Usenet Newsgroup Archive: rec.radio.amateur.antenna

2003-01 - 2003-03

These Usenet messages were preserved as a plain-text archive. This PDF was generated by Digital Library of Amateur Radio & Communications from the source text file in 2026.

Date span: 2003-01-01 through 2003-03-31

Source text: rec.radio.amateur.antenna.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 6,563

Message records with no readable body available in the source text: 5

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. FS NEC-Win Plus+ & "Basic Antenna Modeling:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 00:01:19 UTC
From: ron@rainbow.to
Message-ID: <818e9782.0212311601.3236d000@posting.google.com>
Source record: 128090

This is the NEC-Win Plus+ program and the book "Basic Antenna
Modeling:
A Hands-On Tutorial" by L. B. Cebik

This is brand new and still has the registration card.

I just (Dec. 2002) paid $195.00 for the package. Then I found that it
was not my cup of tea.

I will ship the entire package to you for $150.00.

I can take Master Card, Visa and Discover thru PayPal. Or ship COD or
will accept cashiers checks or postal money order.

Take a look at their web site at : http://www.nittany-scientific.com/
for a complete description of the package and tutorial.

If you are interested in antenna modeling at all this is the best
package available.

Ron Harris/ KY6N

www.ky6n.com

ron@ky6n.com

Picture of the books and disks at:
http://www.ky6n.com/necplus/necplus.html

2. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 01:25:30 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0212311725.728e2b67@posting.google.com>
Source record: 128091

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<dns31v8fl1ndss42vc8ii6dbas5mb52rba@4ax.com>...
> On 31 Dec 2002 10:35:27 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
snipsnip
> >with respect to medium wave broadcasting ?
> >Art
>
> Hi Art,
>
> The losses relate to Richard Harrison's quote:
> >>From page 803, paragraph 22-2 of Terman`s 1955 edition of "Electronic
> >>and Radio Engineering":
> >>"The ground wave is vertically polarized, because any horizontal
> >>component of the electric field in contact with the earth is
> >>short-circuited by the earth."
> which is significantly true in practical life, but clearly, ground is
> not the best of short-circuits to be found. This is a hedge bet to
snip
>
> 73's
> Richard Clark, KB7QHC
Richard,
After reading all the thread again I see that the subject swayed quite
a bit, from medium to shortwave and AM to FM as well as verticals and
horizontals,
all of which serve different requirements. I lost my way somewhere
along the line as to what statements made were refering to and thus my
confusion.
I should have held my tongue.
Art

3. Re: FS NEC-Win Plus+ & "Basic Antenna Modeling:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 01:33:24 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <a9h41v4es9uk50bd9ngj99om7guhf1cki9@4ax.com>
Source record: 128092

On 31 Dec 2002 16:01:19 -0800, ron@rainbow.to (Ron Harris) wrote:

>I just (Dec. 2002) paid $195.00 for the package. Then I found that it
>was not my cup of tea.

I'm curious, what did you find objectionable?

Danny

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

4. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 01:34:12 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <UfadndujVYWxyY-jXTWcqw@ctc.net>
Source record: 128095

"Ian> Always wondered, what do you mean when you talk about the "Q" of an antenna?
>
>
"Q" in msny radio refferances is the bandwidth of the device. High Q means that a device will have a very narrow bandwidth and a Low Q device will be broad.

5. Re: GAP VERTICAL ANTENNA PERFORMANCE

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 02:15:29 UTC
From: Vessen Magee <lynyrd@cableone.net>
Message-ID: <3E124F41.1060904@cableone.net>
Source record: 128093

Hello Asa,

I bought the Titan and couldn't have been more pleased with it. I mounted it on a 10 foot section of 1.25 OD electrical conduit and guyed it down with 3 guys made of the 3/16 inch rope from The Radio Works. I have two primary rigs in my shack. If I werent married I would buy the Challenger for the other radio and run my own comparison tests between the two.

Butch KF5DE

Asa Page wrote:
> Anyone had any experiences with either the Titan DX or the Challenger DX
> vertical antennas produced by GAP Antennas? If you had it to do all over
> again, would you purchase either of the antennas again?
>
> Just looking before I leap.
>
> Thanks.
>
> Asa
> KH2N
>
>

6. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 02:26:00 UTC
From: Ian <cls119@lycos.co.uk>
Message-ID: <VksQ9.483$X41.91103@newsfep2-gui>
Source record: 128094

Hello,

Always wondered, what do you mean when you talk about the "Q" of an antenna?

Ian

7. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 03:07:54 UTC
From: richardharrison@webtv.net
Message-ID: <10147-3E125B8A-110@storefull-2311.public.lawson.webtv.net>
Source record: 128096

Ian wrote"
"Always wondered, what do you mean when you talk about the "Q" of an antenna?"

There is a general definition of "Q" as the energy stored per cycle versus the energy lost per cycle.

In previous discussions in this newsgroup, I recall "Q" being characterized as the reciprocal of an antenna`s bandwidth. The narrower the bandwidth, the higher the Q. Then the discussion settled into how best to define an antenna`s bandwidth. Google probably has all this saved somewhere.

Best regards, Richard Harrison, KB5WZI

8. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 03:25:37 UTC
From: richardharrison@webtv.net
Message-ID: <10147-3E125FB1-112@storefull-2311.public.lawson.webtv.net>
Source record: 128097

Art Unwin wrote:
"---I see the subject swayed quite a bit , from medium to shortwave and
AM to FM as well as verticals and horizontals---."

All that was involved in the original question!

I must have been too bored to leave such a question alone.

Best regards, Richard Harrison, KB5WZI

9. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 05:02:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <autsok$8jq$1@helle.btinternet.com>
Source record: 128098

"Ian" asked -
> Always wondered, what do you mean when you talk about the "Q" of an antenna?

==========

Ian, please relax and stop wondering. Don't allow plagiarising old wives to confuse you with entirely unnecessary complications. When looked at in the right way it is a simple matter you are very likely already quite familiar with.

Any antenna (in it's most simple form), is a straight wire or conductor which possesses resistance R, capacitance C and inductance L per unit length. Not unsurprisingly, it is equally valid to consider it as a (one wire) transmission line or as a series tuned cicuit.

A transmission line, as you already know, has a resonant length when inductive reactance XL is equal to capacitive reactance Xc. For a given length, as frequency increases, XL increases and Xc decreases. At a particular frequency F both X's eventually become equal and opposite to each other and the impedance (seen looking into the center of a half wave dipole) reduces to a pure resistance (about 73 ohms). F is the resonant frequency.

Looking into the center of a 1/2-wave dipole the whole thing behaves just like an LC series-tuned circuit with a loss resistance equal to the resistance of the wire. But in the case of a dipole the radiation resistance must be added to the wire resistance.

The Q of any series-tuned LC resonant circuit is (Inductive Reactance) divided by (Wire Resistance) = XL / R.

In the case of a dipole inductance is directly proportional to its physical length (and to some minor extent to its wire diameter) and it's resistance (as previously stated) for practial purposes is equal to its radiation resistance (a complicated finction of length).

So for a dipole antenna, Q = XL / Rrad = roughly 12 for a thin wire antenna at 2 MHz, falling to roughly 5 for a 1" thick rod at 144 MHz. (As argued on previous occasions Q and bandwidth are very insensitive to wire diameter and insulation thickness, if any).

Summarising - Q depends on antenna dimensions of length, to a small extent on diameter, and on frequency. It is a relatively unimportant antenna characteristic not worthy (like reflected power) of the misleading megabytes expended on the subject in newsgroups and bibles.

WHAT MATTERS TO SOME SMALL EXTENT IS SYSTEM Q AS PERCEIVED BY THE TRANSMITTER AND RECEIVER WHICH DEPENDS AT LEAST AS MUCH ON THE CHARACTERISTICS OF THE TRANSMISSION LINE AND TUNERS AS IT DOES ON THE ANTENNA - factors which old wives apparently consider to be Pentagon top secrets.

Wait for it! Wait for it! Here it comes . . . . . ;o)

Reg, G4FGQ A very enjoyable, prosperous and PEACEFUL 03 to Bush and Blair!

10. Re: 300 Feet of 7/8" Hardline - 70 Ohm

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 05:09:11 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <0gt41vkcmkdg0q1eq38ous9s45rlssp9mt@4ax.com>
Source record: 128099

On 31 Dec 2002 06:37:06 -0800, ron.lucier@flir.com (Ron Lucier) wrote:

>Best offer over the next week or it will be left out for the trash man
>to take. This is the end of a coil of cable TV hardline. Not sure
>the exact length - somewhere between 250 and 300 feet using the old Pi
>times D times the number of coils method. I live in Central Mass and
>unless you want to pay for shipping, meet me nearby to pick it up.

You sure that isn't 3/4 inch?

All the cable companies around here use 3/4 inch for the mains. I had
a 1000 foot reel minus about 200 feet which had a big dent in it.
(across the face of the layer.)

I used it for years and it works well. At least I never had any
problems and connectors are very easy to make. For the 1/2 stuff you
use 1/2 inch copper tube compression fittings and for 3/4 you use the
3/4 inch fittings.

For the UHF male connectors I use half a compression coupling (I cut
them in half on a lathe) cut the hole in the 3/4 center to fit the
outside of a PL259 and then just solder the barrel of the connector
into the opening.
Cut the outer jacket/shield back, cut the foam back to expose enough
of the center conductor to reach into the PL259 pin and solder that
after tightening the compression part down onto the shield.

Every once in a while some of the local hams check to see if I have
any left.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>

73 de W1AAE

11. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 05:13:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <auttdj$g6o$1@knossos.btinternet.com>
Source record: 128100

Hint - when discussing antenna heights it might reduce confusion and arguments if it is the height of the antenna itself which matters or the height of the antenna above ground, or the height of any radials.

12. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 05:32:13 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <autugs$hi6$1@knossos.btinternet.com>
Source record: 128101

"Richard Harrison" wrote
> Ian wrote"
> "Always wondered, what do you mean when you talk about the "Q" of an
> antenna?"
>
> There is a general definition of "Q" as the energy stored per cycle
> versus the energy lost per cycle.
>
> In previous discussions in this newsgroup, I recall "Q" being
> characterized as the reciprocal of an antenna`s bandwidth. The narrower
> the bandwidth, the higher the Q. Then the discussion settled into how
> best to define an antenna`s bandwidth. Google probably has all this
> saved somewhere.

==========

Rich, I know YOU know what you are talking about when answering the
question. But what you have to ask yourself, considering how the question is
posed, "is will the questioner?

Regards, Reg, G4FGQ

13. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 05:39:13 UTC
From: richardharrison@webtv.net
Message-ID: <6727-3E127F01-55@storefull-2317.public.lawson.webtv.net>
Source record: 128102

Reg, G4FGQ wrote:
"The Q of any series-tuned LC resonant circuit is (Inductive Reactance) divided by (Wire Resistance) = XL / R."

OK Reg, fess up!

What book did you copy that from?

Happy New Year!

Best regards, Richard Harrison, KB5WZI

14. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 05:45:22 UTC
From: k3bu@aol.com
Message-ID: <20030101004522.10433.00000839@mb-ba.aol.com>
Source record: 128103

Reg, G4FGQ wrote:

>Summarising - Q depends on antenna dimensions of length, to a small extent
>on diameter, and on frequency. It is a relatively unimportant antenna
>characteristic not worthy (like reflected power) of the misleading megabytes
>expended on the subject in newsgroups and bibles.

Unimportant? Like when considering elements in parasitic arrays?

Happy New One!

Yuri

15. PME and ELCB's, RCCD's & MCB's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 10:32:53 UTC
From: "r.dring" <r.dring@ntlworld.com>
Message-ID: <vuzQ9.201$Jg2.18537@newsfep2-gui>
Source record: 128104
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,uk.radio.amateur

There seems to be some confusion about PME, and circuit breakers. (UK only)
During the post world war 2 building boom there was a need to reduce the cost of housing construction. PME could help, by allowing a reduction in the number of cable cores that needed to be run in a domestic electrical installation. The neutral and earth being the same conductor.
Origionally the only installations allowed (by special permission or the Secratary of state) were installations that could garrantee, that every consumer on a supply transformer would be connected in that arrangement.It still allowed interleaving of premises across 3 phases, using a common neutral core in the feeder cable.
In practice this meant that the only use was in high rise blocks of flats (US = appartments), where the cabling was under total control. In fact there were some installations with mineral insulated cables were only the live cores were inside the cable, the joint neutral/earth conductor was the bare copper sheath.
Later as Britains housing stock was being repaired/replaced another problem came to light.
The copper or lead water main, was used as the main earth electode in a normal domestic installation.
During this period plastic water mains became the norm, isolating the protective conducter, and ensuring that if any faulty appliance, where the case
became live, also made every other earthed appliance live. Not a very good arrangement.
To combat this ELCB,s (Earth Leakage Circuit Breakers) were developed, these were voltage operated and thus series connected devices, they were installed between the earth continuity conductor and the main earth electrode (A 1 yard long copper rod driven into the ground in place of the water pipe).
The disadvantage of this system was that it could be bypassed by plumbing, structural steelwork,
gas pipes, telephone systems, Ham radio RF earths, and many other parallel conductors.
To solve this, we now us a much more reliable circuit breaker called an RCCD. This device uses the current balance priciple, what goes down the live conductor MUST come back via the neutral conductor, any imbalance or RESIDUAL current MUST be fault current and so trip the circuit breaker.
To stop any confusion the unit has a different name, RCCD, it is a Residual Current Circuit-breaking Device.
The residual current can be set at very sensitive levels to take account of different hazards, 100mA with a delay, for some fixed circuits to stop neusance tripping but give fire protection.
A lower level of 30mA on plug in appliances is the norm, this being below

the minimum current that will cause fibrillation in the heart, and so give protection against electocution.
NONE of these devices give any protection against overcurrent. That is provided by the normal fuses or MCB's (Magnetic or Miniture Circuit Breakers). MCB's are now the prefared protection method, they provide very accurate overcurrent protection.
Finally a combination device is now on the market which provides overcurrent, and residual current protection, and that is what I would use for the shack supply, although they are more expensive.
Returning to PME. Later still PME was allowed to be used in mixed areas with the hazards as
described by others. If the neutral core in the supply cable is damaged.Your house wiring can carry the current from other consumers.
The other more serious effect is that the earth conductors in your property can float up to full mains voltage. you still cannot get an electric shock because all bonded metal in the property is also at that potential. The Danger arises when you bring "in" an external 0volt RF earth, putting yourself between them can result in a fatal electric shock.
Now reverse the operation and take an earthed metal cased appliance, supplied with the house earth via a three core flex, out into the garden. The ground you are standing on will be at 0volts but the case of the earthed applience could be at 240volts!!! again not a good idea.
If anyone wants I can deal with all of the alternative earthing arrangements suggested in a later email.This one is already far too long.
One final note, some years ago attended an electrical supply training course, and I raised this with the tuter lecturing on earthing, his answer was to mount the transmitter and all other shack equipment inside additional earthed metal boxes that had holes cut in them to allow you to touch the plastic control knobs only !!!.
Regards
Raid
Martin" <Martin@_NOSPAM_g1gyc.demon.co.uk> wrote in message news:auiv4t$f10$1$8300dec7@news.demon.co.uk...
> Hi, and thank you for reading this.
> I am in stalling my radio station in to the small "box room" on the 2nd
> floor
> of the building and I have in the past not worried about a separate earth
> for
> the station. But as this station is going to be a more permanent
arrangement
> than my other previous locations I want to make sure that :-
> 1) the station is safe electrically. (of course the supply earth will be
> connected)
> 2) protected form static (lightening etc).
> 3) has a good RF performance. (this means low resistance earth connection)
> 4) is as clear of EMC problems as possible.
>
> So any one got some pointers or helpful hints on installing a separate
> station
> earth. The ground connection is easy 3 to 6 off 6' long 1" dia copper

pipes
> driven all the way in to the soil (I know it is a big is job but not
> impossible).
> The bit I am puzzling over is do I use a heavy copper strap as used on
> church
> lightening conductors to provide a common earth for every thing or just
for
> the
> static protection and then a separate heavy conductor to provide the shack
> equipment earth.
> In either case how can I ensure that the earthing does not radiate RF (I
> assume
> that making sure the aerials are correctly balanced with suitable baluns
> fitted is
> the answer here.)
> I did here about using RG8 type coax and connecting both inner and screen
> to the hardware in the ground but only connecting the shack earth buss to
> the
> inner - any thoughts on this.
>
> Cheers Martin
>
>

16. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 12:37:58 UTC
From: zeti@volcanomail.com
Message-ID: <b212035c.0301010437.667525b8@posting.google.com>
Source record: 128105

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<auttdj$g6o$1@knossos.btinternet.com>...
> Hint - when discussing antenna heights it might reduce confusion and
> arguments if it is the height of the antenna itself which matters or the
> height of the antenna above ground, or the height of any radials.

good hint, thank you. It brings the question: how different is the effect of the physical antenna height from the height of the antenna above average ground. Question reformed: Assume an FM station antenna top is 500m from average ground. What would be the difference of the average coverage (range) of the station, if the pysical antenna size would be say 10m (on a 490m peak) or 50m(450m peak) ?

I read the comments of Richard H. about the the height of the antenna being 1/4 (1/2) for a medim wave (short wave) station,, this formula gives an antenna height of (3*10^8/10^6)/4==75m for an AM station at medimum wave (1MHz)and (3*10^8/15*10^6)/2==10m for an average sw station at 15MHz, and it gets smaller with increasing frequency. I heard this 1/4 ratio for the receiving antennas but how efficient and widely-used is this criteria for the transmitting antenna ? If widely used, it does not comply with the given numbers of 300-600m average-antenna-height (at UHF).

17. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 12:52:12 UTC
From: zeti@volcanomail.com
Message-ID: <b212035c.0301010452.534ca4b5@posting.google.com>
Source record: 128106

> Zender Swonssen wrote:
> "What would be a typical FM-radio-station-antenna height?"
>
> About 300 meters or 1000 feet. The distance in miles to the radio
> horizon from 1000 feet is:
>
> sqrt of 2000 or 45 miles.
>
> The formula is: D = sqrt 2H

I assume the radio horizon is a term related to effective range (coverage) of the antenna. Doesn't this "effective range" also depend on the average output power of the transmitter. Assume two antennas with the same height and structure but with different driving power (say 1000W and 100000W). Would the radio horizon be same for the two antennas, if yes, then "radio horizon" can't be a measure for the "effective range", since "effective range" I assume, depends on the antenna-output power.

This rises another issue: what is the average power that an FM(AM SW) station uses. What is it for an average Tv station ?. I assume this power issue, like the antenna-height issue, is dependent on terrain and budget,i.e., different average numbers exist for,say,downtown-NYC and/or urban-PA.

best ragards,
zender

18. Re: AMRAD Ant QST Sept 2001 ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 13:10:22 UTC
From: Joe Strain <jstrain1@cfl.rr.com>
Message-ID: <2NBQ9.194740$Db4.5511955@twister.tampabay.rr.com>
Source record: 128107

I saved the article to build it but it lacked a schematic and parts layout because apparently the internet verion was incomplete...can you share any of that? I can help if costs are a concern

Yodar in orlando
-==========
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message news:v13rn21k3bsv02@corp.supernews.com...
> I'd like to hear some user comments on this active loopstick antenna as I've
> been thinking of buying one vs. making a loop. My main interest would be
> VLF and 160 meters unless of course it's a great performer on HF. I'm
> guessing the parts cost is about $100.00!
> tnx
> hank wd5jfr
>
>
>

19. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 13:38:11 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v15rlqq9jtrhbb@corp.supernews.com>
Source record: 128108

Zender Swonssen wrote:

>>
>>The formula is: D = sqrt 2H
>
>
> I assume the radio horizon is a term related to effective range
> (coverage) of the antenna. Doesn't this "effective range" also depend
> on the average output power of the transmitter. Assume two antennas
> with the same height and structure but with different driving power
> (say 1000W and 100000W). Would the radio horizon be same for the two
> antennas, if yes, then "radio horizon" can't be a measure for the
> "effective range", since "effective range" I assume, depends on the
> antenna-output power.

Consider that satellites operate sometimes only with a few watts of
power from 22,500 miles away. Pretty good effective range! Of course
there is a 'vanishing point' at an infinite distance :-)
The other end of that stick is the desire or need for something like a
VHF/UHF broadcast station to saturate the effective range area with more
RF. It doesn't necessarily reach any further because of the limit of
the horizon. The signal can be either strong or weak at the horizon
depending on transmitted power.
>
> This rises another issue: what is the average power that an FM
In the US the larger stations typically run 100kw, many run considerably
less.

AM
Maximum is 50 kw, some use only a few watts at night.

> SW) station uses.
Minimum is 50 kw with minimum 10db gain antenna ? (for USA)

What is it for an average Tv station ?.
Most VHF stations tend to run the max...100kw on low VHF, 316 on high
VHF, 2-5 MW on UHF. The exceptions of course are the Low Power TV
stations, a special category for limited operation.

I assume
> this power issue, like the antenna-height issue, is dependent on
> terrain and budget,i.e., different average numbers exist
> for,say,downtown-NYC and/or urban-PA.

The US has numerous provisions and exceptions to accomodate (or require)
directional antenna systems, extremely high xmtng locations and as I

recall, has different maximum parameters for the Northeast region due to crowding.

Since most broadcasting in the US is of a commercial nature, stations are generally inclined not to be so worried about extended range if it goes outside of their market area. Theoretically you could place a good TV installation halfway between New York City and Philadelphia and provide decent coverage to both major cities. The reality is that Philadelphia people would really rather watch their local stations as would the New Yorkers.
However, in these days of generic satellite fed FM stations its a fairly common practice for FM broadcasting.

-Bill M

20. Re: 300 Feet of 7/8" Hardline - 70 Ohm

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 13:40:36 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v15rq88m25urde@corp.supernews.com>
Source record: 128109

Roger Halstead wrote:
> On 31 Dec 2002 06:37:06 -0800, ron.lucier@flir.com (Ron Lucier) wrote:
>
>
>>Best offer over the next week or it will be left out for the trash man
>>to take. This is the end of a coil of cable TV hardline. Not sure
>>the exact length - somewhere between 250 and 300 feet using the old Pi
>>times D times the number of coils method. I live in Central Mass and
>>unless you want to pay for shipping, meet me nearby to pick it up.
>
>
> You sure that isn't 3/4 inch?

7/8" is pretty common in the CATV world as are some in-between values
like .860.

-Bill M

21. 80m Horizontal Loop - confirm configuration

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 13:55:15 UTC
From: Dennis Wells <k1drw@comcast.net>
Message-ID: <xxucnW6L2aDZbo-jXTWcrg@comcast.com>
Source record: 128110

I will be installing an 80m horizontal loop approx 35 high. I will be feeding the loop using approx 100 feet of 450 ohm window ladderline to the eve of my house. Drip loop to under the eve where it will connect to a current balun, then 9913F coax (approx 30 feet) down the side of the house (drip loop again) to an SPG enclosure (Single Point Ground connected to a ground bar system) connecting to a Cushcraft LAC4H lightning protector mounted on the SPG. Then, into the shack using a 9913F coax jumper approx 10 feet long, to the tuner. The loop will be used with 100w across 10m - 160m bands for both local and DX contacts. Questions: 1. Should the total feedline length, or any part of it, be optimized to any length (1/2 wave), or not...? 2. The loop will be square with 68 feet per side (272 feet total). I have room to increase the antenna length, making it more rectangular with 2 sides of approx 100 feet. Should I....?? 3. I will be using Dacron double braided poly line to support the loop. Is 3/32 dia rope strong enough or should I use 3/16 dia rope...? Any advice will be sincerely appreciated. Dennis, K1DRW, Philadelphia area.

22. Re: GAP VERTICAL ANTENNA PERFORMANCE

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 14:02:37 UTC
From: Asa Page <asapage@worldnet.att.net>
Message-ID: <1yCQ9.23240$p_6.1848839@bgtnsc04-news.ops.worldnet.att.net>
Source record: 128111

All,

Great advice . . . lots to think about. Appreciate your responses.

Happy and Safe New Year to all of you.

73's,

Asa - KH2N

"Asa Page" <asapage@worldnet.att.net> wrote in message
news:oO5Q9.86825$hK4.7058468@bgtnsc05-news.ops.worldnet.att.net...
> Anyone had any experiences with either the Titan DX or the Challenger DX
> vertical antennas produced by GAP Antennas? If you had it to do all over
> again, would you purchase either of the antennas again?
>
> Just looking before I leap.
>
> Thanks.
>
> Asa
> KH2N
>
>

23. Re: AMRAD Ant QST Sept 2001 ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 14:14:45 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v15tup9fsid7a@corp.supernews.com>
Source record: 128112

I don't have a scanner but can go to Kinkos and copy and mail if you can't find a scan. I guess it's time to get a scanner but there's so many and I'm not ready to study all the possibilities and options.
73
hank wd5jfr
"Joe Strain" <jstrain1@cfl.rr.com> wrote in message news:2NBQ9.194740$Db4.5511955@twister.tampabay.rr.com...
> I saved the article to build it but it lacked a schematic and parts layout
> because apparently the internet verion was incomplete...can you share any of
> that? I can help if costs are a concern
>
> Yodar in orlando
> -==============
> "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
> news:v13rn21k3bsv02@corp.supernews.com...
> > I'd like to hear some user comments on this active loopstick antenna as
> I've
> > been thinking of buying one vs. making a loop. My main interest would be
> > VLF and 160 meters unless of course it's a great performer on HF. I'm
> > guessing the parts cost is about $100.00!
> > tnx
> > hank wd5jfr
> >
> >
> >
>
>

24. Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 14:29:18 UTC
From: Doc <monel@sprynet.myshorts.com>
Message-ID: <auutv3inq1@slb4.atl.mindspring.net>
Source record: 128113

OK, I'm not even a newbe! I run a model rocket hobby club and I just bought a Ramset FM25B broadcaster "thing". (I'm clueless to this stuff) I built it and it works great, but I need more range. We will be using it to announce the flights and to warn people of possible danger. (Some of the rockets are 15 feet tall and 100 pounds.) Our current PA system just doesn't cut it any more.

I think I need a better antenna. I've surfed for hours and see that two options are a "Slim Jim" and a J pole. I like what I read about a Ribbon J Pole made from 300 Ohm TV Cable from Radio Shack, (sounds cheap) but I can't find a diagram or anything.

We don't have much money left in the kitty. :-(

I will be broadcasting at around 88.1 , so I will need help matching it or whatever.

Can you guys help me?

Doc

--
Drake" Doc" Damerau 79986 L2
President NEPRA, NAR Section 614
www.nepra.com

HPR Strength of Materials Site:
http://rocketmaterials.org
(Remove "my shorts" to email me)

25. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 15:05:37 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <auv043$adpbb$1@ID-175933.news.dfncis.de>
Source record: 128114

"Zender Swonssen" <zeti@volcanomail.com> wrote
> It brings the question: how different is the effect of the
> physical antenna height from the height of the antenna
> above average ground. Question reformed: Assume an
> FM station antenna top is 500m from average ground.
> What would be the difference of the average coverage
>(range) of the station, if the pysical antenna size would
> be say 10m (on a 490m peak) or 50m(450m peak) ?

None, assuming transmitting antenna elevation and azimuth radiation patterns, the propagation paths, and atmospheric conditions are all constant in those scenarios. However there can be some effects on the quality of the reception (not so much in raw field strength) from foreground reflections off the ground near those shorter towers.

> I read the comments of Richard H. about the the height of the
> antenna being 1/4 (1/2) for a medim wave (short wave) station,, this
> formula gives an antenna height of (3*10^8/10^6)/4==75m for an AM
> station at medimum wave (1MHz)and (3*10^8/15*10^6)/2==10m for an
> average sw station at 15MHz, and it gets smaller with increasing
> frequency. I heard this 1/4 ratio for the receiving antennas but how
> efficient and widely-used is this criteria for the transmitting
> antenna ? If widely used, it does not comply with the given numbers of
> 300-600m average-antenna-height (at UHF).

A medium wave broadcast antenna generally uses a vertical tower whose total length (height, really) is energized by the transmitter, and the whole structure radiates the signal.

VHF and UHF broadcast antennas usually consist of a number of 1/2-wave dipoles installed in a vertical array, each one receiving a portion of the power delivered by the transmitter. The dipoles are spaced about 1 wavelength apart. The separate patterns produced by each dipole add and cancel in the elevation plane as a function of their relative phases at various angles. All the fields add in the horizontal plane, and that effectively multiplies the power from the transmitter toward the intended reception areas.

An FM antenna having four dipoles arrayed and fed as described will have an elevation power gain of about 4X (in linear polarization), and at 98MHz is about 30 feet long. It can be installed on any structure having that vertical aperture, at a minimum (not including concerns about safety here), but normally it is installed at the top of a taller structure to increase the coverage of the station, and to meet the requirements of the station's FCC license.

VHF/UHF are basically line-of-sight services, and can be more dependent on the existence of a good path than on the absolute power radiated by the antenna.

Richard Fry

26. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 15:09:42 UTC
From: k1bqt@aol.com
Message-ID: <20030101100942.29759.00000313@mb-cv.aol.com>
Source record: 128115

Hi Doc--

What works for receiving should work for transmit. Why not use RadioShack's FM Broadcast crossed dipole array? Send the signal up over coax and use a cheapo 4:1 balun (75-Ohm unbalanced to 300-Ohm balanced) to

Rick K1BQT

27. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 15:18:02 UTC
From: richardharrison@webtv.net
Message-ID: <10146-3E1306AA-301@storefull-2311.public.lawson.webtv.net>
Source record: 128020

Zender Swonssen wrote:
""If widely used, it does not comply with the given numbers of 300-600m average-antenna-height (at UHF)."

That`s right.

Resonant lengths of conductors are used at all frequencies most of the time when possible because at resonance, reactance is practically zero and does not impede excitation of the antenna.

Wave length at 1 MHz is 300 meters. At 10 Mhz, wave length is 30 meters and at 100 MHz, wavelength is 3 meters.

If you make a balanced dipole for these frequencies, you start with about 1/2-wavelength for the dipole of a particular frequency.

If you make an antenna using a reflector at one end, such as a tower resting on a base insulator with the earth and radials acting as a reflecting surface, you can get away with a length (height) of antenna which is only 1/2 the length of an equivalent dipole, to produce the same resonance.

The reason that a 1 MHz broadcast tower is about 75 meters high is that particular length produces a resonant 1/4-wave antenna. The whole tower is the radiating antenna.

This antenna does not need to be elevated to a great height to send a signal to many places where the tower can`t be seen, because the signal from a 1 MHz antenna follows the curvature of the earth through its interaction with the earth.

At 10 MHz, and at 100 MHz, the earth produces too much loss in its interaction with the wave traveling along its surface. The only way to get fairly long distance transmission at 100 Mhz, is to elevate the antenna to produce a "line-of-sight" with the desired receiving antenna.

At 10 MHz, when the ionosphere is right, we don`t need antenna height to get long distance propagation. We can reflect our 10 MHz signal off the ionosphere into a far away location. The 10 MHz signal can only travel a short distance along the surface of the earth because the earth takes a toll on the wave skimming along its surface which increases with the frequency of the wave. At 10 MHz, this toll is already exorbitant and just gets worse at higher frequencies. We need line-of-sight at these frequencies to get groundwave-type distances to the earth`s surface when ionospheric reflection is not available.

100 MHz signals almost always penetrate the ionosphere and are ordinarily not reflected back to earth, so we only can depend on line-of-sight for propagation of these signals.

At 100 MHz, a dipole about 1.5 meters long might be used for an antenna to be received near the earth`s surface. Even with no intervening cbstructions, the earth`s curvature usually requires elevation of the transmitting dipole to an altitude of 1000 feet or more. The support could be a mountain peak or a metal tower as required for a line-of-sight path. It is not the mountain or the tower which is radiating. It is only the 1.5-meter dipole which is expected to radiate.

Best regards, Richard Harrison, KB5WZI

28. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 15:21:29 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <dAYTPqB7VSUxPueczr9S1SjF27f0@4ax.com>
Source record: 128117

"Doc" <monel@sprynet.myshorts.com> wrote:

>
>I think I need a better antenna. I've surfed for hours and see that two
>options are a "Slim Jim" and a J pole. I like what I read about a Ribbon J
>Pole made from 300 Ohm TV Cable from Radio Shack, (sounds cheap) but I can't
>find a diagram or anything.

This page has a diagram of a twin-lead j-pole for 2 meters, and you should be
able to extrapolate for 88.1

http://www.sedan.org/ant.htm#jpoletv

Bob
k5qwg
>
>We don't have much money left in the kitty. :-(
>
>I will be broadcasting at around 88.1 , so I will need help matching it or
>whatever.
>
>
>Can you guys help me?
>
>
>Doc

29. Random Length Wire Antenna Question: Loop Or straight Congig. Best ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 15:30:36 UTC
From: Robert11 <rgsrose@tiac.net>
Message-ID: <auv1gckqd1@slb1.atl.mindspring.net>
Source record: 128116

Hi,

Using a random-length wire running around the 4 sides of my atic, with about a 10 foot vertical drop to my receiver in a
room below. The attic configuration is pretty much of a 360 degree loop in the horiz. plane.

The end of the wire in the attic is open, not connected to anything.

I saw a post where the writer said:

"The longer, the higher and the straighter the better"

This got me to wondering (the "straighter" comment) if I might be better off without having the wire make
the 360 degrees configuration, and perhaps just having it go up to the attic, and then a straight, single run,
along the long side of the house (about 45 feet) ?

I do listening only, and use the aerial for reception up to 30 MHz, or so.

Any thoughts wouldbe most appreciated.

Thanks,
Bob

30. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 15:34:21 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <auv1q0$a9rh6$1@ID-175933.news.dfncis.de>
Source record: 128118

"Doc" <monel@sprynet.myshorts.com> wrote
>...I just bought a Ramset FM25B broadcaster "thing".
>(I'm clueless to this stuff) I built it and it works great, but
> I need more range. ... I think I need a better antenna.

You might want to read through the advice posted about using that device on the Ramsey website:

http://www.ramseyelectronics.com/aboutus/aufcc.asp

There are limits, if you want to observe FCC Rules.

Richard Fry

31. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 15:40:41 UTC
From: richardharrison@webtv.net
Message-ID: <10146-3E130BF9-304@storefull-2311.public.lawson.webtv.net>
Source record: 128024

Doc wrote:
"We will be using it to announce the flights and to warn people of possible danger."

In industrial plants with deafening noise, we had a similar problem. We solved it with an air horn. These were the loudest common communications devices available. You could work out a code or use Morse.

If you must use radio, CB or FRS radios are cheap, available, and legal.

Best regards, Richard Harrison, KB5WZI

32. WTB:DIAMOND X3200A ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 15:44:06 UTC
From: n2ion@aol.com
Message-ID: <20030101104406.01921.00000214@mb-fc.aol.com>
Source record: 128019

WANTED:

DIAMOND X3200A ANTENNA

IF YOU HAVE ONE, EMAIL WITH THE DETAILS

33. HNY

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 15:54:37 UTC
From: fractenna@aol.com
Message-ID: <20030101105437.13934.00000443@mb-cr.aol.com>
Source record: 128021

Best in this new year to my friends and colleagues on the NG.

For those in bad health, I wish you a speedy recovery in 2003;
For those in challenging circumstances, I wish you better days ahead with solid positions in 2003.

I am grateful for the positive help I have received behind the scenes from several of you in 2002, and will continue to be helpful myself when time allows.

73,
Chip N1IR

34. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 16:01:05 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <5hEQ9.83428$I23.4825724@news1.east.cox.net>
Source record: 128022

One point everyone missed: it depends a lot on the spectral
purity of the solid state amplifier! In other words, how good
are the low-pass filters for each band?

Peter

"BICisfag" <ll@jj.com> wrote in message news:3E10BB04.B7DC9780@jj.com...
> I want to get a 500 w solid state amp for HF.
>
> I don't seem to have any interference problems with
> neighbors now with 100 w.
>
> I have dipoles for 80 and 40 and a vertical and inv. L.
>
> Am I asking for trouble with 500 w?
>
>
>

35. Re: recommendation: portable 2M antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 16:10:15 UTC
From: tennant@example.com
Message-ID: <auv3t5veh1@news.chatlink.com>
Source record: 128023

Cool! I'll select one of these. Thanks to all for their advice. (P.S. I have 8- and 12-year old sons both interested in a license as well. Having something cool to take to scout camps may help encourage that interest.)

36. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 16:41:55 UTC
From: Doc <monel@sprynet.myshorts.com>
Message-ID: <auv5nn$95$1@slb6.atl.mindspring.net>
Source record: 128025

"Bob Miller" <bxmillerSpamNot@texas.net> wrote in message
news:dAYTPqB7VSUxPueczr9S1SjF27f0@4ax.com...
> "Doc" <monel@sprynet.myshorts.com> wrote:
>
>
> >
> >I think I need a better antenna. I've surfed for hours and see that two
> >options are a "Slim Jim" and a J pole. I like what I read about a Ribbon
J
> >Pole made from 300 Ohm TV Cable from Radio Shack, (sounds cheap) but I
can't
> >find a diagram or anything.
>
> This page has a diagram of a twin-lead j-pole for 2 meters, and you should
be
> able to extrapolate for 88.1
>
> http://www.sedan.org/ant.htm#jpoletv
>

Wow! that's a ton of great information. Thanks. I'll go through it and see
what I can find.

--
Drake" Doc" Damerau 79986 L2
President NEPRA, NAR Section 614
www.nepra.com
HPR Strength of Materials Site:
http://rocketmaterials.org
(Remove "my shorts" to email me)

37. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 16:42:19 UTC
From: Doc <monel@sprynet.myshorts.com>
Message-ID: <auv5of$hf8$1@slb1.atl.mindspring.net>
Source record: 128026

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:10146-3E130BF9-304@storefull-2311.public.lawson.webtv.net...
> Doc wrote:
> "We will be using it to announce the flights and to warn people of
> possible danger."
>
> In industrial plants with deafening noise, we had a similar problem. We
> solved it with an air horn. These were the loudest common communications
> devices available. You could work out a code or use Morse.
>
> If you must use radio, CB or FRS radios are cheap, available, and legal.
>
> Best regards, Richard Harrison, KB5WZI
>

We too use an air horn as well as the PA system. The air horn is for immediate "danger" (seldom used) and the PA system is more for the announcement of each flight. (Usually around 150 launches in the day.) We also use FRS radios for private communication. Morse code would be nice but I would have to teach the 200 people. ;-)

Doc

--
Drake" Doc" Damerau 79986 L2
President NEPRA, NAR Section 614
www.nepra.com
HPR Strength of Materials Site:
http://rocketmaterials.org
(Remove "my shorts" to email me)

38. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 16:43:19 UTC
From: Doc <monel@sprynet.myshorts.com>
Message-ID: <auv5qb$qd2$1@slb2.atl.mindspring.net>
Source record: 128027

"Richard Fry" <rfry@adams.net> wrote in message
news:auv1q0$a9rh6$1@ID-175933.news.dfncis.de...
> "Doc" <monel@sprynet.myshorts.com> wrote
> >...I just bought a Ramset FM25B broadcaster "thing".
> >(I'm clueless to this stuff) I built it and it works great, but
> > I need more range. ... I think I need a better antenna.
> ----------
>
> You might want to read through the advice posted about using that device
on
> the Ramsey website:
>
> http://www.ramseyelectronics.com/aboutus/aufcc.asp
>
> There are limits, if you want to observe FCC Rules.
>
> Richard Fry
>

Great read, thanks. I don't want to step on anyone's frequency, so I did consider at least that. The private property at which we launch is 2 miles wide and 1.5 miles long, and considerably further to any private buildings. (Miles and miles of hay fields and cows!) I just want to go about a mile.

Doc

--
Drake" Doc" Damerau 79986 L2
President NEPRA, NAR Section 614
www.nepra.com
HPR Strength of Materials Site:
http://rocketmaterials.org
(Remove "my shorts" to email me)

39. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 16:44:35 UTC
From: Doc <monel@sprynet.myshorts.com>
Message-ID: <auv5snqmn1@slb9.atl.mindspring.net>
Source record: 128028

"Rick Littlefield" <k1bqt@aol.com> wrote in message
news:20030101100942.29759.00000313@mb-cv.aol.com...
> Hi Doc--
>
> What works for receiving should work for transmit. Why not use
RadioShack's FM
> Broadcast crossed dipole array? Send the signal up over coax and use a
cheapo
> 4:1 balun (75-Ohm unbalanced to 300-Ohm balanced) to
>
> Rick K1BQT--

Drake" Doc" Damerau 79986 L2
President NEPRA, NAR Section 614
www.nepra.com
HPR Strength of Materials Site:
http://rocketmaterials.org
(Remove "my shorts" to email me)

40. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 16:47:05 UTC
From: Doc <monel@sprynet.myshorts.com>
Message-ID: <auv61d$m5l$1@slb0.atl.mindspring.net>
Source record: 128029

"Rick Littlefield" <k1bqt@aol.com> wrote in message
news:20030101100942.29759.00000313@mb-cv.aol.com...
> Hi Doc--
>
> What works for receiving should work for transmit. Why not use
RadioShack's FM
> Broadcast crossed dipole array? Send the signal up over coax and use a
cheapo
> 4:1 balun (75-Ohm unbalanced to 300-Ohm balanced) to
>
> Rick K1BQT
--

Sorry for the last "dead air" transmission. ;-(
Thanks for the tip. I'll look it up. This set-up wouldn't have to be matched
or any of that stuff?

Drake" Doc" Damerau 79986 L2
President NEPRA, NAR Section 614
www.nepra.com
HPR Strength of Materials Site:
http://rocketmaterials.org
(Remove "my shorts" to email me)

41. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 17:06:28 UTC
From: richardharrison@webtv.net
Message-ID: <6726-3E132014-156@storefull-2317.public.lawson.webtv.net>
Source record: 128031

Zender Swonssen wrote:
"Assume two antennas with the same height and structure but with different driving power (say 1000W and 100,000W). Would the "radio horizon" be the same for the two antennas---?"

No. The stronger signal is a better competitor against noise than the weaker signal. So range is slightly extended, but the extension depends on noise magnitude and other local conditions. For example, there is sometimes multipath reception near the earth curvature blocked signal. The signal slightly blocked by the earth curvature may actually be improved if the grazing signal were out of phase with a reflected signal. The remaining signal may thus be stronger than the sum of the unblocked signals was.

There are several anomalies which crop up when things get critical on the fringes. One item can be counted upon to trouble reception below the peak of an obstruction, the earth curvature in our case. When the receiving antenna drops below the line of sight by only 1/4-wavelength, the field strength drops very quickly. This fact generally trumps all the other factors.

Another item may improve perception of the rapid drop in signal and the benefit that more power doesn`t really have. Volts per meter in the field strength fall linearly with distance from the transmitter. You may have 1000 millivolts per meter at one mile. So, at 10 miles you have 100 millivolts per meter and at 100 unobstructed miles you have 10 millivolts per meter. The power varies with the square of the voltage. Where the power is increased 100 times as in Zender`s example, the volts per meter are increased by only 10 times. This is of no consequence other than of perception. It just helps to understand that when you increase the power by 100x, you don`t reach out 100x as far.

Another fact. Receivers are capabale of receiving extremely small signals. They don`t need really strong signals, but they do need some signal. Bottom line, with an unobstructed path you usually have communications ability. With an obstructed path, you often can`t talk regardless of power. Atmospherics bend the signal to extend the range at times, and at other times the bend is in the opposite direction and produces fading.

Best regards, Richard Harrison, KB5WZI

42. Re: Random Length Wire Antenna Question: Loop Or straight Congig. Best ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 17:11:29 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1685lme6ghfb1@corp.supernews.com>
Source record: 128030

Robert11 wrote:
> Hi,
>
> Using a random-length wire running around the 4 sides of my atic, with about
> a 10 foot vertical drop to my receiver in a
> room below. The attic configuration is pretty much of a 360 degree loop in
> the horiz. plane.
>
> The end of the wire in the attic is open, not connected to anything.
>
> I saw a post where the writer said:
>
> "The longer, the higher and the straighter the better"
>
> This got me to wondering (the "straighter" comment) if I might be better off
> without having the wire make
> the 360 degrees configuration, and perhaps just having it go up to the
> attic, and then a straight, single run,
> along the long side of the house (about 45 feet) ?
>
> I do listening only, and use the aerial for reception up to 30 MHz, or so.
>
> Any thoughts wouldbe most appreciated.
>
> Thanks,
> Bob
>
>

That piece of wire will behave entirely differently between say
Broadcast Band versus 30 MHz. I think the 'looped' configuration will
give you the best results on the lower freqs simply by virtue of its length.
On SW the alternative scheme might be better on *some* freqs and worse
on others.
Why not install both so as to have a choice?

-Bill

43. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 17:20:49 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <auv81g$272$1@helle.btinternet.com>
Source record: 128032

Uri exclaimed -
> Q, Unimportant? Like when considering elements in parasitic arrays?

==========

When using EZNEC to design parasitic arrays Q is not an input parameter. It is not even an end product. If any interest is taken in Q after a design is complete the only way to find its value is to measure it - if you know how. If you don't like it how do you change it? Whatever its value it can only be meekly accepted.

What use does it have in parasitic arrays other than for starting nit-picking arguments in newsgroups, for filling-in gaps between the adverts in magazines, and for obtaining grant money under false pretences by writing 'learned' research papers on the subject.

A Happy & Prosperous 2003. ;o)

From Reg, G4FGQ

44. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 17:28:47 UTC
From: richardharrison@webtv.net
Message-ID: <6725-3E13254F-346@storefull-2317.public.lawson.webtv.net>
Source record: 128034

Doc wrote:
"I think I need a better antenna."

Another trick is to distribute RF using 300-ohm twinlead to bring it in the vicinities of the radios. It is still wireless but can be legal and even works well in tunnels. Works well in both directions of transmission.

Best regards, Richard Harrison, KB5WZI

45. Re: 80m Horizontal Loop - confirm configuration

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 17:34:31 UTC
From: John Haberkern <jhabsNOSPAM@worldnet.att.net>
Message-ID: <HEFQ9.89883$hK4.7273589@bgtnsc05-news.ops.worldnet.att.net>
Source record: 128033

why don't you just feed it directly with the ladder line? That's what I did here and it worked f.b. John W3AYT

"Dennis Wells" <k1drw@comcast.net> wrote in message news:xxucnW6L2aDZbo-jXTWcrg@comcast.com...
> I will be installing an 80m horizontal loop approx 35 high. I will be
> feeding the loop using approx 100 feet of 450 ohm window ladderline to the
> eve of my house. Drip loop to under the eve where it will connect to a
> current balun, then 9913F coax (approx 30 feet) down the side of the house
> (drip loop again) to an SPG enclosure (Single Point Ground connected to a
> ground bar system) connecting to a Cushcraft LAC4H lightning protector
> mounted on the SPG. Then, into the shack using a 9913F coax jumper approx
10
> feet long, to the tuner. The loop will be used with 100w across 10m - 160m
> bands for both local and DX contacts. Questions: 1. Should the
total
> feedline length, or any part of it, be optimized to any length (1/2 wave),
> or not...? 2. The loop will be square with 68 feet per side (272
feet
> total). I have room to increase the antenna length, making it more
> rectangular with 2 sides of approx 100 feet. Should I....?? 3. I
will
> be using Dacron double braided poly line to support the loop. Is 3/32 dia
> rope strong enough or should I use 3/16 dia rope...? Any advice
> will be sincerely appreciated. Dennis, K1DRW, Philadelphia area.
>
>

46. Re: 80m Horizontal Loop - confirm configuration

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 18:01:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E132CFD.8000200@ieee.org>
Source record: 128036

Dennis Wells wrote:
> I will be installing an 80m horizontal loop approx 35 high. I will be
> feeding the loop using approx 100 feet of 450 ohm window ladderline to the
> eve of my house. Drip loop to under the eve where it will connect to a
> current balun, then 9913F coax (approx 30 feet) down the side of the house
> (drip loop again) to an SPG enclosure (Single Point Ground connected to a
> ground bar system) connecting to a Cushcraft LAC4H lightning protector
> mounted on the SPG. Then, into the shack using a 9913F coax jumper approx 10
> feet long, to the tuner. The loop will be used with 100w across 10m - 160m
> bands for both local and DX contacts. Questions: 1. Should the total
> feedline length, or any part of it, be optimized to any length (1/2 wave),
> or not...?

For 80m, 100 ft. of 450 ohm ladder-line is a pretty good length as it is close to 1/2WL. Why not download the free version of EZNEC from www.eznec.com and model your loop for the other bands? You will no doubt be close to worst case on one or more bands, worst case being a feedpoint resistance of thousands of ohms plus thousands of ohms of reactance. Under worst case conditions, your balun will be mostly ineffective.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

47. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 18:01:53 UTC
From: k3bu@aol.com
Message-ID: <20030101130153.01947.00000162@mb-cu.aol.com>
Source record: 128035

Rej counter-exclaimed:-)

>When using EZNEC to design parasitic arrays Q is not an input parameter. It
>is not even an end product. If any interest is taken in Q after a design is
>complete the only way to find its value is to measure it - if you know how.

It is not a direct parameter, but it is reflected indirectly say in the diameter of the wire (element). Ever tried to see the difference when using #14 wire vs. 100 mm diameter tubing? Q is not involved?

High Q is used to advantage in loaded antennas to perform as a filter. See K2KW and Force 12 notes on their loaded 40m verticals and how they helped to suppress out of band BC QRM.

Antenna modeling software is not capable (yet) to consider insulation on the wires, never mind the mechanism of coupling between the wire and the space.

Happy New 2003

Yuri, K3BU

48. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 19:29:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <86e61vggnln84fvhcdu3j3r7g4p7i91b4f@4ax.com>
Source record: 128037

On 1 Jan 2003 04:37:58 -0800, zeti@volcanomail.com (Swonssen) wrote:

>Assume an FM station antenna
>top is 500m from average ground. What would be the difference of the
>average coverage (range) of the station, if the pysical antenna size
>would be say 10m (on a 490m peak) or 50m(450m peak) ?

Hi Zender,

FM is principally line of sight coverage. The higher up, above the surrounding, proposed coverage area, the more area it can see. As for your variation in antenna size, that is another matter.

Any frequency mandates a single size structure to meet the needs of efficient radiation. For the commercial FM band this means that the simplest radiator stands 1/4 of 3 Meters tall (making it a quarterwave antenna at a frequency of 100 MHz) OR it could be an elevated, vertical dipole which spreads 1/2 of 3 Meters up-down. There are more complex designs of antennas design to focus power (pointing the power at listeners) that increase the size of the antenna, but not to the 10M or 50M size goliath you speculate above.

Adding complexity to the design to gain more focus has a point of diminishing returns and this relates to the radio horizon which for the 500M elevation, is found 57 Miles (92 KM) away. It does not take all that much power to satisfy a commercial customer that far away. Beyond that distance all that added power is shooting right over the heads of that distant listening community into outerspace.

The only recourse for that distant community is to hike up their own antenna, higher into the air in hopes of intersecting that wasted power passing over their heads. If we were to be gracious and allow that they could do this, our country cousins out 100 Miles from the FM antenna would have to build their own at a height of that same 500M. Some of those country cousins live in the hills, they can hear the FM with their kitchen radio. Their neighbors down in the valley have to build towers to put up their antennas.

Now, how about those neighbors in the next county? For instance 200 miles away: their antenna better be on the side of Mt Everest. The poor souls at the bottom of Everest won't hear a whisper, even if the FM station is blasting a gigaWatt their way. (Oh they may hear it second hand in the tempo of the dancing rubble as the RF induced avalanche slides down to town at the base.)

Now compare this to AM. Those folks out in the next county can hear the AM station (same power) that is located next door to the FM

station. The AM antenna may be huge in comparison to the FM, standing 1/4 of 300 Meters tall; but it can sit peacefully at a low elevation (at the bottom of that 500M hill) and still offer reliable service 200 Miles away. "Clear Channel" AM stations can offer service across half a continent. AM service is thus not limited to line of sight operation.

Those are the facts. The mechanisms that come to bear on these remarkable differences are encompassed in many topics that are best left to other questions and discussion.

73's
Richard Clark, KB7QHC

49. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 19:40:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E134422.2090306@ieee.org>
Source record: 128038

Reg Edwards wrote:
> So for a dipole antenna, Q = XL / Rrad

The ARRL Antenna Book sez: "Then, for frequency changes of
less than 5% from the exact resonant frequency, the antenna
Q is given with sufficient accuracy by the following formula:

Q = X/(2n*R) where n is the percentage difference, expresses
as a decimal, between the antenna resonant frequency and the
frequency at which X and R (feedpoint impedance) were measured."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

50. Re: Please suggest SW antenna for "French balcony"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 20:07:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2hh61vo3ppd9ac4sl9dj9di67lk5ffqi41@4ax.com>
Source record: 128039
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Tue, 31 Dec 2002 05:23:49 +0000, Candy <candy200@mailandnews.com>
wrote:

>Unfortunatelly, I can't drop wires down to neighbour's balcony, he is a
>nut.
>
>There are only two possible setups in my limited space balcony would a
>"V" dipole turned 90 degrees, something like this:
>
> 1.] 2.]
>
> 3.90 meters 195cm 195cm
>|----------------------* |-----------*-----------|
> | | |
> | | |
> | | |
> | | |
> | | |
> 2.41metres 2.41metres
>
>Will any of those schemes work as dipole ? I'll build an impendance
>transformer (ratio 9:1, by FT82-77 Amidon toroid core, which is suitable
>for frequency range 100kHz up to 30 MHz.)
>
>Maybe a better approach would be a "random wire" antenna instead of a
>dipole, as one peace of wire, horizontal + downloead = 6.26 metres ?
>Will the transformer described above somehow help cover signals
>100kHz-30 MHz ? (receiving SW only).
>
>Someone in this newsgroups suggested a mobile CB whip placed horizontaly
>with an impendance transformer ratio 9:1, I'll try that too, but first
>I'd' like to build some antenna with the cheapest material: a wire, if
>possible.
>
>Thanks.

Hi Candy,

As a SWL, you will want to listen to many different frequencies - more
than any single antenna design would be optimal for. That sounds like
bad news - it is not. Receivers can work very well with less than
optimum. The reason to have a dipole is to null out stations off the
ends of the dipole. This sometimes means that you need two dipoles at
90ï¿½ to each other.

Think of it as a random dipole as long as you can build one with reasonable balance (largely determined by visual inspection). With balance, you maintain those nulls and are reasonably divorced from issues of ground and earth. Turn the exact same length of span into a random wire, and you have to add more wire somewhere to serve as either a counterpoise, or earth.

The choice of random dipole or random wire is generally imposed by limiting conditions, such as yours. Being limited to an apartment environment, then random wire becomes a natural consideration. As I suggested earlier, you need something to provide balance (and hence the suggestion of more wire). This would come in the form of a drop wire that falls to earth below, or simply somewhere short of it. You could dress this up against the building; following a drain pipe; behind trim (if vertical); and so one. Thus, the random wire becomes a severely unbalanced random dipole, only longer and bent. Unfortunately, due to this bend (the unbalance that is visually obvious), the nulls off the ends are filled with noise and signals you might not want to have heard. C'est la vie.

73's
Richard Clark, KB7QHC

51. Re: Random Length Wire Antenna Question: Loop Or straight Congig. Best ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 20:08:12 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E134AAC.4F624EF7@cwis.net>
Source record: 128040

Robert,
The simplest answer is to try it and see. I guess
that depends on how easy it is to get into your attic.
There really isn't anything special about a 'straight'
antenna versus a loop when used over a very large
range of frequencies.
'Doc

52. Re: GAP VERTICAL ANTENNA PERFORMANCE

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 20:33:06 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <auvj9fffc1@slb9.atl.mindspring.net>
Source record: 128041

None of the responses were of much use. No one bothered to mention whether it worked better or worse than whatever and on what band or path or whether it was local (stateside) or DX.

Generally speaking a vertical will start to 'show its stuff' on the long haul stuff. A low wire will outperform it every time within a few thousand miles. The GAP is probably the best vertical antenna out there. And thats my opinion...

Dan/W4NTI

"Asa Page" <asapage@worldnet.att.net> wrote in message
news:1yCQ9.23240$p_6.1848839@bgtnsc04-news.ops.worldnet.att.net...
> All,
>
> Great advice . . . lots to think about. Appreciate your responses.
>
> Happy and Safe New Year to all of you.
>
> 73's,
>
> Asa - KH2N
>
>
> "Asa Page" <asapage@worldnet.att.net> wrote in message
> news:oO5Q9.86825$hK4.7058468@bgtnsc05-news.ops.worldnet.att.net...
> > Anyone had any experiences with either the Titan DX or the Challenger DX
> > vertical antennas produced by GAP Antennas? If you had it to do all
over
> > again, would you purchase either of the antennas again?
> >
> > Just looking before I leap.
> >
> > Thanks.
> >
> > Asa
> > KH2N
> >
> >
>
>

53. Re: 80m Horizontal Loop - confirm configuration

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 20:38:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E1351E0.B09ACEEA@cwis.net>
Source record: 128042

Dennis,
Unless there's some reason that won't allow you
to change your antenna at a later time, try the loop
as you have suggested. See how it works out. Later,
increase the size of the loop to the full extent of
the area you have (320'?). Compare the results.
I think it would work 'more better' if you didn't
bother with the 9913 and the balun (not to mention the
cost). Ladder line isn't ~that~ hard to deal with, it's
just different than coax. I'm not sure what the
Cushcraft lightning protector is, but if it's of the 'gap'
type, it's a complete waste of time.
'Doc

54. a few newbie questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 20:43:16 UTC
From: mdgk <mopedgeek@REMOVEnf.sympatico.ca>
Message-ID: <3E13533A.E27B76A7@REMOVEnf.sympatico.ca>
Source record: 128043

On hf antenna setups people loop the coax on the tower to "choke" the rf (i don't completely understand this), is it needs for 2 meter vhf?

What will I expect to pay for a lightening arrestor. The type i'm looking for are the inline coax type (is there any other options?).

thanks in advance

55. Re: PME and ELCB's, RCCD's & MCB's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 20:58:00 UTC
From: Ian Pollard <easthorton@msn.com>
Message-ID: <9bl61vkusoaj7gn9b4du5l48950kkf26lv@4ax.com>
Source record: 128044
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,uk.radio.amateur

On Wed, 1 Jan 2003 10:32:53 -0000, "r.dring" <r.dring@ntlworld.com>
wrote:

>There seems to be some confusion about PME, and circuit breakers. (UK only)
>During the post world war 2 building boom there was a need to reduce the
>cost of housing construction. PME could help, by allowing a reduction
>in the number of cable cores that needed to be run in a domestic electrical
>installation. The neutral and earth being the same conductor.
<SNIP>

I have a similar kind of installation with a few minor differences. My
mains supply is delivered via overhead lines. I get one phase, neutral
and earth delivered in separate single core conductors from the
nearest distribution transformer (about 1km distant). I have concerns
regarding the earth and reckon it is simply a connection to neutral at
the distribution transformer. What should I do about earthing gear in
the shack? I don't have any kind of circuit breaker, just fuses and a
normal mains switch.

Ian

--
Ian Pollard//Wooler//Northumberland//UK
pollard@bigfoot.com

56. Q: W6ELProp parameters

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 21:00:02 UTC
From: Bjorn Henrik Vangstein <vangstein@bluezone.no>
Message-ID: <1041454032.191573@a217-118-32-43.bluecom.no>
Source record: 128045

I'm using the fine W6ELProp software to make condx predictions on HF. But I'm not quite sure on the prediction parameter settings. Some help would be very welcome:

1) Minimum radiation angle:
The program is very sensitive to this setting. My antenna is a vertical high up and the main lobe has an theoretivcal elevation angle equal to 16 degrees. But if I limit the usable modes to 16 degrees or higher the propagation predictions turn out very bad! What is the practical lower limit here? 10 degrees? Or even lower?

2) Noise bandwith:
Should I set this equal to my receiver bandwith (500 Hz on CW)?

3) Transmitter power:
I expected that the predictions should be sensitive to the transmitting power used. Why isn't this a prediction parameter?

73 de LA5MDA, Henrik
Oslo

57. Re: a few newbie questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 21:24:37 UTC
From: John Passaneau <w3jxp@adelphia.net>
Message-ID: <p0JQ9.41841$VA5.8459181@news1.news.adelphia.net>
Source record: 128046

Hi mdgk:

The point of the choke balun, is that we don't want the signal, both transmit and receive to travel down the outside of the coax. In coax the signal should be confined to the inside of the coax. The choke balun does this by presenting a high impedance to signals traveling down the outside of the coax. This is also important on VHF but the method used is sometimes different than use commonly on HF. At VHF frequencies, the antenna design is what commonly decides if a balun is needed.

As for the lighting arrestor, at VHF, inline is the only type used. A good one will cost between $50-$100 depending on the type. I would suggest that you look at PolyPhaser (www.polyphaser.com) for information on the types available and how to use them.

I would also suggest that you get a copy of the ARRL antenna book from www.arrl.org. if you want to learn more about antennas.

--
John Passaneau W3JXP
State College, Pa
w3jxp@adelphia.net

"mdgk" <mopedgeek@REMOVEnf.sympatico.ca> wrote in message
news:3E13533A.E27B76A7@REMOVEnf.sympatico.ca...
> On hf antenna setups people loop the coax on the tower to "choke" the rf
> (i don't completely understand this), is it needs for 2 meter vhf?
>
> What will I expect to pay for a lightening arrestor. The type i'm
> looking for are the inline coax type (is there any other options?).
>
> thanks in advance
>
>
>
>
>

58. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 21:27:42 UTC
From: k1bqt@aol.com
Message-ID: <20030101162742.23021.00000272@mb-mf.aol.com>
Source record: 128047

Hi Doc--

Only problem with my original suggestion is that it is horizontally polarized. If people are using car radios and portable handhelds, vertical might be better. Something like a simple groundplane.

Rick

59. Re: Q: W6ELProp parameters

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 22:17:27 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E1368B3.6090000@attbi.com>
Source record: 128048

I use the following with fair to good results:

1) 2 degrees
2) 500 Hz, for CW; or 2500 Hz for SSB
3) By default the program assigns 100 Watts. It assumes the dx station
is 100 watts. If it is known that the dx is running more power you can
add it to the output plots.
*) You can also add the gain of your antenna(s) in the options.

Hope this helps. 73,

Deacon Dave W1MCE

Bjorn Henrik Vangstein wrote:
> I'm using the fine W6ELProp software to make condx predictions on HF. But
> I'm not quite sure on the prediction parameter settings. Some help would be
> very welcome:
>
> 1) Minimum radiation angle:
> The program is very sensitive to this setting. My antenna is a vertical high
> up and the main lobe has an theoretivcal elevation angle equal to 16
> degrees. But if I limit the usable modes to 16 degrees or higher the
> propagation predictions turn out very bad! What is the practical lower limit
> here? 10 degrees? Or even lower?
>
> 2) Noise bandwith:
> Should I set this equal to my receiver bandwith (500 Hz on CW)?
>
> 3) Transmitter power:
> I expected that the predictions should be sensitive to the transmitting
> power used. Why isn't this a prediction parameter?
>
> 73 de LA5MDA, Henrik
> Oslo
>
>
>
>

60. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 22:41:42 UTC
From: richardharrison@webtv.net
Message-ID: <9642-3E136EA6-66@storefull-2316.public.lawson.webtv.net>
Source record: 128050

CAM wrote:
" Q = X / (2n*R) "

This is (Eq 3) on page 2-5 of the 19th edition of the ARRL Antenna Book.
Q = Fo delta X / 2 Ro delta F
as I read it.

Best regards, Richard Harrison, KB5WZI

61. constructing UHF connectors for 3/4 inch Aluminum hardline.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 23:13:23 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <f6t61vgon9ojnt1t9t8f673kadj58kjrjc@4ax.com>
Source record: 128049

There has been some interest so I thought I'd post a link to some photos and instructions on how I make relatively inexpensive UHF connectors for 3/4 inch Aluminum hardline. This is the stuff the cable companies use for their mains around here.

Oft times you can find a partial reel that has been thrown out, or at least I used to find the stuff readily available. The companies would (back then) prefer to use the absolute minimum of connectors so when they ended up with roll of the stuff that had a bad spot they pitch the whole reel rather than add connectors.

At any rate, http://www.rogerhalstead.com/conn.htm has three photos of the female UHF adapters along with an explanation. Unfortunately I don't have any that are in parts to show the step-by-step construction, but they are simple.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

62. Re: a few newbie questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 23:17:29 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E137709.BB0E7BFC@qth.com>
Source record: 128051
Body handling: Binary attachment payload not displayed: radioranch.vcf

Choke/ Balun Not normallly needed on VHF....save your money on the arrestor...disconnect when not in use...they dont often work....Have fun...Murray

mdgk wrote:

> On hf antenna setups people loop the coax on the tower to "choke" the rf
> (i don't completely understand this), is it needs for 2 meter vhf?
>
> What will I expect to pay for a lightening arrestor. The type i'm
> looking for are the inline coax type (is there any other options?).
>
> thanks in advance

[One or more binary attachments are retained only in the source text.]

63. Re: GAP VERTICAL ANTENNA PERFORMANCE

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-01 23:51:10 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <O9LQ9.110681$pe.4115970@news2.east.cox.net>
Source record: 128052

I had a Titan. I thought it was pretty good on 20 and above but not so hot below. Worthless on 80. I found my 102 foot top fed doublet L did as well or better on all bands for a lot less $$.

If you have 2 50 foot or so trees about 50 feet apart, string a wire from one to the other. Run the other half of the antenna down to the ground. Feed it at the top center with ladder line to a 1:1 balun to a short piece of coax to a tuner. Mine works 160-10 and does better than the Titan ever did. See Cebik's articles on the top fed L for more info.
http://www.cebik.com/ltv.html
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460
"Asa Page" <asapage@worldnet.att.net> wrote in message
news:oO5Q9.86825$hK4.7058468@bgtnsc05-news.ops.worldnet.att.net...
> Anyone had any experiences with either the Titan DX or the Challenger DX
> vertical antennas produced by GAP Antennas? If you had it to do all over
> again, would you purchase either of the antennas again?
>
> Just looking before I leap.
>
> Thanks.
>
> Asa
> KH2N
>
>

64. Standard

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 00:09:13 UTC
From: Carl Domanico <carl.domanico@verizon.net>
Message-ID: <3E138361.2020503@verizon.net>
Source record: 128053

For Sale or Trade : Standard C-5718DA 144/440 FM Mobile Radio
Hi I have a Standard C-5718DA Mobile Radio which I bought new. However I just purchased another car and deceided not to install the radio in this car....The radio is fully modified...for out of Band use...also has 800 MHz coverage....Plus can receive AM....
I have the optional Memory chip which allows for 100 memory channels per band....I also have extra mic cables 12' and 25'. The power output as indicated by a Bird wattmetter into a Bird Termaline Dummyload is : 55 Watts on 2 meters and 42 Watts on 440...I have the original manual and box. I would prefer a swap for a functioning High Frequency Radio.....However I will consider selling the unit for cash......

Carl
N2MFW

65. Carolina 160 Windom by Radio Works

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 00:34:41 UTC
From: W0SZ <zumbruns@evertek.net>
Message-ID: <av01gm$5n6$1@ins22.netins.net>
Source record: 128055

Anyone have any information on the above antenna in so far as how it preforms on 160, 80 and 40 meters? Thanks and 73, Steve W0SZ

66. Re: What kind of balun do you use for HF antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 00:34:50 UTC
From: Glynn Kevin <kfglynn@mindspring.com>
Message-ID: <av01e2cqq1@slb9.atl.mindspring.net>
Source record: 128054

Hi Doc,

I tried vertical antennas and horizontal dipoles with no chokes at the feedpoint and TVI/RFI was a horrow show. Living in NYC makes it a real problem. Once I went to horizontal dipoles with coax and W2DU chokes the problem was minmized by huge amounts.

I am going with chokes on my new antennas, but was trying to get a consensious of who uses what and how effective coax chokes would be vs. W2DU type choke baluns. And I was trying to see how worth it it'd be to insert a balun at the edge of the roof, where the feedline runs right near the antenna elements prior to going to the window.

73 Kevin N2TO
Brooklyn, NYC
kfglynn@mindspring.com

"'Doc" <w5lz@cwis.net> wrote in message news:3E0F99B9.4010000@cwis.net...
> Glynn,
> Why use one at all?
> 'Doc
>
>

67. Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 00:52:31 UTC
From: Brian Warn <brwarn@oz.net>
Message-ID: <av02gfoam0@216.39.144.200>
Source record: 128056

I'm sure this question has been asked many times, but I've so far been unable to find it discussed anywhere. What sort of anti-corrosion protectant should I apply to connectors (SO-239, PL-259, etc.) after I've cleaned the corrosion off of them?

73,
Brian KD7TAE

68. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 01:19:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v174tbqoi6kpe6@corp.supernews.com>
Source record: 128058

NEC-4 includes wire insulation as an option, and there was a comprehensive article in, I believe, Ham Radio magazine a few years back by Bob Haviland, W4MB, on how to do the calculations.

Coupling from the antenna to space is certainly included in calculations by NEC-2 as well as NEC-4. In fact, NEC-4 allows the antenna to be immersed in a medium of arbitrary conductivity and permittivity.

Factors which give certain antennas magical properties aren't considered by such programs as NEC-2. Alas, these pedantic programs are limited to applying only the laws of physics, and don't include factors existing only in antenna manufacturers' marketing departments, horoscopes, and Ouiji boards. Antennas designed with those factors considered do, of course, have vastly superior performance.

But enough of this Christmas-fools-day joking, you kidder, you. I won't be fooled again, haha.

Roy Lewallen, W7EL

Yuri Blanarovich wrote:

> . . .

> Antenna modeling software is not capable (yet) to consider insulation on the
> wires, never mind the mechanism of coupling between the wire and the space.
>
> Happy New 2003
>
> Yuri, K3BU

69. Re: constructing UHF connectors for 3/4 inch Aluminum hardline.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 01:21:57 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <NdMQ9.10371$us1.9266@news.bellsouth.net>
Source record: 128059

Thanks Roger. I know can use the 40-50 feet to go up the tower.

--
73,
Chuck
KE4ETH
USA-NA
Remove the obvious from Email.

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:f6t61vgon9ojnt1t9t8f673kadj58kjrjc@4ax.com...
> There has been some interest so I thought I'd post a link to some
> photos and instructions on how I make relatively inexpensive UHF
> connectors for 3/4 inch Aluminum hardline. This is the stuff the
> cable companies use for their mains around here.
>
> Oft times you can find a partial reel that has been thrown out, or at
> least I used to find the stuff readily available. The companies would
> (back then) prefer to use the absolute minimum of connectors so when
> they ended up with roll of the stuff that had a bad spot they pitch
> the whole reel rather than add connectors.
>
> At any rate, http://www.rogerhalstead.com/conn.htm has three photos of
> the female UHF adapters along with an explanation. Unfortunately I
> don't have any that are in parts to show the step-by-step
> construction, but they are simple.
>
> Roger Halstead (K8RI EN73 & ARRL Life Member)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)

70. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 01:35:32 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E139764.DCCEAF5D@cwis.net>
Source record: 128060

Brian,
Nothing.
'Doc

71. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 01:41:09 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1761cj2hpsgdf@corp.supernews.com>
Source record: 128061

Brian Warn wrote:
> I'm sure this question has been asked many times, but I've so far been
> unable to find it discussed anywhere. What sort of anti-corrosion
> protectant should I apply to connectors (SO-239, PL-259, etc.) after I've
> cleaned the corrosion off of them?
>
> 73,
> Brian KD7TAE
>
>
Two things are at work here....anti-corrosion and sealing from the
environment.
From my practical experience of being in CATV in the Caribbean Islands
I'd say glob everything with silicone grease. The screw threads, etc
....just don't gunk up the innards of the connector. Silicon grease
will easily arc at high power.
There's lots of new-fangled tapes and shrink boots that work well but
the initial connection must be secure. In practice, all of the boots,
etc are simply a second-level way of sealing against the environment.
Even a properly made PL259 is pretty weatherproof but its hard to beat a
half-roll of good electrical tape on a connector.
RTV is popular but is difficult to apply evenly. And there are acetic
properties that may be an issue. Works good ON TOP of a layer of tape.
And then if its shrink-booted the archealogists a million years from
now will admire the connection with awe.
From a ham standpoint we tend to rework all these things every year or
so, consequently its not so demanding.
-Bill WX4A

72. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 02:17:55 UTC
From: k3bu@aol.com
Message-ID: <20030101211755.06337.00000276@mb-dh.aol.com>
Source record: 128062

>Roy Lewallen, W7EL wrote:

>NEC-4 includes wire insulation as an option, and there was a
>comprehensive article in, I believe, Ham Radio magazine a few years back
>by Bob Haviland, W4MB, on how to do the calculations.
>
>Coupling from the antenna to space is certainly included in calculations
>by NEC-2 as well as NEC-4. In fact, NEC-4 allows the antenna to be
>immersed in a medium of arbitrary conductivity and permittivity.
>

QSL, looks like time to claim up to NEC-4 for more serious work.
When I asked about insulated wire modeling while back, I guess you referred to
NEC2 having problems.

Thanks!
:-) New Year

Yuri

73. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 02:27:21 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <kdGdnWz9D-2WL46jXTWcow@ctc.net>
Source record: 127972

>
> I'm going to turn a loop antenna on Quaker oats tube. The Idea here is to
> turn enough to get it resonant some where in the AM radio band, then tap
off
> shorter for higher freq SW bands. I have a bag of 1.5pf - 5pf variable
> capacitors to help tune the impedance.
>
You need to start off with a much larger capacitor. Something in the range
of 300 to 400 pF for the maximum would probalby be a good guess.

74. length of coax on mag mount antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 02:29:06 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0301011829.28511f7a@posting.google.com>
Source record: 128063

Recently, while in a hurry I stuck my 2m/440 Hustler mag mount antenna on the roof of my car but was then distracted, suffered a moment of "brain cramp", and backed down the driveway without placing the coax in thru the window. I drove over the coax and ripped up the outer braid beyond repair.

I was successful in disassembling the base to fit a new piece of coax but the thought comes to mind.....does it need to be the same length as the original? As originally supplied its much longer than needed for my vehicles. Can I make it shorter without degrading performance?

Rich K2CPE

75. Re: What kind of balun do you use for HF antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 02:31:47 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <av08aj$7h$2@knossos.btinternet.com>
Source record: 128064

Just a suggestion - try using your antenna without a balun. If it works,
very sensibly, don't bother to fix it.

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

76. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 02:31:47 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <av08ai$7h$1@knossos.btinternet.com>
Source record: 128065

"OC_CAM's Razor"
> Q is given with sufficient accuracy by the following formula:
>
> Q = X/(2n*R) where n is the percentage difference, expresses
> as a decimal, between the antenna resonant frequency and the
> frequency at which X and R (feedpoint impedance) were measured."

==========

Dear Cecil, Yuri and Richard,

If antenna Q is sufficiently important for radio amateurs to go to great lengths to calculate its value from elaborate, tedious measurements, could you please describe how and for what purpose the numerical value of Q is used once it is known?

In the absence of a sensible, numerical response it must be concluded antenna Q is a relatively unimportant antenna parameter which nobody knows the value of anyway.

[PS: I wonder why I am reminded the reason stated on this newsgroup for making expensive, time consumimg field-strength measurements versus distance from a 1KW transmitter is to provide data for calculating ground conductivity. The reason, of course, for determining ground conductivity is to allow prediction of field strength radiated by a 1KW transmitter along the same ground path.]

Let's send food and medical supplies to Iraq and Korea. I look forward to having some fun on this newsgroup in 2003. ;o)

Reg, G4FGQ

77. Re: length of coax on mag mount antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 02:33:16 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <v1797acvgajc3@corp.supernews.com>
Source record: 128066

"rich a." <rckchp@comcast.net> wrote in message
news:6dc33f40.0301011829.28511f7a@posting.google.com...
> Recently, while in a hurry I stuck my 2m/440 Hustler mag mount antenna
> on the roof of my car but was then distracted, suffered a moment of
> "brain cramp", and backed down the driveway without placing the coax
> in thru the window. I drove over the coax and ripped up the outer
> braid beyond repair.
>
> I was successful in disassembling the base to fit a new piece of coax
> but the thought comes to mind.....does it need to be the same length
> as the original? As originally supplied its much longer than needed
> for my vehicles. Can I make it shorter without degrading performance?
>
> Rich K2CPE

Yes!
--
'73' From KB9TMP
"The secret of life is honesty and fair dealing,
if you can fake that, you've got it made."
-Groucho Marx

78. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 02:44:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E13A79F.9080702@ieee.org>
Source record: 128067

Reg Edwards wrote:
> If antenna Q is sufficiently important for radio amateurs to go to great
> lengths to calculate its value from elaborate, tedious measurements, could
> you please describe how and for what purpose the numerical value of Q is
> used once it is known?

Again, quoting the ARRL Antenna Book: "Another measure of antenna
bandwidth is its Q."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

79. Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 02:47:49 UTC
From: James Hilins <jhilins@wi.rr.com.REMOVE>
Message-ID: <pLNQ9.67757$Zt4.793073@twister.rdc-kc.rr.com>
Source record: 128068

(Receive only antenna for Antique Console Radios)

I'm going to turn a loop antenna on Quaker oats tube. The Idea here is to turn enough to get it resonant some where in the AM radio band, then tap off shorter for higher freq SW bands. I have a bag of 1.5pf - 5pf variable capacitors to help tune the impedance.

So I hope to pick the brain trust out there to help save some time and experimentation.

One idea is to turn it from the center of the tube to one end clock wise and from the center to the other end counter clockwise center tap it and use the trim cap to cancel out the inductance. This way the currents are opposite but equal (kind of like a dipole wrapped on a oatmeal box, with each leg wound in opposite directions) I'll keep adding turns until my MFJ antenna analyzer is happy.

Another idea is to turn it from one end to the other attach ground to one end and then start tapping from the other end for AM and SW bands use the trim capacitors as needed to cancel inductance.

Anyone out there have any experience with this? Any other construction techniques?

Jim Hilins

Reply to
ka4upw@wi.rr.com

80. Re: length of coax on mag mount antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 03:10:34 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v17b8v4rnmmifb@corp.supernews.com>
Source record: 127969

KB9TMP wrote:
> "rich a." <rckchp@comcast.net> wrote in message
> news:6dc33f40.0301011829.28511f7a@posting.google.com...
>
>>Recently, while in a hurry I stuck my 2m/440 Hustler mag mount antenna
>>on the roof of my car but was then distracted, suffered a moment of
>>"brain cramp", and backed down the driveway without placing the coax
>>in thru the window. I drove over the coax and ripped up the outer
>>braid beyond repair.

Damn, you must have been really peeling rubber! In spite of how flimsy RG58 is, from what I have experienced it should probably be replaced annually anyway if any movement of it is involved. I won't bother to ask how you managed to run over your antenna but 'movement involved' seems to apply.
Replace it to length and naught you should worry. If you plan to do this regularly then check into some bigger, more durable cable. A heavy piece of waveguide might serve to chock the vehicle when it takes a mind to chew up RG58 and there are adaptors available.
:-)
-Bill M

81. Control Program for IC 756 Pro

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 03:13:50 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <3db71v0dj3u6hu7cqt4rrrcpc825fkudn4@4ax.com>
Source record: 127970

Any one know where I can find a control program for the IC 756 Pro?
I went tot he QRZ.com site and found one that sounded like it might
work, but it turned out to be for a receiver. When I tried to about
the installation it didn't have a feature to gracefully exit the
install. It was easy enough to get out, but I expect most programs to
give me a choice any where in the install.

At any rate, I haven't found any place so far that has a control
program that works with XP, Win 2000 Pro, or LINUX.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

82. Re: PME and ELCB's, RCCD's & MCB's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 03:21:27 UTC
From: richardharrison@webtv.net
Message-ID: <1952-3E13B037-85@storefull-2313.public.lawson.webtv.net>
Source record: 127974

Ian Pollard wrote:
"I get one phase, neutral and earth---."

Not too different from most U.S. households. U.S. shock potential is "halved" as the distribution transformer secondary coil is centre-tapped. This centre-tap is connected to earth. So the maximum bite we are exposed to is normally 120 volts rms. We get three-wire single-phase service, 240 volts live wire to live wire, and 120 volts, live wire to neutral. With overhead distribution, the distribution circuit is connected to earth at nearly every supporting pole. In other distributions, earth connections are made at nearly every opportunity. Distribution secondaries are connected, right at the transformer, along with the distribution primary circuit to earth.

Ian`s 1-km long secondary circuit drop wiring is a little long by rule of thumb. Being only 240 volts, it should probably be no longer than about 400 meters. The rule says you need a KV per mile in transmission circuits. So 0.6 mile would rerquire 600 volts (0.6 volt / metre). Bigger wire can limit the voltage drop. The rule is just for economy.

Ian`s concern is "earthing gear in the shack". He doesn`t identify his digs, high-rise or ranch-house? His electrical service should have its earthed wire bonded to a sustantial and permanent rod in the earth at the service entrance. It also should be bonded to a metal water pipe nearby if there is one.

Any metal appliance which may become electrified should be securely conected to the earth or it should be "doule-isulated" to reduce shock hazard.

The U.S. now has a wire separate from the neutral (until these are joined at the service entrance) for connecting devices to the earth. Before that became the norm, large appliances, such as stoves and ranges had the neutral wire connected to all exposed metal.

If everything that could become shocking in Ian`s shack were well connected to the neutral feed for the shack, the only shock hazard comes from a live wire.

For more safety, double ground every piece of gear in the shack so that a single failure doesn`t leave you floating and shocked. You can work out your own schemes to avoid ground loops.

Best regards, Richard Harrison, KB5WZI

83. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 03:34:42 UTC
From: James Hilins <jhilins@wi.rr.com.REMOVE>
Message-ID: <mrOQ9.67842$Zt4.796375@twister.rdc-kc.rr.com>
Source record: 127973

Why more capacitance?
What are you basing it off? How many turns ? What turn spacing ?
Jim
"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:kdGdnWz9D-2WL46jXTWcow@ctc.net...
> >
> > I'm going to turn a loop antenna on Quaker oats tube. The Idea here is
to
> > turn enough to get it resonant some where in the AM radio band, then tap
> off
> > shorter for higher freq SW bands. I have a bag of 1.5pf - 5pf variable
> > capacitors to help tune the impedance.
> >
> You need to start off with a much larger capacitor. Something in the
range
> of 300 to 400 pF for the maximum would probalby be a good guess.
>
>

84. Re: length of coax on mag mount antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 03:59:43 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <uHOQ9.4978$wQ1.3085@fe01>
Source record: 127975

rich a. wrote:
> Recently, while in a hurry I stuck my 2m/440 Hustler mag mount antenna
> on the roof of my car but was then distracted, suffered a moment of
> "brain cramp", and backed down the driveway without placing the coax
> in thru the window. I drove over the coax and ripped up the outer
> braid beyond repair.
>
> I was successful in disassembling the base to fit a new piece of coax
> but the thought comes to mind.....does it need to be the same length
> as the original? As originally supplied its much longer than needed
> for my vehicles. Can I make it shorter without degrading performance?
>
> Rich K2CPE

It needs to be exactly long enough to reach the rig.

73 de W6DKN

85. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 04:02:09 UTC
From: k3bu@aol.com
Message-ID: <20030101230209.01851.00000214@mb-fc.aol.com>
Source record: 127976

G4FGQ writes:
>
>If antenna Q is sufficiently important for radio amateurs to go to great
>lengths to calculate its value from elaborate, tedious measurements, could
>you please describe how and for what purpose the numerical value of Q is
>used once it is known?
>
>In the absence of a sensible, numerical response it must be concluded
>antenna Q is a relatively unimportant antenna parameter which nobody knows
>the value of anyway.

I don't think we are after precise value of the antenna Q, I was questioning how the Q might affect antenna's coupling effciency to space. One significance of Q is the bandwidth of the antenna, another significance is its effect in parasitic arrays.

Based on previous claims (W6SAI) in literature, I learned that Quad loops have low Q, therefore are more broadband (than Yagi el.), do not couple as well in parasitic array (Quad loses gain game vs. Yagi past abt. 4 el.) as Yagi elements. When playing wit my Quagi Razors on 2m range, it showed that with 1 parasitic quad element past driver, further Yagi elements produced more gain. Now R.L. Cebik claims (appears based on soft modeling) that Quad loops have higher Q than Yagi elements. Go figure, or better measure and see whats up. I see contradiction and want to see what is really going on. It has implication in high performance array design. Dipoles are fine and happy without it :-)

Based on tuned circuits coupling, like in IF transformers, we know that higher Q produces sharper curves, better coupling and more signal. Because antenna elements are tuned RF circuits and antennas are RF transducers between wires and air, I wondered if there was any connection between Q and coupling to space (capture area), besides other effects.
Thatsall!

Yuri

86. Re: Control Program for IC 756 Pro

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 04:25:34 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <2bPQ9.15605$4j5.7120402@newssvr28.news.prodigy.com>
Source record: 127971

My favorite is TRX-Manager...works well with almost any rig, and runs on all windows versions. www.trx-manager.com Has a good logging program built-in and links to LoGic6 also. Has a very useable Remote function also, and lots of other nifty features. Written by Laurent, F6DEX, and there's a demo version available to try.

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:3db71v0dj3u6hu7cqt4rrrcpc825fkudn4@4ax.com...
> Any one know where I can find a control program for the IC 756 Pro?
> I went tot he QRZ.com site and found one that sounded like it might
> work, but it turned out to be for a receiver. When I tried to about
> the installation it didn't have a feature to gracefully exit the
> install. It was easy enough to get out, but I expect most programs to
> give me a choice any where in the install.
>
> At any rate, I haven't found any place so far that has a control
> program that works with XP, Win 2000 Pro, or LINUX.
>
> Roger Halstead (K8RI EN73 & ARRL Life Member)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)

87. Re: Random Length Wire Antenna Question: Loop Or straight Congig. Best ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 05:09:55 UTC
From: "Antti J. Huhtala" <ahuhtal4@welho.com>
Message-ID: <3E13C9A2.798BFFF1@welho.com>
Source record: 128057

Robert11 wrote:

> Hi,
>
> Using a random-length wire running around the 4 sides of my atic, with about
> a 10 foot vertical drop to my receiver in a
> room below. The attic configuration is pretty much of a 360 degree loop in
> the horiz. plane.
>
> The end of the wire in the attic is open, not connected to anything.
>
> I saw a post where the writer said:
>
> "The longer, the higher and the straighter the better"
>
> This got me to wondering (the "straighter" comment) if I might be better off
> without having the wire make
> the 360 degrees configuration, and perhaps just having it go up to the
> attic, and then a straight, single run,
> along the long side of the house (about 45 feet) ?
>
> I do listening only, and use the aerial for reception up to 30 MHz, or so.
>
> Any thoughts wouldbe most appreciated.
>
> Thanks,
> Bob

The answer to your question is not quite straightforward. Assuming
your house is, say, 30 ft. wide, the (loop)wire is approx. 150 ft. long. That
means it is about a half-wavelength long on 91,5 meters or 3.28 MHz.
On this frequency (and lower), currents induced by passing radio waves
in parallel parts of the wire tend to oppose each other resulting in partial
cancellation of the received signal. Therefore, you'd probably be better off
with the straight 45 ft. wire.
On the other hand, on frequencies near 6,56 MHz (2*3.28) the currents
tend to reinforce each other, and the "loop" would give you better signals.
(Loop is perhaps not the best term here because the far end is connected
nowhere. I'd call it a longwire folding onto itself.)
The above description is admittedly (over-)simplified because it doesn't
discuss the significance of *direction* to the transmitter being received
and phase differences resulting from this.
However, as a general rule, I'd agree with the anonymous poster on "high"
and "straight". "Long" is debatable because the longer the wire is, compared
with the wavelength received, the more directional it becomes, and then

there's always the danger of overloading the front-end of the receiver.
To sum it all up, I'd suggest a .25 to .5 wavelength long straight wire for the

wavelength (band) of greatest interest.

Best regards Antti, OH2DT

88. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 05:13:58 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <moh71voq7m8hivpt8u1h8kjlkjsdcb13eq@4ax.com>
Source record: 127977

On Wed, 01 Jan 2003 21:41:09 -0400, Bill M
<don'tspamme-exray@caribe.net> wrote:

>Brian Warn wrote:
>> I'm sure this question has been asked many times, but I've so far been
>> unable to find it discussed anywhere. What sort of anti-corrosion
>> protectant should I apply to connectors (SO-239, PL-259, etc.) after I've
>> cleaned the corrosion off of them?
>>
>> 73,
>> Brian KD7TAE
>>
>>
>Two things are at work here....anti-corrosion and sealing from the
>environment.
> From my practical experience of being in CATV in the Caribbean Islands
>I'd say glob everything with silicone grease. The screw threads, etc
>....just don't gunk up the innards of the connector. Silicon grease
>will easily arc at high power.

Beg to differ....That silicon grease was developed with the sole
intent of insulating the ignition systems on B-17s. It was used to
prevent arching in ignition systems powered by magnetos and they have
a hotter spark than your every day car. <:-)) It behaves very well at
quite high voltages. However, even if it does arc, it forms silicon
dioxide, better known as quartz. (I worked for the company that made
it) If you used the grease and it arced it had to be from
contamination and not due to the characteristics of the grease.

At UHF AND high voltages it may break down. I use it in every thing
here and I run the legal limit except on VHF and UHF. On 2-meters I'm
limited only by RF exposure levels rather than the legal limit of 1500
watts out. Actually I'm limited to 380 watts at the antenna
connector.

>There's lots of new-fangled tapes and shrink boots that work well but
>the initial connection must be secure. In practice, all of the boots,
>etc are simply a second-level way of sealing against the environment.
>Even a properly made PL259 is pretty weatherproof but its hard to beat a
>half-roll of good electrical tape on a connector.

"Flooded" heat shrink tubing. I get it at the local electrical
distributing company in 4 foot lengths. It works far better than
electrical tape. (no adhesive to get sticky and come loose) I let it
extend about 2 to 3 inches beyond the ends of the connectors in
splices. The interior contains something akin to hot melt glue.

So...never start at the ends and move toward the center. It'll look like a snake that just swallowed your pet cat.

However I'll grant the tape is a whole lot easier to install at 100 feet plus. OTOH I have been seen at the top of the tower with heat gun in hand.

>RTV is popular but is difficult to apply evenly. And there are acetic
>properties that may be an issue. Works good ON TOP of a layer of tape.
> And then if its shrink-booted the archealogists a million years from
>now will admire the connection with awe.

There are several types of RTV which was a trademark, but unfortunately has become generic. *Most* RTVs are acetic, but not all. There are some that are alcohol based, but they sure don't smell like it....They "stink". They do work fairly well, just consider any internal use turning the connectors into One-time-use.

> From a ham standpoint we tend to rework all these things every year or
>so, consequently its not so demanding.
>-Bill WX4A

Mine don't come down unless I have to work on an antenna. As high as they are that may be much more often than I'd like.

http://www.rogerhalstead.com/tower.htm

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S/N CD-2)

89. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 06:39:56 UTC
From: richardharrison@webtv.net
Message-ID: <2864-3E13DEBC-75@storefull-2312.public.lawson.webtv.net>
Source record: 127978

Reg Edwards wrote:
"---describe how and for what purpose the numerical value of Q is used once it is known."

Amateurs haven`t been using low frequencies for code transmission for most of a century. Commercial interests are more recent practitioners. When they did, antenna frequency discrimination limited the shape and resolution of their code pulses. You need the odd harmonics for square corners.

At low frequencies, the wavelengths are so long, that the antenna had to be very short in terms of wavelength. The short antenna had to have a large reactance as compared with its resistance. The bandwidth is equal to the frequency divided by Q. The antenna system is a coil-loaded series-resonant circuit.

Bandwidth is inversely proportional to Q. To reduce Q, the method used on some antennas is to use wire cages in place of single skinny wires. Another method is stagger tuning of paralleled wires.

Wideband requirements aren`t limited to low frequencies. I`ve heard of AM broadcast directional arrays with sideband cutting problems in some directions which were fixed by using extra wires to fatten the towers. I have no experience with this myself other than listening to distortion in the nulls of directional arrays. It continued unfixed.

I expect that hams could exploit some of the known techniques for lowering Q to cover a wider HF segment in a ham band without retuning.

Best regards, Richard Harrison, KB5WZI

90. Re: Control Program for IC 756 Pro

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 07:48:57 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <lmr71v8q0reih3rpnlh15anp48p9b0ckht@4ax.com>
Source record: 127979

On Thu, 02 Jan 2003 04:25:34 GMT, "Larry Phipps"
<larry@telepostinc.com> wrote:

>My favorite is TRX-Manager...works well with almost any rig, and runs on all
>windows versions. www.trx-manager.com Has a good logging program built-in
>and links to LoGic6 also. Has a very useable Remote function also, and lots
>of other nifty features. Written by Laurent, F6DEX, and there's a demo
>version available to try.

Thanks. I'll take a look at it.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

91. Has anyone moded their IC-756 PRO2 for Extended TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 07:49:48 UTC
From: BICisfag <ll@jj.com>
Message-ID: <3E13EF1C.268A101@jj.com>
Source record: 127981

Has anyone moded their IC-756 PRO2 for Extended TX?

How did you do it?

92. Re: Control Program for IC 756 Pro

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 07:54:33 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <ttr71vs7gvg2nalrepsj0fjrq3uu832cic@4ax.com>
Source record: 127980

On Thu, 02 Jan 2003 04:25:34 GMT, "Larry Phipps"
<larry@telepostinc.com> wrote:

>My favorite is TRX-Manager...works well with almost any rig, and runs on all
>windows versions. www.trx-manager.com Has a good logging program built-in
>and links to LoGic6 also. Has a very useable Remote function also, and lots
>of other nifty features. Written by Laurent, F6DEX, and there's a demo
>version available to try.

Unfortunately after going to the site I'm not willing to agree to the
licensing which is non transferable. <sigh>, but when I didn't find
the price on the home page I figured I'd probably pass.

Thanks for the information.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

93. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 09:29:33 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <DAuGJcG9ZAF+EA5m@ifwtech.co.uk>
Source record: 127983

Brian Warn wrote:
>I'm sure this question has been asked many times, but I've so far been
>unable to find it discussed anywhere. What sort of anti-corrosion
>protectant should I apply to connectors (SO-239, PL-259, etc.) after I've
>cleaned the corrosion off of them?

Good luck with cleaning the corrosion - but it's obviously better not to have let that happen. Here are a few ideas from a rainy country...

Self-amalgamating tape is your best friend. This is the stuff that welds together into a continuous rubber sheath (can someone in the USA recommend a 3M number?).

Regular PVC-based electrical tape is also effective for waterproofing, but it's not as good as the real self-amalgamating stuff... use it for a Field Day weekend, but not for anything you hope will be permanent.

To apply tape to a coax connector, start on the connector body and wind it the same way as you tightened the connector sleeve. Stretch the tape quite tight as you wind, and come down off the connector body on to the coax. Keep going for at least 2 inches along the coax, and finish by stretching the tape tight until it snaps. S-a tape cuts off easily after many years to reveal a perfectly clean, dry connector.

Try not to use SO-239s in outdoor situations - chassis/bulkhead mounting connectors are practically impossible to tape over. The best way to bring a coax lead out of a waterproof box is through a waterproof sealing gland, available from electrical suppliers. Then fit a line jack to the tail of coax (or a plug and a double-female adapter). When connected to a plug, this gives a nice round shape that can be taped very effectively. To tape over an inline connection, start on the body and tape down onto the coax as described above; then start again and repeat in the opposite direction.

If you absolutely must use a bulkhead socket outdoors, then you'll need some other sealant in addition to tape. Coax-Seal (tm) is good, but so too are silicone rubber and regular hot-melt glue.

Don't plaster Coax-Seal all over a plug and socket - ignore the adverts! It works well, but it's horrible to remove, and leaves the connector sticky and filthy. Reserve Coax-Seal for places where tape will not go - it bonds very well to s-a tape.

To waterproof an SO-239/PL-259 connection, begin by sealing all over the square base and onto the box, using Coax-Seal or similar. Make a thick 'O-ring' of sealant around the base of the round part of the socket, and then screw the ring of the plug down into it. Mold this firmly into

place to prevent water from creeping up inside the ring. Then cover with s-a tape, stretching it as tight as you can around to base of the socket to make a good seal.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

94. Re: Has anyone moded their IC-756 PRO2 for Extended TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 10:09:44 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <q6UQ9.5148$wQ1.2180@fe01>
Source record: 127982

BICisfag wrote:
> Has anyone moded their IC-756 PRO2 for Extended TX?

Nope, it covers all the ham bands just fine right out of the box... :>)

95. Re: 80m Horizontal Loop - confirm configuration

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 11:23:06 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <r3881v85poluvh8c90pln50c003sg9hi1s@4ax.com>
Source record: 127984

On Wed, 1 Jan 2003 08:55:15 -0500, "Dennis Wells" <k1drw@comcast.net>
wrote:

>I will be installing an 80m horizontal loop approx 35 high. I will be
>feeding the loop using approx 100 feet of 450 ohm window ladderline to the
>eve of my house. Drip loop to under the eve where it will connect to a
>current balun, then 9913F coax (approx 30 feet) down the side of the house
>(drip loop again) to an SPG enclosure (Single Point Ground connected to a
>ground bar system) connecting to a Cushcraft LAC4H lightning protector
>mounted on the SPG. Then, into the shack using a 9913F coax jumper approx 10
>feet long, to the tuner. The loop will be used with 100w across 10m - 160m
>bands for both local and DX contacts. Questions: 1. Should the total
>feedline length, or any part of it, be optimized to any length (1/2 wave),
>or not...? 2. The loop will be square with 68 feet per side (272 feet
>total). I have room to increase the antenna length, making it more
>rectangular with 2 sides of approx 100 feet. Should I....?? 3. I will
>be using Dacron double braided poly line to support the loop. Is 3/32 dia
>rope strong enough or should I use 3/16 dia rope...? Any advice
>will be sincerely appreciated. Dennis, K1DRW, Philadelphia area.

I would make the loop as big as you can , that way you won't have to
make spilces latter.. I have a 500' loop here works great 160--10m
fed with 300 ohm line about 40 feet directly to the tuner.. you may
have to adjust the length of feed line some but eventually you can
find a combo that works well on all bands.

Good Luck and Happy Hamming!
73 Dave Kc1di

96. 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 13:04:06 UTC
From: cprstn54zz@att.net
Message-ID: <3e143678.36035265@news-server.optonline.net>
Source record: 127985

Still looking for the ideal 40/80 camping QRP dipole (or doublet), I
am trying to reconcile W5DXP's approach (130 ft dipole fed with
variable-length ladder line) with W4RNL's suggestion (88 ft dipole,
fed with ???).

(1) How is the the 88 ft dipole fed? It is called a "doublet," so I
would assume balanced feed line -- but how long?

(2) How do these two antennas perform on 160, 20 and 10?

See:
http://www.qsl.net/w5dxp/notuner.htm
http://www.cebik.com/aledz.html

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

97. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 13:41:04 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <PFudnSJ9pcr83ImjXTWc2Q@crocker.com>
Source record: 127986

lets put it this way... there are an infinite number of possible combinations of wire lengths, baluns, feedlines, tuners, etc. you can ask all day and everyone who answers will have their own favorite that has worked for them in some situation and they will defend it as the best thing since bread slicers. what is important for you may be completely different than what they cared about, and what works for them may not work for you because of a variety of factors.

so to steal a phrase... just DO IT!

for camping use with only qrp tx i would recommend that you pick a convenient length of wire for a dipole. 50', 80', 120', whatever you think you can easily put up in the type of areas you go camping, physical arrangement being more important than electrical length... just think about where you go, if its a trailer camping area with power and water you probably won't be able to put up a full size 160m 1/2 wave dipole... you may be lucky to put up one that is 20' from end to end! if you go deep woods hiking and camping you may not have room to carry multiple lengths of ladderline, baluns, center insulators, etc. then think about how you could reasonably get the center feed point, again this depends on where you go.... it is hard in most areas to get a support up more than 20-30' in a tree, so 100' of ladderline would end up mostly on the ground which kind of defeats the purpose of it.

my recommendations... two pieces of thin bare wire(22ga or smaller depending on your weight limit or size limit) on plastic spools, maybe 50' each. use the spools as end insulators with some thin nylon rope through them. unroll them to use as much as you need to reach convenient supports. use a thin piece of plexiglass as a center insulator with another nylon rope. (ropes only need to be 5-10', maybe longer for the center one). get 25-30' of the thinnest coax you can find. put this up in your back yard and see if your tx loads into it on the bands you use. if it doesn't like to load it look into a small tuner, if you are backpacking you may want to take a small tuner apart and repackage it into a smaller and lighter case, most of them have switches, meters, connectors, baluns, and other junk you probably don't need.

"Ken" <cprstn54zz@att.net> wrote in message
news:3e143678.36035265@news-server.optonline.net...
> Still looking for the ideal 40/80 camping QRP dipole (or doublet), I
> am trying to reconcile W5DXP's approach (130 ft dipole fed with
> variable-length ladder line) with W4RNL's suggestion (88 ft dipole,
> fed with ???).
>
> (1) How is the the 88 ft dipole fed? It is called a "doublet," so I

> would assume balanced feed line -- but how long?
>
> (2) How do these two antennas perform on 160, 20 and 10?
>
> See:
> http://www.qsl.net/w5dxp/notuner.htm
> http://www.cebik.com/aledz.html
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

98. Re: Control Program for IC 756 Pro

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 13:41:20 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <qO0R9.1751$Tn.1138@news.bellsouth.net>
Source record: 127927

but when I didn't find
> the price on the home page I figured I'd probably pass.
From the homepage, click on Demo and Order, see second highlited topic on
that page "How to purchase the program? - The price is specified as approx
70$ US depending on shipping location, special taxes, etc. - also explains
the personalization key on the delivered CD and the non-transfer restriction
as you mentioned.

No affiliation with the program or author.

73
Ed - AD5JV

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:ttr71vs7gvg2nalrepsj0fjrq3uu832cic@4ax.com...
> On Thu, 02 Jan 2003 04:25:34 GMT, "Larry Phipps"
> <larry@telepostinc.com> wrote:
>
> >My favorite is TRX-Manager...works well with almost any rig, and runs on
all
> >windows versions. www.trx-manager.com Has a good logging program
built-in
> >and links to LoGic6 also. Has a very useable Remote function also, and
lots
> >of other nifty features. Written by Laurent, F6DEX, and there's a demo
> >version available to try.
>
> Unfortunately after going to the site I'm not willing to agree to the
> licensing which is non transferable. <sigh>, but when I didn't find
> the price on the home page I figured I'd probably pass.
>
> Thanks for the information.
>
> Roger Halstead (K8RI EN73 & ARRL Life Member)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)
>
>
>

99. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 13:43:53 UTC
From: richardharrison@webtv.net
Message-ID: <6725-3E144219-461@storefull-2317.public.lawson.webtv.net>
Source record: 127990

Ian, G3SEK wrote:
"Self-amalgamating tape is your best friend. This is the stuff that welds together into a continuous rupper sheath (can someone in the USA recommend a 3M number?)."

Ian hit the nail on the head!

Applied forcefully and carefully, starting from the bottom on vertical runs and working up overlapping slightly on each turn, just for extra water shedding, this stuff is impenetrable. We used this tape on tower top coax joints for company radios for decades and in hundreds of installations it never leaked. Sliced off the coax after many years, the coax connectors looked brand new.

We did not trust s-a tape`s resistance to the sun. So, we covered the s-a tape with friction tape and doped the joint. Then when PVC tape appeared, we started using 7-mil 3M PVC tape for the overwrap.

Don`t know if 3M manufactures s-a tape, but would expect it does. In the U.S. this tape was called rubber tape (it does have adhesive) or electrician`s tape. In any case, it is the most important tngredient of a water-proof coax joint.

Best regards, Richard Harrison, KB5WZI

100. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 13:52:07 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <buXQ9.598520$QZ.86513@sccrnsc02>
Source record: 127987

Around here they call that "coax seal". Wrap it around the connector and back down the coax a couple of inches, wet your hand and squeeze it into a homogenous blob. Works great and even Radio Shack carries it.
--

CW
KC7NOD

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message news:DAuGJcG9ZAF+EA5m@ifwtech.co.uk...
>> Self-amalgamating tape is your best friend. This is the stuff that welds
> together into a continuous rubber sheath (can someone in the USA
> recommend a 3M number?).
>

101. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 13:55:52 UTC
From: cprstn54zz@att.net
Message-ID: <3e1443e9.39475953@news-server.optonline.net>
Source record: 127988

On Thu, 2 Jan 2003 13:41:04 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:
>so to steal a phrase... just DO IT!

I did that with my shack dipole and didn't like the results. I am
back to first principles: measure twice, cut once. There is a reason
we have engineers. Trying all these possible combos is a lifelong
pursuit and I want to start off in the zone before I start fiddling.

I have already put in around 5 hours with EZNEC without finding
something satisfactory. If I had done all that in the field, it would
have been 5 days.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

102. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 14:11:40 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301020611.2fbdd68c@posting.google.com>
Source record: 127989

"Ralph Mowery" <rmowery@ctc.net> wrote in message news:<kdGdnWz9D-2WL46jXTWcow@ctc.net>...
> >
> > I'm going to turn a loop antenna on Quaker oats tube. The Idea here is to
> > turn enough to get it resonant some where in the AM radio band, then tap
> off
> > shorter for higher freq SW bands. I have a bag of 1.5pf - 5pf variable
> > capacitors to help tune the impedance.
> >
> You need to start off with a much larger capacitor. Something in the range
> of 300 to 400 pF for the maximum would probalby be a good guess.

Interesting thought! My first inclination would be for minimum
capacitance and an inductance of at least 100uH. I would imagine the
main problem will be
controlling the capacitance created by interwinding and stray
capacitance
created by nearby objects. Haven't really thought it out tho so it
will be interesting to read further comments.
Art

103. Re: 300 Feet of 7/8" Hardline - 70 Ohm

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 14:24:11 UTC
From: ron.lucier@flir.com
Message-ID: <90376889.0301020624.132e6374@posting.google.com>
Source record: 127991

Bill M <don'tspamme-exray@caribe.net> wrote in message
news:<v15rq88m25urde@corp.supernews.com>...
> Roger Halstead wrote:
> > On 31 Dec 2002 06:37:06 -0800, ron.lucier@flir.com (Ron Lucier) wrote:
> >
> >
> >>Best offer over the next week or it will be left out for the trash man
> >>to take. This is the end of a coil of cable TV hardline. Not sure
> >>the exact length - somewhere between 250 and 300 feet using the old Pi
> >>times D times the number of coils method. I live in Central Mass and
> >>unless you want to pay for shipping, meet me nearby to pick it up.
> >
> >
> > You sure that isn't 3/4 inch?
>
> 7/8" is pretty common in the CATV world as are some in-between values
> like .860.
>
> -Bill M

YES - it is 7/8" and I know it is easy to make connectors for it but
I'm just looking for a good home for this stuff. Otherwise it will be
in front of my house Monday morning for the trash man to take!

73 Ron

104. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 15:17:09 UTC
From: richardharrison@webtv.net
Message-ID: <9640-3E1457F5-506@storefull-2316.public.lawson.webtv.net>
Source record: 127993

Art Unwin wrote:
"My first inclination would be for minimum capacitance and an inductance of at least 100 uH."

Mine would be to reverse engineer a proven L/C. The typical broadcast tuning capacitor had a 365 picofarad maximum capacitance. Add maybe 25 pF for trimmer and stray capacitance, for a total of 390 pF.

This 390 pF should tune the coil to 540 KHz. My ARRL L/C/F Calculator says the coil needed is 220 microhenrys. It also says the minimum capacitance of 25 pF resonates the coil at 2.3 MHz. So, we can be sloppy and pile on extra capacitance and still tune the entire BC band.

Wind turns on the oatmeal cylinder until the coil resonates at 540 KHz when shunted with 390 pF, and the crystal set will probably tune OK.

Best regards, Richard Harrison, KB5WZI

105. Re: GAP VERTICAL ANTENNA PERFORMANCE

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 15:36:34 UTC
From: k9sqg@aol.com
Message-ID: <20030102103634.27836.00000349@mb-mo.aol.com>
Source record: 127992

My on the air tests indicated that a horizontal antenna is best close in, but the difference converges to zero at about a thousand miles out and then the vertical takes over as being better. This test was conducted over several years, on 40 m, with the GAP Challenger being ground mounted and the horizontal antenna about 30 ft up.

73s,

Evan

106. QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:07:57 UTC
From: ardujenski@aol.com
Message-ID: <20030102110757.02130.00000129@mb-bd.aol.com>
Source record: 127994

In reading Chapter 9 Section 3.4.1 of LOW BAND DXING it states that :

One way to improve the radiating efficiency of a vertical over poor ground is to replace the single radiating element with several close spaced verticals all fed in phase.

Is there an article that further addresses this? I run a 42ft ground mounted vertical and was wondering HOW MANY and HOW CLOSE? Will two or three say about 1/8 wave apart or are we talking a few meters? It is not clear what is meant here. Just looking for a guestimate. Thanks

Alan KB7MBI in Woodinville, WA
FISTS 5702 Proud member of ARRL
___ ___ . . . . . ___ ___ DIT DIT

107. Re: What kind of balun do you use for HF antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:09:10 UTC
From: k1bqt@aol.com
Message-ID: <20030102110910.29663.00000544@mb-cv.aol.com>
Source record: 127995

>try using your antenna without a balun. If it works very sensibly, don't bother to fix it.<

I like your logic, Reg. Here's a similar example. Have sex without using birth control. If the girl doesn't get pregnant, why bother with it in the future?

Rick K1BQT

108. Re: length of coax on mag mount antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:21:18 UTC
From: Kedrid <Kedrid@kedrid.com>
Message-ID: <av1ottevi1@slb9.atl.mindspring.net>
Source record: 127996

You can replace it, and have the cable be ANY lenght needed. Since you tune your antena at the whip it'self.. Via the tap screw, and your SWR meter. Also as stated previously I wouldn't have a lot of "extra" cable if not needed.. As far as tunning the length of the cable makes very little difference. Your cable under the first 100' is not normaly a problem, and I use the general rule of thumb your signal lose is 3db / 100' cable. so replace it, and don't worry unless your antena whip was shortened in the prossess too.. lol I would also err on the side of caution, and check your match anyway.

73s

"rich a." <rckchp@comcast.net> wrote in message
news:6dc33f40.0301011829.28511f7a@posting.google.com...
> Recently, while in a hurry I stuck my 2m/440 Hustler mag mount antenna
> on the roof of my car but was then distracted, suffered a moment of
> "brain cramp", and backed down the driveway without placing the coax
> in thru the window. I drove over the coax and ripped up the outer
> braid beyond repair.
>
> I was successful in disassembling the base to fit a new piece of coax
> but the thought comes to mind.....does it need to be the same length
> as the original? As originally supplied its much longer than needed
> for my vehicles. Can I make it shorter without degrading performance?
>
> Rich K2CPE

109. Scanner antenna question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:28:23 UTC
From: Gadget150 <gadgetgru@netscape.net>
Message-ID: <3E1468A7.30501@netscape.net>
Source record: 127997

Hello there,
I have a Radio Shack Discone model 20-043.. My problem is this
I have it hooked up to either my Pro-2006 or BC780XLT
I monitor VHF and UHF bands and the antenna works great!...but when I
monitor our Police or Fire in the 800Mhz band the signal is quite weak
and I find that a back of set antenna works better in that band!
So I have to switch antennas all the time and it's a bit of a pain!
I have my antenna on the roof...
I thought that the discone was meant to work 25-1300 Mhz obviously one
antenna just won't work well in all the bands?
Question?...
Is this antenna a very good one?
What is the very top vertical section for?..
Is there a better antenna for multi band use?

Thanks for any help or advice you may offer
-Russ gadgetgru@netscape.net
--
Your favorite stores, helpful shopping tools and great gift ideas.
Experience the convenience of buying online with Shop@Netscape!
http://shopnow.netscape.com/

110. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:32:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E146987.8030404@ieee.org>
Source record: 127998

Ken wrote:
> Still looking for the ideal 40/80 camping QRP dipole (or doublet), I
> am trying to reconcile W5DXP's approach (130 ft dipole fed with
> variable-length ladder line) with W4RNL's suggestion (88 ft dipole,
> fed with ???).
>
> (2) How do these two antennas perform on 160, 20 and 10?

Not very well on 160m. As dipoles are shortened below 1/2WL, the
feedpoint resistance gets lower and the feedpoint reactance gets
higher. The shorter the dipole, the higher the SWR. A good rule
of thumb is not to use a wire dipole shorter than 3/8 wavelength
(without loading coils).
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

111. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:33:54 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E1469F1.6577EA36@cwis.net>
Source record: 127999

Ken,
If you're looking for ~the~ perfect antenna, I'm afraid you are out of luck. There isn't one. There are only antennas that work well for a particular circumstance. You've also picked two bands that will require a fairly long antenna. You can 'shrink' an antenna to some extent, but don't expect a 'rubber-duck' to do much on 160m (slight exageration, but not much).
I really think that your best bet would be a small tuner and as long a wire as you can carry. That wire can be end fed or center fed (up to you) with what ever feed line you can manage. It won't work 'well' on all bands but it will certainly get you ~on~ most of them.
Good luck...
'Doc

112. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:42:53 UTC
From: Steve <invalid@xyz.net>
Message-ID: <h_ZQ9.5219$wQ1.4680@fe01>
Source record: 128002

Yuri Blanarovich <k3bu@aol.com> wrote:
: Antenna modeling software is not capable (yet) to consider insulation on the
: wires, never mind the mechanism of coupling between the wire and the space.

: Happy New 2003

: Yuri, K3BU

This modeling capability has been available for many years, J.H. Richmond published a thin wire code that included dielectric sheath (insulation) effects in 1974.

"Radiation and Scattering by thin wire structures in a homogeneous conducting medium", IEEE Transactions on Antennas and Propagation, vol AP-22, pp. 365-, March 1974.

"Computer Program for thin wire structures in a homogeneous conducting medium", Nat. Tech. Inform. Service, Springfield, VA 22151, NASA CR-2399, June 1974.

I am not sure what you mean by "never mind the mechanism of coupling between the wire and the space". This is exactly the information antenna modeling programs are designed to give you. For a given model (wire antenna) and excitation, you can determine the EM field anywhere in space.

113. Re: How much difference does a resonant antenna make?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:43:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E146C40.9000003@ieee.org>
Source record: 128000

Bob Cameron wrote:
> The cruncher with the main question is why do we bother even analysing
> antenna reactance? We can do all of our tuning with just an SWR meter?

Historically, SWR meters have been used by hams primarily on HF.
If the feedline is low loss and the SWR is reasonable (less than
about 25:1 for open-wire line) the antenna *system* can be made
resonant without worrying about the length of the wire dipole.
I do all my "trimming" at the transmitter where conditions are
always comfortable.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

114. Re: Scanner antenna question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:46:47 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <6tOcna9WpKV18YmjXTWc2Q@crocker.com>
Source record: 128001

any wide band antenna like that is a compromise and is bound to not be as good somewhere as other antennas are. one thing to check is the type and length of coax you are using, 100' of a cheap coax can cost 20db or more on 800mhz.

"Gadget150" <gadgetgru@netscape.net> wrote in message news:3E1468A7.30501@netscape.net...
> Hello there,
> I have a Radio Shack Discone model 20-043.. My problem is this
> I have it hooked up to either my Pro-2006 or BC780XLT
> I monitor VHF and UHF bands and the antenna works great!...but when I
> monitor our Police or Fire in the 800Mhz band the signal is quite weak
> and I find that a back of set antenna works better in that band!
> So I have to switch antennas all the time and it's a bit of a pain!
> I have my antenna on the roof...
> I thought that the discone was meant to work 25-1300 Mhz obviously one
> antenna just won't work well in all the bands?
> Question?...
> Is this antenna a very good one?
> What is the very top vertical section for?..
> Is there a better antenna for multi band use?
>
> Thanks for any help or advice you may offer
> -Russ gadgetgru@netscape.net
> --
> Your favorite stores, helpful shopping tools and great gift ideas.
> Experience the convenience of buying online with Shop@Netscape!
> http://shopnow.netscape.com/
>

115. Re: 300 Feet of 7/8" Hardline - 70 Ohm

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 16:55:06 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <f6r81vk38jhe8qamvnonanji68j4hpcbfc@4ax.com>
Source record: 128003

On 2 Jan 2003 06:24:11 -0800, ron.lucier@flir.com (Ron Lucier) wrote:

>Bill M <don'tspamme-exray@caribe.net> wrote in message
news:<v15rq88m25urde@corp.supernews.com>...
>> Roger Halstead wrote:
>> > On 31 Dec 2002 06:37:06 -0800, ron.lucier@flir.com (Ron Lucier) wrote:
>> >
>> >
>> >>Best offer over the next week or it will be left out for the trash man
>> >>to take. This is the end of a coil of cable TV hardline. Not sure
>> >>the exact length - somewhere between 250 and 300 feet using the old Pi
>> >>times D times the number of coils method. I live in Central Mass and
>> >>unless you want to pay for shipping, meet me nearby to pick it up.
>> >
>> >
>> > You sure that isn't 3/4 inch?
>>
>> 7/8" is pretty common in the CATV world as are some in-between values
>> like .860.
>>
>> -Bill M
>
>YES - it is 7/8" and I know it is easy to make connectors for it but
>I'm just looking for a good home for this stuff. Otherwise it will be
>in front of my house Monday morning for the trash man to take!

Good luck, The stuff works so well, but for some reason too many hams
have it fixed in their heads they have to use the "regular stuff". I
had a bunch of the 3/4 stuff...I used a lot of it in long runs. The
tower was over 300 feet from the house back then.

If we were closer I'd put it in my shop just in case one of the locals
needed an inexpensive alternative to the more expensive stuff..

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>73 Ron

116. Re: What kind of balun do you use for HF antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 17:03:48 UTC
From: tdonaly@aol.com
Message-ID: <20030102120348.02047.00000138@mb-fd.aol.com>
Source record: 128005

Rick wrote,
>
>
>>try using your antenna without a balun. If it works very sensibly, don't
>bother to fix it.<
>
>I like your logic, Reg. Here's a similar example. Have sex without using
>birth
>control. If the girl doesn't get pregnant, why bother with it in the future?
>
>Rick K1BQT
>
>
>

Reg was talking about a different kind of antenna than you are, Rick.
Besides, he didn't say anything about the future in his post.
73,
Tom Donaly, KA6RUH

117. Directional 1.2 GHz antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 17:04:30 UTC
From: Wes <RWestman@Cox.Net>
Message-ID: <yi_Q9.99985$Y86.44555@news2.central.cox.net>
Source record: 128007

Good day,

Can someone provide me with a link or drawing so I can built an "inexpensive" directional receiver antenna for a 1.2 GHz color camera. I saw one shown on news television piece. My reception is okay, but I would like to make it better.

Thanks

118. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 17:05:14 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3E14714A.71E1@mindspring.com>
Source record: 128006

WELL..... I like the answer "Get on with it" Already.... IF you like playing with computer modeling all day, Then fine.... IF you want fun, Then put something up and have at it! Regards, Sparks W4EAS

119. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 17:30:10 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <o2Zs0lAicHF+EAu6@ifwtech.co.uk>
Source record: 128010

CW wrote:
>
>"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
>news:DAuGJcG9ZAF+EA5m@ifwtech.co.uk...
>>> Self-amalgamating tape is your best friend. This is the stuff that welds
>> together into a continuous rubber sheath (can someone in the USA
>> recommend a 3M number?).

> Around here they call that "coax seal". Wrap it around the connector and
>back down the coax a couple of inches, wet your hand and squeeze it into a
>homogenous blob. Works great and even Radio Shack carries it.

If you had read my whole message, you would know that self-amalgamating
tape is NOT the same as Coax-Seal.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

120. Morse code cookie cutter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 17:34:23 UTC
From: goofy <dbeard@aoc.nrao.edu>
Message-ID: <av1t6v$n1t$1@chaos.aoc.nrao.edu>
Source record: 128009

Dear Ham dudes!

Christmas morning found me staring at a red plastic cookie cutter
while drooling into my first cup of coffee. To my surprise this
cookie cutter had Morse code on it that said "Merry Yhristmas"!!!
I guess they made a mistake and made the C a Y. I was blown
away by this knowing that someone in the past sent a secret message
down through time and I rcvd it on Christmas morning!

The cutter was (is) made by HRM in the USA. It is a Christmas tree
and the garland around the tree is Morse code.

I preformed a search on the web and told all of my Ham clown friends
of this find yet no one had been previously aware of this so I"m telling
the world NOW!!!

Check out your cookie cutters! Do you have one? Have you ever heard of
this before? Etc.

KC0KZE
D.J. Beard
National Radio Astronomy Observatory
Very Long Baseline Array
North Liberty, Iowa

121. Re: Control Program for IC 756 Pro

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 17:38:56 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <cqr81v8kkkv6id2gq162egui97qp91otcr@4ax.com>
Source record: 128008

On Thu, 02 Jan 2003 07:54:33 GMT, Roger Halstead <rdhalste@tm.net>
wrote:

>On Thu, 02 Jan 2003 04:25:34 GMT, "Larry Phipps"
><larry@telepostinc.com> wrote:
>
>>My favorite is TRX-Manager...works well with almost any rig, and runs on all
>>windows versions. www.trx-manager.com Has a good logging program built-in
>>and links to LoGic6 also. Has a very useable Remote function also, and lots
>>of other nifty features. Written by Laurent, F6DEX, and there's a demo
>>version available to try.
>
>Unfortunately after going to the site I'm not willing to agree to the
>licensing which is non transferable. <sigh>, but when I didn't find
>the price on the home page I figured I'd probably pass.

Many thanks for all those who have offered suggestions.
I have several control programs I can try now.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>Thanks for the information.
>
>Roger Halstead (K8RI EN73 & ARRL Life Member)
>www.rogerhalstead.com
>N833R World's oldest Debonair? (S# CD-2)
>
>

122. Re: Scanner antenna question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 17:57:31 UTC
From: "Dee D. Flint" <deehays@qix.net>
Message-ID: <f4%Q9.17191$4j5.7193284@newssvr28.news.prodigy.com>
Source record: 128004

"Gadget150" <gadgetgru@netscape.net> wrote in message
news:3E1468A7.30501@netscape.net...
> Hello there,
> I have a Radio Shack Discone model 20-043.. My problem is this
> I have it hooked up to either my Pro-2006 or BC780XLT
> I monitor VHF and UHF bands and the antenna works great!...but when I
> monitor our Police or Fire in the 800Mhz band the signal is quite weak
> and I find that a back of set antenna works better in that band!
> So I have to switch antennas all the time and it's a bit of a pain!
> I have my antenna on the roof...
> I thought that the discone was meant to work 25-1300 Mhz obviously one
> antenna just won't work well in all the bands?
> Question?...
> Is this antenna a very good one?
> What is the very top vertical section for?..
> Is there a better antenna for multi band use?
>
> Thanks for any help or advice you may offer
> -Russ gadgetgru@netscape.net

The discone antenna should work fine. What kind of coax are you using on the discone? What kind of coax are you using on the other antenna? Is one antenna higher in the air than the other? Is the other antennal directional or omnidirectional?

A discone comes closer than any other antenna to being good on multiple bands. Try to get hold of a copy of the ARRL Antenna book and read up on discones.

Dee Flint, N8UZE

123. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 18:22:45 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <av1vqd$2j0f$1@news1.tribune.com>
Source record: 128011

I use the W4RNL 88 foot antennas for field day.
When Mounted More than a half wave above ground (that is more than 70 feet
for 40 meters) the 88 foot antenna has predictable patterns on 20 meters and
a reasonable efficiency on 80.

When mounted less than 1/2 wave length above the ground dipoles tend to
become omnidirectional.

If your portable antenna will be less than 70 feet above ground the
advantage of the 88 foot length disappears.

KA9CAR

"Ken" <cprstn54zz@att.net> wrote in message
news:3e143678.36035265@news-server.optonline.net...
> Still looking for the ideal 40/80 camping QRP dipole (or doublet), I
> am trying to reconcile W5DXP's approach (130 ft dipole fed with
> variable-length ladder line) with W4RNL's suggestion (88 ft dipole,
> fed with ???).
>
> (1) How is the the 88 ft dipole fed? It is called a "doublet," so I
> would assume balanced feed line -- but how long?
>
> (2) How do these two antennas perform on 160, 20 and 10?
>
> See:
> http://www.qsl.net/w5dxp/notuner.htm
> http://www.cebik.com/aledz.html
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

124. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 18:32:24 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301021032.289a30b8@posting.google.com>
Source record: 128012

"Brian Warn" <brwarn@oz.net> wrote in message news:<av02gfoam0@216.39.144.200>...
> I'm sure this question has been asked many times, but I've so far been
> unable to find it discussed anywhere. What sort of anti-corrosion
> protectant should I apply to connectors (SO-239, PL-259, etc.) after I've
> cleaned the corrosion off of them?
>
> 73,
> Brian KD7TAE

Brian, many say silicone grease 'as used by experts' where-as we are
but amateurs!
During my working years I often found that silicone contamination some
how had a way of getting on device contact surfaces even tho the
nearest grease supply
was some distance away . I personaly avoid it like a plague.
Art

125. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 18:34:09 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <BC%Q9.601883$NH2.40822@sccrnsc01>
Source record: 128013

Up yours.
"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:o2Zs0lAicHF+EAu6@ifwtech.co.uk...
> CW wrote:
> >
> >"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
> >news:DAuGJcG9ZAF+EA5m@ifwtech.co.uk...
> >>> Self-amalgamating tape is your best friend. This is the stuff that
welds
> >> together into a continuous rubber sheath (can someone in the USA
> >> recommend a 3M number?).
>
> > Around here they call that "coax seal". Wrap it around the connector and
> >back down the coax a couple of inches, wet your hand and squeeze it into
a
> >homogenous blob. Works great and even Radio Shack carries it.
>
> If you had read my whole message, you would know that self-amalgamating
> tape is NOT the same as Coax-Seal.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

126. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 18:39:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6e191v8natpcmbtucc7oghfl0lhh4naubh@4ax.com>
Source record: 128014

On 02 Jan 2003 04:02:09 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

>Based on tuned circuits coupling, like in IF transformers, we know that higher
>Q produces sharper curves, better coupling and more signal. Because antenna
>elements are tuned RF circuits and antennas are RF transducers between wires
>and air, I wondered if there was any connection between Q and coupling to space
>(capture area), besides other effects.
>Thatsall!
>
>Yuri

Hi Yuri,

You have it backwards. Q does not produce anything, it is the product
OF stored power and loss - it is the loss that is (un)productive.

Q does not cause coupling, Q is diminished by coupling (normally known
as loaded-Q).

In every discussion of Q, resistive loss leads the way and Q follows.

The significant determinant is the ratio of ohmic loss to radiative
loss - Q, as Richard Harrison pointed out, is only a meaningful factor
when its high value intrudes and clips modulation bandwidth.

73's
Richard Clark, KB7QHC

127. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 18:49:45 UTC
From: cprstn54zz@att.net
Message-ID: <3e14840c.55895296@news-server.optonline.net>
Source record: 128015

On Thu, 02 Jan 2003 12:05:14 -0500, Sparks W4EAS
<sparksw4eas@mindspring.com> wrote:
>WELL..... I like the answer "Get on with it" Already.... IF you like
>playing with computer modeling all day, Then fine.... IF you want fun,
>Then put something up and have at it! Regards, Sparks W4EAS

No one is camping now (in northern climes), so this is a good time for gathering information and for running simulations.

My shack antenna is an Alpha-Delta DX-LB+. It has four coils and three dipoles. I expected it to work 160-10. But it didn't. By asking questions here, I learned why it didn't work for me where I wanted it to work, and how to get it to work. The information was valuable, and not readily available elsewhere.

Same for the backpack QRP dipole -- only more so, because it has to be light.

Lastly, planning and learning *is* fun -- and a principle purpose of ham radio. Some folks like a radio ragchew, some to chase DX, some like to master complex technology and find elegant solutions.

If this were for a business, good enough would be good enough. But it is not a business.

So far in this thread, I learned that 88 ft. is not a plus for me because my feedpoint will rarely be above 25 ft. So I am probably back to the 130 ft doublet with variable-length balanced feed line.

What I still don't know about the doublet is, If I am willing to use a modest tuner, what is a good compromise length for the feedline? I have seen an antenna like this offered -- with 75 ft of balanced feed line:
http://kk4tr.tripod.com/index-10.html

Unfortunately, I can't get the answer for myself because I can't figure out how to model a balanced feed line in EZNEC.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

128. Re: PME and ELCB's, RCCD's & MCB's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 18:57:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <46291vs8camrb6pdc3h8fj0eupnkc0kqte@4ax.com>
Source record: 128016

On Wed, 1 Jan 2003 21:21:27 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>You can work
>out your own schemes to avoid ground loops.
>
>Best regards, Richard Harrison, KB5WZI

Gad Richard,

That is the greatest single activity doomed to failure from
"self-empowerment" and the naive illusion of what constitutes ground.

For every shack with an acknowledged ground problem, there are
probably 10 "perfectly user grounded" shacks in denial - with
unremitting ground loops and a spider web of earth connections driving
spurious signal straight into the signal feed.

73's
Richard Clark, KB7QHC

129. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 18:58:11 UTC
From: dplatt@radagast.org
Message-ID: <v192u3bclbbqda@corp.supernews.com>
Source record: 128017

>Self-amalgamating tape is your best friend. This is the stuff that welds
>together into a continuous rubber sheath (can someone in the USA
>recommend a 3M number?).

I don't have the 3M part number, I'm afraid.

AMP makes a version of this, as part #605262-1 - Electronics Goldmine
has rolls of it (1" wide, 10' long un-stretched) for all of $2, or
four for $7 (their stock #G12875). I think this is definitely in the
"gotta have, to throw a roll in the go-pack" category!

I found a similar tape at Home Depot, under the name "Stretch-n-Seal"
or something like that... it was about $6 for a 15' roll.

>Try not to use SO-239s in outdoor situations - chassis/bulkhead mounting
>connectors are practically impossible to tape over.

N connectors, on the other hand, have a lot better water resistance.
They're a bit more expensive but I think they're worth the money.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

130. Re: constructing UHF connectors for 3/4 inch Aluminum hardline.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:03:52 UTC
From: Allodoxaphobia <nobody@jonz.net>
Message-ID: <slrnb1938m.ug4.nobody@animas.frontier.net>
Source record: 128018

On Wed, 01 Jan 2003 23:13:23 GMT, Roger Halstead hath writ:
> There has been some interest so I thought I'd post a link to some
> photos and instructions on how I make relatively inexpensive UHF
> connectors for 3/4 inch Aluminum hardline. This is the stuff the
> cable companies use for their mains around here.
>
> Oft times you can find a partial reel that has been thrown out, or at
> least I used to find the stuff readily available. The companies would
> (back then) prefer to use the absolute minimum of connectors so when
> they ended up with roll of the stuff that had a bad spot they pitch
> the whole reel rather than add connectors.
>
> At any rate, http://www.rogerhalstead.com/conn.htm has three photos of
> the female UHF adapters along with an explanation. Unfortunately I
> don't have any that are in parts to show the step-by-step
> construction, but they are simple.
>
> Roger Halstead (K8RI EN73 & ARRL Life Member)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)

As, well, I natter on about it, too, in:

http://jonz.net/W3DHJ/catvhardline.html

HNY es gud dx
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

131. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:11:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <co391v4nvlevnabenta02aibourh7bl4p4@4ax.com>
Source record: 127919

On Thu, 02 Jan 2003 05:13:58 GMT, Roger Halstead <rdhalste@tm.net>
wrote:

>
>There are several types of RTV which was a trademark, but
>unfortunately has become generic. *Most* RTVs are acetic, but not
>all. There are some that are alcohol based, but they sure don't smell
>like it....They "stink". They do work fairly well, just consider any
>internal use turning the connectors into One-time-use.
>

Hi Roger,

The reason for the stink is that the alcohol may in fact be the common
thinner for this - acetone.

73's
Richard Clark, KB7QHC

132. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:15:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i2491v4ifequckv532ans2q0cv2kveifqi@4ax.com>
Source record: 127920

On Thu, 2 Jan 2003 09:29:33 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

> Keep going for at least 2 inches along the coax, and finish by
>stretching the tape tight until it snaps.

Hi Ian,

A tight wrap is good until the last turn or two where it should be
relaxed so that the end does not suffer sheer stress and pull itself
open.

73's
Richard Clark, KB7QHC

133. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:22:33 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <98491vkrql4tqlled1aqu1aa5i4o9ltkpe@4ax.com>
Source record: 127921

On Thu, 2 Jan 2003 17:30:10 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>
>If you had read my whole message, you would know that self-amalgamating
>tape is NOT the same as Coax-Seal.

Hi Ian,

I think it goes by the name of Cold Fusion Tape here (the only success
of Pons & Fleishman?). I have a roll of it from Radio Shack, but I
cannot find any cat. number to offer in assistance (it comes with a
burnt-orange colored vinyl separating liner between the inner/outer
faces as it is rolled - other wise the roll would fuse to itself).

73's
Richard Clark, KB7QHC

134. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:26:53 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <1o0R9.533495$WL3.140745@rwcrnsc54>
Source record: 127922

I believe W8JI debunked this idea on one of the reflectors he
frequents (either towertalk or topband). My modelling on
EZNEC tends to support Tom on this one.

Rick N6RK

"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20030102110757.02130.00000129@mb-bd.aol.com...
> In reading Chapter 9 Section 3.4.1 of LOW BAND DXING it states that :
> ---
> -------------------
> One way to improve the radiating efficiency of a vertical over poor ground
is
> to replace the single radiating element with several close spaced
verticals all
> fed in phase.
> ---
> -------------------
> Is there an article that further addresses this? I run a 42ft ground
mounted
> vertical and was wondering HOW MANY and HOW CLOSE? Will two or three say
about
> 1/8 wave apart or are we talking a few meters? It is not clear what is
meant
> here. Just looking for a guestimate. Thanks
>
> Alan KB7MBI in Woodinville, WA
> FISTS 5702 Proud member of ARRL
> ___ ___ . . . . . ___ ___ DIT DIT

135. Re: Scanner antenna question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:31:24 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v194qck9f9af3f@corp.supernews.com>
Source record: 127924

As a general rule, a discone antenna's radiation pattern is only usable over about a 1:3 frequency ratio. The discone part of your antenna probably only has an appropriate pattern from 140 MHz to perhaps 500 MHz.
A "top vertical section" is sometimes added to a discone to cover "Low Ban."
As others have said, the additional signal loss in the connecting coax at 800+ MHz will be a contributing factor.
Since you have a strong signal at 800 MHz in the room with the radio, why not build a simple ground plane mounted in the room and run the two pieces of coax to a switch? A coax connector (with about 90 mm of stiff wire) in the middle of a pie tin should do the trick.
73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Gadget150" <gadgetgru@netscape.net> wrote in message news:3E1468A7.30501@netscape.net...
> Hello there,
> I have a Radio Shack Discone model 20-043.. My problem is this
> I have it hooked up to either my Pro-2006 or BC780XLT
> I monitor VHF and UHF bands and the antenna works great!...but when I
> monitor our Police or Fire in the 800Mhz band the signal is quite weak
> and I find that a back of set antenna works better in that band!
> So I have to switch antennas all the time and it's a bit of a pain!
> I have my antenna on the roof...
> I thought that the discone was meant to work 25-1300 Mhz obviously one
> antenna just won't work well in all the bands?
> Question?...
> Is this antenna a very good one?
> What is the very top vertical section for?..
> Is there a better antenna for multi band use?
>
> Thanks for any help or advice you may offer
> -Russ gadgetgru@netscape.net
> --
> Your favorite stores, helpful shopping tools and great gift ideas.
> Experience the convenience of buying online with Shop@Netscape!
> http://shopnow.netscape.com/
>

136. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:31:50 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v194oo1ela7d24@corp.supernews.com>
Source record: 127923

Ian White, G3SEK wrote:
> CW wrote:
>
>>
>> "Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
>> news:DAuGJcG9ZAF+EA5m@ifwtech.co.uk...
>>
>>>> Self-amalgamating tape is your best friend. This is the stuff that
>>>> welds
>>>
>>> together into a continuous rubber sheath (can someone in the USA
>>> recommend a 3M number?).

Years ago there was a tape called Bishop Bi-Seal that somewhat fits this
description. Had a rubbery outer layer and a more mastic inner layer.
Good stuff but prone to deterioration from the elements. The routine
was to cover it with regular electrical tape.
Not sure if its still available.

-Bill M

137. Re: Scanner antenna question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:31:58 UTC
From: KB7M <kb7m@arrl.net>
Message-ID: <Rs0R9.39$DR5.82462@news.uswest.net>
Source record: 127925

One issue with the discone antenna is that as the frequency increases, the angle of radiation (the angle at which it recieves and transmits best) increases. The antenna may present a good match to the receiver at 800 Mhz, but not receive as well towards the horizon.

"Gadget150" <gadgetgru@netscape.net> wrote in message news:3E1468A7.30501@netscape.net...
> Hello there,
> I have a Radio Shack Discone model 20-043.. My problem is this
> I have it hooked up to either my Pro-2006 or BC780XLT
> I monitor VHF and UHF bands and the antenna works great!...but when I
> monitor our Police or Fire in the 800Mhz band the signal is quite weak
> and I find that a back of set antenna works better in that band!
> So I have to switch antennas all the time and it's a bit of a pain!
> I have my antenna on the roof...
> I thought that the discone was meant to work 25-1300 Mhz obviously one
> antenna just won't work well in all the bands?
> Question?...
> Is this antenna a very good one?
> What is the very top vertical section for?..
> Is there a better antenna for multi band use?
>
> Thanks for any help or advice you may offer
> -Russ gadgetgru@netscape.net
> --
> Your favorite stores, helpful shopping tools and great gift ideas.
> Experience the convenience of buying online with Shop@Netscape!
> http://shopnow.netscape.com/
>

138. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:57:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <fq491v4ndobmouvkivck85qdu0qodkskch@4ax.com>
Source record: 127926

On Thu, 2 Jan 2003 09:17:09 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>This 390 pF should tune the coil to 540 KHz. My ARRL L/C/F Calculator
>says the coil needed is 220 microhenrys. It also says the minimum
>capacitance of 25 pF resonates the coil at 2.3 MHz. So, we can be sloppy
>and pile on extra capacitance and still tune the entire BC band.
>

Hi Richard,

The common, commercial 360pF variable cap so often used for AM radios
would be hard pressed to offer less than 5-10% as its lowest value,
and with the additional 30pF trimmer you generously allowed, the top
of the AM band is not all that far away.

In the real world of staged tuned front ends; successful trimmer
settings were more often found with two rules:
1. Adjust the RF stage's trimmers at the high end
2. Adjust the Osc stage's trimmer at the low end.
2a. Repeat 1 & 2 until no particular frequency shows any marked peak.
Adjustment 2 relates to what is called tracking differences between
the tuning range of the larger RF sections, and the smaller Osc
section of a multi-section variable cap.

The Osc stage operates over a stretch of frequencies that are 1:1
related to the tuned frequency of the RF stages, but offset upwards by
the IF, most often 455kHz. For 540kHz to 1620kHz coverage, the Osc
stage has to cover the same span, but from 995kHz to 2075kHz. Seems
simple enough, but this means the two equal spans are tuned with
different increments of same knob travel (the "tracking" problem). As
such, the two circuits, through brutal geometry and the cold hand of
physical linkage, drift apart in resonance-difference as the knob is
turned.

Of the two adjustments, again adjustment 2 had more impact because
there was generally not enough Q for the RF tweaks to peak at. It is
the Osc adjustment that dominates what gets through the IF, even if
the RF stages are way off.

73's
Richard Clark, KB7QHC

139. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 19:58:54 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <44eIHIC+nJF+EAsw@ifwtech.co.uk>
Source record: 127946

Dave Platt wrote:
>>Self-amalgamating tape is your best friend. This is the stuff that welds
>>together into a continuous rubber sheath (can someone in the USA
>>recommend a 3M number?).
>
>I don't have the 3M part number, I'm afraid.
>
>AMP makes a version of this, as part #605262-1 - Electronics Goldmine
>has rolls of it (1" wide, 10' long un-stretched) for all of $2, or
>four for $7 (their stock #G12875). I think this is definitely in the
>"gotta have, to throw a roll in the go-pack" category!
>
>I found a similar tape at Home Depot, under the name "Stretch-n-Seal"
>or something like that... it was about $6 for a 15' roll.
>

This topic often comes up on the Tower-Talk mailing list, and the people there quote a 3M number which seemed to be the leading brand in the USA. However, the idea has been around for at least 50 years, so it's not surprising that other brands have appeared.

>>Try not to use SO-239s in outdoor situations - chassis/bulkhead mounting
>>connectors are practically impossible to tape over.
>
>N connectors, on the other hand, have a lot better water resistance.
>They're a bit more expensive but I think they're worth the money.
>
Agreed, but 239/259s are what people seem to use...

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

140. test

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:07:28 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <xO0R9.1752$Tn.666@news.bellsouth.net>
Source record: 127928

[No readable article body recovered]

141. test

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:11:33 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <AO0R9.1753$Tn.880@news.bellsouth.net>
Source record: 127929

[No readable article body recovered]

142. Tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:13:31 UTC
From: BDDD <nospam@nospam.com>
Message-ID: <L31R9.22114$Ab.13722@nwrddc03.gnilink.net>
Source record: 127930

I am planning on attic-mounting a scratch-built antenna for low VHF
TV channels, probably a simple dipole with a single reflector - is there
some type of readily available tubing that will serve as a suitable material,
say something I could find at the local home depot store?

143. Re: Scanner antenna question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:17:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <d1791vo8f8vdr77s5rn7ioqevb2g5q5tel@4ax.com>
Source record: 127931

On Thu, 02 Jan 2003 08:28:23 -0800, Gadget150 <gadgetgru@netscape.net>
wrote:

>I monitor VHF and UHF bands and the antenna works great!...but when I
>monitor our Police or Fire in the 800Mhz band the signal is quite weak
>and I find that a back of set antenna works better in that band!

Hi OM,

The claims made for the discone's amazing wide band properties are
generally overblown in favor of "match." Once you've settled the
match issue, you normally look at the radiation properties (and find
that is the single most avoided topic in discone specifications).
Your problem comes from this side of aisle.

Yes, there are premium discones that can "match" over a 10:1 frequency
variation. This is not a great virtue for receive only applications,
and is hardly better for transmissions.

Trying to span more than two octaves (6M-2M-440) will force radiation
lobe growth straight up. The higher the frequency, the more the
discone will want to look directly overhead for the best signal (not
out toward the horizon where it works at the low end). Now you may
protest that you do not plan to radiate, so you have no interest in
radiation patterns going out or up. Yes you do, this is known as
"reciprocity" and what is good for the transmitter is good for the
receiver (or t'other way 'round if you prefer).

You need more than one antenna. You also need to learn how to combine
them. Stay tuned for details.

73's
Richard Clark, KB7QHC

144. Re: Scanner antenna question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:20:48 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v197os6nnrs45@corp.supernews.com>
Source record: 127932

The top piece is for the lowest frequencies. It is resonant at about 54 MHz.
More important is the coax loss at 800, I would suggest that you use RG6 cut
to the shortest possible path from the antenna to the receiver. I realize
the RG6 is 72 Ohm, but the 4% loss due to the mismatch is more than offset
by the decreased loss compared to like size 50 Ohm cable.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Gadget150" <gadgetgru@netscape.net> wrote in message
news:3E1468A7.30501@netscape.net...
> Hello there,
> I have a Radio Shack Discone model 20-043.. My problem is this
> I have it hooked up to either my Pro-2006 or BC780XLT
> I monitor VHF and UHF bands and the antenna works great!...but when I
> monitor our Police or Fire in the 800Mhz band the signal is quite weak
> and I find that a back of set antenna works better in that band!
> So I have to switch antennas all the time and it's a bit of a pain!
> I have my antenna on the roof...
> I thought that the discone was meant to work 25-1300 Mhz obviously one
> antenna just won't work well in all the bands?
> Question?...
> Is this antenna a very good one?
> What is the very top vertical section for?..
> Is there a better antenna for multi band use?
>
> Thanks for any help or advice you may offer
> -Russ gadgetgru@netscape.net
> --
> Your favorite stores, helpful shopping tools and great gift ideas.
> Experience the convenience of buying online with Shop@Netscape!
> http://shopnow.netscape.com/
>

145. Re: Morse code cookie cutter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:21:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <is791vc1q4d4lopjbcj2qd9qalg2fk1tao@4ax.com>
Source record: 127933

On Thu, 2 Jan 2003 11:34:23 -0600, "goofy" <dbeard@aoc.nrao.edu>
wrote:

>The cutter was (is) made by HRM in the USA. It is a Christmas tree
>and the garland around the tree is Morse code.
>
>I preformed a search on the web and told all of my Ham clown friends
>of this find yet no one had been previously aware of this so Iï¿½m telling
>the world NOW!!!
>
>Check out your cookie cutters! Do you have one? Have you ever heard of
>this before? Etc.
>
>KC0KZE
>D.J. Beard
>National Radio Astronomy Observatory
>Very Long Baseline Array
>North Liberty, Iowa

Hi OM,

A commendable effort. Almost up there with:
What is the Grail?
Who serves the Grail?
;-)

73's
Richard Clark, KB7QHC

146. Re: Morse code cookie cutter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:25:38 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1981t924o28ef@corp.supernews.com>
Source record: 127934

Think how many hams today are not capable of reading the code, even at
cookie speed.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"goofy" <dbeard@aoc.nrao.edu> wrote in message
news:av1t6v$n1t$1@chaos.aoc.nrao.edu...
> Dear Ham dudes!
>
> Christmas morning found me staring at a red plastic cookie cutter
> while drooling into my first cup of coffee. To my surprise this
> cookie cutter had Morse code on it that said "Merry Yhristmas"!!!
> I guess they made a mistake and made the C a Y. I was blown
> away by this knowing that someone in the past sent a secret message
> down through time and I rcvd it on Christmas morning!
>
> The cutter was (is) made by HRM in the USA. It is a Christmas tree
> and the garland around the tree is Morse code.
>
> I preformed a search on the web and told all of my Ham clown friends
> of this find yet no one had been previously aware of this so I'm telling
> the world NOW!!!
>
> Check out your cookie cutters! Do you have one? Have you ever heard of
> this before? Etc.
>
> KC0KZE
> D.J. Beard
> National Radio Astronomy Observatory
> Very Long Baseline Array
> North Liberty, Iowa
>
>
>

147. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:38:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <oa891v0bp1laql4dnmf8vrmbsd34btfg5k@4ax.com>
Source record: 127935

On 2 Jan 2003 10:32:24 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>"Brian Warn" <brwarn@oz.net> wrote in message news:<av02gfoam0@216.39.144.200>...
>> I'm sure this question has been asked many times, but I've so far been
>> unable to find it discussed anywhere. What sort of anti-corrosion
>> protectant should I apply to connectors (SO-239, PL-259, etc.) after I've
>> cleaned the corrosion off of them?
>>
>> 73,
>> Brian KD7TAE
>
>Brian, many say silicone grease 'as used by experts' where-as we are
>but amateurs!
>During my working years I often found that silicone contamination some
>how had a way of getting on device contact surfaces even tho the
>nearest grease supply
>was some distance away . I personaly avoid it like a plague.
>Art

Hi All,

In the past I have offered descriptions of how some Power Meters
present more error than their meter reading. Real error rather than
perceived error because of connectors presenting significant
reflections (when you start getting into seriously accurate power
measurement).

The source of the connector reflections (I think Bird specifies theirs
to present no more than 1.05:1) is from thread erosion. The fine
metallic particles usually settle into a smudge or haze bridging the
connector's shield and center conductor.

Usual (and usually ignored) service is to clean the connector's mating
faces, and this as a problem goes away. Ignore this service, and then
add any goop, and my guess is that you've just drawn out metallic grit
to make a conductive paste.

73's
Richard Clark, KB7QHC

148. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:47:30 UTC
From: k3bu@aol.com
Message-ID: <20030102154730.06300.00000868@mb-fp.aol.com>
Source record: 127938

Steve invalid@xyz.net (?) wrote:
>
>This modeling capability has been available for many years, J.H. Richmond
>published a thin wire code that included dielectric sheath (insulation)
>effects in 1974.
>
>"Radiation and Scattering by thin wire structures in a homogeneous conducting
>
>medium", IEEE Transactions on Antennas and Propagation, vol AP-22, pp. 365-,
>March 1974.
>
>"Computer Program for thin wire structures in a homogeneous conducting
>medium", Nat. Tech. Inform. Service, Springfield, VA 22151, NASA CR-2399,
>June 1974.
>
>I am not sure what you mean by "never mind the mechanism of coupling between
>the wire and the space". This is exactly the information antenna modeling
>programs are designed to give you. For a given model (wire antenna) and
>excitation, you can determine the EM field anywhere in space.
>
>

I guess, us poor ham slobes do not have the luxury of using it in "cheap"
software available to us. Pardon my ignorance (that's why I am asking :-)
It sure would help to have option to consider insulated wire in our versions of
NEC2 etc.

We know about antennas radiating, or coupling to space, what I was after, if
there was a way including parameters for air (it is dielectric) or if the Q is
related to the efficiency of coupling.
To put it in experimental terms: would there be any measurable difference in
signal level if we feed say dipole made of #12 wire and one made of 100mm
tubing? (same material, same power)

Thank you for pointers.

73 Yuri

149. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:47:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <av28ha$o1m$1@knossos.btinternet.com>
Source record: 127937

A straight line of multiple verticals is supposed to be a teeny bit more efficient when each vertical has its own independent system of buried ground radials. There were some loading coils somewhere and the antennas were fed from the top.

But it seems to me any improvement is due only to having a bigger and better ground system.

There's an ancient, I think Swedish, VLF station which employed the idea for many years but I forget the details except that the station used a VLF alternator. The installation may still exist as a museum.

Reg.

==========

"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20030102110757.02130.00000129@mb-bd.aol.com...
> In reading Chapter 9 Section 3.4.1 of LOW BAND DXING it states that :
> ---
> ---
> One way to improve the radiating efficiency of a vertical over poor ground
is
> to replace the single radiating element with several close spaced
verticals all
> fed in phase.
> ---
> ---
> Is there an article that further addresses this? I run a 42ft ground
mounted
> vertical and was wondering HOW MANY and HOW CLOSE? Will two or three say
about
> 1/8 wave apart or are we talking a few meters? It is not clear what is
meant
> here. Just looking for a guestimate. Thanks
>
> Alan KB7MBI in Woodinville, WA
> FISTS 5702 Proud member of ARRL
> ___ ___ . . . . . ___ ___ DIT DIT

150. Re: length of coax on mag mount antenna? follow up post

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:47:41 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0301021247.6e951562@posting.google.com>
Source record: 127936

Thanks to those who responded to my question. FYI, I also sent the
same question to Hustler....they said for best performance, make the
coax exactly either 15' or 17' Seems a little strange since I measure
the old ruined piece to be 20ft = 4"....unless I stretched it when it
was run over. Could be.

"W6DKN" <w6dkn-nospam-@qsl.net> wrote in message news:<uHOQ9.4978$wQ1.3085@fe01>...
> rich a. wrote:
> > Recently, while in a hurry I stuck my 2m/440 Hustler mag mount antenna
> > on the roof of my car but was then distracted, suffered a moment of
> > "brain cramp", and backed down the driveway without placing the coax
> > in thru the window. I drove over the coax and ripped up the outer
> > braid beyond repair.
> >
> > I was successful in disassembling the base to fit a new piece of coax
> > but the thought comes to mind.....does it need to be the same length
> > as the original? As originally supplied its much longer than needed
> > for my vehicles. Can I make it shorter without degrading performance?
> >
> > Rich K2CPE
>
> It needs to be exactly long enough to reach the rig.
>
> 73 de W6DKN

151. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 20:57:52 UTC
From: k3bu@aol.com
Message-ID: <20030102155752.06300.00000869@mb-fp.aol.com>
Source record: 127939

>
>You have it backwards. Q does not produce anything, it is the product
>OF stored power and loss - it is the loss that is (un)productive.
>
>Q does not cause coupling, Q is diminished by coupling (normally known
>as loaded-Q).
>
>In every discussion of Q, resistive loss leads the way and Q follows.
>
>The significant determinant is the ratio of ohmic loss to radiative
>loss - Q, as Richard Harrison pointed out, is only a meaningful factor
>when its high value intrudes and clips modulation bandwidth.
>
>73's
>Richard Clark, KB7QHC
>
>

What I meant for example: a. you have two circuits (antenna elements) that have low Q and then you have b. two circuits that have high Q, you place them at the same distance, wouldn't two high Q circuits "produce" mo coupling?

I remember when I was young and my elmers had never ending discussions on effect of Q on tuned circuits in the PA output networks. Is this the same f$%#@ Q? :-)

Yuri, da Q BUm

152. Re: Has anyone moded their IC-756 PRO2 for Extended TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:03:07 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <PagUPpmjLV0Of0VnV7k5dPYQEn87@4ax.com>
Source record: 127942

BICisfag <ll@jj.com> wrote:

>Has anyone moded their IC-756 PRO2 for Extended TX?

What's your interest? MARS/CAP? CB?

Bob
k5qwg

>
>How did you do it?

153. Re: Morse code cookie cutter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:04:30 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3e14a93e$1@news.netacc.net>
Source record: 127940

"Richard Clark" <kb7qhc@attbi.com> wrote in message > A commendable effort.
Almost up there with:
> What is the Grail?
> Who serves the Grail?
> ;-)
>
The Bar and Grail is up the street on the corner
Tina serves drinks from 3 PM to Midnight at the Grail and has humongous....

Oh wait.... That is the Bar and GRILL!

Nevermind

Steve

154. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:11:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vt991v0scvatnotusdpp0pbfvecrj5g07m@4ax.com>
Source record: 127941

On 02 Jan 2003 20:47:30 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

>To put it in experimental terms: would there be any measurable difference in
>signal level if we feed say dipole made of #12 wire and one made of 100mm
>tubing? (same material, same power)
>
>Thank you for pointers.
>
>73 Yuri

Hi Yuri,

Depends on wavelength.

Would you build an 80M dipole with 100mm stock to gain the advantage
only measured in a lab?

Or would you prefer to build a 1M loop for the same band with #12 wire
that glows when you transmit?

Antenna, Q, and radiator thickness are tied together through
dimensions with respect to wavelength. For a given frequency, a
fatter antenna is a lower Q antenna (ohmic loss aside), a fatter
antenna is also a shorter antenna, a fatter antenna is also a lower
Radiation Resistance load. It takes an enormously fat antenna to
become aggressive with these traits (discones come close to
qualifying).

One such design that embodies some or all of these issues is found
with the Folded Di/Monopole. It exhibits the "fat" qualities, but
unfortunately its discussion is often clouded with poor understanding
of the requirement for good grounding (or the usual emphasis on
controlling ohmic loss in either the structure, and/or the RF ground).

73's
Richard Clark, KB7QHC

155. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:19:59 UTC
From: Alexander Schewelew <dl1pbd@gmx.net>
Message-ID: <av2akk$b99d4$1@ID-34767.news.dfncis.de>
Source record: 127944

> I have already put in around 5 hours with EZNEC without finding
> something satisfactory. If I had done all that in the field, it would
> have been 5 days.

I needed only 10 minutes:-)
http://www.8ung.at/apak/twoband.htm

Alex, DL1PBD

156. which vertical for 10/15/20?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:21:32 UTC
From: tore stabell kulo <stabern@chello.no>
Message-ID: <R22R9.3622$T41.13685@amstwist00>
Source record: 127943

Hi, there!
I want to buy a vertical for 10/15/20 meters. I am currently using a 40/80 trap dipole.
But I am not going to buy a Cushcraft R8, priced here in Norway at about 900 dollars, that is too expensive for me.
Does anyone know which of the cheaper vericals that perform really good (Butternut/Hygain/Hustler..)

Thank's in advance!

(I am going to place it on a 4 meter mast on top of a flat concrete building)

Regards,
Tore Stabell Kulo,
LA7FKA

157. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:38:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v19ca4kfsm0sce@corp.supernews.com>
Source record: 127947

Coupling between two antennas is well known. Graphs for mutual impedance for parallel wires can be found in many references including the ARRL Antenna Book. Coupling between more complex arrangements is easily found with any of the popular antenna modeling programs.

It isn't necessary to know Q to make this calculation, and the mutual impedance depends only very weakly on wire diameter, while this is a primary determining factor of Q.

You've asked why two high Q antennas wouldn't couple more strongly than two low Q antennas. Why do you think they should? Can you explain what effect Q should have on coupling and why?

Roy Lewallen, W7EL

Yuri Blanarovich wrote:
>
> What I meant for example: a. you have two circuits (antenna elements) that have
> low Q and then you have b. two circuits that have high Q, you place them at the
> same distance, wouldn't two high Q circuits "produce" mo coupling?
>
> I remember when I was young and my elmers had never ending discussions on
> effect of Q on tuned circuits in the PA output networks. Is this the same f$%#@
> Q? :-)
>
> Yuri, da Q BUm

158. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:38:22 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <CC6dnU3SPvJQIomjXTWc3Q@ctc.net>
Source record: 127953

> Why more capacitance?
> What are you basing it off? How many turns ? What turn spacing ?
> Jim
> "Ralph Mowery" <rmowery@ctc.net> wrote in message
> news:kdGdnWz9D-2WL46jXTWcow@ctc.net...
> > >
> > > I'm going to turn a loop antenna on Quaker oats tube. The Idea here
is
> to
> > > turn enough to get it resonant some where in the AM radio band, then
tap
> > off
> > > shorter for higher freq SW bands. I have a bag of 1.5pf - 5pf
variable
> > > capacitors to help tune the impedance.
> > >
> > You need to start off with a much larger capacitor. Something in the
> range
> > of 300 to 400 pF for the maximum would probalby be a good guess.
> >
> >
>

The number is based on a wild guess. That is what is used in many receivers
to cover from about 550 to 1600 kHz. If you try to use the very small
value capacitors (1.5 to 5 pF) the tuning range of each capacitor will be
very small at those frequencies. Probably around 3 to 4 kHz.
Play with the formulas for how much inductance it takes to make a 1.5 pf
capacitor tune to 1 mHz. Then see how much the change is if you plug in 5
pf for the same coil.

159. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:38:34 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E14B15A.E7E67FB2@northwest.com>
Source record: 127945

Reg Edwards wrote:

>
> There's an ancient, I think Swedish, VLF station which employed the idea for
> many years but I forget the details except that the station used a VLF
> alternator. The installation may still exist as a museum.
> ---
> Reg.
>

it still operates, tho very infrequently.

anyhow, at vlf (~10kHz), the ionosphere/earth acts as a waveguide, so the conduction mechamisms are not the same as at HF.

160. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:43:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <u5b91voooshv563agdh0074dluho2r4c1@4ax.com>
Source record: 127948

On 02 Jan 2003 20:57:52 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

>What I meant for example: a. you have two circuits (antenna elements) that have
>low Q and then you have b. two circuits that have high Q, you place them at the
>same distance, wouldn't two high Q circuits "produce" mo coupling?
>
>I remember when I was young and my elmers had never ending discussions on
>effect of Q on tuned circuits in the PA output networks. Is this the same f$%#@
>Q? :-)
>
>Yuri, da Q BUm

Hi Yuri,

Coupling is a characteristic of distance. Coupling, like Q, is a specification called the "dependant variable." That means its value is a product of "independant variables" and constants. Q or Coupling are then dependant on other issues and are not causitive (the independant variables are the causitive factors).

The standard discussion of coupling usualy employs terms like Critical Coupling, Loose Coupling and Over Coupled that are ad-hoc, but easily followed. Critical Coupling implies that both Q's add in a constructive manner for steep skirts and wide bandwidth without passband ripples. Loose Coupling implies less load and hence higher Q and it follows that the peak is narrower, higher, and with steep or steeper skirts (if both circuit resonate at the same frequency) or camel humped (two distinct peaks, otherwise known as severe passband ripple). Over Coupled is the opposite and brings a much lower, loaded Q. The peak(s) is(are) flat, the skirts are broad.

In each case Q and Coupling "depend" upon, or follow, a parameter of physical distance. "Close Coupling" obviously demands close physical relationships; "Loose Coupling" drives us to the opposite demands. How close or loose is strictly subjective to the application intended.

73's
Richard Clark, KB7QHC

161. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 21:58:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v19dglgek9r520@corp.supernews.com>
Source record: 127949

The first time I came across this principle was in "Antenna Design for Field-Strength Gain", by H.W. Kohler, in Proceedings of the I.R.E., October 1944. The author describes a system of four closely spaced short verticals, each with its own ground system, fed in phase. They report experimental results showing a substantial field strength gain over a single vertical. The reduction in ground system loss is just about inversely proportional to the number of verticals -- that is, the effect is what you'd expect if the parallel connected ground systems were independent. The gain is due solely to reduction of ground loss, since the scheme doesn't provide any significant directionality. For very short verticals, where the ground resistance is the major part of the feedpoint impedance, the gain over a single vertical is nearly equal to the number of verticals. On the other hand, if the efficiency of a single vertical is high to begin with, adding more close-spaced in phase verticals won't provide any substantial signal strength improvement.

I've done some brief modeling with NEC-4, which allows buried conductors, and it shows just what the authors described -- the loss does decrease as though the ground resistances were just resistors in parallel.

I'd be interested to hear what Tom said about it and how he reached the conclusion that the method isn't valid. Between the reported experimental results and the NEC-4 modeling results, I'm prone to believe that it works.

I haven't attempted modeling it with NEC-2, but if the results are different, the likely cause is coupling between the necessarily above-ground ground radial systems that's higher than you'd find with buried systems.

Roy Lewallen, W7EL

Rick Karlquist wrote:
> I believe W8JI debunked this idea on one of the reflectors he
> frequents (either towertalk or topband). My modelling on
> EZNEC tends to support Tom on this one.
>
> Rick N6RK
>
> "ARDUJENSKI" <ardujenski@aol.com> wrote in message
> news:20030102110757.02130.00000129@mb-bd.aol.com...
>
>>In reading Chapter 9 Section 3.4.1 of LOW BAND DXING it states that :
>>--
>>-------------------

>>One way to improve the radiating efficiency of a vertical over poor ground
>
> is
>
>>to replace the single radiating element with several close spaced
>
> verticals all
>
>>fed in phase.
>>--
>>-------------------
>>Is there an article that further addresses this? I run a 42ft ground
>
> mounted
>
>>vertical and was wondering HOW MANY and HOW CLOSE? Will two or three say
>
> about
>
>>1/8 wave apart or are we talking a few meters? It is not clear what is
>
> meant
>
>>here. Just looking for a guestimate. Thanks
>>
>>Alan KB7MBI in Woodinville, WA
>>FISTS 5702 Proud member of ARRL
>>___ ___ . . . . . ___ ___ DIT DIT
>
>
>

162. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 22:04:04 UTC
From: k3bu@aol.com
Message-ID: <20030102170404.06300.00000870@mb-fp.aol.com>
Source record: 127950

>
>Depends on wavelength.
>
>Would you build an 80M dipole with 100mm stock to gain the advantage
>only measured in a lab?
>
>Or would you prefer to build a 1M loop for the same band with #12 wire
>that glows when you transmit?
>
>Antenna, Q, and radiator thickness are tied together through
>dimensions with respect to wavelength. For a given frequency, a
>fatter antenna is a lower Q antenna (ohmic loss aside), a fatter
>antenna is also a shorter antenna, a fatter antenna is also a lower
>Radiation Resistance load. It takes an enormously fat antenna to
>become aggressive with these traits (discones come close to
>qualifying).
>
>One such design that embodies some or all of these issues is found
>with the Folded Di/Monopole. It exhibits the "fat" qualities, but
>unfortunately its discussion is often clouded with poor understanding
>of the requirement for good grounding (or the usual emphasis on
>controlling ohmic loss in either the structure, and/or the RF ground).
>
>73's
>Richard Clark, KB7QHC
>
>

I should have mentioned 2m band. I will try to measure signal levels off #14,
100mm and 200mm radiators.

Yuri

163. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 22:13:47 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e14bea3_1@news1.prserv.net>
Source record: 127951

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:DAuGJcG9ZAF+EA5m@ifwtech.co.uk...

<snip>
>
> Self-amalgamating tape is your best friend. This is the stuff that welds
> together into a continuous rubber sheath (can someone in the USA
> recommend a 3M number?).

3M is a very minor player in this market. Their 2200 and 2210 pads are a
rectangular sheet of this material which is useful for irregular electrical
connections. The principal player is Flex Fab (I think, unless they have
been bought or sold) who sells tons of their 600R MOX Tape, made to
MIL-I-22444C, to the US Navy. 'Self-fusing tape' is the magic phrase to put
in a search engine to find US sources.

>
> Regular PVC-based electrical tape is also effective for waterproofing,
> but it's not as good as the real self-amalgamating stuff... use it for a
> Field Day weekend, but not for anything you hope will be permanent.

Unfortunately, the adhesive on PVC tape is not a moisture barrier. However,
there is a way to permanently fuse PVC tape, it is the solvent based glue
for PVC pipe sold in plumbing stores. It will not only fuse the PVC tape,
but also fuse it to the coax jacket, so there is NO possible moisture entry
path. Also a way to repair PVC water hoses.
>
> To apply

[SA]

tape to a coax connector, start on the connector body and wind
> it the same way as you tightened the connector sleeve. Stretch the tape
> quite tight as you wind, and come down off the connector body on to the
> coax. Keep going for at least 2 inches along the coax, and finish by
> stretching the tape tight until it snaps. S-a tape cuts off easily after
> many years to reveal a perfectly clean, dry connector.

For PVC, the last layer needs to be snug but not tight.

<snip>
>
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

--
Crazy George
Remove NO and SPAM from return address

164. Re: which vertical for 10/15/20?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 22:22:57 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <5Z2R9.229457$a8.72053@news4.srv.hcvlny.cv.net>
Source record: 127952

"tore stabell kulo" <stabern@chello.no> wrote in message
news:R22R9.3622$T41.13685@amstwist00...
> Hi, there!
> I want to buy a vertical for 10/15/20 meters. I am currently using a 40/80
> trap dipole.
> But I am not going to buy a Cushcraft R8, priced here in Norway at about
900
> dollars, that is too expensive for me.
> Does anyone know which of the cheaper vericals that perform really good
> (Butternut/Hygain/Hustler..)
>
> Thank's in advance!
>
> (I am going to place it on a 4 meter mast on top of a flat concrete
> building)
>
> Regards,
> Tore Stabell Kulo,
> LA7FKA

Here you go. Seems like a good deal at approx. $80 +/-.

http://www.eham.net/reviews/detail/1376

--
73 de Bert
WA2SI

165. Re: which vertical for 10/15/20?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 23:12:21 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3E14C3EE.45E93580@verizon.net>
Source record: 127954

tore stabell kulo wrote:

> Hi, there!
> I want to buy a vertical for 10/15/20 meters. I am currently using a 40/80
> trap dipole.
> But I am not going to buy a Cushcraft R8, priced here in Norway at about 900
> dollars, that is too expensive for me.
> Does anyone know which of the cheaper vericals that perform really good
> (Butternut/Hygain/Hustler..)
>
> Thank's in advance!
>
> (I am going to place it on a 4 meter mast on top of a flat concrete
> building)
>
> Regards,
> Tore Stabell Kulo,
> LA7FKA

Add 10,15 and 20M wires to your dipole- better performance and quieter than a vertical.

Dale W4OP

166. WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 23:13:44 UTC
From: jdprislupski@aol.com
Message-ID: <5sh91vo4i9jq0kjnhq5sp99h6jtoqihd4f@4ax.com>
Source record: 127955

Hello,
I am looking for a used B&W AC-1.8 to 30 end fed wire antenna, or a BWD 1.8 to 30 Folded Dipole antenna. I am also looking for the BC-7 12:1 Balun that comes with these antennas.

My AC-1.8 to 30 end fed fell, and the BAlun Shattered. The cost is $75 to replace the balun. I have seen full used antennas here for that or less.
Thanks, John WC3Z

167. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 23:15:42 UTC
From: "J. Keith Carter" <j.keith.carter@sympatico.ca>
Message-ID: <3E14C81E.8C3A2845@sympatico.ca>
Source record: 127956

Hi Ken. I bumped into the problem of modeling balanced feebleness a number of years back when I first bought EZNEC ver1. I wrote (before I went on the net) Roy W7EL and queried him. His response was to model it as two wires in the Z axis. (or any axis you chose) i.e.; your dipole two elements are separated by the spacing of the feed line, then you put in three wires (or more if you turn corners), two in the Z axis spaced by the impedance requirement, then a wire connecting them at the feed point to add your source. It sure works for me but it does take more time and wires. The number of segments works on the same principal as the ant. The source wire is usually 3 segments inasmuch as it is only 4 to 6 inches. Don't know if this is clear enough but if not I can supply you with data on a modeled G5RV

(UGH).

Ken wrote:

> Unfortunately, I can't get the answer for myself because I can't
> figure out how to model a balanced feed line in EZNEC.
>
> Ken KC2JDY
>

168. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 23:19:59 UTC
From: "J. Keith Carter" <j.keith.carter@sympatico.ca>
Message-ID: <3E14C91F.87D94AD3@sympatico.ca>
Source record: 127957

Hi Ken. I bumped into the problem of modeling balanced feed lines a number of years back when I first bought EZNEC ver1. I wrote (before I went on the net) Roy W7EL and queried him. His response was to model it as two wires in the Z axis. (or any axis you choose) i.e.; your dipole two elements are separated by the spacing of the feed line, then you put in three wires (or more if you turn corners), two in the Z axis spaced by the impedance requirement, then a wire connecting them at the feed point to add your source. It sure works for me but it does take more time and wires. The number of segments works on the same principal as the ant. The source wire is usually 3 segments inasmuch as it is only 4 to 6 inches. Don't know if this is clear enough but if not I can supply you with data on a modeled G5RV

(UGH). Gook luck, Keith, VE3JKC.

Ken wrote:

> Unfortunately, I can't get the answer for myself because I can't
> figure out how to model a balanced feed line in EZNEC.
>
> Ken KC2JDY
>

169. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 23:32:11 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E14CBAE.3070408@attbi.com>
Source record: 127958

I don't have or do LOW BAND DXing! That said, is this possibly a
reference to a 'collinear array'?

Deacon Dave, W1MCE

ARDUJENSKI wrote:
> In reading Chapter 9 Section 3.4.1 of LOW BAND DXING it states that :
> ---
> ---
> One way to improve the radiating efficiency of a vertical over poor ground is
> to replace the single radiating element with several close spaced verticals all
> fed in phase.
> ---
> ---
> Is there an article that further addresses this? I run a 42ft ground mounted
> vertical and was wondering HOW MANY and HOW CLOSE? Will two or three say about
> 1/8 wave apart or are we talking a few meters? It is not clear what is meant
> here. Just looking for a guestimate. Thanks
>
> Alan KB7MBI in Woodinville, WA
> FISTS 5702 Proud member of ARRL
> ___ ___ . . . . . ___ ___ DIT DIT

170. Re: info wire antenna 80mtr/1:4 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 23:38:36 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E14CD2C.8060406@attbi.com>
Source record: 127959

Question: Do you mean a 1:4 balun or a 4:1 balun? The first is a step
down for impedance matching the second is a step up [50:12.5 ohms for
the 1:4; or 50:200 ohms for the 4:1 [as seen from the transmitter]].

Why is a URL required for what is a standard antenna?

Deacon Dave, W1MCE
++++++++++++++++++

Rollo Tomassi wrote:
> Hello ,
>
> Any idea's on a URL about a wire antenna for 80 (or more bands) with a
> Balun 1: 4 ?
>
>

171. Re: Tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-02 23:50:14 UTC
From: jgboyles@aol.com
Message-ID: <20030102185014.08041.00000458@mb-fw.aol.com>
Source record: 127960

>
>
>I am planning on attic-mounting a scratch-built antenna for low VHF
>TV channels, probably a simple dipole with a single reflector - is there
>some type of readily available tubing that will serve as a suitable material,
>say something I could find at the local home depot store?

For this simple an antenna, I would suggest using wooden dowel with wire either taped or ty-wrapped to the dowel. For the driven element use a folded dipole made from 300 ohm twin lead and some scrap wire for the reflector. Use 1/4" dowel for the elements, and 3/4"-1" dowel for the boom. Since it is to be in the attic you don't have to weather proof the wood.

73 Gary N4AST

172. Re: Scanner antenna question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 00:02:08 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <li4R9.5379$wQ1.527@fe01>
Source record: 127961

Have to agree, coax loss is probably biggest concern, also, just how good is the front end in the scanner? but there is a feedline , called a "G" , or (can't spell it,think pronounced
" gobaut line ". it has alot in common with a long wire antenna, the big difference is that it has a "launcher" that is 1/2 wavelength at the lowest frequency being used (kinda like a circular base for a ground plane) , at BOTH ENDS! and, the line must be tight- but can obtain very low loss's at VHF, and above! I don't know it's fundamental impedence. Might give it a try! , or make a 800 MHz antenna that is VERY CLOSE to the rx (unless you want to run RG8 (or 11) to an antenna- Was described in 73 magazine, many moons ago-- Long before Wayne G> went NUTS! about 30 years ago- at least.
jim nn7k

"Gadget150" <gadgetgru@netscape.net> wrote in message
news:3E1468A7.30501@netscape.net...
> Hello there,
> I have a Radio Shack Discone model 20-043.. My problem is this
> I have it hooked up to either my Pro-2006 or BC780XLT
> I monitor VHF and UHF bands and the antenna works great!...but when I
> monitor our Police or Fire in the 800Mhz band the signal is quite weak
> and I find that a back of set antenna works better in that band!
> So I have to switch antennas all the time and it's a bit of a pain!
> I have my antenna on the roof...
> I thought that the discone was meant to work 25-1300 Mhz obviously one
> antenna just won't work well in all the bands?
> Question?...
> Is this antenna a very good one?
> What is the very top vertical section for?..
> Is there a better antenna for multi band use?
>
> Thanks for any help or advice you may offer
> -Russ gadgetgru@netscape.net
> --
> Your favorite stores, helpful shopping tools and great gift ideas.
> Experience the convenience of buying online with Shop@Netscape!
> http://shopnow.netscape.com/
>

173. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 00:15:03 UTC
From: cprstn54zz@att.net
Message-ID: <3e14d54c.76694703@news-server.optonline.net>
Source record: 127962

On Thu, 02 Jan 2003 18:15:42 -0500, "J. Keith Carter"
<j.keith.carter@sympatico.ca> wrote:
> model it as two wires in
>the Z axis. (or any axis you chose

I tried precisely that in the demo EZNEC that I have.

With a too-wide feed line conductor spacing of .2 ft (around 2.4"), I
get a solution. However, it shows that the feedline is a major
radiator. This is not supposed to be the case. When I lower the
conductor spacing to a more realistic (for ladderline) .1 ft (1.2"),
EZNEC gives an error message and aborts. Maybe I need more than the
20 elements the demo program allows.

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

174. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 00:26:15 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301021626.780444c3@posting.google.com>
Source record: 127963

Richard you looked at it in depth and more profesional, where as mine
was a gut feeling.
My thoughts pivoted around the fact that I knew of no radio that
had coils as large as a quaker oats tube, thus by minimizing
capacitance values at worst case the variable capacitor would have a
larger frequency span.
Since it is intended to be used as a antenna I would
imagine that resistance and therefore efficiency settings may
skew theoretical set ups based on radio receivers.
A point to note is that loop antenna tuning goes awry when
placed near other objects, so the choice of what
combination of capacity/inductance values are used would be important
rather than choosing a combination just because it is resonant!
The latter is very important in the experiments that I perform since
resonance alone is not enough to achieve worthwhile ends.
I think that the gentleman would be better served by just hooking up
to his house wiring but experimenting can be a lot of fun as well as
a means for spreading your 'oats' around while you are still young.
Art

ichard Clark <kb7qhc@attbi.com> wrote in message
news:<fq491v4ndobmouvkivck85qdu0qodkskch@4ax.com>...
> On Thu, 2 Jan 2003 09:17:09 -0600 (CST), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >
> >This 390 pF should tune the coil to 540 KHz. My ARRL L/C/F Calculator
> >says the coil needed is 220 microhenrys. It also says the minimum
> >capacitance of 25 pF resonates the coil at 2.3 MHz. So, we can be sloppy
> >and pile on extra capacitance and still tune the entire BC band.
> >
>
> Hi Richard,
>
> The common, commercial 360pF variable cap so often used for AM radios
> would be hard pressed to offer less than 5-10% as its lowest value,
> and with the additional 30pF trimmer you generously allowed, the top
> of the AM band is not all that far away.
>
> In the real world of staged tuned front ends; successful trimmer
> settings were more often found with two rules:
> 1. Adjust the RF stage's trimmers at the high end
> 2. Adjust the Osc stage's trimmer at the low end.
> 2a. Repeat 1 & 2 until no particular frequency shows any marked peak.

> Adjustment 2 relates to what is called tracking differences between
> the tuning range of the larger RF sections, and the smaller Osc
> section of a multi-section variable cap.
>
> The Osc stage operates over a stretch of frequencies that are 1:1
> related to the tuned frequency of the RF stages, but offset upwards by
> the IF, most often 455kHz. For 540kHz to 1620kHz coverage, the Osc
> stage has to cover the same span, but from 995kHz to 2075kHz. Seems
> simple enough, but this means the two equal spans are tuned with
> different increments of same knob travel (the "tracking" problem). As
> such, the two circuits, through brutal geometry and the cold hand of
> physical linkage, drift apart in resonance-difference as the knob is
> turned.
>
> Of the two adjustments, again adjustment 2 had more impact because
> there was generally not enough Q for the RF tweaks to peak at. It is
> the Osc adjustment that dominates what gets through the IF, even if
> the RF stages are way off.
>
> 73's
> Richard Clark, KB7QHC

175. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 00:26:53 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <QMSCK7ANjNF+EAqA@ifwtech.co.uk>
Source record: 127893

Crazy George wrote:
>
>
>"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote
>>
>> Regular PVC-based electrical tape is also effective for waterproofing,
>> but it's not as good as the real self-amalgamating stuff... use it for a
>> Field Day weekend, but not for anything you hope will be permanent.
>
>Unfortunately, the adhesive on PVC tape is not a moisture barrier.

Agreed, well, not for much more than a weekend.

>However,
>there is a way to permanently fuse PVC tape, it is the solvent based glue
>for PVC pipe sold in plumbing stores. It will not only fuse the PVC tape,
>but also fuse it to the coax jacket, so there is NO possible moisture entry
>path. Also a way to repair PVC water hoses.

Yup - it's handy stuff.

I said:
[When applying s-a tape...]
>> and finish by
>> stretching the tape tight until it snaps.

George said:
>For PVC, the last layer needs to be snug but not tight.

Both statements are correct - the two different types of tape work best
with two different techniques. Stretching the loose end of s-a tape will
make it bond better. Stretching the loose end of PVC tape will make it
slowly pull back, because the plastic 'remembers' its original length.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

176. Re: Tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 00:31:07 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <J9edncf6P5vtRImjXTWcpA@comcast.com>
Source record: 127964

I would use a 1 x 2 for the boom, and some sort of molding for the element supports. Staple or tape the element wires to the molding. The 300 ohm twinlead sounds like a good idea for the DE. If you are using a rotator, nail the boom to the end of a pice of 5/4 square. No law that says it has to be round. For manual rotation, use 1 nail.

Tam/WB2TT
"BDDD" <nospam@nospam.com> wrote in message
news:L31R9.22114$Ab.13722@nwrddc03.gnilink.net...
> I am planning on attic-mounting a scratch-built antenna for low VHF
> TV channels, probably a simple dipole with a single reflector - is there
> some type of readily available tubing that will serve as a suitable
material,
> say something I could find at the local home depot store?
>

177. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 00:32:20 UTC
From: cprstn54zz@att.net
Message-ID: <3e14d7b7.77314000@news-server.optonline.net>
Source record: 127965

On Thu, 2 Jan 2003 22:19:59 +0100, "Alexander Schewelew"
<dl1pbd@gmx.net> wrote:
>I needed only 10 minutes:-)
>http://www.8ung.at/apak/twoband.htm

I spent 10 minutes looking at your diagram and couldn't figure out
what you did. How are the dipole and the Windom connected up? What
is the lead to "OFF"?

Is your Windom the off-center antenna of that name or just ladder
line?

I do not believe that a vertical radiator is good in this application:
I am looking for NVIS to communicate regionally -- not for DX. I am
looking to communicate with John on the other side of the mountain --
not Juan in Equador.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

178. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 00:38:22 UTC
From: k3bu@aol.com
Message-ID: <20030102193822.06300.00000873@mb-fp.aol.com>
Source record: 127966

>
>You've asked why two high Q antennas wouldn't couple more strongly than
>two low Q antennas. Why do you think they should? Can you explain what
>effect Q should have on coupling and why?
>
>Roy Lewallen, W7EL
>

I dunno, that's why I was wondering and questioning the subject.

I just tried to use EZNEC to provide some answers. I took the 3 el Yagi design, around 30 MHz, used #14 wire and 21.1 mm tubing, both aluminum, free space, at the same spacing of elements. I took the tubing elements out of the antenna, found their self resonant frequency, then replaced them with #14 wire and reresonated the elements and put them back into the antenna.
I ran SWR curves on individual elements and confirmed that wire had higher Q, narrower SWR bandwidth.
The results "dissapointed" me, wire Yagi produced 8.85 dBi gain vs. tubing Yagi with 9.63 dBi gain. If I increased spacing on wire Yagi by abt .2 m I could get 8.98 dBi - some increase in gain. Tubing Yagi barely showed difference for decrease or increas in spacing.
Looking at single driven element the wire element (higher Q) showed 2.06 dBi, while tubing element showed 2.12 dBi.
So it looks like R or surface area has more effect on the performance.
Looks like more detailed analysis could be done in optimizer program. I will try that with AO or 4NEC2.
This agrees with R.L.Cebik findings that Quads performed better with "thicker" elements using double wires for elements.
.... so, it is clear as a mud (:-) as long as theory mirrors the reality.
So the conclu(fu)sion is? The Q has negative effect on coupling? Or, fuggetaboutit alltogether?

de Qed Yuri

179. Re: What kind of balun do you use for HF antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 01:11:54 UTC
From: jgboyles@aol.com
Message-ID: <20030102201154.08041.00000462@mb-fw.aol.com>
Source record: 127967

>Rick wrote,
>>
>>
>>>try using your antenna without a balun. If it works very sensibly, don't
>>bother to fix it.<
>>
>>I like your logic, Reg. Here's a similar example. Have sex without using
>>birth
>>control. If the girl doesn't get pregnant, why bother with it in the future?
>
>>
>>Rick K1BQT
>>
>>
>>
>
>Reg was talking about a different kind of antenna than you are, Rick.
>Besides, he didn't say anything about the future in his post.
>73,
>Tom Donaly, KA6RUH

That is a good one Tom. I needed a good laugh. Maybe we should discuss the future of organic antennas.

73 Gary N4AST

180. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 01:14:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <l4n91v0a2fgm9fq45opcb72lhi9l2vjod2@4ax.com>
Source record: 127968

On 2 Jan 2003 16:26:15 -0800, aunwin@insightbb.com (Art Unwin KB9MZ) wrote:

>My thoughts pivoted around the fact that I knew of no radio that
>had coils as large as a quaker oats tube, thus by minimizing
>capacitance values at worst case the variable capacitor would have a
>larger frequency span.

Hi Art,

The simple fact of the matter is that it is the excursion of minimum to maximum that defines the range. The standard garden variety of cap has about a 10:1 capacitance range that translates into a little more than 3:1 tuning range (540Khz to 1600Khz) for ANY capacitor-inductor combination. A lot of professional equipment does not even try to challenge this span and simply offers 2:1 ranges (0.5-1.0; 1.0-2.0; 2.0-4.0; 4.0-8.0; 8.0-16.0) in matching bands. The benefit of this is more linear dials with markings that could be shared across bands. There is also less tracking error (less span to track).

As for large coils, many radio sets of the 1930's came complete with a loop antenna that defined the front end. The coils were larger than the Quaker Oats box, but still on par with AM loop antenna designs of today (about 18" diameter). Many, many, many more kitchen radios of the 40's and 50's (the standard "All American-5") came with flat coils in the back cover that had an average radius of 4", still larger than the Quaker Oats box. In the 60's, the Transistor introduced the notion that you can have a smaller radio and still hear things fine with small, ferrite loops. Seems their point of view held some validity. This was from a day when they used transistors for diodes to boost the solid state count (like when they counted jewels in watches - both lost arts to the digital age): 26 transistor radio with 17 jewel movement.

Now, if we were to talk about a ferrite rod the size of a Quaker Oats box, then we might be talking about something truly absurd. I believe that you can obtain an 18" long half inch diameter rod loaded with something like 100,000 turns useful for ELF monitoring of Quake borne electronic disturbances from Scientific American sources.

When you get into these size coils, and these applications, we are talking about High Q again (you reading this Yuri?) where the radiation resistance of the coil is measured in millionths of one ohm. ANY kind of resistance outside of this radiation resistance can put a cloud over your parade; hence these ancient front ends are designed to be Tuned and High Z (about as far away from common Ham rigs as you

can get).

73's
Richard Clark, KB7QHC

181. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 01:33:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9jp91vgd2kirr4b2cunltl64d9j1h10hgb@4ax.com>
Source record: 127869

On 03 Jan 2003 00:38:22 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

>I just tried to use EZNEC to provide some answers. I took the 3 el Yagi design,
>around 30 MHz, used #14 wire and 21.1 mm tubing, both aluminum, free space, at
>the same spacing of elements. I took the tubing elements out of the antenna,
>found their self resonant frequency, then replaced them with #14 wire and
>reresonated the elements and put them back into the antenna.

Hi Yuri,

This comes close, but you have to appreciate that in the 10M band,
these dimensions are significant (and more so at your 2M). One point
that bears attention:
>the same spacing of elements
If by that you mean the same center-to-center dimension; then, yes,
you have the "same" ...but not same. The lower Q, thicker elements
are in fact closer together. (more coupling - even less Q) Design
elements that shift Q have a tendency to run-away with even more Q
impact than you might imagine with the original perturbation.

Consider that the beam is nothing more than a skeletal lens or
telescope. What would happen if you took the original glass lenses of
a telescope, and replaced them with same size Polycarbonate lenses
with the same length tube? I bet the image "might" be larger, and
certainly more blurry (you will be tempted to juggle the length of the
tube to find focus again).

73's
Richard Clark, KB7QHC

182. Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 01:34:57 UTC
From: Ted Busky <busky@portone.com>
Message-ID: <3E14E8C1.123E807D@portone.com>
Source record: 127870

Hi,
I made my first attempt at installing a rope in a tree with a slingshot for my 75m dipole. In the past I borrowed a bow and had much better results both in targetting and having enough power to get the arrow up and weight to bring the line down. I changed the weight quite easily by taping steel rod of various lengths to the arrow until it flew right. The arrow also seemed less likely to snap past a branch and tangle than the nuts or bolts I used with the slingshot.The biggest problem with the bow was losing arrows when the line broke from the bow as it was shot. I also broke a few wood arrows that hit the tree head on. (I have collected some low cost aluminum arrows since then.) Since I own this sling shot, I wanted to get some ideas before giving up and searching out another bow to borrow.

My setup includes the following: Marksman 3055 tapered band slingshot. Daiwa 2200A reel with 6 pound line. The reel is hose clamped to the slingshot. I used a 1/2"x2" bolt that barely made it up 50'. The bolt is stuck on a branch that the line got tangled on. I need to go about 70'. Then I tried 1/2" and 5/16" nuts that went up high, but did not have enough weight to bring the line down. I lost them when they hung as I tried to pull them back.

These are my questions:
1. Is there a site that explains how to aim a slingshot?
2. Can anyone suggest a reasonable weight to start with?
3. Is this the right reel? It has a plastic cup over the mechanism that winds the line. Would an "open" reel be better? Is there something about the reel I should be aware of for this application?
4. Is the a good shape for the weight to reduce the chances of the weight snagging as it is pulled back then springing up and tangling in a branch? I image that a pointed back end would be helpful, but what easily available devices, in the right weight range, can I use.
5. Any other suggestions?

Thanks in advance for any ideas.

Ted
N1XLW

183. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 02:02:43 UTC
From: garigue <garigue@attbi.com>
Message-ID: <7b6R9.405953$pN3.45287@sccrnsc03>
Source record: 127872

Hello Ken ...I agree with the fellow who says get it up and try it. Antennas, like pizza or coffee, come in the some better than others box. I have tried a lot of things over the years. All have worked ...some better than others. Years ago I wanted to get on 80 but didn't have the room. The "old timers" told me that nothing short of a full sized antenna would be worth my efforts. A kind fellow gave me a set of loading coils and some instructions to get an inefficient shortened antenna erected. Guess what ...it worked beautifully. Then I struck a deal with a good neighbor that would allow me to put up "full sized" 80 meter antenna. Guess what ...couldn't tell the difference from my shortened V. I routinely use a W3EDP for my QRP work which is very simple to build and erect. Mine is from the green Christmas light sets. I wouldn't overly concern myself what is "correct" but instead get it up and enjoy.

73 God Bless KI3R Tom nr Pittsburgh
"Ken" <cprstn54zz@att.net> wrote in message
news:3e14d54c.76694703@news-server.optonline.net...
> On Thu, 02 Jan 2003 18:15:42 -0500, "J. Keith Carter"
> <j.keith.carter@sympatico.ca> wrote:
> > model it as two wires in
> >the Z axis. (or any axis you chose
>
> I tried precisely that in the demo EZNEC that I have.
>
> With a too-wide feed line conductor spacing of .2 ft (around 2.4"), I
> get a solution. However, it shows that the feedline is a major
> radiator. This is not supposed to be the case. When I lower the
> conductor spacing to a more realistic (for ladderline) .1 ft (1.2"),
> EZNEC gives an error message and aborts. Maybe I need more than the
> 20 elements the demo program allows.
>
> Ken KC2JDY
> Ken
> (to reply via email
> remove "zz" from address)

184. Re: Station Earth / RF Earth for shack on 2nd / 3rd floor

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 02:03:17 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v19rp180nnipcd@corp.supernews.com>
Source record: 127871
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,uk.radio.amateur

Dear Dan and other UK amateurs:
Wow. I always thought that the electrical distribution system in UK was designed with an emphasis on low cost - you have confirmed it. I shall add to my safety lectures how things are done in UK.
My suspicions were aroused when the purchase of an electrical appliance in the UK did not include a plug. One went to a separate store for a plug. I just put it off to heightened liability concerns with some small justification being more than one set of socket standards.
The only justification for the existence of a profession is the protection of the public. I make sure that my students understand the scheme used in NA for protecting people and property. Contrasting the requirements of the NEC (not the antenna one) with the scheme you are subjected to is bound to impress them more then just discussing the NEC.
Thanks for the explanation. Wow!
73 Mac, N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

185. Re: which vertical for 10/15/20?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 02:20:19 UTC
From: derswede@aol.comspam.com
Message-ID: <20030102212019.18716.00000253@mb-cq.aol.com>
Source record: 127873

>"tore stabell kulo" <stabern@chello.no> wrote in message
>news:R22R9.3622$T41.13685@amstwist00...
>> Hi, there!
>> I want to buy a vertical for 10/15/20 meters

Tore...look for a used R5 locally or via the newsgroups....good but older antenna. Also, there are several homebrew verts based on the R5. Cushcraft did a good job on that antenna. Mine works well, just make sure the toroids are in good shape (matching network at base of antenna)

Andrew

186. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 02:34:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ipt91v415l69i9v04anlqlla5lsja7s4te@4ax.com>
Source record: 127874

On Thu, 02 Jan 2003 20:34:57 -0500, Ted Busky <busky@portone.com>
wrote:

> I lost them when they hung as I
>tried to pull them back.

Hi Ted,

Use more weight if you can.

Wait longer (like a day or two) before giving up and pulling back.

73's
Richard Clark, KB7QHC

187. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 02:37:33 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <uxmdnU2vs-5Ta4mjXTWc3g@comcast.com>
Source record: 127875

Ted,

I use a bow&arrow, but a 1/2 inch nut seems about right. You are probably using too heavy a line. Skinny monofilament fishing line works great. What I do is to lay an old sheet or drop cloth on the ground, and then spread the fish line on that. If you do it on the bare ground, a 1/2 inch twig is enough to mess things up. Never try to pull the weight back; give it enough slack so that it will come to the ground. Then cut off the weight, and pull the line back. I have a 3/8 or 1/2 nut taped to the tip of the arrow, and a hole drilled through the tail for the fish line. I have no trouble getting the line up over 75 - 80 foot branches.

When you splice fish line to string or rope, or rope to rope, cover the knot with duct tape and make it smooth. Else, the knot won't slide over the tree branch.

Tam/WB2TT
"Ted Busky" <busky@portone.com> wrote in message
news:3E14E8C1.123E807D@portone.com...
> Hi,
> I made my first attempt at installing a rope in a tree with a slingshot

188. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 02:40:36 UTC
From: dplatt@radagast.org
Message-ID: <v19u142t1nps09@corp.supernews.com>
Source record: 127876

In article <ipt91v415l69i9v04anlqlla5lsja7s4te@4ax.com>,
Richard Clark <kb7qhc@attbi.com> wrote:

>Hi Ted,
>
>Use more weight if you can.
>
>Wait longer (like a day or two) before giving up and pulling back.

Ah! It's neat to see a problem resolved by such an alliteration as
"Weight more, and wait more." Who says there's no poetry in technology?

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

189. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 02:49:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E14FA2B.8030900@ieee.org>
Source record: 127877

Ken wrote:
> What I still don't know about the doublet is, If I am willing to use a
> modest tuner, what is a good compromise length for the feedline?

For my 130 ft dipole, 100ft is a pretty good compromise. You can
see why on my web page.

> Unfortunately, I can't get the answer for myself because I can't
> figure out how to model a balanced feed line in EZNEC.

There's really no difference between a balanced feedline and an
unbalanced feedline in EZNEC since the feedlines are not allowed
to carry common mode currents.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

190. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 02:49:53 UTC
From: richardharrison@webtv.net
Message-ID: <10146-3E14FA51-560@storefull-2311.public.lawson.webtv.net>
Source record: 127879

Yuri, K3BU wrote:
"The Q has a negative effect in coupling?

The answer may be: Seldom.

Coupling between inductive circuits depends on how completely flux produced in one circuit flows through the coupled circuit.

Proximity, permeability, and inductive orientation affect coupling. (Ian, I am shooting from the lip again, being too lazy to look up all the answers, but no rocket launches depend upon my recitation as far as I know.)

Q has a negative effect on coupling in a ferroresonant voltage regulator when the circulating reactive current grows to a point where it saturates a section of the transformer core and decouples secondary from primary to tend to reduce output from the regulator. But, that does not happen when the magnetic medium is air or free space.

For coupled circuits, energy transfer depends on coupling. The magnitude of energy in the circuits are interdependent.

191. Re: Tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 03:12:15 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301021912.77a65e23@posting.google.com>
Source record: 127878

"BDDD" <nospam@nospam.com> wrote in message
news:<L31R9.22114$Ab.13722@nwrddc03.gnilink.net>...
> I am planning on attic-mounting a scratch-built antenna for low VHF
> TV channels, probably a simple dipole with a single reflector - is there
> some type of readily available tubing that will serve as a suitable material,
> say something I could find at the local home depot store?

Wood doweling with dia of choice. Cover with Reynolds aluminum wrap
when the wife is not looking.
Art

192. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 03:23:24 UTC
From: richardharrison@webtv.net
Message-ID: <10148-3E15022C-87@storefull-2311.public.lawson.webtv.net>
Source record: 127883

Yuri, K3BU wrote:
"The Q has a negative effect on coupling?"

I was in the middle of a too-long reply when my composition disappeared from the screen. Don`t know if the unfinished message will be posted or if it is lost in cyberspace.

I think I was saying that I may see Yuri`s point that energy is related to Q. An antenna often behaves as a series resonant circuit. At resonance, reactance is balanced out leaving only the resistance (loss + radiation) in the circuit to limit circuit current. The high current allowed by resonance can drop large voltages across the antenna`s inductance and capacitance, (IXcap & IXind).

The voltage across an inductance in a series resonant circuit is:
(E) (omega L) / R = EQ
This is the basis of text book series resonance curves. The tallest responses are those with the highest Q. But, as Richard Clark points out, Q doesn`t generate energy, it only exhibits energy storage.

Best regards, Richard Harrison, KB5WZI

193. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 03:28:46 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <eAIVPuCotc+Wy2mUxg3WmhcLmdG6@4ax.com>
Source record: 127882

Ted Busky <busky@portone.com> wrote:

>...excerpted...
>
>Thanks in advance for any ideas.
>
>Ted
>N1XLW
>
>
>

In addition to the good advice of the others, try the http://radioworks.com web site, and look under "Jim's Notebook." Plenty of tips on tree installations.

Bob
k5qwg

194. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 03:32:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <dkv91v4l94pdf0gl27hiud9ec9a0h703m2@4ax.com>
Source record: 127881

On Thu, 2 Jan 2003 21:37:33 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:

> What I
>do is to lay an old sheet or drop cloth on the ground, and then spread the
>fish line on that. If you do it on the bare ground, a 1/2 inch twig is
>enough to mess things up.

Hi Tarmo,

I use the sling-shot and bucket method with great success from inside the forest, beneath the canopy.

Instead of layering fishing line on a sheet, I scramble fill a small bucket with the line (dropping the line in loosely, allowing it to fall into any shape it wants to take). This makes for a compact, low resistance feed. I can shoot a line from within a foot of dense brush (making allowance for slack, trajectory and overhead branches).

Most of the trees here are 60 - 80 foot Maples on a steep slope (hard to get wire more than 40 feet away from terra unfirma); and I need more punch to get through the canopy. I use round fishing weights (about 1" diam) and 1/16th inch woven nylon cord. It may not give me height, but I don't have that option available except at the crown of the hill. There I will take up my bow.

It is an absolute must to use woven or monofilament line or cord. Twisted yarns have a coil built into their relaxed state (shape memory) that causes snags during quick feed. A casual (an imprecise method of approximating randomness) layering of line on a sheet, or filling a bucket yields a low resistance hi speed feed source.

73's
Richard Clark, KB7QHC

195. Re: PME and ELCB's, RCCD's & MCB's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 04:35:05 UTC
From: richardharrison@webtv.net
Message-ID: <10149-3E1512F9-24@storefull-2311.public.lawson.webtv.net>
Source record: 127887

Richard Clark wrote:
"That is the greatest single activity doomed to failure from
"self-empowerent" and the naive illusion of what constitutes ground."

My recommendation was made with an amused sense of futility.

For maximum safety, the new U.S. system of grounding is reasonably good.
It won`t likely be adopted abroad.

Electrified metal devices should be connected to the earth grounding
point at the service entrance, and for maximum safety, a separate ground
wire should be run for each device in a protected path to the service
entrance earthing point.

Will this be done? Maybe when pigs fly!

Best regards, Richard Harrison, KB5WZI

196. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 04:38:40 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <NxKdnRkocvmvjoijXTWcqA@comcast.com>
Source record: 127885

Richard,

Thanks for the hint about the bucket. Never would have thought of it.

Tam/WB2TT
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:dkv91v4l94pdf0gl27hiud9ec9a0h703m2@4ax.com...
> On Thu, 2 Jan 2003 21:37:33 -0500, "Tarmo Tammaru"
> <t-tammaru@home.com> wrote:
>
> > What I
> >do is to lay an old sheet or drop cloth on the ground, and then spread
the
> >fish line on that. If you do it on the bare ground, a 1/2 inch twig is
> >enough to mess things up.
>
> Hi Tarmo,
>
> I use the sling-shot and bucket method with great success from inside
> the forest, beneath the canopy.
>
> Instead of layering fishing line on a sheet, I scramble fill a small
> bucket with the line (dropping the line in loosely, allowing it to
> fall into any shape it wants to take). This makes for a compact, low
> resistance feed. I can shoot a line from within a foot of dense brush
> (making allowance for slack, trajectory and overhead branches).
>

197. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 04:41:10 UTC
From: n2ey@aol.com
Message-ID: <20030102234110.01791.00000168@mb-cb.aol.com>
Source record: 127886

In article <3e143678.36035265@news-server.optonline.net>, cprstn54zz@att.net (Ken) writes:

>Still looking for the ideal 40/80 camping QRP dipole (or doublet), I
>am trying to reconcile W5DXP's approach (130 ft dipole fed with
>variable-length ladder line) with W4RNL's suggestion (88 ft dipole,
>fed with ???).
>
I wouldn't use either for camping. btw, "camping" means different things to dofferent folks. I know "campers" who do weekend-long trips with only what they can carry on their backs - and others who use a motor home and full utility hookups.

W5DXP's idea is fine if you can deal with having a certain length of ladderline, used as a matching section. With a 130 foot center-fed wire, his approach requires about 1/2 wave of line on 80 and 1/4 or 3/4 wave on 40. If the ladder line you use has a velocity factor of, say, .85, that works out to about 110 feet of line on 80 and 28 or 84 feet of line on 40. And the ladder line can't just be laid on the ground or coiled up like coax. 110 feet of ladder line is quite a package, too. If you can deal with the feedline issue, it's a good design. But that's a big IF in a camping situation.

W4RNL's 88 foot approach is a compromise that sacrifices 80 meter performance a bit - which is fine if you are interested in all bands, but since the discussion is about an 80/40 wire antenna, you can do a lot better on those two bands if the simnple antenna is designed for those bands primarily.

I have had very good results with a simple trap dipole designed for 80 and 40. The traps I use are resonant on 7050 kHz, and use RG-58 coax cable on PVC pipe. There are better trap designs, though - Reg Edwards' "twintrap" design is one, or make a conventional trap using a capacitor of about 50 pF and a coil wound on PVC pipe. I used coax cable traps because I had the materials, and I hadn't discovered the twintrap design when I made the antennas.

Such an antenna is simply fed with 50 ohm coax of any convenient length. Overall length is about 105-110 feet. It takes a bit of work to get the resonances where you want them, but once you have them, the job is done. If installed at a reasonable height (35 feet or more) it will give SWR of better than 2:1 over most of 40 and about 150-200 kHz of 80. If you use #14 or lighter wire for the dipole, 1-1/2" PVC pipe for the traps and center insulator, and RG-8X feedline, the result is a fairly compact, lightweight package. Smaller wire, coax and PVC will yield a smaller, lighter package.

Using such an antenna installed as an inverted V with the apex at 35 feet and the ends at 10-15 feet, I made well over 300 contacts and ~75 sections in each of the past two CW Sweepstakes using QRP (5 watts) in about 12 -14 hours of

operating. With the antenna used as a dipole on Field Day gave similar results with QRP.

Put it up as a dipole or inverted V, as high as you can, and have fun.

73 de Jim, N2EY

198. Re: Tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 04:53:23 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <7H8R9.46752$4j5.7284851@newssvr28.news.prodigy.com>
Source record: 127884

Does it need to be rotatable? If not, try 300 ohm twinlead for the DE and
#14 wire for the reflector... If it does need to rotate, use CPVC or wood
dowels to support the wires...they also sell aluminum at the hardware
store...it's pretty soft, but would be OK indoors

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0301021912.77a65e23@posting.google.com...
> "BDDD" <nospam@nospam.com> wrote in message
news:<L31R9.22114$Ab.13722@nwrddc03.gnilink.net>...
> > I am planning on attic-mounting a scratch-built antenna for low VHF
> > TV channels, probably a simple dipole with a single reflector - is there
> > some type of readily available tubing that will serve as a suitable
material,
> > say something I could find at the local home depot store?
>
> Wood doweling with dia of choice. Cover with Reynolds aluminum wrap
> when the wife is not looking.
> Art

199. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 05:11:42 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3E151B8E.7FA6@wt.net>
Source record: 127888

Ken wrote:
>
> On Thu, 2 Jan 2003 13:41:04 -0000, "David Robbins" <k1ttt@arrl.net>
> wrote:
> >so to steal a phrase... just DO IT!
>
> I did that with my shack dipole and didn't like the results. I am
> back to first principles: measure twice, cut once. There is a reason
> we have engineers. Trying all these possible combos is a lifelong
> pursuit and I want to start off in the zone before I start fiddling.

Dunno. I have already tried most of them already when camping, and it didn't take me near my whole life to do it asumming I have more years left... I prefer just a regular coax fed dipole after trying the different types. It will almost certainly end up being the most efficient with the least hassle.
What I do is not take an antenna per say, I take a run of coax, and a spool of wire. If I'm well set up, I'll also drag along my tuner and some twin lead. I then build whatever antenna I need to match the site. It's almost always parallel 80/40 dipoles fed with a single coax. My arm span is 5 ft. It's my measuring stick. I can build a dipole for 80m in about 5 min of "measuring". It might take me 5-10 more minutes to fine tune it for best SWR once I've strung it up over the nearest tree or mast. Quickly pruning dipoles is an aquired art..I can do it very fast usually. Sometimes, I'm on the money with no trimming needed. I've used plenty of dipoles that weren't 6-10 ft off the ground. They work fine for average distance paths on those bands. Don't overly worry about height. If you have a 20 ft stick for a mast, that will be fine at the apex. Many times where I could only run one wire , I would make a 40 m dipole, and then use "clip on" extenders to convert to 80m at night. And yes, I have used my tuner and run twin lead to a single 80m dipole for all band use. But after trying it, it's not my preferred route to take. In the daytime, the coax fed 1/2 wl dipole will usually outdo the "two half waves in phase" that is fed with twin lead. With the dry 300 ohm line I used, I noticed loss when feeding that antenna, even though it did work ok. I don't know if the loss was from the line, or the tuner...Should have been the tuner...But it was there. How do I know there was loss? The noise floor dropped a good bit compared to the dipole. I tried the 80 m dipole at night fed with the 300 ohm line vs the same antenna fed with coax. The coax antenna won, no matter how carefully I tuned the tuner. Sure, not a large difference, but enough to notice on a meter. With QRP, I'd go coax fed any day. Many will argue I'm sure, and yes, it's only my opinion, but as far as I'm concerned for a "no gain" antenna, a coax fed dipole *is* nearly the perfect antenna

as far as modern "50 ohm" radios are concerned. Period. Electrically, and practically. You can lay it on the ground, get it wet, coil it up, etc, and no problems. No tuner needed, and thus no tuner losses, and the coax itself can be wound into a choke if needed for common mode problems, if by chance they occur. I rarely have problems out in the boonies though. RG-58 is light, and quite low loss on the low bands. It's even livable on 10m if the SWR is not too high. You can try whatever, but I really truly believe you would have the best results with just a simple coax fed dipole/s when running QRP. 100w?? Yea, you can skimp a bit on the antenna with that power...I never do though...:) I do usually run a full 100w out camping. I use car/deep cycles. I don't want to strain everyones ears..Weight is not an issue where I go. I usually have everything but the kitchen sink with me. TV's , VCR's, radios, etc, etc...Gotta have my toys to play with...I get bored real fast living out there with the crickets and hootowls.

MK

--
http://web.wt.net/~nm5k

200. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 05:22:13 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <969R9.537997$WL3.145080@rwcrnsc54>
Source record: 127889

I think there is an issue of semantics. The multiple ground systems
are what increase the efficiency, not the extra antennas. If you could
somehow put up one antenna and tie it into the 4 ground systems
in parallel, it would see the same improvement in efficiency.

Also, I don't see the value proposition. In terms of cost/real estate,
etc., why would 4 verticals be easier to realize than one vertical with a 4X
better ground system?

Rick N6RK

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v19dglgek9r520@corp.supernews.com...
> The first time I came across this principle was in "Antenna Design for
> Field-Strength Gain", by H.W. Kohler, in Proceedings of the I.R.E.,
> October 1944. The author describes a system of four closely spaced short
> verticals, each with its own ground system, fed in phase. They report
> experimental results showing a substantial field strength gain over a
> single vertical. The reduction in ground system loss is just about
> inversely proportional to the number of verticals -- that is, the effect
> is what you'd expect if the parallel connected ground systems were
> independent. The gain is due solely to reduction of ground loss, since
> the scheme doesn't provide any significant directionality. For very
> short verticals, where the ground resistance is the major part of the
> feedpoint impedance, the gain over a single vertical is nearly equal to
> the number of verticals. On the other hand, if the efficiency of a
> single vertical is high to begin with, adding more close-spaced in phase
> verticals won't provide any substantial signal strength improvement.
>
> I've done some brief modeling with NEC-4, which allows buried
> conductors, and it shows just what the authors described -- the loss
> does decrease as though the ground resistances were just resistors in
> parallel.
>
> I'd be interested to hear what Tom said about it and how he reached the
> conclusion that the method isn't valid. Between the reported
> experimental results and the NEC-4 modeling results, I'm prone to
> believe that it works.
>
> I haven't attempted modeling it with NEC-2, but if the results are
> different, the likely cause is coupling between the necessarily
> above-ground ground radial systems that's higher than you'd find with
> buried systems.
>
> Roy Lewallen, W7EL

>
> Rick Karlquist wrote:
> > I believe W8JI debunked this idea on one of the reflectors he
> > frequents (either towertalk or topband). My modelling on
> > EZNEC tends to support Tom on this one.
> >
> > Rick N6RK
> >
> > "ARDUJENSKI" <ardujenski@aol.com> wrote in message
> > news:20030102110757.02130.00000129@mb-bd.aol.com...
> >
> >>In reading Chapter 9 Section 3.4.1 of LOW BAND DXING it states that :
>
>>--
> >>-------------------
> >>One way to improve the radiating efficiency of a vertical over poor
ground
> >
> > is
> >
> >>to replace the single radiating element with several close spaced
> >
> > verticals all
> >
> >>fed in phase.
>
>>--
> >>-------------------
> >>Is there an article that further addresses this? I run a 42ft ground
> >
> > mounted
> >
> >>vertical and was wondering HOW MANY and HOW CLOSE? Will two or three say
> >
> > about
> >
> >>1/8 wave apart or are we talking a few meters? It is not clear what is
> >
> > meant
> >
> >>here. Just looking for a guestimate. Thanks
> >>
> >>Alan KB7MBI in Woodinville, WA
> >>FISTS 5702 Proud member of ARRL
> >>___ ___ . . . . . ___ ___ DIT DIT
> >
> >
> >
>

201. Re : Sat reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 06:00:43 UTC
From: Eoin <thesoldier50@hotmail.com>
Message-ID: <fG9R9.26855$aV5.73825@news-server.bigpond.net.au>
Source record: 127890

Is a parabolic dish required for the reception of sattelite signals or can a home made hlical be used as a directional antennae in conjunction with a scanner that covers up to 1600mhz .

202. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 06:26:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1ab8v3ohresf9@corp.supernews.com>
Source record: 127891

There are two ways to model a transmission line with EZNEC. One is by using the transmission line model, and the other is to model the line as two wires or a combination of transmission line and wire. The transmission line model always represents a balanced line, i.e., a twinlead feedline with equal and opposite currents on the two conductors or a coax feedline with no current on the outside of the shield. This component doesn't radiate. An unbalanced coax feedline (a coax feedline with current on the outside of the shield) can be modeled with a combination of a transmission line model (to represent the balanced inside of the coax) and a wire (to represent the outside of the coax). The technique is described in the EZNEC manual. An unbalanced twinlead feedline (one with currents that aren't equal and opposite) has to be modeled as two parallel wires.

Either a coax or twinlead line can be balanced and not radiate, and either a coax or twinlead line can be unbalanced and radiate. The physical symmetry of a twinlead line doesn't by any means guarantee balance, nor does the asymmetry of a coax line guarantee imbalance.

Systems with twinlead feedlines (e.g. ladder line) are often difficult or impossible to model accurately because most people connect them to the rig through some sort of tuner. The properties of the tuner with respect to balance (the relationship between common and differential mode currents) is seldom known, and there's generally no good way to model it with EZNEC even if known. The two exceptions to this are: 1. If a fully balanced tuner (not an unbalanced tuner with balun of unknown effectiveness) is used, the common mode current at the tuner can be assumed to be very low, and the source can be placed in the model where the tuner is in the real system; and 2. If one of the twinlead conductors is connected directly to the system ground. In that case, the path to the Earth from the rig or tuner needs to be modeled with a single wire. Neither of these conditions is common, so it's often not possible to get a really good idea of feedline radiation/common mode current with a typical twinlead-tuner setup using EZNEC or similar programs.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Ken wrote:
>
>> What I still don't know about the doublet is, If I am willing to use a
>> modest tuner, what is a good compromise length for the feedline?
>
>
> For my 130 ft dipole, 100ft is a pretty good compromise. You can

> see why on my web page.
>
>> Unfortunately, I can't get the answer for myself because I can't
>> figure out how to model a balanced feed line in EZNEC.
>
>
> There's really no difference between a balanced feedline and an
> unbalanced feedline in EZNEC since the feedlines are not allowed
> to carry common mode currents.

203. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 06:28:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1abcq918o3a6e@corp.supernews.com>
Source record: 127892

I've posted my experiences with this several times on this newsgroup, as have a number of other people. If you do a search at http://groups.google.com, you should find a good deal of information.

Roy Lewallen, W7EL

Ted Busky wrote:
> Hi,
> I made my first attempt at installing a rope in a tree with a slingshot
> for my 75m dipole. In the past I borrowed a bow and had much better
> results both in targetting and having enough power to get the arrow up
> and weight to bring the line down. I changed the weight quite easily by
> taping steel rod of various lengths to the arrow until it flew right.
> The arrow also seemed less likely to snap past a branch and tangle than
> the nuts or bolts I used with the slingshot.The biggest problem with the
> bow was losing arrows when the line broke from the bow as it was shot. I
> also broke a few wood arrows that hit the tree head on. (I have
> collected some low cost aluminum arrows since then.) Since I own this
> sling shot, I wanted to get some ideas before giving up and searching
> out another bow to borrow.
>
> My setup includes the following: Marksman 3055 tapered band slingshot.
> Daiwa 2200A reel with 6 pound line. The reel is hose clamped to the
> slingshot. I used a 1/2"x2" bolt that barely made it up 50'. The bolt is
> stuck on a branch that the line got tangled on. I need to go about 70'.
> Then I tried 1/2" and 5/16" nuts that went up high, but did not have
> enough weight to bring the line down. I lost them when they hung as I
> tried to pull them back.
>
> These are my questions:
> 1. Is there a site that explains how to aim a slingshot?
> 2. Can anyone suggest a reasonable weight to start with?
> 3. Is this the right reel? It has a plastic cup over the mechanism that
> winds the line. Would an "open" reel be better? Is there something about
> the reel I should be aware of for this application?
> 4. Is the a good shape for the weight to reduce the chances of the
> weight snagging as it is pulled back then springing up and tangling in a
> branch? I image that a pointed back end would be helpful, but what
> easily available devices, in the right weight range, can I use.
> 5. Any other suggestions?
>
> Thanks in advance for any ideas.
>
> Ted
> N1XLW

>
>
>
>

204. Re: Morse code cookie cutter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 09:02:59 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <av49ue3132s@enews2.newsguy.com>
Source record: 127905

Imagine that..... cookie requirements!

"Fred Hambrecht Sr." <w4jle@charter.net> wrote in message
news:v1981t924o28ef@corp.supernews.com...
> Think how many hams today are not capable of reading the code, even at
> cookie speed.
>
> --
> For Admiral Poindexter's folks:
> Bomb, anthrax, attack, acid, hijack, skyjack
> sniper, plutonium, nuclear, Big Mac, jihad
> Democrats, terror, Howdy Doody, Oprah
>
> "Those that sacrifice freedom for security deserve neither"
>
>
> "goofy" <dbeard@aoc.nrao.edu> wrote in message
> news:av1t6v$n1t$1@chaos.aoc.nrao.edu...
> > Dear Ham dudes!
> >
> > Christmas morning found me staring at a red plastic cookie cutter
> > while drooling into my first cup of coffee. To my surprise this
> > cookie cutter had Morse code on it that said "Merry Yhristmas"!!!
> > I guess they made a mistake and made the C a Y. I was blown
> > away by this knowing that someone in the past sent a secret message
> > down through time and I rcvd it on Christmas morning!
> >
> > The cutter was (is) made by HRM in the USA. It is a Christmas tree
> > and the garland around the tree is Morse code.
> >
> > I preformed a search on the web and told all of my Ham clown friends
> > of this find yet no one had been previously aware of this so I'm telling
> > the world NOW!!!
> >
> > Check out your cookie cutters! Do you have one? Have you ever heard of
> > this before? Etc.
> >
> > KC0KZE
> > D.J. Beard
> > National Radio Astronomy Observatory
> > Very Long Baseline Array
> > North Liberty, Iowa
> >
> >

> >
>
>

205. Re: Standard

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 09:13:14 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <av49uh4132s@enews2.newsguy.com>
Source record: 127906

Shoot.... and I just ordered a new radio!!!!!!!! Depending on your "cash" price, I still may be able to afford it...

--
Ryan, KC8PMX
FF/MFR
REMOVE "NOSPAM" in email address to reply.

"Carl Domanico" <carl.domanico@verizon.net> wrote in message news:3E138361.2020503@verizon.net...
For Sale or Trade : Standard C-5718DA 144/440 FM Mobile Radio
Hi I have a Standard C-5718DA Mobile Radio which I bought new. However I just purchased another car and deceided not to install the radio in this car....The radio is fully modified...for out of Band use...also has 800 MHz coverage....Plus can receive AM....
I have the optional Memory chip which allows for 100 memory channels per band....I also have extra mic cables 12' and 25'. The power output as indicated by a Bird wattmetter into a Bird Termaline Dummyload is : 55 Watts on 2 meters and 42 Watts on 440...I have the original manual and box.
I would prefer a swap for a functioning High Frequency Radio.....However I will consider selling the unit for cash......

Carl
N2MFW

206. Re: HNY

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 09:14:16 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <rfla1v8430s3f5n6c004fe9mpu0ue0lnp9@4ax.com>
Source record: 127894

On Fri, 3 Jan 2003 00:20:30 +0100, Gilbert Mouget <no.spam@thank.you>
wrote:

>In article <20030101105437.13934.00000443@mb-cr.aol.com>,
> dated 01 Jan 2003 15:54:37 GMT,
> Fractenna, <fractenna@aol.com> says...
>
>
>> I am grateful for the positive help I have received behind the scenes from
>> several of you in 2002, and will continue to be helpful myself when time
>> allows.
>
>Pathetic.

Be kind, Gilbert. Everyone needs friends, even if they are imaginary.

207. SeeSignature@below.com

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 09:37:20 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <r5ma1v4gbsoa9e6atfmgmd0360bdeueqde@4ax.com>
Source record: 127895

Whoever sent me e-mail with the return address of
SeeSignature@below.com
Please! Don't send me e-mail without a valid return address.
I have received no e-mails with a address contained in the body that I could find and I'm not willing to go through the headers of over 200 messages to find the two that bounced. All I get back from my isp is the the "munged" address, but no body...their new software is less than helpful.

I think it came from this newsgroup, but I can't be sure.
I posted to seven different groups the last few days, so I'm pretty sure it was one of them.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

208. Re: MAXX automatic antenna tuners

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 10:30:07 UTC
From: Steve <n4lq@iglou.com>
Message-ID: <3e1503b9_1@news.iglou.com>
Source record: 127880

I bought one for my cell phone. Now I can call long-distance easily.

--
Steve
N4LQ

"G Blair" <gblair@sympatico.ca> wrote in message
news:pan.2002.12.30.17.41.31.747751@sympatico.ca...
> Anyone used the MAXX antomatic antenna tuners, http://www.maxx-com.com/?
>
> How well do they work?
>
> If you have no first hand experience or otherwise know nothing about this
> tuner, please do not respond to this post.

209. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 10:33:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1apmvrsr0g1e@corp.supernews.com>
Source record: 127896

Although the multiple ground systems are what increase the efficiency (by reducing the ground loss), and the antennas don't provide any gain from directivity, they nevertheless serve an important function in producing the observed results. I've just done a bit more NEC-4 modeling, using two four-radial ground systems, with each radial being 20 meters long at a frequency of 3.7 MHz. A single 5 meter high element with this ground system showed a field strength of -10.26 dBi at its maximum elevation angle. I made a second identical element and ground system, offset 7 meters (5 meters in each of two directions) from the first. The radial system of the first element was buried 0.1 meter. The second was lowered to 0.2 meters to prevent overlapping wires from contacting. The field strength from the two element array was -7.66 dB, an improvement about equal to what you'd expect. Then I tried hooking the two ground systems in parallel and using a single vertical element. I tried with the single element centered over the first ground system, and a horizontal wire 0.1 meter above ground connecting to the second ground system (-8.9 dBi), a single vertical connected to the center of this above ground wire (-9.0 dBi), and an underground wire connecting the centers of the two ground systems with a single vertical upward from the center of this wire (-12.25 dBi). The two-vertical system produced the greatest field strength, with the difference increasing with larger spacing between the ground systems. The large difference between the above ground and below ground connections is very interesting and I don't have any ready explanation, but I didn't pursue it.

It appears that the reason the two vertical approach is better than a single vertical with these particular ground systems is that the presence of a vertical centered on the radial system causes equal currents to be induced in all the radials (and presumably spread evenly in the ground), minimizing ground loss. Aside from the point being discussed, it's apparent that it's important to run radial wires directly outward from a vertical rather than connecting the antenna to an offset radial system.

Now, why not just put 8 radials under one vertical? If we do that with this model, the field strength is -7.97 dBi, very nearly as good as it is with two verticals each having four radials. So it doesn't look like there would be any good reason to use the system of two verticals with 4 radials each to replace a single one with 8 radials, for this particular combination of radiator height and number and length of radials. Would it always be just as good to put all the radials under one antenna? I don't know, but it seems likely that you'd at least do nearly as well.

The author of the paper I mentioned was working with an array at 200 and 400 kHz which was excited in two modes, one with diagonal towers out of

phase and the other with them in phase. The purpose of the calculations presented in the paper was to explain the observed gain over a single element when running them all in phase. No claim is made for any practical application of the principle and, frankly, it's hard for me to see any. As far as I can see, it's an interesting observation that illustrates some basic principles of antenna, ground system, and array operation, but of no obvious practical use.

Roy Lewallen, W7EL

Rick Karlquist wrote:
> I think there is an issue of semantics. The multiple ground systems
> are what increase the efficiency, not the extra antennas. If you could
> somehow put up one antenna and tie it into the 4 ground systems
> in parallel, it would see the same improvement in efficiency.
>
> Also, I don't see the value proposition. In terms of cost/real estate,
> etc., why would 4 verticals be easier to realize than one vertical with a 4X
> better ground system?
>
> Rick N6RK
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v19dglgek9r520@corp.supernews.com...
>
>>The first time I came across this principle was in "Antenna Design for
>>Field-Strength Gain", by H.W. Kohler, in Proceedings of the I.R.E.,
>>October 1944. The author describes a system of four closely spaced short
>>verticals, each with its own ground system, fed in phase. They report
>>experimental results showing a substantial field strength gain over a
>>single vertical. The reduction in ground system loss is just about
>>inversely proportional to the number of verticals -- that is, the effect
>>is what you'd expect if the parallel connected ground systems were
>>independent. The gain is due solely to reduction of ground loss, since
>>the scheme doesn't provide any significant directionality. For very
>>short verticals, where the ground resistance is the major part of the
>>feedpoint impedance, the gain over a single vertical is nearly equal to
>>the number of verticals. On the other hand, if the efficiency of a
>>single vertical is high to begin with, adding more close-spaced in phase
>>verticals won't provide any substantial signal strength improvement.
>>
>>I've done some brief modeling with NEC-4, which allows buried
>>conductors, and it shows just what the authors described -- the loss
>>does decrease as though the ground resistances were just resistors in
>>parallel.
>>
>>I'd be interested to hear what Tom said about it and how he reached the
>>conclusion that the method isn't valid. Between the reported
>>experimental results and the NEC-4 modeling results, I'm prone to
>>believe that it works.
>>

>>I haven't attempted modeling it with NEC-2, but if the results are
>>different, the likely cause is coupling between the necessarily
>>above-ground ground radial systems that's higher than you'd find with
>>buried systems.
>>
>>Roy Lewallen, W7EL
>>
>>Rick Karlquist wrote:
>>
>>>I believe W8JI debunked this idea on one of the reflectors he
>>>frequents (either towertalk or topband). My modelling on
>>>EZNEC tends to support Tom on this one.
>>>
>>>Rick N6RK
>>>
>>>"ARDUJENSKI" <ardujenski@aol.com> wrote in message
>>>news:20030102110757.02130.00000129@mb-bd.aol.com...
>>>
>>>
>>>>In reading Chapter 9 Section 3.4.1 of LOW BAND DXING it states that :
>>>
>>>---
>>>
>>>>--------------------
>>>>One way to improve the radiating efficiency of a vertical over poor
>>>
> ground
>
>>>is
>>>
>>>
>>>>to replace the single radiating element with several close spaced
>>>
>>>verticals all
>>>
>>>
>>>>fed in phase.
>>>
>>>---
>>>
>>>>--------------------
>>>>Is there an article that further addresses this? I run a 42ft ground
>>>
>>>mounted
>>>
>>>
>>>>vertical and was wondering HOW MANY and HOW CLOSE? Will two or three say
>>>
>>>about
>>>

>>>
>>>>1/8 wave apart or are we talking a few meters? It is not clear what is
>>>
>>>meant
>>>
>>>
>>>>here. Just looking for a guestimate. Thanks
>>>>
>>>>Alan KB7MBI in Woodinville, WA
>>>>FISTS 5702 Proud member of ARRL
>>>>___ ___ . . . . . ___ ___ DIT DIT
>>>
>>>
>>>
>
>

210. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 11:08:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E156F49.8000808@ieee.org>
Source record: 127897

N2EY wrote:
> W4RNL's 88 foot approach is a compromise that sacrifices 80 meter performance a
> bit - which is fine if you are interested in all bands, but since the
> discussion is about an 80/40 wire antenna, you can do a lot better on those two
> bands if the simnple antenna is designed for those bands primarily.

There's also the G5RV. If one is going to use an antenna tuner anyway,
the G5RV gives reasonable performance on 80m and 40m. With a 102' dipole
and 30' of 300 ohm twinlead (VF=0.85), EZNEC sez the antenna system will
be resonant on 3.77 MHz and 7.26 MHz with a 50 ohm SWR of about 3:1.
--
cheers, CAM http://www.qsl.net/w5dxp

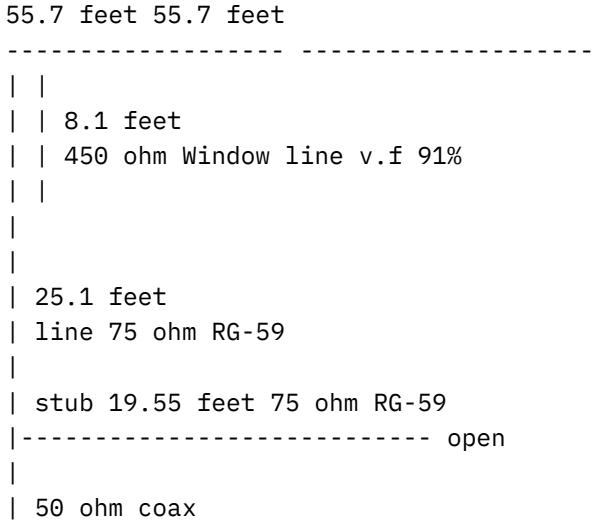
-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

211. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 11:43:20 UTC
From: Alexander Schewelew <dl1pbd@gmx.net>
Message-ID: <av3taf$bmed3$1@ID-34767.news.dfncis.de>
Source record: 127898

Hi Ken!

> I spent 10 minutes looking at your diagram and couldn't figure out
> what you did. How are the dipole and the Windom connected up? What
> is the lead to "OFF"?
It is a symmetrical dipole.



Juan will be disappointed since he won't be able to communicate with you.
And you'll have to make do with John.

Alex DL1PBD

212. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 12:17:12 UTC
From: n2ey@aol.com
Message-ID: <20030103071712.15952.00000547@mb-mj.aol.com>
Source record: 127899

In article <3E156F49.8000808@ieee.org>, OC_CAM's Razor <Cecil.A.Moore@ieee.org>
writes:

>N2EY wrote:
>> W4RNL's 88 foot approach is a compromise that sacrifices 80 meter
>>performance a
>> bit - which is fine if you are interested in all bands, but since the
>> discussion is about an 80/40 wire antenna, you can do a lot better on those
>>two
>> bands if the simnple antenna is designed for those bands primarily.
>
>There's also the G5RV. If one is going to use an antenna tuner anyway,
>the G5RV gives reasonable performance on 80m and 40m.

Sort of. But the G5RV still has some of the ladder line feed troubles, and the
feedpoint Z on 80 and 40 are pretty ugly. A trap dipole has none of those
problems, and in most cases can be used on its design frequencies without a
tuner.

>With a 102' dipole
>and 30' of 300 ohm twinlead (VF=0.85), EZNEC sez the antenna system will
>be resonant on 3.77 MHz and 7.26 MHz with a 50 ohm SWR of about 3:1.

Which is fine if you want to run 'phone and don't mind lugging a tuner along.
But what about CW and digital? What will the feedpoint Z and 50 ohm SWR of that
antenna be on 3.54 and 7.04, the QRP CW hot spots? How about 3.58 and 7.07?

Two big advantages of the trapper are the ability to put the resonant poinmts
exactly where you want them, and the tunerless operation on and around those
freqs.

73 de Jim, N2EY

213. Re: Sat reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 12:39:02 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <70Odnd768evIGYijXTWc2Q@crocker.com>
Source record: 127900

"Eoin" <thesoldier50@hotmail.com> wrote in message
news:fG9R9.26855$aV5.73825@news-server.bigpond.net.au...
> Is a parabolic dish required for the reception of sattelite signals or can
a
> home made hlical be used as a directional antennae in conjunction with a
> scanner that covers up to 1600mhz .
>
>

it depends on which satellite. i have received satellites on a mag mount
stuck on the side of a refrigerator, and one of them that has a 2m fm output
i received on a rubber duck on my ht. many others use turnstile omni
directional antennas... high class stations use crossed yagis or other types
of arrays.

214. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 14:10:59 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E1599F3.FB6F19E9@cwis.net>
Source record: 127901

John,
I find it amazing that having had one,
you would want another.
'Doc

215. HAMTRONICS schematics needed

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 14:14:40 UTC
From: FM <radiovintage@hotmail.com>
Message-ID: <kVgR9.12319$9N5.1160575@newsread2.prod.itd.earthlink.net>
Source record: 127902
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Hi,

I am in need of Hamtronics schematics for the 28mhz. to 432mhz. and
222mhz. transverters.
THANKS

216. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 14:19:35 UTC
From: richardharrison@webtv.net
Message-ID: <9640-3E159BF7-643@storefull-2316.public.lawson.webtv.net>
Source record: 127903

ARDUJENSKI wrote:
"One way to improve the radiating efficiency of a vertical over poor ground is to replace the single radiating element with several close spaced verticals all fed in phase."

That is similar to something I once read in "Radio Antenna Engineering", so I looked it up.

Ed Laport is describing stagger tuning multiple low-frequency verticals to increase bandwidth on page 40 of "Radio Antenna Engineering". Ed says:

"However, the radiating efficiency is improved over that of single tuning by virtue of the decreased total ground resistance resulting from reduction in the density of ground currents of each collecting point. Thus the ratio of radiation resistance to total resistance is effectively increased by multiple tuning.

If N rpresents the number of multiple tuning downleads carrying equal currents, the new radiation resistance Rrr is related to that for single tuning Rr by the equation

Rrr = Rr Nsquared

---In addition to improving radiation efficiency, multiple tuning also provides a more convenient input impedance at the feed point and increases bandwidth."

Best regards, Richard Harrison, KB5WZI

217. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 14:56:38 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e160503_4@news1.prserv.net>
Source record: 127774

John:
If it shattered just the case, use PVC pipe and build another. If it shattered the toroid, a 9:1 Balun will replace it, and those are a lot cheaper than $75.
--
Crazy George
Remove NO and SPAM from return address

<jdprislupski@aol.com> wrote in message news:5sh91vo4i9jq0kjnhq5sp99h6jtoqihd4f@4ax.com...
> Hello,
> I am looking for a used B&W AC-1.8 to 30 end fed wire antenna, or a
> BWD 1.8 to 30 Folded Dipole antenna. I am also looking for the BC-7
> 12:1 Balun that comes with these antennas.
>
> My AC-1.8 to 30 end fed fell, and the BAlun Shattered. The cost is
> $75 to replace the balun. I have seen full used antennas here for that
> or less.
> Thanks, John WC3Z
>

218. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 14:59:12 UTC
From: cprstn54zz@att.net
Message-ID: <3e159f35.128385750@news-server.optonline.net>
Source record: 127904

On 03 Jan 2003 12:17:12 GMT, n2ey@aol.com (N2EY) wrote:
>Two big advantages of the trapper are the ability to put the resonant poinmts
>exactly where you want them, and the tunerless operation on and around those
>freqs.

Maybe I am missing something. CW and data are at the low end of every band and phone is at the high end. What does it mean to put resonance where you need it, when you need it everywhere in the band? With coax feed, you need a resonant antenna, or else your radio will just be heating up your coax. I know this to be true the hard way.

Based on the information in this thread, I see two practical options: coax fed and balance fed.

Balance fed: 130 ft dipole fed with 100 ft of twinlead. Bring a balun and a tuner. Should work well 80-10 and be OK on 160. Wrap the twinlead around the trees and don't let it touch the ground.

Coax fed: I am still trying to figure out DL1PBD's antenna. Putting that aside, the simplest solution is to run fan dipoles for every band of interest. A tuner is helpful, but not mandatory.

This just leaves random wire, which some folks have advocated. What do you use as radials/ground if you run a 500 ft wire? No one seems to mention this. Could I get away with a 4 ft X 4 ft wet copper screen on the ground, or with some dirt thrown on it?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

219. Re: Quaker Oats Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 15:55:12 UTC
From: richardharrison@webtv.net
Message-ID: <6725-3E15B260-677@storefull-2317.public.lawson.webtv.net>
Source record: 127908

Richard Clark wrote:
"The common, commercial 360 pF variable cap so often used for AM radios would be hard pressed to offer less than 5-10% as its lowest value, and with the additional trimmer you allowed, the top of the AM band is not that far away."

We may be splitting hairs. I wrote without looking up (Ian). So, now challenged, I referred to the Radiotron Designer`s Handbook. On page 915 it says:
"To obtain the reduced frequency coverage (for shortwave) with variable ganged capacitors having a capacitance range of about 10-400 mu-mu-F, various arrangements of series and parallel fixed capacitors are used."

I proposed a 365 pF variable with a total additional capacitance, load, strays, trimmer, etc. of 25 pF, for a total of 390 pF. It was just a SWAG, but I don`t believe it was too far astray.
My Lightning Coil Calculator says 390 pF will resonate with 220 microhenries at 540 KHz. It also says that 220 microhenries will resonate at 2.15 MMHz when shunted with a capacitance of 25 pF. 1.7 MHz would require a total capacitance of 40 pF for resonance with 220 microhenries. I believe 220 microhenries is an appropriate inductance to cover the broadcast band using a common 365 pF variable capacitor as used for decades to tune the standard medium wave broadcast band.

Best regards, Richard Harrison, KB5WZI

220. Re: Scanner antenna question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 16:07:47 UTC
From: Michalkun <no.spam@nospam.com>
Message-ID: <Xns92F86809A4C89michalkunyahoocom@128.233.3.7>
Source record: 127907

If I was to feed an antenna without a coax, what wire would be the best to use? Is there anyway to find out which wire gives the least loss?

221. Re: Tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 16:19:44 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <bDjR9.1676$OX2.395791502@news.inreach.com>
Source record: 127909

You can buy aluminum tubing at larger hardware supply stores, like Home Depot and Lowe's. Prices tend to be rather high but you don't need very much. In larger cities you can find industrial supply outlets that carry it and sell it for just above the scrap metal price...check the yellow pages of your phone book under "metals", "surplus" etc.

But as the earlier replies to your post mention, you have lots of cheaper options. Many of us hams like to build antennas out of stuff found laying around. Another good source of antenna materials is old TV antennas. I recently built a 200 mHz 10 element yagi for TV channel 11. I used materials from 3 old TV antennas that were no longer in use. The boom, elements, element clamps and insulators were very easily put together.

You will have a lot of fun making the antenna and you will enjoy using it a lot more than if you bought it ready made.

Roger K6XQ

222. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 17:00:05 UTC
From: ardujenski@aol.com
Message-ID: <20030103120005.01999.00000118@mb-cb.aol.com>
Source record: 127910

It has been educational and I appreciate the feedback. Interesting how reading a publication closely you can find statements that have a lot more to them than what is in print. I am glad I asked the question. Thanks to all who responded.

Alan KB7MBI

223. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 17:26:37 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <3E15C7CD.3CC586E6@core.com>
Source record: 127911

Doc;
There are those of us that feel that the antenna is usefull. To
denigrate us for feeling that way does not do the Amateur community a
justice. Remember one man's trash is another's gold.
I like mine and it does the job I want it to do.

Dave WD9BDZ

'Doc wrote:

> John,
> I find it amazing that having had one,
> you would want another.
> 'Doc

224. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 17:38:31 UTC
From: wb4una@aol.com
Message-ID: <20030103123831.01977.00000100@mb-fd.aol.com>
Source record: 127912

just a comment on the B & W antenna..I have used one for many years as a all band recieving antenna..They do good but a dipole cut for the correct freq. does much better, but if you don't have the room they work . They seem to do a great job for the military to still use them....
just my 2 cents ....

Randy WB4UNA

Doc;
>There are those of us that feel that the antenna is usefull. To
>denigrate us for feeling that way does not do the Amateur community a
>justice. Remember one man's trash is another's gold.
>I like mine and it does the job I want it to do.
>
>Dave WD9BDZ
>
>'Doc wrote:
>
>> John,
>> I find it amazing that having had one,
>> you would want another.
>> 'Doc
>
>
>
>
>
>
>

ARS: WB4UNA
Randy Chavis
247 Goff Court
West Columbia
S.C. 29172

225. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 17:47:04 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E15CC98.72336130@cwis.net>
Source record: 127913

David,
You're right, some people are willing to settle
for less than others.
'Doc

226. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 17:53:17 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <3E15CE0D.564B1E5@core.com>
Source record: 127914

Doc;

No, some people have different requirements. My antenna does the job I want it to do. A dipole would do a similiar job but requires a tuner which does not do anything for resonance just matches impediances and allows the finals to output their full power. The B&W does that differently.
If I was into weak signal you would be correct. I'm not.
Good to talk with you. See you on the radio sometime.

Dave

'Doc wrote:

> David,
> You're right, some people are willing to settle
> for less than others.
> 'Doc

227. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 18:41:51 UTC
From: richardharrison@webtv.net
Message-ID: <6725-3E15D96F-689@storefull-2317.public.lawson.webtv.net>
Source record: 127917

Richard Clark wrote:
"(it (s-a tape) comes with a burnt-orange colored vinyl separating
liner between the inner/outer faces as it is rolled - otherwise it would
fuse to itself)."

Yes. That slick non-stick separator is an identifier. Never saw
burnt-orange but have seen white and other colors.

This is a very useful product and predates PVC by a long time.

Best regards, Richard Harrison, KB5WZI

228. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 18:56:59 UTC
From: tdonaly@aol.com
Message-ID: <20030103135659.06733.00000411@mb-cj.aol.com>
Source record: 127915

Dave wrote,
>
>Doc;
>
>No, some people have different requirements. My antenna does the job I
>want it to do. A dipole would do a similiar job but requires a tuner
>which does not do anything for resonance just matches impediances and
>allows the finals to output their full power. The B&W does that
>differently.
>If I was into weak signal you would be correct. I'm not.
>Good to talk with you. See you on the radio sometime.
>
>Dave
>
>'Doc wrote:
>
>> David,
>> You're right, some people are willing to settle
>> for less than others.
>> 'Doc
>

'Doc's invidious little comments, notwithstanding, Dave is right. One of the most, if not the most, inefficient antennas ever made, the loopstick, is also the most commercially successful because it does what its users want it to do. Another inefficient antenna, the short mobile vertical, is used by hams, everywhere.
Go ahead, 'Doc, tell someone with a Texas Bugcatcher that he's a fool for owning one. You may have to extract a very large coil from a very tender spot in your anatomy if you do.
73,
Tom Donaly, KA6RUH

229. Diamond antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 19:09:32 UTC
From: Michalkun <no.spam@nospam.com>
Message-ID: <Xns92F886D99E7B9michalkunyahoocom@130.133.1.4>
Source record: 127916

Does anybody know anything about Diamond D130J? Is it any good? How tall
is it? Is it short enough to put on a balcony?
Any info?

230. Re: Diamond antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 19:26:27 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <DtlR9.36287$L61.2497920@news1.west.cox.net>
Source record: 127918

From URL: http://www.grove-ent.com/ANT9.html

Don't own one but understand these are not gain antennas -- just extremely
wide band.

Diamond Wideband Discone Antenna D130J

SPECIFICATIONS

Frequency Range: 25-1300 MHz for receiving {Amateur frequency bands and
personal radio frequency band for transmitting}
Length: 1.7 m {66.9"}.
Weight: 1 kg {2.2 lbs}.
Equipped with SO-239 requires PL-259
Max. Diameter: 0.41m {16.1"}.
Mast Diameter: 25 to 52 mm {0.98" to 2.05"}.
Max Power: 200 W at transmittable frequency bands.
Type: Wideband omni-directional Discone antennas.
Manufacturer: Diamond

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Michalkun" <no.spam@nospam.com> wrote in message
news:Xns92F886D99E7B9michalkunyahoocom@130.133.1.4...
> Does anybody know anything about Diamond D130J? Is it any good? How tall
> is it? Is it short enough to put on a balcony?
> Any info?

231. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 19:37:25 UTC
From: n2ey@aol.com
Message-ID: <20030103143725.08991.00000445@mb-ct.aol.com>
Source record: 127769

In article <3e159f35.128385750@news-server.optonline.net>, cprstn54zz@att.net (Ken) writes:

>On 03 Jan 2003 12:17:12 GMT, n2ey@aol.com (N2EY) wrote:
>>Two big advantages of the trapper are the ability to put the resonant
>>points exactly where you want them, and the tunerless operation on and
>>around those freqs.
>
>Maybe I am missing something. CW and data are at the low end of every
>band and phone is at the high end.

Yup. On most of the amateur HF bands, a simple wire antenna (dipole, vertical, sloper, etc.) resonant at the middle of the band will have a low-enough SWR at the band edges for two reasons:

1) Most of the bands are not that wide as a percentage of the center frequency

2) The Q of a simple wire antenna for those bands is fairly low.

Example: 15 meters is 450 kHz wide, and the center freq is 21,225 kHz. 450/21,225 is .021, or 2.1%. IOW, the band edges are just 1.05% from the center freq.

But look at 80 meters - 500 kHz wide and center only 3750! 13.33% - the band edges are 6.66% from the center freq. And if the antenna Q is raised by loading coils or other means of shortening, the problem just gets worse.

This is a fundamental problem on 80 meters, and no simple compact efficient tunerless wire antenna will solve it. There ARE solutions, but they are more complex than simple dipoles.

>What does it mean to put resonance
>where you need it, when you need it everywhere in the band?

That depends on what kind of operating is intended. I'm primarily a CW operator, so I put the antenna resonances in the CW/data parts of the bands. To work 'phone, I use a tuner to deal with the SWR. Friends of mine who are primarily 'phone ops do the opposite.

Better to have an antenna that works well on the favorite bnads and parts of the band than one that works poorly on all.

>With coax
>feed, you need a resonant antenna, or else your radio will just be
>heating up your coax.

You need a good match, which means low SWR on the coax. Resonance or near-resonance operation is one way to get it. The two-band trapper does this.

>I know this to be true the hard way.
>
Then I'm preaching to the choir.

>Based on the information in this thread, I see two practical options:
>coax fed and balance fed.
>
>Balance fed: 130 ft dipole fed with 100 ft of twinlead. Bring a
>balun and a tuner. Should work well 80-10 and be OK on 160. Wrap the
>twinlead around the trees and don't let it touch the ground.

You might want to compute the shack-end feedpoint impedance before deciding on that route. Reg Edwards DIPOLE3 program is a quick way to do that. Your tuner must be able to deal with the impedance presented by the line, which will be quite reactive on many bands.
>
>Coax fed: I am still trying to figure out DL1PBD's antenna.

It's a dipole that uses twin lead, 75 ohm coax and a stub for matching the odd feedpoint impedances. Two main problems:

1) How lossy are the RG-59 sections when operated at high SWR? The design forces the coax parts to handle impedances very different from 75 ohms resistive. Loss may not be too bad because the sections are relatively short. But how bad are the losses? SWR at the feedpoint won't tell you how much is being lost in the stub and series sections of RG-59..

2) The design may or may not cover the frequencies of greatest interest to you without a tuner. Region 1 hams don't have the same amount of 80 and 40 as US hams (I think they are limited to 3500-3800 on 80 and 7000-7100 on 40). So they are trying to solve a somewhat different problem than we are.

>Putting
>that aside, the simplest solution is to run fan dipoles for every band
>of interest. A tuner is helpful, but not mandatory.

Multiple parallel dipoles work fine - at the cost of mechanical complexity. And as the number of dipoles increases, the complexity of adjustment to get a low SWR rises dramatically. But they do work well - as well as individual dipoles. Just another tradeoff.
>
>This just leaves random wire, which some folks have advocated. What
>do you use as radials/ground if you run a 500 ft wire? No one seems
>to mention this. Could I get away with a 4 ft X 4 ft wet copper
>screen on the ground, or with some dirt thrown on it?

In my experience with them, random wires need decent ground systems to work well, and are highly affected by the characteristics of the ground itself where you put up the antenna. Dry rocky soil gives a poor ground, for example. At a permanent location you can do invest the work needed to have a good ground, but for camping it's a different story.

At some campsites, an end-fed wire would be ideal. Example: At the edge of a lake or pond, a single bare wire can be laid out in the water for an excellent

ground. In other cases it will be a real problem. Antennas that don't depend on a ground will work anywhere that you can get them up in the air, which is why I use them.

--

When reading anecdotal reports of antenna results ("It works great!") you always have to look for the frame of reference of the person doing the reporting. Example: Hams will say things like "We used it on Field Day and made lots of contacts." To some hams, averaging 10 QSOs per hour on Field Day with a 100 Watt rig is good results, while to others, 10 QSOs per hour is awful - 40-50 per hour being "good results".

When the band is open, even an inefficent antenna will do some amazing things. Just look at the results obtained by mobile hams using antennas with efficiencies of only a few percent. But if what you want is consistent results....

73 de Jim, N2EY

232. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 19:44:08 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E15E808.4D9B73B4@cwis.net>
Source record: 127770

Tom,
Why should I, I use a Bug Catcher for a mobile antenna.
You're right though, they are inefficient. But they are
also better than whatever else is available. Keep trying,
you'll get it some day.
'Doc

233. Re: length of coax on mag mount antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 19:57:10 UTC
From: fmmck@aol.com
Message-ID: <20030103145710.08372.00000351@mb-fu.aol.com>
Source record: 127771

<< As originally supplied its much longer than needed
for my vehicles. Can I make it shorter without degrading performance? >>

Rich-

I suggest you make it a bit longer than needed. There may be a time when you
have to reterminate.

I've had some damage where the co-ax enters the door. Even worse, when someone
opens and closes the door without holding the cable in position!

73, Fred, K4DII

234. Temporary Mobile Mount and Antenna suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 20:09:34 UTC
From: Ed Laughery <laughery@bellsouth.net>
Message-ID: <oSIR9.7731$Tn.3274@news.bellsouth.net>
Source record: 127772

Hello

I'm awaiting a Tentec Argonaut V (primarily for CW QRP and digital operation) but would like to use it for SSB mobile while commuting between Louisiana and Texas. My travel is in a rental car so I need to have a temporary mobile installation - the low power requirements of the Argonaut simplifies the power hookup but I would appreciate any ideas for a simple and temporary antenna / ground configuration. Considering a Hamstick (20 m, etc.) but not sure of the proper mount for temp use.

All suggestions are appreciated.

73
Ed - AD5JV

235. Will a balun help?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 21:29:09 UTC
From: ve3tmt@rac.ca
Message-ID: <e40c1vo893b5vbeta62a8j1l4hrpispmrm@4ax.com>
Source record: 127775

My "hidden" antenna consists of a random length of wire fed by coax using the frame of my apartment building as a ground. Although somewhat usable, would I benefit from feeding the wire through a 4:1 balun with the other side attached to the ground?

236. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 22:03:39 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0301031403.747dc1a7@posting.google.com>
Source record: 127776

An open face reel is best, the larger the diameter the better. Even
better than a spinning reel is a bowfishing open spool....can be
obtained at any well stocked fishing/sporting goods store. (Try
www.basspro.com. Type "bowfishing" in the "search" box.) Stake the
spool on the ground in front of you, angled in the direction of the
desired trajectory. The "line in bucket" and "line spread on sheet on
ground" are also viable alternatives. The bowfish spool is a little
neater and easier to rewind

I use "bank" type fishing sinkers , as heavy as will allow to get the
desired altitude. Use a snap swivel on the line end to quickly change
to different weight sinkers. Also, use one of the modern kevlar type
lines, such as "Spiderwire" or a "Spectra" type line. They are much
thinner (and lighter) than regular monofilament line. 40 lb test
kevlar line will have the same diameter and weight as 10 lb mono....so
it will "fly" like 10 lb line but not be as apt to break when pulling
up your support line. The "lighter" the line, the heavier the sinker
you can use = more altitude.
Its a good idea to go out and practice/experiment with your line
launch gear before you actually need to install an antenna.... as its
likely your support line will eventually break and need to be replaced
in the lousiest weather. If you've got your line launch equipment and
technique "dialed in" you'll minimize the time (and discomfort) needed
to get your antenna back up.

Rich K2CPE

Ted Busky <busky@portone.com> wrote in message news:<3E14E8C1.123E807D@portone.com>...
> Hi,
> I made my first attempt at installing a rope in a tree with a slingshot
> for my 75m dipole. In the past I borrowed a bow and had much better
> results both in targetting and having enough power to get the arrow up
> and weight to bring the line down. I changed the weight quite easily by
> taping steel rod of various lengths to the arrow until it flew right.
> The arrow also seemed less likely to snap past a branch and tangle than
> the nuts or bolts I used with the slingshot.The biggest problem with the
> bow was losing arrows when the line broke from the bow as it was shot. I
> also broke a few wood arrows that hit the tree head on. (I have
> collected some low cost aluminum arrows since then.) Since I own this
> sling shot, I wanted to get some ideas before giving up and searching
> out another bow to borrow.
>
> My setup includes the following: Marksman 3055 tapered band slingshot.
> Daiwa 2200A reel with 6 pound line. The reel is hose clamped to the
> slingshot. I used a 1/2"x2" bolt that barely made it up 50'. The bolt is

> stuck on a branch that the line got tangled on. I need to go about 70'.
> Then I tried 1/2" and 5/16" nuts that went up high, but did not have
> enough weight to bring the line down. I lost them when they hung as I
> tried to pull them back.
>
> These are my questions:
> 1. Is there a site that explains how to aim a slingshot?
> 2. Can anyone suggest a reasonable weight to start with?
> 3. Is this the right reel? It has a plastic cup over the mechanism that
> winds the line. Would an "open" reel be better? Is there something about
> the reel I should be aware of for this application?
> 4. Is the a good shape for the weight to reduce the chances of the
> weight snagging as it is pulled back then springing up and tangling in a
> branch? I image that a pointed back end would be helpful, but what
> easily available devices, in the right weight range, can I use.
> 5. Any other suggestions?
>
> Thanks in advance for any ideas.
>
> Ted
> N1XLW

237. Re: Will a balun help?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 22:36:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1c4356e7ieq4f@corp.supernews.com>
Source record: 127777

The balun is likely to do more harm than good. Baluns work well only when presented with a particular range of impedances, and the impedance of the random wire could be just about anything. While 1:1 current baluns just become less effective if presented with the wrong impedance, 4:1 baluns include a transformer that can become very lossy under extreme mismatch conditions. If the coax is more than a few feet long, you'd benefit more by replacing the coax with ladder or open wire line.

Roy Lewallen, W7EL

ve3tmt@rac.ca wrote:
> My "hidden" antenna consists of a random length of wire fed by coax
> using the frame of my apartment building as a ground. Although
> somewhat usable, would I benefit from feeding the wire through a 4:1
> balun with the other side attached to the ground?

238. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 22:52:29 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v1c523cr60mabe@corp.supernews.com>
Source record: 127778

I recall an article using a golf ball and a 9 iron. Put a nail in the ball,
tie the mono on, line up and let it rip! Anyone recall where it was I saw
it and has anyone tried it?
73
hank wd5jfr
"Ted Busky" <busky@portone.com> wrote in message
news:3E14E8C1.123E807D@portone.com...
> Hi,
> I made my first attempt at installing a rope in a tree with a slingshot
> for my 75m dipole. In the past I borrowed a bow and had much better
> results both in targetting and having enough power to get the arrow up
> and weight to bring the line down. I changed the weight quite easily by
> taping steel rod of various lengths to the arrow until it flew right.
> The arrow also seemed less likely to snap past a branch and tangle than
> the nuts or bolts I used with the slingshot.The biggest problem with the
> bow was losing arrows when the line broke from the bow as it was shot. I
> also broke a few wood arrows that hit the tree head on. (I have
> collected some low cost aluminum arrows since then.) Since I own this
> sling shot, I wanted to get some ideas before giving up and searching
> out another bow to borrow.
>
> My setup includes the following: Marksman 3055 tapered band slingshot.
> Daiwa 2200A reel with 6 pound line. The reel is hose clamped to the
> slingshot. I used a 1/2"x2" bolt that barely made it up 50'. The bolt is
> stuck on a branch that the line got tangled on. I need to go about 70'.
> Then I tried 1/2" and 5/16" nuts that went up high, but did not have
> enough weight to bring the line down. I lost them when they hung as I
> tried to pull them back.
>
> These are my questions:
> 1. Is there a site that explains how to aim a slingshot?
> 2. Can anyone suggest a reasonable weight to start with?
> 3. Is this the right reel? It has a plastic cup over the mechanism that
> winds the line. Would an "open" reel be better? Is there something about
> the reel I should be aware of for this application?
> 4. Is the a good shape for the weight to reduce the chances of the
> weight snagging as it is pulled back then springing up and tangling in a
> branch? I image that a pointed back end would be helpful, but what
> easily available devices, in the right weight range, can I use.
> 5. Any other suggestions?
>
> Thanks in advance for any ideas.
>
> Ted

> N1XLW
>
>
>
>

239. Re: Will a balun help?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-03 23:06:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <av552dsek1@helle.btinternet.com>
Source record: 127779

You don't say how long is the outside wire, is all of it indoors, how much is outside, how long is the coax, what sort of receiver you have, whether you both transmit and receive, or what frequency bands you are interested in. Is it a TV or broadcast receiver? Whereabouts in the building is the equipment located? Is it near a window or the attic? How far above ground? How much higher is the roof?

What's the secret? What are you hiding from us? Don't worry - nobody at this end will leak anything to your neighbors, your landlord or to the secret police. Cross our hearts - it's a promise! Many of us are in the same fix as yourself.

The short answer to your question is no!

But you could remove the coax and bring the antenna wire all the way to the equipment (whatever it is). If you havn't aleady done so you could also take the ground wire to the building's hot+cold plumbing system by the shortest route. The ground is just as important as the antenna.

There's no charge. Good luck, Reg G4FGQ

==========
Somebody enquired -

> My "hidden" antenna consists of a random length of wire fed by coax
> using the frame of my apartment building as a ground. Although
> somewhat usable, would I benefit from feeding the wire through a 4:1
> balun with the other side attached to the ground?

240. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 00:02:32 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Sz3yV2DYSiF+EA4s@ifwtech.co.uk>
Source record: 127781

Richard Harrison wrote:
>Richard Clark wrote:
>"(it (s-a tape) comes with a burnt-orange colored vinyl separating
>liner between the inner/outer faces as it is rolled - otherwise it would
>fuse to itself)."
>
>Yes. That slick non-stick separator is an identifier. Never saw
>burnt-orange but have seen white and other colors.
>
>This is a very useful product and predates PVC by a long time.

That's an interesting comment. PVC tape has been around for a very long time in Britain, but I've never been quite clear what US "friction tape" is - can anyone describe it, please?

Self-amalgamating tapes have a long track record over here too. A "self-vulcanizing" rubber tape was used in British coal mines from the early 1950s, but it's not the same as the modern stuff which I believe is polyisobutylene-based. All of these tapes have to use a throwaway interleaving strip.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

241. Re: HAMTRONICS schematics needed

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 00:02:37 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3E16249D.844DC2A5@crosslink.net>
Source record: 127773
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

FM wrote:
>
> Hi,
>
> I am in need of Hamtronics schematics for the 28mhz. to 432mhz. and
> 222mhz. transverters.
> THANKS

<http://www.hamtronics.com/>

242. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 00:05:30 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <mSzvd7EKViF+EAcX@ifwtech.co.uk>
Source record: 127782

David G. Nagel wrote:
>
>No, some people have different requirements. My antenna does the job I
>want it to do. A dipole would do a similiar job but requires a tuner
>which does not do anything for resonance just matches impediances and
>allows the finals to output their full power. The B&W does that
>differently. If I was into weak signal you would be correct. I'm not.

Whatever your requirements, if you're aware of the compromises you're
making then that's just fine.

If you're not aware, that's a very different story...

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

243. Remanufactured AM Transmitters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 00:12:30 UTC
From: Christophe <christophe.torre@wanadoo.fr>
Message-ID: <av58u0$su1$1@news-reader10.wanadoo.fr>
Source record: 127780

I look for one Remanufactured AM Transmitters radio station. Please, have
you ideas to find there?
Thank,
73 de Cris

244. Re: Sat reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 00:19:16 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <MkCdndQZhaSeqoujXTWcqA@ctc.net>
Source record: 127789

> Is a parabolic dish required for the reception of sattelite signals or can
a
> home made hlical be used as a directional antennae in conjunction with a
> scanner that covers up to 1600mhz .
>
>
YOu can use any type of antenna that will give enough gain. The parabolic antenna usually has high gain once you get past 3ghz or so for its size. It is usaully more forgiving of construction. Also if you are tryng for very weak signals there is little noise picked up off the back or side. Not sure what sats you are trying to listen to.

If you use a helical antenna make sure it is wound for the correct rotation. If wound backwards for the signal you are trying to hear , you can loose 20 or more db of signal.

245. Re: Thanks GAP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 00:31:55 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0301031631.36419aef@posting.google.com>
Source record: 127783
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

"K HB" <k hb@arrl.DOTORG> wrote in message
news:<iV3Q9.4919$9N5.489585@newsread2.prod.itd.earthlink.net>...
> "Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote
>
> : I have one of those GAPs....I assume your talking about the 45 foot GAP
> : Voyager DX...?? I didn't really like the way it was working on 160. How
> : does yours do Hans?
>
> It's a reasonably good transmitting antenna given its footprint, but noisy
> on receive (the curse of verticals!). To receive I use a horizontal loop

What are the dimensions of your loop, how high is it and how effective
is it on rcv vs. other 160 rcvng antennas you've used?

A year ago when I was recovering from some nasty surgery I stayed at
one of my brothers' places. Four acres of ancient hardwoods. I'd
previously managed to get 475 feet of "random wire" up around 40 feet
and got on 160 for a couple weeks. First time I've ever managed to get
on 160. What a beautiful place to do ham radio. The band that is.

Tnx.

> and during contests string some temporary beverages.
>
> ï¿½ï¿½ï¿½ 73, de Hans, K0HB

w3rv

246. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 00:46:32 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E162EE8.6030004@ieee.org>
Source record: 127784

Henry Kolesnik wrote:
> I recall an article using a golf ball and a 9 iron. Put a nail in the ball,
> tie the mono on, line up and let it rip!

How do you talk Tiger into hitting it for you?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

247. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 00:49:23 UTC
From: dplatt@radagast.org
Message-ID: <v1cbsjn9371g7b@corp.supernews.com>
Source record: 127785

In article <Sz3yV2DYSiF+EA4s@ifwtech.co.uk>,
Ian White, G3SEK <g3sek@ifwtech.co.uk> wrote:

>That's an interesting comment. PVC tape has been around for a very long
>time in Britain, but I've never been quite clear what US "friction tape"
>is - can anyone describe it, please?

I've always thought of friction tape (or "frictape" as we used to call
it back in high-school Stage Crew) as being a generic term for a
fabric-based electrical tape.

It's useful for many sorts of electrical repairs (but only, I think,
under dry conditions, as it's not water-repellant), and also for
wrapping around the handles of tools, hockey sticks, etc. when you
want some to have a firm grip.

One example is Scotch Temflex 1755 - "a 15-mil thick high grade cotton
cloth tape coated with an electrical adhesive."

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

248. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 00:56:14 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <av5be7lre1@slb6.atl.mindspring.net>
Source record: 127786

I use a 'K-mart special' sling-shot. Some 20 lb fishing line. And two
bell shaped fishing weights tied together.

Accurancy can't be planned. Let the eye and arm do its thing. (Military
stuff...you know.. hi)

Dan/W4NTI

"Ted Busky" <busky@portone.com> wrote in message
news:3E14E8C1.123E807D@portone.com...
> Hi,
> I made my first attempt at installing a rope in a tree with a slingshot
> for my 75m dipole. In the past I borrowed a bow and had much better
> results both in targetting and having enough power to get the arrow up
> and weight to bring the line down. I changed the weight quite easily by
> taping steel rod of various lengths to the arrow until it flew right.
> The arrow also seemed less likely to snap past a branch and tangle than
> the nuts or bolts I used with the slingshot.The biggest problem with the
> bow was losing arrows when the line broke from the bow as it was shot. I
> also broke a few wood arrows that hit the tree head on. (I have
> collected some low cost aluminum arrows since then.) Since I own this
> sling shot, I wanted to get some ideas before giving up and searching
> out another bow to borrow.
>
> My setup includes the following: Marksman 3055 tapered band slingshot.
> Daiwa 2200A reel with 6 pound line. The reel is hose clamped to the
> slingshot. I used a 1/2"x2" bolt that barely made it up 50'. The bolt is
> stuck on a branch that the line got tangled on. I need to go about 70'.
> Then I tried 1/2" and 5/16" nuts that went up high, but did not have
> enough weight to bring the line down. I lost them when they hung as I
> tried to pull them back.
>
> These are my questions:
> 1. Is there a site that explains how to aim a slingshot?
> 2. Can anyone suggest a reasonable weight to start with?
> 3. Is this the right reel? It has a plastic cup over the mechanism that
> winds the line. Would an "open" reel be better? Is there something about
> the reel I should be aware of for this application?
> 4. Is the a good shape for the weight to reduce the chances of the
> weight snagging as it is pulled back then springing up and tangling in a
> branch? I image that a pointed back end would be helpful, but what
> easily available devices, in the right weight range, can I use.
> 5. Any other suggestions?
>
> Thanks in advance for any ideas.

>
> Ted
> N1XLW
>
>
>
>

249. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 01:09:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1cd32tm5q4kc0@corp.supernews.com>
Source record: 127787

When I was a kid, "friction tape" referred to a black cloth adhesive tape used for electrical work, before PVC tape was commonly available. I recall using it pretty much like we use today's PVC tape, but splices in old electrical work I've seen are covered first by a nonadhesive rubber tape, then a layer of "friction tape" on the outside. That was apparently the standard for splices before today's use of romex cable, wire nuts, and junction boxes. I'm sure some of the older timers can shed more light on it.

"Friction tape" used in a modern context would most likely simply mean PVC electrical tape -- PVC tape was commonly called "friction tape" for some time after it became available and replaced the cloth stuff.

Roy Lewallen, W7EL

Ian White, G3SEK wrote:
>
> That's an interesting comment. PVC tape has been around for a very long
> time in Britain, but I've never been quite clear what US "friction tape"
> is - can anyone describe it, please?
> . . .

250. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 01:10:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E16349C.7010502@ieee.org>
Source record: 127788

Ian White, G3SEK wrote:
> ... but I've never been quite clear what US "friction tape"
> is - can anyone describe it, please?

It's been around a long time and is a cloth based, double-sided
sticky black tar-like adhesive. In other words, it sticks to
itself on both sides and is somewhat waterproof if you use
enough of it. It's what we used here before black plastic
electrical tape was introduced.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

251. Re: Remanufactured AM Transmitters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 01:15:42 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e163cc3_2@news1.prserv.net>
Source record: 127790

Those things tend to be heavy and expensive to ship. What country?

--
Crazy George
Remove NO and SPAM from return address
"Christophe" <christophe.torre@wanadoo.fr> wrote in message
news:av58u0$su1$1@news-reader10.wanadoo.fr...
> I look for one Remanufactured AM Transmitters radio station. Please, have
> you ideas to find there?
> Thank,
> 73 de Cris
>
>

252. Re: CQ! Do You Recognise This HF Amateur Mobile Antenna by description?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 01:24:02 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e163cc4_2@news1.prserv.net>
Source record: 127791

My Elmer had both of those at one time, and neither matches my understanding of the hardware Wilf originally described. I wish I had the Whipload 6, it was a neat package. Instantly recognizable in its original form by the lever knob on the bandswitch. It was for base loading, however, and Wilf described a fold-over base section. IIRC, the Whipload was about 6" in diameter and about as tall.

--
Crazy George
Remove NO and SPAM from return address
"Fred McKenzie" <fmmck@aol.com> wrote in message
news:20021228232642.21128.00000295@mb-fm.aol.com...
> << The loading coil/cap was called the "WHIPLOAD-6". >>
>
> Cecil-
>
> I dug through some old boxes and found my 1955 ARRL "Radio Amateur's
Handbook".
> In the E. F. Johnson advertisement section in the back, I found reference
to
> two antenna loading networks.
>
> The one I was thinking of, is called "Bi-Net". It is a dual band loading
> network for ten and twenty meters. It mounts in the center of a
"standard"
> mobile whip for completely automatic band change while in motion! Catalog
> number 250-22, Amateur Net $10.95.
>
> This one is streamlined, with a tear-drop shape when viewed from the top.
> According to the ad, the size is 4-7/16" X 5-5/16" X 2-3/8".
>
> The other one is the "Whipload-6". It appears to be cylindrical. The ad
> doesn't mention its size, but from the photograph, I imagine it might be
like a
> small coffee can.
>
> According to the ad, the Whipload-6 provides high efficiency base loading
for
> mobile whips with instant bandswitch selection of 75, 40, 20, 15, 11 and
10
> meters. On 75 meters a special capacitor, with dial scale, permits tuning
> entire band. Covers other bands without tuning. Air-wound coil provides
> extremely high "Q". Fibre-glass housing protects assembly. Mounts on
standard

> mobile whip. Catalog number 250-26, Amateur Net $19.50.
>
> I wonder if either of these match the one Wilf has?
>
> 73, Fred, K4DII
>

253. Re: Remanufactured AM Transmitters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 01:37:48 UTC
From: Christophe <christophe.torre@wanadoo.fr>
Message-ID: <av5dts$dn6$1@news-reader12.wanadoo.fr>
Source record: 127792

For France in Toulouse. I look for an Remanufactured AM transmitter 01Kw , 1485Khz...
Thank you
73 de Cris
--
CRIS
maxinet@wanadoo.fr

Crazy George <munschNO@attglobal.net.SPAM> a écrit dans le message : 3e163cc3_2@news1.prserv.net...
> Those things tend to be heavy and expensive to ship. What country?
>
> --
> Crazy George
> Remove NO and SPAM from return address
> "Christophe" <christophe.torre@wanadoo.fr> wrote in message
> news:av58u0$su1$1@news-reader10.wanadoo.fr...
> > I look for one Remanufactured AM Transmitters radio station. Please, have
> > you ideas to find there?
> > Thank,
> > 73 de Cris
> >
> >
>
>

254. re : Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 01:43:35 UTC
From: Eoin <thesoldier50@hotmail.com>
Message-ID: <b%qR9.974$oS1.2258@news-server.bigpond.net.au>
Source record: 127793
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

Purely out of interest I would like to start scanning some more obscure things , including satellite I have a scanner that has a continuous range up to 1600mhz and would like any one who is currently scanning satellite signals or who has any other obscure and interesting scanner freq.'s out there . Also I an looking for a high gain antennae that is portable (I live in an apartment block) and possibly any directional solutions .

Thanks in advance

Eoin

255. Re: re : Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 01:59:59 UTC
From: Rollo <webmechanic@hotmail.com>
Message-ID: <oprigc6bs6uoy5bj@netnews.attbi.com>
Source record: 127794
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

On Sat, 04 Jan 2003 01:43:35 GMT, Eoin <thesoldier50@hotmail.com> wrote:

> Purely out of interest I would like to start scanning some more obscure
> things , including satellite I have a scanner that has a continuous range
> up
> to 1600mhz and would like any one who is currently scanning satellite
> signals or who has any other obscure and interesting scanner freq.'s out
> there . Also I an looking for a high gain antennae that is portable (I
> live
> in an apartment block) and possibly any directional solutions .
>
> Thanks in advance
>
> Eoin

There are lots of satellites. You didn't specify which ones you want to
scan. I'm assuming
amateur radio satellites here, but I might be wrong.

If you want to hear the "Easy" FM ones, like UO-14, AO-27, the new SaudiSat
"Payload C"
then I suggest the Arrow handheld antenna if you want an appliance; a
build-it-yourself WA5VJB "cheap yagi" if you are halfway handy. Keep in
mind that a preamp is almost essential for even the easiest of satellites.
You can build a Ramsey UHF preamp kit for about $10 and get reasonable
results.

Remember that you are listening for a transmitter that's between
400 milliwatts and 1 watt, 2000 miles away near the horizon, 400 miles away
near zenith.

This is not to imply that it's impossible. Lots of people do it every day.
Remember, these are the EASY ones.
It simply means that you will have to work for it.

256. Re: Remanufactured AM Transmitters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 02:27:15 UTC
From: richardharrison@webtv.net
Message-ID: <2862-3E164683-768@storefull-2312.public.lawson.webtv.net>
Source record: 127796

Chris wrote:
"I look for one Remanufactured AM Transmitters radio station."

Contact manufacturers of the latest models. Tell them what you need and that you can`t pay a new radio price.

Manufacturers often have agreed to take a trade-in at a certain price following installation of the new transmitter. Trade-in was needed to make the new transmitter sale.

Manufacturers also broker a resale of a used transmitter by finding a buyer for an existing transmitter so that the new transmitter buyer will sign a purchase agreement.

I`ve had the vendor refurbish the bargain priced used radio all tuned and tested on its new frequency and give a new-radio guarantee. It turned out not to ever need anything under the guarantee. The radio was perfect for years!

Best regards, Richard Harrison, KB5WZI

257. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 02:37:48 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <0OrR9.118903$pe.4752453@news2.east.cox.net>
Source record: 127795

Keep it simple. Make it as long as you can. Droop down the ends and if you really want to be heard, run half the antenna horizontal and half vertical. Feed it all with ladder line to a 1:1 balun then coax to a tuner and go to town. While all the other guys are arguing about why your antenna won't work, you will be enjoying QSOs all over the world.

"Ken" <cprstn54zz@att.net> wrote in message news:3e143678.36035265@news-server.optonline.net...
> Still looking for the ideal 40/80 camping QRP dipole (or doublet), I
> am trying to reconcile W5DXP's approach (130 ft dipole fed with
> variable-length ladder line) with W4RNL's suggestion (88 ft dipole,
> fed with ???).
>
> (1) How is the the 88 ft dipole fed? It is called a "doublet," so I
> would assume balanced feed line -- but how long?
>
> (2) How do these two antennas perform on 160, 20 and 10?
>
> See:
> http://www.qsl.net/w5dxp/notuner.htm
> http://www.cebik.com/aledz.html
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

258. Can more than one vertical element be fed with the same coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 03:54:09 UTC
From: W4HIJ@msn.com
Message-ID: <4c5cb167.0301031954.3668ce31@posting.google.com>
Source record: 127797

Forgive the dumb question but I can't for the life of me remember if this is possible and all my reference material is packed away at the moment. I know it's possible to feed several dipoles cut for different bands from the same coax but can that be done with quarter wave verticals? In other words, I want to cut one vertical element for 10 meters and one for 20 meters, then attach the shiled of the coax to a ground radial sytem and the center conductor to both quarter wave elements. Will the antennas resonate on their respective bands?
I don't want to go to the trouble of building a trap vertical. I figure for only two bands that I can make two elements. Am I way off base on this?
Tnx and 73,
Michael, W4HIJ

259. Re: Can more than one vertical element be fed with the same coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 05:05:16 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E166B8C.18390D39@cwis.net>
Source record: 127798

Michael,
Yes, you can.
'Doc

260. Re: Temporary Mobile Mount and Antenna suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 05:45:03 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E1674DB.1020507@tampabay.rr.com>
Source record: 127800

hey ed
i would suggest one of the 3 magenet magmounts and hamsticks
i think that would be the easist and lightest to use
i dont think there is much else out there that would be temp enough
the magmount is 3 5 inch dia. magenets with metal strapping connecting
them with a 3/8 24 thread mount on it and usually 18 feet of coax
the hamsticks break down to 4 foot lenght that can be stowed in a piece
of 4in dia PVC pipe with caps
good luck

Ed Laughery wrote:
> Hello
>
> I'm awaiting a Tentec Argonaut V (primarily for CW QRP and digital
> operation) but would like to use it for SSB mobile while commuting between
> Louisiana and Texas. My travel is in a rental car so I need to have a
> temporary mobile installation - the low power requirements of the Argonaut
> simplifies the power hookup but I would appreciate any ideas for a simple
> and temporary antenna / ground configuration. Considering a Hamstick (20 m,
> etc.) but not sure of the proper mount for temp use.
>
> All suggestions are appreciated.
>
> 73
> Ed - AD5JV
>
>
>

261. Re: Morse code cookie cutter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 06:23:03 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <b5vR9.225365$qF3.18070@sccrnsc04>
Source record: 127801

Me.
--

CW
KC7NOD

"Fred Hambrecht Sr." <w4jle@charter.net> wrote in message
news:v1981t924o28ef@corp.supernews.com...
> Think how many hams today are not capable of reading the code, even at
> cookie speed.
>

262. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 06:25:57 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301032225.18de4b08@posting.google.com>
Source record: 127802

cprstn54zz@att.net (Ken) wrote in message
> This just leaves random wire, which some folks have advocated. What
> do you use as radials/ground if you run a 500 ft wire? No one seems
> to mention this. Could I get away with a 4 ft X 4 ft wet copper
> screen on the ground, or with some dirt thrown on it?

I'd stay away from random wires. You don't want an antenna that is
dependent on a good ground system when camping. Very important with
QRP. Also, even with a good ground, the performance is likely to drag
behind a dipole fed in any manner for most paths you will work.
Overall, I hate random wires. Never have had one really worth a hoot.
The fan dipoles fed with coax get my vote out of those three choices.
MK

263. Re: Can more than one vertical element be fed with the same coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 06:32:46 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <ievR9.54445$4j5.7439845@newssvr28.news.prodigy.com>
Source record: 127799

Should be no problem. You might have to play a little with element tuning,
especially on 20, but it will work. I would also try to keep the spacing at
6" or more to minimize interaction.

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Michael" <W4HIJ@msn.com> wrote in message
news:4c5cb167.0301031954.3668ce31@posting.google.com...
> Forgive the dumb question but I can't for the life of me remember if
> this is possible and all my reference material is packed away at the
> moment. I know it's possible to feed several dipoles cut for different
> bands from the same coax but can that be done with quarter wave
> verticals? In other words, I want to cut one vertical element for 10
> meters and one for 20 meters, then attach the shiled of the coax to a
> ground radial sytem and the center conductor to both quarter wave
> elements. Will the antennas resonate on their respective bands?
> I don't want to go to the trouble of building a trap vertical. I
> figure for only two bands that I can make two elements. Am I way off
> base on this?
> Tnx and 73,
> Michael, W4HIJ

264. Re: Temporary Mobile Mount and Antenna suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 07:26:20 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301032326.7c291db4@posting.google.com>
Source record: 127803

"Ed Laughery" <laughery@bellsouth.net> wrote in message
news:<oSlR9.7731$Tn.3274@news.bellsouth.net>...
> Hello
>
> I'm awaiting a Tentec Argonaut V (primarily for CW QRP and digital
> operation) but would like to use it for SSB mobile while commuting between
> Louisiana and Texas. My travel is in a rental car so I need to have a
> temporary mobile installation - the low power requirements of the Argonaut
> simplifies the power hookup but I would appreciate any ideas for a simple
> and temporary antenna / ground configuration. Considering a Hamstick (20 m,
> etc.) but not sure of the proper mount for temp use.
>
> All suggestions are appreciated.
>
> 73
> Ed - AD5JV

A multi magnet mag mount would handle it no problem, but you want to
be careful about scratching the paint on the car. They might dock you
for it, if they noticed the tell tale "rubs" on the paint that many
mag mounts cause eventually. You might could use a thin layer of
sandwich wrap or something to protect, if the magnets were strong
enough to hold through the plastic. I think most likely the damage
would be small as long as the magnets are strong and can't "walk"
around on the roof. Wouldn't be that long a time either. MK

265. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 08:02:33 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301040002.292999ab@posting.google.com>
Source record: 127804

n2ey@aol.com (N2EY) wrote in message news:<20030103071712.15952.00000547@mb-mj.aol.com>...
> In article <3E156F49.8000808@ieee.org>, OC_CAM's Razor <Cecil.A.Moore@ieee.org>
> writes:
>
> >N2EY wrote:
> >> W4RNL's 88 foot approach is a compromise that sacrifices 80 meter
> >>performance a
> >> bit - which is fine if you are interested in all bands, but since the
> >> discussion is about an 80/40 wire antenna, you can do a lot better on those
> >>two
> >> bands if the simnple antenna is designed for those bands primarily.

I agree. If you run QRP on 80m, you want all the efficiency you can
muster. Every last drop. Same for 40m really, if you want a decent
signal. The antenna requirements for decent performance on the higher
bands are much less critical. Not that Cecils version is inefficient,
I just think the coax feed is much easier to deal with when you are
going camping in places that you might not even be sure what the site
looks like.
Heck, suspended tuned feeders? I'd probably end up tripping over one
once it got dark and yanking the radios off the table...:(

> >
> >There's also the G5RV. If one is going to use an antenna tuner anyway,
> >the G5RV gives reasonable performance on 80m and 40m.
>
> Sort of. But the G5RV still has some of the ladder line feed troubles, and the
> feedpoint Z on 80 and 40 are pretty ugly. A trap dipole has none of those
> problems, and in most cases can be used on its design frequencies without a
> tuner.

Dunno, I guess G5RV's vary according to the builder, but the
"storebought" G5RV that I've tried in the past was pathetic compared
to a normal dipole on 80m. And I was running 100w, not QRP. I always
suspected the problem was in the coax/twinlead junction. Too much
loss. Was one of the worst 80m wire antennas I've ever used. Now, I
have heard a few G5RV's on the air that did work fairly well, so there
must be an owner corrected hook, but overall, "storebought" G5RV's on
80m suck compared to a normally fed dipole. I got much the same
results trying a "storebought" windom against a coax fed dipole. I
compared them once at a field day on 40m in the late afternoon. The
windom owner thought he had a fairly decent antenna, until I threw up
a coax fed dipole, and ran it's coax to the table and used a switch to
compare to the windom. The meter would jump up two S units or more on
noise, signals, everything. Needless to say, we retired the windom at

that point...I think it has the same problems. Loss in the balun
systems from the coax to the twin lead, or wire. I forgot now exactly
how it was made...
>

>
> Two big advantages of the trapper are the ability to put the resonant poinmts
> exactly where you want them, and the tunerless operation on and around those
> freqs.

I do as you mentioned..I tune the dipoles to where I usually am at the
most. This varies with the case...I then use a tuner to go to the
other end of the band if needed. The losses with a relatively low
mismatch such as 3 or 4 or even 5 to one, are not too bad at all, even
with rg-58. Being on 80/40 meters helps in that regard a lot.
I prefer full size dipoles at right angles whenever possible, but your
solution would probably be my 2nd choice if coax fed. MK

266. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 08:13:40 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <ei5d1v0mc9aotj6sm3reejtom0t4ueudt8@4ax.com>
Source record: 127805

On Fri, 03 Jan 2003 17:09:38 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>When I was a kid, "friction tape" referred to a black cloth adhesive
>tape used for electrical work, before PVC tape was commonly available. I
>recall using it pretty much like we use today's PVC tape, but splices in
>old electrical work I've seen are covered first by a nonadhesive rubber
>tape, then a layer of "friction tape" on the outside. That was
>apparently the standard for splices before today's use of romex cable,
>wire nuts, and junction boxes. I'm sure some of the older timers can
>shed more light on it.
>
>"Friction tape" used in a modern context would most likely simply mean
>PVC electrical tape -- PVC tape was commonly called "friction tape" for
>some time after it became available and replaced the cloth stuff.

No, Friction Tape is still the fabric based tape and is available at
most hardware stores and places like Lowe's, or Builder's Square.
Those that call the plastic tape "friction tape" are just not familiar
with which tape does what.

PVC tape did not replace the "friction tape".
In addition to using it to add "friction" to baseball bat handles,
rakes, and other wood handled tools (helps keep the blisters down), it
can be layered with the various plastic tapes to add strength as well
as "fill", although it's not as handy as the self sticking stuff that
pretty much becomes one piece on application.

I often see a layer of the self sticking tape, friction tape, and
another layer of PVC tape on top as mentioned above. You still may
find the connections at the top of weather heads done that way..

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>Roy Lewallen, W7EL
>
>Ian White, G3SEK wrote:
>>
>> That's an interesting comment. PVC tape has been around for a very long
>> time in Britain, but I've never been quite clear what US "friction tape"
>> is - can anyone describe it, please?
>> . . .

267. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 08:19:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1d69irqi41117@corp.supernews.com>
Source record: 127807

The quality of ground you need with a monopole conductor depends on the impedance at the feedpoint. If, for example, an end fed wire is close to a half wavelength long, you can get by with a very simple ground system. On the other hand, some lengths require very good ground systems for good efficiency. If you're trying to run multiple bands on one antenna, the ground system requirements will vary from band to band. Only once did I try radial wires laid on the ground when camping (on Field Day). Very early on Sunday morning, a bunch of horses and riders trotted through, and there was a mad scramble to get the wires up. On other camping trips, I've had sheep, cattle, deer, elk, and coyotes come through or very near the camp. So I heartily recommend against wires lying on the ground.

I've generally used single band or trapped dipoles for portable use. The only time I'd be tempted to use a vertical for performance is if I was at the shore of a reasonably sized lake or on the beach, and wanted to work in the direction of the water. But there'd still be the problem of how to keep critters from getting tangled in the wires.

Roy Lewallen, W7EL

Mark Keith wrote:
> cprstn54zz@att.net (Ken) wrote in message
>
>>This just leaves random wire, which some folks have advocated. What
>>do you use as radials/ground if you run a 500 ft wire? No one seems
>>to mention this. Could I get away with a 4 ft X 4 ft wet copper
>>screen on the ground, or with some dirt thrown on it?
>
>
> I'd stay away from random wires. You don't want an antenna that is
> dependent on a good ground system when camping. Very important with
> QRP. Also, even with a good ground, the performance is likely to drag
> behind a dipole fed in any manner for most paths you will work.
> Overall, I hate random wires. Never have had one really worth a hoot.
> The fan dipoles fed with coax get my vote out of those three choices.
> MK

268. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 08:20:25 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <r06d1v0sh4tmklgk2mdqr9ph3g4a316u2s@4ax.com>
Source record: 127806

On Fri, 3 Jan 2003 08:19:35 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>ARDUJENSKI wrote:
>"One way to improve the radiating efficiency of a vertical over poor
>ground is to replace the single radiating element with several close
>spaced verticals all fed in phase."
>
>That is similar to something I once read in "Radio Antenna Engineering",
>so I looked it up.
>
>Ed Laport is describing stagger tuning multiple low-frequency verticals
>to increase bandwidth on page 40 of "Radio Antenna Engineering". Ed
>says:
>
>"However, the radiating efficiency is improved over that of single
>tuning by virtue of the decreased total ground resistance resulting from
>reduction in the density of ground currents of each collecting point.
>Thus the ratio of radiation resistance to total resistance is
>effectively increased by multiple tuning.
>
>If N rpresents the number of multiple tuning downleads carrying equal
>currents, the new radiation resistance Rrr is related to that for single
>tuning Rr by the equation
>
>Rrr = Rr Nsquared
>
>---In addition to improving radiation efficiency, multiple tuning also
>provides a more convenient input impedance at the feed point and
>increases bandwidth."

Ahhh... closely spaced verticals < 1/4 wave will have a lower feed
point impedance than a single vertical.

The matching of one will affect the others as well. They aren't all
that difficult to match, but like tuning a gamma match there is a bit
of give and take. We generally used to short out the other verticals
and then tune just one. Once all were tuned we'd do a bit of a touch
here and another there....

I used to run phased quarter waves on 40. They worked great.

I ran them with half wave spacing and could switch directions by 90
degrees ...either broad side, or end fire (with a figure 8 pattern)

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>Best regards, Richard Harrison, KB5WZI

269. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 10:59:17 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <QrQyjfFF6rF+EAof@ifwtech.co.uk>
Source record: 127811

CAM and many others wrote that "friction tape" is:

> a cloth based, double-sided
>sticky black tar-like adhesive. In other words, it sticks to
>itself on both sides

Thank you all - that fills a very important gap in the British-American Technical Dictionary!

Over here the same stuff was simply called 'insulating tape'. It doesn't seem to be easily available any more, having been replaced by PVC a long time ago.

The niche for a strong cloth-based tape has been filled by "gaffer tape" (roadie's friend) which is similar to your duct tape.

The old cloth insulating tape was used for "frictional" purposes as well... come to think, there's still some on the handle our ancient garden hoe. For the first 20 years, the friction seemed to be achieved by coating your hand with tar.

Sorry for being lazy about the Scotch/3M equivalent for self-amalgamating tape. It's 'Scotch Type 23', and is available over here from the major electronics suppliers - but at more than double the price of the local equivalents.

Someone also wrote to remind me about the *really serious* heavy-duty connector/cable sealant, as used by the military in Europe. It's called Denso Tape, and is actually a very thick, strong putty, shiny black. It's supplied as a large reel of 2-3in tape with a throwaway interleaving strip. Denso is self-amalgamating (sticks to itself), sticks very well to metal, and clings to PVC cable jackets like grim death. On the other hand, it can be cut away and rolled off to leave everything completely clean and shiny, without having to use solvents.

(Denso tape is a completely different kind of material from Coax-Seal - bigger, stronger and better in every way.)

Unfortunately Denso tape doesn't seem to be easily available to amateurs in the UK... but if anyone knows different, please spread the word.

Is there a US equivalent?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

270. questions about coax cable

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 11:08:07 UTC
From: WJSchaible <donovan820@attbi.com>
Message-ID: <rgzR9.557818$%m4.163141@rwcrnsc52.ops.asp.att.net>
Source record: 127808

Hello. Actually I have a BSEE degree but over the last 22 years I forgot almost everything. And there is much I never understood anyway. I need help understanding the whys and wherefore's of coaxial cable and the flat parallel conductor antenna feed wire. I will appreciate your sharing of knowledge
on the subject. Specifically:

1) They have 50 and 75 ohm coax (and others, I assume). That means 50 and 75 are the
characteristic impedance. It is the impedance the source sees as the wave travels down the line - before it reaches the load. OK. But there is also IMPEDANCE that depends on the frequency of the transmitted signal. I mean, don't you have to use different diameter coax at different frequencies?

2) What determines the 50 ohms, 75 ohms, etc. Is that determined by the spacing of the conductors and the properties of the plastic material between the conductors?

3) How about the parallel conductor flat wire used for old TV antenna feeds. That's 300 ohm, right? I don't understand what is the benefit of this kind of wire. Why not a twisted pair instead? Why not an untwisted pair? What is magic about the distance of separation between the wires. Does that separation give it flat response in the VHF/UHF frequency range? Is that why it is how it is?

I will appreciate your help.

Thank you.
Bill Schaible - in Seattle, WA, USA
--

--

271. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 11:38:00 UTC
From: peter <heathernpeter@dnet.aunz.com>
Message-ID: <newscache$8lt68h$bob$1@mars.dataline.net.au>
Source record: 127809
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

the satellites
other that the amateur sats
are around 150 MHz which are
navigation satellites
various Russian sats on 143 MHz
around 1500 MHz are the inmarsats
1691 MHz are weather sats shame your scanner doesn't go that high
plus the weather sats on around 137 MHz and the orbcom sats from 136 to 138
MHz
thats a few that are easy to receive
Hope that gives you an idea
Cheers Peter VK4KHP

"Eoin" <thesoldier50@hotmail.com> wrote in message
news:b%qR9.974$oS1.2258@news-server.bigpond.net.au...
> Purely out of interest I would like to start scanning some more obscure
> things , including satellite I have a scanner that has a continuous range
up
> to 1600mhz and would like any one who is currently scanning satellite
> signals or who has any other obscure and interesting scanner freq.'s out
> there . Also I an looking for a high gain antennae that is portable (I
live
> in an apartment block) and possibly any directional solutions .
>
> Thanks in advance
>
> Eoin
>
>

272. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 11:38:02 UTC
From: richardharrison@webtv.net
Message-ID: <9642-3E16C79A-121@storefull-2316.public.lawson.webtv.net>
Source record: 127810

Roger, K8RI wrote:
"Ahhh...Closely spaced verticals < 1/4 wave will have a lower feed point than a single vertical."

The trick is to feed just one of the verticals at the ground level and connect all of them together at the top. The feed point impedance of N similar radiating elements is then Nsquared that of a single element. It`s the folded unipole impedance transformation.

Roger also wrote:
"I iused to run phased quarter waves on 40. They worked great."

Yes, thousands of broadcasters are running phased quarter wave arrays in the band between 556 and 176 meters.

Best regards, Richard Harrison, KB5WZI

273. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 12:01:16 UTC
From: kevcat <kevcat@dodo.com.au>
Message-ID: <3E16D177.9D88E17D@dodo.com.au>
Source record: 127812
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

you forgot the Military sats in the 240MHz-280Mhz region

Kev

peter wrote:
>
> the satellites
> other that the amateur sats
> are around 150 MHz which are
> navigation satellites
> various Russian sats on 143 MHz
> around 1500 MHz are the inmarsats
> 1691 MHz are weather sats shame your scanner doesn't go that high
> plus the weather sats on around 137 MHz and the orbcom sats from 136 to 138
> MHz
> thats a few that are easy to receive
> Hope that gives you an idea
> Cheers Peter VK4KHP
>
> "Eoin" <thesoldier50@hotmail.com> wrote in message
> news:b%qR9.974$oS1.2258@news-server.bigpond.net.au...
> > Purely out of interest I would like to start scanning some more obscure
> > things , including satellite I have a scanner that has a continuous range
> up
> > to 1600mhz and would like any one who is currently scanning satellite
> > signals or who has any other obscure and interesting scanner freq.'s out
> > there . Also I an looking for a high gain antennae that is portable (I
> live
> > in an apartment block) and possibly any directional solutions .
> >
> > Thanks in advance
> >
> > Eoin
> >
> >

274. Re: questions about coax cable

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 12:42:53 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <av6l5n$cgjq6$1@ID-175933.news.dfncis.de>
Source record: 127814

Short answers:

1. Coaxial transmission line impedance is approx. constant over a wide RF bandwidth.

2. Right. The impedance bandwidth of RF transmission line is fixed mainly by its mechanical characteristics, and is relatively independent of operating frequency.

3. 300 ohm balanced line was used with TV receive antennas because it was a direct match for the impedance of the folded dipole used as its driven element. The separation and diameter of the two conductors basically defines Z. This line often was twisted as it was installed, to minimize unwanted pickup by the line itself. The normal insulation/wire thickness of conventional "twisted pairs" do not produce a close enough match to the 300 ohm impedance of the antenna feed point, and so were not as used for this application.

No doubt there will be many posts to follow having formulas, exceptions and various minutia, but the info above is the essence of it.

Richard Fry

275. Re: questions about coax cable

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 12:45:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E16D782.B5AFA2E1@cwis.net>
Source record: 127813

Bill,

> 1) They have 50 and 75 ohm coax (and others, I assume). That means 50 and
> 75 are the
> characteristic impedance. It is the impedance the source sees as the wave
> travels down the line - before it reaches the load. OK. But there is also
> IMPEDANCE that depends on the frequency of the transmitted signal. I mean,
> don't you have to use different diameter coax at different frequencies?

No.

> 2) What determines the 50 ohms, 75 ohms, etc. Is that determined by the
> spacing of the conductors and the properties of the plastic material between
> the conductors?

Yes. Plus the diameters of conductors

> 3) How about the parallel conductor flat wire used for old TV antenna
> feeds. That's 300 ohm, right? I don't understand what is the benefit of
> this kind of wire. Why not a twisted pair instead? Why not an untwisted
> pair? What is magic about the distance of separation between the wires.
> Does that separation give it flat response in the VHF/UHF frequency range?
> Is that why it is how it is?

It is cheap to make.
No magic.
No.
More or less, that's how it is.

'Doc

276. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 13:24:48 UTC
From: cprstn54zz@att.net
Message-ID: <3e16de55.59645187@news-server.optonline.net>
Source record: 127815

On Sat, 04 Jan 2003 02:37:48 GMT, "K4IA" <K4ia@novacoxmail.com> wrote:
>Keep it simple. Make it as long as you can. Droop down the ends and if you
>really want to be heard, run half the antenna horizontal and half vertical.
>Feed it all with ladder line to a 1:1 balun then coax to a tuner and go to
>town. While all the other guys are arguing about why your antenna won't
>work, you will be enjoying QSOs all over the world.

I didn't mention it, but I am interested in NVIS, not DX. So
vertical is not good for me.

Why ladder to a 1:1 balun into coax into a tuner? Why not ladder to a
4:1 balun to coax into a tuner?

My MFJ-986 has a built in 4:1 balun when you hook up with ladder.

If 1:1 is correct for, say, a 100 ft balanced line, will I get the
same result with, say, a 30 ft balanced line and a 4:1 balun?
(I already have a the nifty LDG 4:1 balun and it is more convenient
to bring that than an extra 70 ft of twinlead)

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

277. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 13:32:58 UTC
From: Lindsay <lindsay00@hornet.net.au>
Message-ID: <3E16E28A.A0BEBF6@hornet.net.au>
Source record: 127816
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

kevcat wrote:
>
> you forgot the Military sats in the 240MHz-280Mhz region

And possibly the easiest of all, the NOAA polar orbiting weather sats @
137.500 and 137.620, and the Russian Meteor 3/5, at 137.300

Regards

Lindsay

--
Get rid of the 00 to email me.
All spammers will be added to my shitlist.

278. 6m/2m/70cm vertical...build/buy?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 13:59:50 UTC
From: Henrik <henrik>
Message-ID: <3e16e8d7$0$152$edfadb0f@dread16.news.tele.dk>
Source record: 127817

Hi,
I recently got an FT-817, moved house and wish to establish antennas for 6 and 2m plus 70cm. , no rotor, hence vertical(!?)...and mainly for FM....

I like the thought of a tri-bander with only one coax feed line, and realise that f.ex. Comet has the "GP 15" which will do the job and has "some" gain....but can I with (simple) "hand tools" make something equivalent.

I understand that the Comet antennas are thin wire with the right twist and bends inside a "plastic" tube.

Mechanically, mine does not need to be weather resistant, as it will be placed in the attic.

Would you know of any references to such a home brew project, or have any other comments, then I am all ears....

73,
de OZ6F.

279. Re: questions about coax cable

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 15:29:50 UTC
From: richardharrison@webtv.net
Message-ID: <6725-3E16FDEE-854@storefull-2317.public.lawson.webtv.net>
Source record: 127819

Bill Schaible wrote:
"I will appreciate your help."

1. Characteristic impedance (Zo) is not a function of frequency over a wide useful range. Zo can be the same for cables of widely varying external size. Larger cables of the same Zo have less loss and more power capability in most cases.

2. Zo is the square root of the cable`s Z over Y, In most cables loss is low enough to say Zo is the square root of L over C. It is determined by conductor sizes, spacing, and the dielectric fill between the conductors.

3. The benefit of 300-ohm TV twinlead is lower loss than either coax or twisted pair. Higher impedance means higher volts and lower amps. Loss is I squared R. The higher Zo line is usually more efficient. Twinlead IS an untwisted pair until it is twisted by the installer for better balance.

Typical Zo values run between 200 and 800 ohms for parallel wire transmission lines, and between 20 and 100 ohms for coax.

At low radio frequencies, most coax loss is due to conductor resistance. At high frequencies, much of the loss is due to the dielectric material.

Coax is impenetrable to R-F, generally. Open-wire transmission lines are subject to some radiation which increases with the distance between the wires as a function of frequency. But, the distance between the wires increases the Zo, which reduces the I squared R loss. The R grows with frequency due to "skin effect". But, at UHF, solid dielectric in coax usually dominates the loss.

The potential for radiation from an open-wire line becomes large at microwave frequencies, so coax and waveguide are the norm.

Best regards, Richard Harrison, KB5WZI

280. Re: Temporary Mobile Mount and Antenna suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 15:33:24 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E16FEC1.3030208@tampabay.rr.com>
Source record: 127818

hey mark
i can tell you never used one of the multi mag mounts most are so strong
its all you can do to get them back off so walking isnt a problem and
most good quality ones have a vinyl protector over the magenet to keep
the marring down to a minium

Mark Keith wrote:
> "Ed Laughery" <laughery@bellsouth.net> wrote in message
news:<oSlR9.7731$Tn.3274@news.bellsouth.net>...
>
>>Hello
>>
>>I'm awaiting a Tentec Argonaut V (primarily for CW QRP and digital
>>operation) but would like to use it for SSB mobile while commuting between
>>Louisiana and Texas. My travel is in a rental car so I need to have a
>>temporary mobile installation - the low power requirements of the Argonaut
>>simplifies the power hookup but I would appreciate any ideas for a simple
>>and temporary antenna / ground configuration. Considering a Hamstick (20 m,
>>etc.) but not sure of the proper mount for temp use.
>>
>>All suggestions are appreciated.
>>
>>73
>>Ed - AD5JV
>
>
> A multi magnet mag mount would handle it no problem, but you want to
> be careful about scratching the paint on the car. They might dock you
> for it, if they noticed the tell tale "rubs" on the paint that many
> mag mounts cause eventually. You might could use a thin layer of
> sandwich wrap or something to protect, if the magnets were strong
> enough to hold through the plastic. I think most likely the damage
> would be small as long as the magnets are strong and can't "walk"
> around on the roof. Wouldn't be that long a time either. MK

281. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 17:03:39 UTC
From: Sam <dr500s@yahoo.com>
Message-ID: <_tER9.355$CR.16860@nnrp1.ozemail.com.au>
Source record: 127820
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

I am getting pretty good results frorm the NOAA and Meteor sats with a homemade discone, very cheap to make and easy to build. Can send you dimensions if you want them.

"Lindsay" <lindsay00@hornet.net.au> wrote in message news:3E16E28A.A0BEBF6@hornet.net.au...
>
>
> kevcat wrote:
> >
> > you forgot the Military sats in the 240MHz-280Mhz region
>
> And possibly the easiest of all, the NOAA polar orbiting weather sats @
> 137.500 and 137.620, and the Russian Meteor 3/5, at 137.300
>
> Regards
>
> Lindsay
>
>
> --
> Get rid of the 00 to email me.
> All spammers will be added to my shitlist.

282. Re: Can more than one vertical element be fed with the same coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 17:06:50 UTC
From: Glynn Kevin <kfglynn@mindspring.com>
Message-ID: <av74ca$k2h$1@slb6.atl.mindspring.net>
Source record: 127821

Hi Michael,

Yes, but as Larry pointed out tuning will be affected. When I worked with multiple fed dipoles I had success tuning the lower band first and going higher. It took a while but finally worked out OK. I used a tuner for upper band edges.

I remember seeing an article in QST a few years ago where such an antenna was made. The author used used aluminum and commonly fed the antenna at the base with lots of radials.

GL

73 Kevin N2TO

283. Re: Tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 17:24:44 UTC
From: Glynn Kevin <kfglynn@mindspring.com>
Message-ID: <av75eehgh1@slb9.atl.mindspring.net>
Source record: 127822

FYI

Texas Towers sells various aluminum stock and tubing and are reasonable.

73 Kevin N2TO

284. manual for AEA IT-1 IsoTuner

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 17:29:07 UTC
From: "Mitch, W4OA" <w4oa@arrl.net>
Message-ID: <Xns92F9B1E05183Ew4oaarrlnet@216.148.227.77>
Source record: 127823
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

hi...

i just got an it-1 isotuner to go with my aea isoloop...
however, i need the manual... anyone have one that
could make me a copy? when i get it, i will scan it
in and make a pdf file for others...

tnx
mitch, w4oa
w4oa@arrl.net

285. Re: Remanufactured AM Transmitters ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 20:13:21 UTC
From: Larry Saletzki <wa9vrh@ocslink.com>
Message-ID: <3e173f8c$1_4@corp.newsgroups.com>
Source record: 127824

Hi Cris, You might try some of the links on this website. Good luck Larry

http://www.radio-classifieds.com/

"Christophe" <christophe.torre@wanadoo.fr> wrote in message
news:av58u0$su1$1@news-reader10.wanadoo.fr...
> I look for one Remanufactured AM Transmitters radio station. Please, have
> you ideas to find there?
> Thank,
> 73 de Cris
>
>

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

286. Cushcraft power divider

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 20:34:04 UTC
From: Edward Lewis <kq6dx@pacbell.net>
Message-ID: <s4he1vodkq7fa0vrf7etaf3b6p9ififfja@4ax.com>
Source record: 127825

is the cushcraft PD2 power divider simply a uhf tee or is there more
to it?
Edward Lewis KQ6DX
kq6dx@pacbell.net

287. Re: PME and ELCB's, RCCD's & MCB's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 21:22:57 UTC
From: "r.dring" <r.dring@ntlworld.com>
Message-ID: <PgIR9.45$KQ5.53639@newsfep2-gui>
Source record: 127826
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,uk.radio.amateur

Ian I suggest you have a look around your incomer installation and see if
there is a
notice identifying it as PME first. Also examine your installation and try
and identify
the main earthing arangement.
Another person who has had a disagreement with the electricity supply
company over
PME was "Professor Peter Felgett" one of the co-inventers of the Amisonic
surround sound system.
The row was detailed in the New Scientist magazine last year.
"Ian Pollard" <easthorton@msn.com> wrote in message
news:9bl61vkusoaj7gn9b4du5l48950kkf26lv@4ax.com...
> On Wed, 1 Jan 2003 10:32:53 -0000, "r.dring" <r.dring@ntlworld.com>
> wrote:
>
> >There seems to be some confusion about PME, and circuit breakers. (UK
only)
> >During the post world war 2 building boom there was a need to reduce the
> >cost of housing construction. PME could help, by allowing a reduction
> >in the number of cable cores that needed to be run in a domestic
electrical
> >installation. The neutral and earth being the same conductor.
> <SNIP>
>
> I have a similar kind of installation with a few minor differences. My
> mains supply is delivered via overhead lines. I get one phase, neutral
> and earth delivered in separate single core conductors from the
> nearest distribution transformer (about 1km distant). I have concerns
> regarding the earth and reckon it is simply a connection to neutral at
> the distribution transformer. What should I do about earthing gear in
> the shack? I don't have any kind of circuit breaker, just fuses and a
> normal mains switch.
>
> Ian
>
> --
> Ian Pollard//Wooler//Northumberland//UK
> pollard@bigfoot.com

288. Re: Cushcraft power divider

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 21:25:49 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E17515D.BAB1830D@cwis.net>
Source record: 127827

Edward,
There's a little bit more to it than just a
'T'...
'Doc

289. Re: PME and ELCB's, RCCD's & MCB's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 21:26:17 UTC
From: "r.dring" <r.dring@ntlworld.com>
Message-ID: <XjIR9.56$KQ5.54542@newsfep2-gui>
Source record: 127828

I Agree
RayD
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:46291vs8camrb6pdc3h8fj0eupnkc0kqte@4ax.com...
> On Wed, 1 Jan 2003 21:21:27 -0600 (CST), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >You can work
> >out your own schemes to avoid ground loops.
> >
> >Best regards, Richard Harrison, KB5WZI
>
> Gad Richard,
>
> That is the greatest single activity doomed to failure from
> "self-empowerment" and the naive illusion of what constitutes ground.
>
> For every shack with an acknowledged ground problem, there are
> probably 10 "perfectly user grounded" shacks in denial - with
> unremitting ground loops and a spider web of earth connections driving
> spurious signal straight into the signal feed.
>
> 73's
> Richard Clark, KB7QHC

290. Re: Has anyone moded their IC-756 PRO2 for Extended TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 21:32:34 UTC
From: "Mark L. Bary" <mbary@adelphia.net>
Message-ID: <3E1752F6.5211047B@noway.com.net>
Source record: 127829

Yep, and it works fine too.

I faxed Icom a copy of my MARS license, and they faxed me back the procedure.

Mark

BICisfag wrote:

> Has anyone moded their IC-756 PRO2 for Extended TX?
>
> How did you do it?

291. Re: Can more than one vertical element be fed with the same coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 21:39:21 UTC
From: Bjorn Henrik Vangstein <vangstein@bluezone.no>
Message-ID: <1041715570.883377@a217-118-32-43.bluecom.no>
Source record: 127830

Michael,

The Cushcraft R8 consists of 5 different parallell vertical elements fed by the same coax feeder (via a matching network) and common ground plane. The closest element spacing is about 1''. But I guess it's not straight forward to calculate the length of the elements, so the 'cut and try' algorithm is surtainly the most effective.

Good luck and 73
de LA5MDA, Henrik
Oslo

"Michael" <W4HIJ@msn.com> wrote in message
news:4c5cb167.0301031954.3668ce31@posting.google.com...
> Forgive the dumb question but I can't for the life of me remember if
> this is possible and all my reference material is packed away at the
> moment. I know it's possible to feed several dipoles cut for different
> bands from the same coax but can that be done with quarter wave
> verticals? In other words, I want to cut one vertical element for 10
> meters and one for 20 meters, then attach the shiled of the coax to a
> ground radial sytem and the center conductor to both quarter wave
> elements. Will the antennas resonate on their respective bands?
> I don't want to go to the trouble of building a trap vertical. I
> figure for only two bands that I can make two elements. Am I way off
> base on this?
> Tnx and 73,
> Michael, W4HIJ

292. Re: Has anyone moded their IC-756 PRO2 for Extended TX?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 21:48:16 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1elktpk6qpe2d@corp.supernews.com>
Source record: 127831

See http://www.mods.dk/

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

> BICisfag wrote:
>
> > Has anyone moded their IC-756 PRO2 for Extended TX?
> >
> > How did you do it?
>

293. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 21:52:27 UTC
From: Lindsay <lindsay00@hornet.net.au>
Message-ID: <3E17579B.497616B2@hornet.net.au>
Source record: 127832
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

Sam wrote:
>
> I am getting pretty good results frorm the NOAA and Meteor sats with a
> homemade discone, very cheap to make and easy to build. Can send you
> dimensions if you want them.

Thanks all the same, I'm using a home made QFH antenna, results at:

http://www.hornet.net.au/weather.html

and here's one of a dust storm we had a couple of months ago..

http://home.iprimus.com.au/fibcon/10231006a.jpg

Regards

Lindsay

--
Get rid of the 00 to email me.
All spammers will be added to my shitlist.

294. Re: Cushcraft power divider

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 22:13:32 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E175C8A.7020507@tampabay.rr.com>
Source record: 127833

ed
i have had the PD4 and all it was was 3 T connectors and 2 short pieces
of coax and i foolishly paid $75 for it
if i where you i would look at directive systems power dividers they are
very low loss and well built
i think there website is www.directivesystems.com
they can also make the stacking lines for you if you need it
what are you going to stack?

Edward Lewis wrote:
> is the cushcraft PD2 power divider simply a uhf tee or is there more
> to it?
> Edward Lewis KQ6DX
> kq6dx@pacbell.net

295. Re: 6m/2m/70cm vertical...build/buy?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 22:17:40 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E175D83.5030504@tampabay.rr.com>
Source record: 127834

hey henrik
i think unless you are very detailed and slightly anal i would just
shell out the $150 for the GP15 it seems simple but i dont think it
really is when you get down to it
my brother has that antenna and loves it
you could possibly make a copper cactus Jpole but i dont think it would
look as neat as the GP15
good luck

Henrik wrote:
> Hi,
> I recently got an FT-817, moved house and wish to establish antennas for 6
> and 2m plus 70cm. , no rotor, hence vertical(!?)...and mainly for FM....
>
> I like the thought of a tri-bander with only one coax feed line, and realise
> that f.ex. Comet has the "GP 15" which will do the job and has "some"
> gain....but can I with (simple) "hand tools" make something equivalent.
>
> I understand that the Comet antennas are thin wire with the right twist and
> bends inside a "plastic" tube.
>
> Mechanically, mine does not need to be weather resistant, as it will be
> placed in the attic.
>
> Would you know of any references to such a home brew project, or have any
> other comments, then I am all ears....
>
> 73,
> de OZ6F.
>
>

296. Re: Cushcraft power divider

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 22:37:25 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3E175EBC.A78E8256@verizon.net>
Source record: 127835

Edward Lewis wrote:

> is the cushcraft PD2 power divider simply a uhf tee or is there more
> to it?
> Edward Lewis KQ6DX
> kq6dx@pacbell.net

I have not personally used this divider, but it should also include a
pair of 1/4 or 3/4 75 Ohm electrical length lines.
There is no reason this type of divider should be any worse than the
lumped element styles.
Dale W4OP

297. Re: Tubing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 22:54:28 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA3CA67A001D2201F0305600@news.west.cox.net>
Source record: 127836

On Sat, 4 Jan 2003 9:24:44 -0800, Glynn Kevin wrote
(in message <av75eehgh1@slb9.atl.mindspring.net>):

> FYI
>
> Texas Towers sells various aluminum stock and tubing and are reasonable.
>
> 73 Kevin N2TO
>
>

I have bought tubing from them and it worked out super.

73 bill ka6dvn

298. Re: questions about coax cable

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 23:31:07 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <z1KR9.10132$wQ1.3490@fe01>
Source record: 127837

1) Negative- only thing controls the impedence are: 1) the ratio of the outside diameter of the inner conductor, to the inside diameter of the outer conductor, with some modification because of dielectric characteristics (very slight), but the dialectric constant will have massive (relatively speaking) effect to the Velocity factor (the appearence of a shift in the speed of light, if you will), makeing a wavelength about 82% (foam dielectric), to 66% (for polyethlyne dialectric)
the bigger coax has LESS LOSS than the small stuff, so is generally used at higher frequencies, till you get to microwave freqs- then another ball game when coax tries to reproduce waveguide (loss's start building again). Coax's come , typically in 50, 75, and 90 ohm (and some other impedences).

2) YES, see above.- for coax Zo= 138/ square root of the dielectric constant of the insulation between the 2 conductors (air =1), x LOG (base 10) of D/d (rario of diameters).

3) Now , for twinlead, you are correct, as a balanced line doesn't care if it's twisted, or not (assuming that the feed and load is PROPERLY BALANCED) Impedences come , typically in 300, 450 (loadder line), 600 (phone wire, and multiplex drop), 150 , again, phoneco standard) impedences. but the impedence means little to power handleing capabilities, (assumeing the imput, and output impedences are matched.) rather, again it is the RATIO of the diameters to the spaceing , that determines the impedence (Zo= 120 cosh to the -1 power, times the ratio of the center to center spaceing/diameter of the lines (again modified by
the dielectric constant of insulation ! If you can find it, recomend the july '65 issue of 73 magazine, tho, you only ask about coax lines, this also covers vhf circuits built out of these said lines! good luck- jim nn7k
(to reply, send to: nn7k@reno.rmci.net)

"WJSchaible" <donovan820@attbi.com> wrote in message
news:rgzR9.557818$%m4.163141@rwcrnsc52.ops.asp.att.net...
>
> Hello. Actually I have a BSEE degree but over the last 22 years I forgot
> almost everything. And there is much I never understood anyway. I need
> help understanding the whys and wherefore's of coaxial cable and the flat
> parallel conductor antenna feed wire. I will appreciate your sharing of
> knowledge
> on the subject. Specifically:
>
> 1) They have 50 and 75 ohm coax (and others, I assume). That means 50
and
> 75 are the
> characteristic impedance. It is the impedance the source sees as the wave
> travels down the line - before it reaches the load. OK. But there is

also
> IMPEDANCE that depends on the frequency of the transmitted signal. I
mean,
> don't you have to use different diameter coax at different frequencies?
>
> 2) What determines the 50 ohms, 75 ohms, etc. Is that determined by the
> spacing of the conductors and the properties of the plastic material
between
> the conductors?
>
> 3) How about the parallel conductor flat wire used for old TV antenna
> feeds. That's 300 ohm, right? I don't understand what is the benefit of
> this kind of wire. Why not a twisted pair instead? Why not an untwisted
> pair? What is magic about the distance of separation between the wires.
> Does that separation give it flat response in the VHF/UHF frequency range?
> Is that why it is how it is?
>
> I will appreciate your help.
>
> Thank you.
> Bill Schaible - in Seattle, WA, USA
> --
>
>
>
> --
>
>
>

299. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-04 23:50:42 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <mrKR9.630372$QZ.92637@sccrnsc02>
Source record: 127838

A note on the slingshot. I noticed that the original poster was using one with tapered tubing. These are meant for speed with a light projectile. The strait tubing gives more power.

"Roy Lewallen" <w7el@eznec.com> wrote in message news:v1abcq918o3a6e@corp.supernews.com...
> I've posted my experiences with this several times on this newsgroup, as
> have a number of other people. If you do a search at
> http://groups.google.com, you should find a good deal of information.
>
> Roy Lewallen, W7EL
>
> Ted Busky wrote:
> > Hi,
> > I made my first attempt at installing a rope in a tree with a slingshot
> > for my 75m dipole. In the past I borrowed a bow and had much better
> > results both in targetting and having enough power to get the arrow up
> > and weight to bring the line down. I changed the weight quite easily by
> > taping steel rod of various lengths to the arrow until it flew right.
> > The arrow also seemed less likely to snap past a branch and tangle than
> > the nuts or bolts I used with the slingshot.The biggest problem with the
> > bow was losing arrows when the line broke from the bow as it was shot. I
> > also broke a few wood arrows that hit the tree head on. (I have
> > collected some low cost aluminum arrows since then.) Since I own this
> > sling shot, I wanted to get some ideas before giving up and searching
> > out another bow to borrow.
> >
> > My setup includes the following: Marksman 3055 tapered band slingshot.
> > Daiwa 2200A reel with 6 pound line. The reel is hose clamped to the
> > slingshot. I used a 1/2"x2" bolt that barely made it up 50'. The bolt is
> > stuck on a branch that the line got tangled on. I need to go about 70'.
> > Then I tried 1/2" and 5/16" nuts that went up high, but did not have
> > enough weight to bring the line down. I lost them when they hung as I
> > tried to pull them back.
> >
> > These are my questions:
> > 1. Is there a site that explains how to aim a slingshot?
> > 2. Can anyone suggest a reasonable weight to start with?
> > 3. Is this the right reel? It has a plastic cup over the mechanism that
> > winds the line. Would an "open" reel be better? Is there something about
> > the reel I should be aware of for this application?
> > 4. Is the a good shape for the weight to reduce the chances of the
> > weight snagging as it is pulled back then springing up and tangling in a
> > branch? I image that a pointed back end would be helpful, but what

> > easily available devices, in the right weight range, can I use.
> > 5. Any other suggestions?
> >
> > Thanks in advance for any ideas.
> >
> > Ted
> > N1XLW
> >
> >
> >
> >
>

300. Re: Cushcraft power divider

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 00:14:31 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <fGKR9.10226$wQ1.4775@fe01>
Source record: 127839

Good Greif! The ARRL handbook tells how to make these!, but to suffice, for
a 2 Port power devider, at 50 ohms to 2x 50 ohm loads:
L-1
s -------------------[length of 75 ohm coax=
L-2 velocity factor,
.66 times 1/4 wavelength, .82 times wavelength for Foam dielectric coax
at operating frequency

source = xmitter side, L1, and L2 = loads

for 4 way, double this (2 of these lines, and 3 "TEE" fittings)

L-1
L-3
]------------------------]X[------------------------[
L-2
L-4

Source = "X" , "]x[" -- [and] -- = "tee" fittings

jim nn7k nn7k@reno.rmci.net

"Edward Lewis" <kq6dx@pacbell.net> wrote in message
news:s4he1vodkq7fa0vrf7etaf3b6p9ififfja@4ax.com...
> is the cushcraft PD2 power divider simply a uhf tee or is there more
> to it?
> Edward Lewis KQ6DX
> kq6dx@pacbell.net

301. Alpha-Delta DX-DD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 00:24:33 UTC
From: "Donnie (N4JZH)" <n4jzh@knology.net>
Message-ID: <qmue1vcf646i9th79p0dtiunnpqpg620i3@4ax.com>
Source record: 127840

I have limit area, comments, pros, cons
let me know from your experience
THANKS!
''Behold how good and pleasant it is for Brethren to dwell together in unity''
Donnie n4jzh@knology.net

302. Re: Cushcraft power divider

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 00:29:27 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <fUKR9.10252$wQ1.7018@fe01>
Source record: 127841

correction: for 4 way , use 50 ohm coax (times 2 pieces), and 3 "tee"
fittings ! again figuring the lengths of these as : .66 times a 1/4 wave
length (for polyethlyne insulated coax), or .82 times 1/4 wavelenght (for
foam dielectric-- jim

<Jimnn7k@reno.rmci.net> wrote in message news:fGKR9.10226$wQ1.4775@fe01...
> Good Greif! The ARRL handbook tells how to make these!, but to suffice,
for
> a 2 Port power devider, at 50 ohms to 2x 50 ohm loads:
> L-1
> s ------------------[length of 75 ohm coax=
> L-2 velocity factor,
> .66 times 1/4 wavelength, .82 times wavelength for Foam dielectric
coax
> at operating frequency
>
> source = xmitter side, L1, and L2 = loads
>
> for 4 way, double this (2 of these lines, and 3 "TEE" fittings)
>
>
> L-1
> L-3
>]-----------------------]X[----------------------[
> L-2
> L-4
>
>
>
> Source = "X" , "]x[" -- [and] -- = "tee" fittings
>
>
> jim nn7k nn7k@reno.rmci.net
>
>
> "Edward Lewis" <kq6dx@pacbell.net> wrote in message
> news:s4he1vodkq7fa0vrf7etaf3b6p9ififfja@4ax.com...
> > is the cushcraft PD2 power divider simply a uhf tee or is there more
> > to it?
> > Edward Lewis KQ6DX
> > kq6dx@pacbell.net
>
>
>

303. Re: 6m/2m/70cm vertical...build/buy?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 00:37:52 UTC
From: Larry Saletzki <wa9vrh@ocslink.com>
Message-ID: <3e177d8b_1@corp.newsgroups.com>
Source record: 127842

Hello Henrik, I agree the Comet GP15 works great. I used on on packet with 6m, 2m and UHF connections with the proper GFX-5140 triplexer. It worked great for a number of years. I can also report that a direct lightening hit will make vapor parts of the GP-15. That of course would stand for any antenna. I have a replacement that will be going up in it's place this next year. I am still amazed that it could be transmitting on all 3 bands at once and still work. this new technology is really something! 73 Larry

"Henrik" <henrik> wrote in message
news:3e16e8d7$0$152$edfadb0f@dread16.news.tele.dk...
> Hi,
> I recently got an FT-817, moved house and wish to establish antennas for 6
> and 2m plus 70cm. , no rotor, hence vertical(!?)...and mainly for FM....
>
> I like the thought of a tri-bander with only one coax feed line, and
realise
> that f.ex. Comet has the "GP 15" which will do the job and has "some"
> gain....but can I with (simple) "hand tools" make something equivalent.
>
> I understand that the Comet antennas are thin wire with the right twist
and
> bends inside a "plastic" tube.
>
> Mechanically, mine does not need to be weather resistant, as it will be
> placed in the attic.
>
> Would you know of any references to such a home brew project, or have any
> other comments, then I am all ears....
>
> 73,
> de OZ6F.
>
>

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

304. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 01:20:48 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <7d0f1vo5ab2b8apefms1kkctmr0akavk6a@4ax.com>
Source record: 127843

On Sat, 4 Jan 2003 10:59:17 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>The niche for a strong cloth-based tape has been filled by "gaffer tape"
>(roadie's friend) which is similar to your duct tape.
>
>The old cloth insulating tape was used for "frictional" purposes as

That was its primary purpose, hence the name "friction tape", although
it did end up used in electrical circuits. It's just that was not its
primary purpose.

>well... come to think, there's still some on the handle our ancient
>garden hoe. For the first 20 years, the friction seemed to be achieved
>by coating your hand with tar.

That it did<LOL>
However, out in the field, so to speak, a little dirt and the stuff
worked great. It got rid of the "sticky" tar that came off.

>
>Sorry for being lazy about the Scotch/3M equivalent for
>self-amalgamating tape. It's 'Scotch Type 23', and is available over
>here from the major electronics suppliers - but at more than double the
>price of the local equivalents.
>
>Someone also wrote to remind me about the *really serious* heavy-duty
>connector/cable sealant, as used by the military in Europe. It's called
>Denso Tape, and is actually a very thick, strong putty, shiny black.
>It's supplied as a large reel of 2-3in tape with a throwaway
>interleaving strip. Denso is self-amalgamating (sticks to itself),
>sticks very well to metal, and clings to PVC cable jackets like grim
>death. On the other hand, it can be cut away and rolled off to leave
>everything completely clean and shiny, without having to use solvents.

Some years back...actually quite a few years back, when the Midland
repeater (147.00) was in my garage the antenna took a direct hit. The
top section of the repeater antenna looked like an "exploded cigar"
and it blew out the 7/8ths inch Heliax about 30 feet down from the
antenna.

The connector between the Heliax and the antenna as well as all the
connectors at the top were sealed with coax seal with 33 tape wrapped
over it.

After the lightening strike There wasn't a bit of protectant of any
kind left. The coax jackets were still intact but there wasn't a

trace of either the "coax seal" (TM), or 33 tape left. Even the
silver plating was gone. They were "true" brass connectors at that
point.

I did find several pieces of the "coax seal" (TM) on the ground.
Every one was laid out flat and looked like a piece of expanded metal
right down to the diamond shaped pattern.

Unfortunately the strike took place during a heavy downpour. A half
hour later, my 2-meter rig in the shack had water running out of the
bottom. (That's what I get for using 9913).

The only damage was the Repeater antenna, the Heliax, and the
connectors...I did replace the 9913 due to the water. The rig dried
out just fine.

BTW, I replaced all of the 9913 with LMR400 when I put up the new
tower. It has less loss, the center conductor doesn't migrate to the
outside in sharp turns, and it's cheaper.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>(Denso tape is a completely different kind of material from Coax-Seal -
>bigger, stronger and better in every way.)
>
>Unfortunately Denso tape doesn't seem to be easily available to amateurs
>in the UK... but if anyone knows different, please spread the word.
>
>Is there a US equivalent?

305. Re: QUESTION on Chapter 9 Section 3.4.1 of LOW BAND DXING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 01:23:36 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <d72f1v0ga6u8l12iero4t3n5r4gu10e7ku@4ax.com>
Source record: 127844

On Sat, 4 Jan 2003 05:38:02 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Roger, K8RI wrote:
>"Ahhh...Closely spaced verticals < 1/4 wave will have a lower feed point
>than a single vertical."
>
>The trick is to feed just one of the verticals at the ground level and
>connect all of them together at the top. The feed point impedance of N
>similar radiating elements is then Nsquared that of a single element.
>It`s the folded unipole impedance transformation.

That I'll buy although it sounds vaguely like a sterba curtain.
Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>Roger also wrote:
>"I iused to run phased quarter waves on 40. They worked great."
>
>Yes, thousands of broadcasters are running phased quarter wave arrays in
>the band between 556 and 176 meters.
>
>Best regards, Richard Harrison, KB5WZI

306. Window Mounted Antenna Coupler Design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 01:33:17 UTC
From: dmaciuca@hotmail.com
Message-ID: <8bbeefcc.0301041733.4d24c5e2@posting.google.com>
Source record: 127845

I was wondering if anybody can point me to window mounted antenna couple design. Here is what I found so far by opening a celluar antenna one (those in the know may skip the next paragraph).

The coupler is basically a cube covered on 5 faces by a copper cross. The faces parallel to the window has the center of the cross and the sides ajacent to it have the extension of the cross arms running up it. In terms of dimensions, the cross arms are 19mm thick and 35mm long starting from the center of the cross and going up the sides of the cube. (Put another way, start with a 19mm square, continue with a 19x9.5mm section on all 4 sides, then continue with another 19x16mm section on 4 sides of the cube). In terms of connections, the cable connector comes in from one of the sides, its ground is connected to the cross, but so is the center connector (a balun?). Then, from the center connector it connects to a PCB circle which connects to the window.

Now, for the questions:
1. Is this cross forming a ground plane with a quarter wave antenna mounted on the outside of the glass?
2. How are the lengths of the cross arms calculated? It seems they are 1/10 wavelength for 860MHz, but that may be just a coincidence.
3. How does the thickness of the glass affect the design of the coupler?
4. Can the coupler be improved if there are little or no space limitations?

Thanks a lot!
Doug

307. Re: Can more than one vertical element be fed with the same coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 01:58:11 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <003f1vsuep9q7ehn0b40emahhebripo384@4ax.com>
Source record: 127846

On Sat, 04 Jan 2003 06:32:46 GMT, "Larry Phipps"
<larry@telepostinc.com> wrote:

>
>Should be no problem. You might have to play a little with element tuning,
>especially on 20, but it will work. I would also try to keep the spacing at
>6" or more to minimize interaction.

I've seen them work, but I've never been able to get one to work for
myself. I have to get the outer ends separated by several feet and
then they work fine. On 20 I still separate the ends by several feet
and anchor the ends as if they were separate antennas.

With dipoles I separate the ends, either vertically, or horizontally
and cut one for the phone section and the other for the CW section of
the band. This gives me a dipole that nearly covers the complete
75/80 meter band without the need for a tuner. (note the nearly).
I have always had to shorten both antennas by several inches due to
the extra capacitance which makes the antennas appear to be long.

Typically I cut them to formula check them with a bridge and then
adjust the lengths accordingly.

This has started me thinking...I have slopping half wave dipoles for
the 75/80 meter band and have been using a tuner. Now, after reading
this thread, I'm thinking of trying this on both. It would be nice to
not have to mess with the tuner when switching between the NE and SW
antennas. Near as I can tell the antennas are identical, but due to
nearby objects they tune a bit differently. The upper ends are close
to 90 feet up and the base is 90 feet out. Unfortunately I've
forgotten my trig, but at 90 up and 90 out, I think that makes 45
degrees for the antenna angle.

It sure would be nice to do the band switching without having to
adjust the line tuner.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

308. Directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 02:14:25 UTC
From: Wes <RWestman@Cox.Net>
Message-ID: <5yMR9.112751$Y86.100923@news2.central.cox.net>
Source record: 127847

Hello... I posted this earlier with no replies. Any chance of someone helping me?

Good day,

Can someone provide me with a link or drawing so I can built an "inexpensive" directional receiver antenna for a 1.2 GHz color camera. I saw one shown on news television piece. My reception is okay, but I would like to make it better.

Thanks

309. Re: questions about coax cable

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 02:24:58 UTC
From: dino@nomail.com
Message-ID: <_HMR9.12855$134.1446600@newsread1.prod.itd.earthlink.net>
Source record: 127848

Go here and buy the book called "Reflections" and/or "Reflections II". You
will appreciate this fantastic text on specifically what you seek! Enjoy!

http://www.radio-ware.com/bookants.htm

Dino

>Hello. Actually I have a BSEE degree but over the last 22 years I forgot
>almost everything. And there is much I never understood anyway. I need
>help understanding the whys and wherefore's of coaxial cable and the flat
>parallel conductor antenna feed wire. I will appreciate your sharing of
>knowledge
>on the subject. Specifically:
>
>1) They have 50 and 75 ohm coax (and others, I assume). That means 50 and
>75 are the
>characteristic impedance. It is the impedance the source sees as the wave
>travels down the line - before it reaches the load. OK. But there is also
>IMPEDANCE that depends on the frequency of the transmitted signal. I mean,
>don't you have to use different diameter coax at different frequencies?
>
>2) What determines the 50 ohms, 75 ohms, etc. Is that determined by the
>spacing of the conductors and the properties of the plastic material between
>the conductors?
>
>3) How about the parallel conductor flat wire used for old TV antenna
>feeds. That's 300 ohm, right? I don't understand what is the benefit of
>this kind of wire. Why not a twisted pair instead? Why not an untwisted
>pair? What is magic about the distance of separation between the wires.
>Does that separation give it flat response in the VHF/UHF frequency range?
>Is that why it is how it is?
>
>I will appreciate your help.
>
>Thank you.
>Bill Schaible - in Seattle, WA, USA
>--
>
>
>
>--
>
>
>

310. wtb cushcraft 13b2

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 02:41:23 UTC
From: matt stock <mstock@ptd.net>
Message-ID: <3E179C1D.BC2586F1@ptd.net>
Source record: 127849

i wouid like to find a good cushcraft 13b2 2 meter beam antenna
within driving distance of the pa/nj border
please drop me a line
matt
kc2knf

311. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 02:57:57 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301041857.4e5ba742@posting.google.com>
Source record: 127850

"The tape used at Nuclear Power stations is made by
Plymouth Rubber Co.Inc
Canton. Mass.
02021. u.s.a.

The interleaving colors that I have seen is blue and orange.
I have no idea if the color has any significance, no difference
is apparent. It does not have any UL recognised marking !
Art

White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<QrQyjfFF6rF+EAof@ifwtech.co.uk>...
> CAM and many others wrote that "friction tape" is:
>
> > a cloth based, double-sided
> >sticky black tar-like adhesive. In other words, it sticks to
> >itself on both sides
>
> Thank you all - that fills a very important gap in the British-American
> Technical Dictionary!
>
> Over here the same stuff was simply called 'insulating tape'. It doesn't
> seem to be easily available any more, having been replaced by PVC a long
> time ago.
>
> The niche for a strong cloth-based tape has been filled by "gaffer tape"
> (roadie's friend) which is similar to your duct tape.
>
> The old cloth insulating tape was used for "frictional" purposes as
> well... come to think, there's still some on the handle our ancient
> garden hoe. For the first 20 years, the friction seemed to be achieved
> by coating your hand with tar.
>
> Sorry for being lazy about the Scotch/3M equivalent for
> self-amalgamating tape. It's 'Scotch Type 23', and is available over
> here from the major electronics suppliers - but at more than double the
> price of the local equivalents.
>
> Someone also wrote to remind me about the *really serious* heavy-duty
> connector/cable sealant, as used by the military in Europe. It's called
> Denso Tape, and is actually a very thick, strong putty, shiny black.
> It's supplied as a large reel of 2-3in tape with a throwaway
> interleaving strip. Denso is self-amalgamating (sticks to itself),
> sticks very well to metal, and clings to PVC cable jackets like grim
> death. On the other hand, it can be cut away and rolled off to leave

> everything completely clean and shiny, without having to use solvents.
>
> (Denso tape is a completely different kind of material from Coax-Seal -
> bigger, stronger and better in every way.)
>
> Unfortunately Denso tape doesn't seem to be easily available to amateurs
> in the UK... but if anyone knows different, please spread the word.
>
> Is there a US equivalent?

312. Re: Cushcraft power divider

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 03:13:18 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E17A2CD.8020405@tampabay.rr.com>
Source record: 127851

well yes it is easy to do if you dont care how well it works
but for weak signal work on VHF line loss incertion loss and line lenght
are big factors
i have done the 4 array with the 3 Ts and coax jumpers that i made up
myself and i have used store bought and i can tell you that the one that
Directive systems or M2 makes is a lot less loss than the home built one
and the phasing lines are electically exactly the same lenght which is
very important
now if all he wants this for is FM repeater hopping i would say build it
yourself
if you want to work weak signal stuff do it right and buy the stuff
listening to these HF mentality folks will only discourage you when they
put up a station most of there station budget goes for radio and mic and
they spend the least amount on antenna and feedline
good luck

Jimnn7k@reno.rmci.net wrote:
> correction: for 4 way , use 50 ohm coax (times 2 pieces), and 3 "tee"
> fittings ! again figuring the lengths of these as : .66 times a 1/4 wave
> length (for polyethlyne insulated coax), or .82 times 1/4 wavelenght (for
> foam dielectric-- jim
>
>
>
>
>
> <Jimnn7k@reno.rmci.net> wrote in message news:fGKR9.10226$wQ1.4775@fe01...
>
>>Good Greif! The ARRL handbook tells how to make these!, but to suffice,
>
> for
>
>>a 2 Port power devider, at 50 ohms to 2x 50 ohm loads:
>> L-1
>>s -------------------[length of 75 ohm coax=
>> L-2 velocity factor,
>>.66 times 1/4 wavelength, .82 times wavelength for Foam dielectric
>
> coax
>
>>at operating frequency
>>
>>source = xmitter side, L1, and L2 = loads
>>

>>for 4 way, double this (2 of these lines, and 3 "TEE" fittings)
>>
>>
>>L-1
>>L-3
>>]------------------------]X[-----------------------[
>>L-2
>>L-4
>>
>>
>>
>>Source = "X" , "]x[" -- [and] -- = "tee" fittings
>>
>>
>>jim nn7k nn7k@reno.rmci.net
>>
>>
>>"Edward Lewis" <kq6dx@pacbell.net> wrote in message
>>news:s4he1vodkq7fa0vrf7etaf3b6p9ififfja@4ax.com...
>>
>>>is the cushcraft PD2 power divider simply a uhf tee or is there more
>>>to it?
>>>Edward Lewis KQ6DX
>>>kq6dx@pacbell.net
>>
>>
>>
>
>
>

313. Re: Directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 03:20:15 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <NvNR9.8701$8M3.1463677@news20.bellglobal.com>
Source record: 127852

"Wes"
> ...no replies.

We're still recovering from the holidays...

> Can someone provide me with a link or
> drawing so I can built an "inexpensive"
> directional receiver antenna for a 1.2 GHz
> color camera. I saw one shown on news
> television piece. My reception is okay,
> but I would like to make it better.

One option is a corner reflector antenna.
www.google.com/search?&q=corner+reflector+antenna

The advantages of a corner reflector are that you couldn't possibly screw it up (not critical at all), you might be able to jury-rig it into your existing antenna (no wiring), and you can also make a 'test article' using cardboard and aluminum foil (30 minutes?). They also provide significant gain.

If you want other options, then fill your boots...
www.google.com/search?&q=1.2+GHz+antenna

314. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 04:05:32 UTC
From: Ken Taylor <ken123@xtra.co.nz>
Message-ID: <r8OR9.10921$F63.193806@news.xtra.co.nz>
Source record: 127853
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

"Lindsay" <lindsay00@hornet.net.au> wrote in message
news:3E17579B.497616B2@hornet.net.au...
>
>
> Sam wrote:
> >
> > I am getting pretty good results frorm the NOAA and Meteor sats with a
> > homemade discone, very cheap to make and easy to build. Can send you
> > dimensions if you want them.
>
> Thanks all the same, I'm using a home made QFH antenna, results at:
>
> http://www.hornet.net.au/weather.html
>
> and here's one of a dust storm we had a couple of months ago..
>
> http://home.iprimus.com.au/fibcon/10231006a.jpg
>
> Regards
>
> Lindsay
>
Very nice pix! What sort of receiver and pre-amp are you using? And do you
have a couple of trees to be feeled yet? :-)

Ken

315. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 06:45:07 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3e17d478$0$53824$ba620e4c@news.skynet.be>
Source record: 127854

I have used Denso tape in Belgium 20 years ago to protect antenna traps and PL239. Perfect for this purpose. At the time I have bought it at a building material shop as a plumber tape (very good to seal old exhaust pipes). But very dirty to fix, use plastic gloves or you will be cleaning your hands the rest of the day.

73 de ON5MJ - Jacques.

316. Good stubby antenna for hand held scanner?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 07:24:45 UTC
From: Gadget150 <gadgetgru@netscape.net>
Message-ID: <3E17DDBD.3060702@netscape.net>
Source record: 127855

Hi all,
Just wondering if anyone has had any luck finding a stubby antenna that works well?..I have a Yaesu VR-120 hand held and am looking for something a little smaller for the pocket?..anyone have any they might recommend?
I monitor a lot in the 860.00Mhz range as well as other bands.
Please e-mail me directly as I don't always check the N.G's
Thanks-Russ
gadgetgru@netscape.net

317. Re: Temporary Mobile Mount and Antenna suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 07:28:32 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301042328.536002f3@posting.google.com>
Source record: 127856

Dennis Kaylor <k4oxg@tampabay.rr.com> wrote in message
news:<3E16FEC1.3030208@tampabay.rr.com>...
> hey mark
> i can tell you never used one of the multi mag mounts most are so strong
> its all you can do to get them back off so walking isnt a problem and
> most good quality ones have a vinyl protector over the magenet to keep
> the marring down to a minium

True. Don't use em here. I drill holes. I've never been satified with
the grounding you get with a mag mount on the low bands. Say on 80m,
I've heard that many times the rf arcs through the paint on those
mounts. I like a real good ground connection under the antenna. I
consider the mag mounts a usable temporay mount though. I doubt the
arcing problem is too bad on the higher bands. MK

318. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 08:26:23 UTC
From: Lindsay <lindsay00@hornet.net.au>
Message-ID: <3E17EC2F.206B83FD@hornet.net.au>
Source record: 127857
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

Ken Taylor wrote:

> > http://www.hornet.net.au/weather.html
> > and here's one of a dust storm we had a couple of months ago..
> > http://home.iprimus.com.au/fibcon/10231006a.jpg
> > Regards
> > Lindsay

> Very nice pix!

Thanks...

> What sort of receiver and pre-amp are you using?

Details are below the pic at the first link :) except the software
has changed. read on :)

I've just taken a better pic, this time with the best weather
satellite software, Wxtoimg. (which a freeware version is available
at http://www.weather.net.nz/wxtoimg/)

http://home.iprimus.com.au/fibcon/01051822.jpg

This pic, from Noaa 12 is a color pic, called MSA (multi-spectral
analysis), with rainfall. This is an 88 degree pass, nearly directly
overhead. At the top of the image is a tropical
storm/monsoon/baby cyclone, which is expected to turn into
a full blown (pardon the pun) cyclone in the next 24 hours.
I'm in Melbourne, so it's at extreme range...

> And do you have a couple of trees to be feeled yet? :-)

Not any more :)

--
Get rid of the 00 to email me.
All spammers will be added to my shitlist.

319. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 09:36:03 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <veht+DCDy$F+EAte@ifwtech.co.uk>
Source record: 127863

Roger Halstead wrote:

>>The old cloth insulating tape was used for "frictional" purposes as
>
>That was its primary purpose, hence the name "friction tape", although
>it did end up used in electrical circuits. It's just that was not its
>primary purpose.
>
Electrical use *was* its primary purpose over here, so the same stuff
was called insulating tape instead. How strange.

(My wife, who is American, just said that if I'd asked her at any time
in the past 25 years, she could have told me all about friction tape. Oh
well...)

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

320. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 09:49:55 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <1eBr+fDD$$F+EAPK@ifwtech.co.uk>
Source record: 127864

ON5MJ wrote:
>I have used Denso tape in Belgium 20 years ago to protect antenna traps and
>PL239. Perfect for this purpose. At the time I have bought it at a building
>material shop as a plumber tape (very good to seal old exhaust pipes). But
>very dirty to fix, use plastic gloves or you will be cleaning your hands the
>rest of the day.

Denso make two very different kinds of tape. One is the shiny
(bitumen/rubber-based?) stuff I was describing earlier. The other is a
grease-based tape, also branded as Sylglas.

I think you're talking about the second kind - a thin cloth tape,
heavily coated with a very thick, waterproof grease. It works fine for
waterproofing but the grease gets everywhere. Even if you wear gloves,
the grease sticks so well that it pulls them off!

I now have the contact details for Denso in the UK (tnx, John) and will
call them tomorrow.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

321. Re: 6m/2m/70cm vertical...build/buy?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 11:20:45 UTC
From: Gordon Couger <gcouger@NOSPAMprovalue.net>
Message-ID: <2yUR9.1178$j22.887694@newsfeed.slurp.net>
Source record: 127858

> On Sat, 4 Jan 2003 14:59:50 +0100, "Henrik" <henrik> wrote:
>
> >Hi,
> >I recently got an FT-817, moved house and wish to establish antennas for
6
> >and 2m plus 70cm. , no rotor, hence vertical(!?)...and mainly for FM....
> >
> >I like the thought of a tri-bander with only one coax feed line, and
realise
> >that f.ex. Comet has the "GP 15" which will do the job and has "some"
> >gain....but can I with (simple) "hand tools" make something equivalent.
> >
> >I understand that the Comet antennas are thin wire with the right twist
and
> >bends inside a "plastic" tube.
> >
> >Mechanically, mine does not need to be weather resistant, as it will be
> >placed in the attic.
> >
> >Would you know of any references to such a home brew project, or have any
> >other comments, then I am all ears....
> >
> >73,
> >de OZ6F.

I built a vertical dipole for 6 meters with the coax feeding out the lower element and added 2 rods a half wave long on 2 meters and 440 centered at the feed point and inch or two away from the 6 meter dipole. It worked great on 6 and 2 the coax wasn't good enough to tell how good it was on 440. I could only get the SWR down to 1:1.7 on 6 meters. The SWR was fine on 2 and 440.

I expect part of my problem on 6 may have been the large difference in the diameter of the top and bottom element and coupling between the bottom element and the coax.

It is an easy antenna to build.
--
Gordon W5RED

Gordon Couger
Stillwater, OK
www.couger.com/gcouger

322. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 11:37:45 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301050337.44545330@posting.google.com>
Source record: 127859

>
> I didn't mention it, but I am interested in NVIS, not DX. So
> vertical is not good for me.
>
> Why ladder to a 1:1 balun into coax into a tuner? Why not ladder to a
> 4:1 balun to coax into a tuner?

Why coax at all, would be my question. I'd run the ladder line all the way from the antenna to the tuner and use the built in 4:1, or change that balun to a 1:1 if needed. Sure, using the 4:1 baluns that are built into the tuner may not be the best solution, and many report better results using a 1:1 in some cases, but I see no reason to use coax at all in most antennas fed with ladder line. The use of a 4:1 may have some inherent problems, but it's good enough for gov use. To my way of thinking, you are defeating the purpose of the low loss ladder line if you throw a section of coax into the equation. I stick to one or the other. I don't mix and match feedline types. Usually just adds loss. The antennas that gave me the worst performance for 80m suffered from this problem. I would steer clear with a ten foot pole for QRP use on 80m.
>
> My MFJ-986 has a built in 4:1 balun when you hook up with ladder.

It's perfectly usable for "gov" work. I use the one in my 989c all the time. I've had no serious problems.
But, I after you saying you are working NVIS, that would seal it for me. I work the same exact type of operation on 80/40. I would use nothing but a coax fed dipole. Myself, I wouldn't even consider anything else for NVIS QRP, because nothing else is any better. Nothing. Nada, zip...Trust me on this. I live on those bands most of the time. I've done exactly what you are going to do at Lake Amistad, TX about 15 years ago. I used a yeasu ft-7 running about 5-10w out. I used coax fed dipoles that were only 5-6 ft off the ground. I was able to talk to everyone I heard, and this was in the early fall, not yet winter. In San Antonio, about 100? miles east, I was given S9 to 10 over 9 reports. I would have been averaging 20 over 9 to them with 100w. 30 over 9 with a taller 20-30 ft high dipole and 100w would be the norm...The losses involved with the coax fed dipole are as low as you will get in any practical system. You will have more effect from the ground losses, than any losses in the system, and thats unavoidable with any antenna that low. Being as you have to deal with ground losses at the low heights involved, why add any possibility for excess "system" losses? I sure wouldn't. Not if I only had 5 watts to play with. I don't even with 100w. BTW, many times I'm lazy and just use my mobile antenna, but I assume a mobile will not apply in your

case...I assume backpacking, etc??
This is a case where I think "occums razor" applies...:) The simpliest answer is the best. Or to me anyway...:/
You will be hard pressed to improve upon a 50 ohm radio feeding a 50 ohm line to a 50 ohm balanced antenna feedpoint impedance. I've never been able to do it. And believe me, I have tried. A low full wave loop can also qualify in this regard, but it's more wire, and more work, and in my comparison tests, not a bit better for the job you are planning. I found horizontal loops to be almost identical in performance to a dipole for 80m NVIS. So , I don't bother with them. A dipole works just as well, and is less work and wire. MK

323. FS: TA-33 - UPS Shippable

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 12:53:44 UTC
From: JS <wd1v@amsat.org>
Message-ID: <wd1v-1E9822.07534305012003@netnews.attbi.com>
Source record: 127860

UPS out of Manchester, NH to any USA location $150.00 with
manual - ready to go.

Contact John WD1V

wd1v@amsat.org

324. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 12:58:50 UTC
From: kevcat <kevcat@dodo.com.au>
Message-ID: <3E183079.2F44E013@dodo.com.au>
Source record: 127861
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

Being in Melbourne what is the lowest latitude you have recieved, have
you seen Antarctica at all
my images start not much futher north than yours and I'm just Nth of
Brisbane

Kev

Lindsay wrote:
>
> Ken Taylor wrote:
>
> > > http://www.hornet.net.au/weather.html
> > > and here's one of a dust storm we had a couple of months ago..
> > > http://home.iprimus.com.au/fibcon/10231006a.jpg
> > > Regards
> > > Lindsay
>
> > Very nice pix!
>
> Thanks...
>
> > What sort of receiver and pre-amp are you using?
>
> Details are below the pic at the first link :) except the software
> has changed. read on :)
>
> I've just taken a better pic, this time with the best weather
> satellite software, Wxtoimg. (which a freeware version is available
> at http://www.weather.net.nz/wxtoimg/)
>
> http://home.iprimus.com.au/fibcon/01051822.jpg
>
> This pic, from Noaa 12 is a color pic, called MSA (multi-spectral
> analysis), with rainfall. This is an 88 degree pass, nearly directly
> overhead. At the top of the image is a tropical
> storm/monsoon/baby cyclone, which is expected to turn into
> a full blown (pardon the pun) cyclone in the next 24 hours.
> I'm in Melbourne, so it's at extreme range...
>
> > And do you have a couple of trees to be feeled yet? :-)
>
> Not any more :)
>
> --

> Get rid of the 00 to email me.
> All spammers will be added to my shitlist.

325. Re: Help with antenna proposal

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 13:33:57 UTC
From: "r.dring" <r.dring@ntlworld.com>
Message-ID: <8vWR9.5092$pL6.857573@newsfep2-win.server.ntli.net>
Source record: 127862

Allways add that due to the expermental nature of the hobby antenna shape
and design
may change from time to time, it is not possible to be more definate, but
you can guarantee that changes will not cause interference. That is how we
are advised by the RSGB in the UK.
Ray G0BXG
"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E0AF965.4080205@attbi.com...
> Scott, the ANTENNA does not cause interference.
>
> I would state:
>
> "The amateur station, including antennas and supporting structures, will
> be in complete compliance with the requirements of 47 CFR 97.1 - 97.527.
>
> For the purposes of this document a particular reference to paragraph 47
> CFR 97.121a is included by reference."
>
> I would pick up a copy of Part 97 from W5YI or equivalent source, take
> the time to become familiar with it and have it available for reference.
>
> FYI: 97.121a is the paragraph that states among other items "If the
> operation of an amateur station causes general interference to the
> reception of transmissions from stations operating in the domestic
> broadcast service when receivers of good engineering design, including
> adequate selectivity characteristics, are used to receive such
> transmissions ... " Then silent hours are imposed. Also, subparagraph b
> allows for FCC investigation of complaints.
>
> Build your terms based on complying with the normal Federally imposed
> requirements for your station.
>
> Examples: telephone interference, VCR interference, computer sound card
> interference are excluded because they are NOT receivers of the domestic
> broadcasrt service and do not exhibit "adequate selectivity". Once the
> legalities are defined then good neighbor practices should be followed.
> I keep about $200 of telephone filters, clamp on ferrite beads, and
> various chokes that the owners can connect to their equipment externally.
>
> Deacon Dave, W1MCE
>
>
>
> Scott Vanzandt wrote:

> > Anyway to the point, they want something to asure
> > them that I would not interfere with neiboring radio/TV and a set of
> > descriptors for the proposed antenna. I am looking for something
> > fairly generic that I could give them that would have the least impact
> > on my ability to install/change antennas. I was thinking something
> > like "I agree that my equipment will not cause undue interference with
> > properly engineered equipment in the area. In all cases, FCC
> > regulations regarding radio frequency interference shall be adhered
> > to. Antenna will be .... (need the help here.) What do I need to
> > change/add?
> > Help.
> > N2WMD
> > Scott
> >
>

326. MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 13:46:55 UTC
From: "William M. Bickley" <bickley@dmv.com>
Message-ID: <v1gdqb8gggr82f@corp.supernews.com>
Source record: 127865

The few examples of R, X and SWR combinations in the manual for the 259B are consistent with the classical equations I'm familiar with. One such example in the manual is R=153, X=62 and SWR =3.61. When I plug real-world readings for R and X from my 259B into these equations, however, the SWR shown on the 259B does not match the computed value. An example is R=16, X=46 and SWR=4.1 on the 259B, when the equations I have say the SWR is 5.9 (Zc=50).

It doesn't take much for this stuff to become black magic to me. What am I missing?

Bill W2ET

327. Re: Help with antenna proposal

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 14:33:30 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <83c5kkI6IEG+EAEM@ifwtech.co.uk>
Source record: 127719

r.dring wrote:
>Allways add that due to the expermental nature of the hobby antenna
>shape and design may change from time to time, it is not possible to be
>more definate, but you can guarantee that changes will not cause
>interference. That is how we
>are advised by the RSGB in the UK.

When making a UK planning (US: zoning) application for amateur antennas, we are advised to put in a carefully-crafted phrase to say that the actual antennas are examples, and may change from time to time owing to the experimental nature of amateur radio.

But we're generally advised not to say anything at all about interference, because that is outside the powers of the UK planning authorities (US: zoning board). It's a whole different can of worms, and you don't want to let the planners into it. We are advised to tell the planners that we operate in accordance with the terms of our licence from the Radiocommunication Authority - and to leave it at that.

When applying for a very high "mast" (we're recommended not to say "tower", because it makes them think of something much bigger than what we're applying for) it may be possible to claim that the extra height would reduce the likelihood of interference to the immediate neighbours... but then you've gone and opened that can of worms. It's probably better to talk about the need to raise the antennas well clear of your own and neighbouring roofs, for "maximum effectiveness".

Above all, nobody can *ever* guarantee that changes will not cause interference - except by not transmitting. It's a very rash statement, and RSGB does not advise us to say any such thing! The possibility of interference depends on so many things that you cannot know in advance... which is what makes the whole subject so difficult.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

328. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 14:48:15 UTC
From: cprstn54zz@att.net
Message-ID: <3e183fa6.150093921@news-server.optonline.net>
Source record: 127866

On 5 Jan 2003 03:37:45 -0800, nm5k@wt.net (Mark Keith) wrote:
>Why coax at all, would be my question. I'd run the ladder line all the
>way from the antenna to the tuner and use the built in 4:1, or change
>that balun to a 1:1 if needed.

The tuner I would be bringing would not be the large MFJ-986, but a more diminutive MFJ-945E mobile tuner, which has the great virtue of being already owned by me -- and usable on 6M. Unfortunately it only has SO-239 jacks. So, I need the LDG 4:1 balun in front of it to go from balanced to unbalanced. What's the difference? If I used a tuner with balanced output to the antenna (like the MFJ-971), it would still have to have a 50 ohm connection to the radio. I would use short coax cables between the components -- one footers.

>I work the same exact type of operation on 80/40. I would use
>nothing but a coax fed dipole.

This might indeed be the optimum solution, but my expereince is that there is high SWR at the feedpoint and unacceptably big feed-line losses on 80M near the band limits. Using decent coax and keeping it short (25 ft?) would help.

You say dipole, but do you mean dipoles? Or do you run 40 and 80 on the same coax-fed dipole?

I suspect that the optimum antenna for camping HF will be a 130 ft dipole fed with around 40 ft of twinlead (dictated by geometry, not HF theory) into the 4:1 balun, thence to the tuner. This ought to work OK from 160-10. The big question will be whether the tuner can handle the match without attendant high losses. If not, I could use CAM's tuned twinlead feed and go 1:1 balun (i.e. coax wrapped around a toroid).

The tuned twinlead has the virtue of being adjustable on the ground by adding or removing sections. Nevertheless, it is still not as convenient as turning a dial on a tuner.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

329. Re: Directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 14:53:04 UTC
From: Adam 9A4QV <alicajic.adam@pu.hinet.hr>
Message-ID: <av9gpn$7kio$1@as201.hinet.hr>
Source record: 127867

Try this, it works for me,
http://www.clarc.org/Articles/uhf.htm

"Wes" <RWestman@Cox.Net> wrote in message
news:5yMR9.112751$Y86.100923@news2.central.cox.net...
> Hello... I posted this earlier with no replies. Any chance of someone
> helping me?
>
> Good day,
>
> Can someone provide me with a link or drawing so I can built an
> "inexpensive" directional receiver antenna for a 1.2 GHz color camera. I
saw
> one shown on news television piece. My reception is okay, but I would like
> to make it better.
>
> Thanks
>
>

330. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 15:01:42 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E18487F.8080108@attbi.com>
Source record: 127868

My Smith Chart indicates 16+j46 is a VSWR of 6.4:1!

It's NOT Black MAgic but it is complex hyperbolic math functions.

Deacon Dave, W1MCE

William M. Bickley wrote:
> The few examples of R, X and SWR combinations in the manual for the 259B are
> consistent with the classical equations I'm familiar with. One such example
> in the manual is R=153, X=62 and SWR =3.61. When I plug real-world readings
> for R and X from my 259B into these equations, however, the SWR shown on the
> 259B does not match the computed value. An example is R=16, X=46 and
> SWR=4.1 on the 259B, when the equations I have say the SWR is 5.9 (Zc=50).
>
> It doesn't take much for this stuff to become black magic to me. What am I
> missing?
>
> Bill W2ET
>
>

331. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 15:18:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <av9ibv$3k5$1@knossos.btinternet.com>
Source record: 127720

"William M. Bickley" wrote .
> The few examples of R, X and SWR combinations in the manual for the 259B
are
> consistent with the classical equations I'm familiar with. One such
example
> in the manual is R=153, X=62 and SWR =3.61. When I plug real-world
readings
> for R and X from my 259B into these equations, however, the SWR shown on
the
> 259B does not match the computed value. An example is R=16, X=46 and
> SWR=4.1 on the 259B, when the equations I have say the SWR is 5.9 (Zc=50).
>
> It doesn't take much for this stuff to become black magic to me. What am
I
> missing?
>
==========

Bill, as useful as they are, don't expect too much in the way of accuracy from these handy little instruments. The difference between SWR = 4.1 and 5.9 is of little importance. Can the man at the other end of the QSO detect anything?

Your ordinary SWR meter is probably no more accurate and you have managed for many years with that faithful servant. But the manufacturer was sensible enough not to provide a formula to check it against.

Actually, neither your faithful old servant nor your 259B measure SWR. What do you do with the numerical SWR value when you think you know it? You can't even calculate back to R+jX.

Not wishing to be depressing, I also own a 259B. I find it quite a useful little box of tricks. But then, I am seldom interested in the unimportant subject of what is the SWR on feedlines. ;o)

Reg, G4FGQ

332. Re: Temporary Mobile Mount and Antenna suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 15:18:40 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <80jg1vc1qgeogicvkno9q361fhu06qre71@4ax.com>
Source record: 127721

On 4 Jan 2003 23:28:32 -0800, nm5k@wt.net (Mark Keith) sent into the ether:

>Dennis Kaylor <k4oxg@tampabay.rr.com> wrote in message news:<3E16FEC1.3030208@tampabay.rr.com>...
>> hey mark
>> i can tell you never used one of the multi mag mounts most are so strong
>> its all you can do to get them back off so walking isnt a problem and
>> most good quality ones have a vinyl protector over the magenet to keep
>> the marring down to a minium
>
>True. Don't use em here. I drill holes. I've never been satified with
>the grounding you get with a mag mount on the low bands. Say on 80m,
>I've heard that many times the rf arcs through the paint on those
>mounts. I like a real good ground connection under the antenna. I
>consider the mag mounts a usable temporay mount though. I doubt the
>arcing problem is too bad on the higher bands. MK

Hi,
I use a triple mag mount with hamsticks for 10/15/20/40 and have had good results.
If you are worried about ground, mount it on the trunk and use a battery drill motor to put a screw into the underside of the trunk lid so you can mount a temp. lead there.
JMHO
Dan
Safe Today - Here Tomorrow
Don't Just Say It - Live It
Remove left x for direct reply

333. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 15:19:54 UTC
From: tennant@example.com
Message-ID: <av9iep$2oo$1@news.chatlink.com>
Source record: 127722
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

>> I am getting pretty good results frorm the NOAA and Meteor sats with a
>> homemade discone, very cheap to make and easy to build. Can send you
>> dimensions if you want them.

Can you provide a link to a page describing this please? Thanks.

334. LIVE Internet Broadcast of Sunday swaps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 15:24:32 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E184E30.18BFCFE4@qth.com>
Source record: 127723
Cross-posted to: rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors
Body handling: Binary attachment payload not displayed: radioranch.vcf

```
http://www.3819khz.net/listen.htm

Got to above web site
7.245 sunday morning at9AM
3.922 Sunday nite at 7pm Central

[One or more binary attachments are retained only in the source text.]
```

335. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 15:51:33 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <hADOZ7QFSFG+EAUK@ifwtech.co.uk>
Source record: 127724

William M. Bickley wrote:
>The few examples of R, X and SWR combinations in the manual for the 259B are
>consistent with the classical equations I'm familiar with. One such example
>in the manual is R=153, X=62 and SWR =3.61. When I plug real-world readings
>for R and X from my 259B into these equations, however, the SWR shown on the
>259B does not match the computed value. An example is R=16, X=46 and
>SWR=4.1 on the 259B, when the equations I have say the SWR is 5.9 (Zc=50).
>
>It doesn't take much for this stuff to become black magic to me. What am I
>missing?
>
>Bill W2ET

There's nothing wrong with your calculations, or with the example in the manual.

However, the analyser does not use that equation to compute SWR from R and X. It measures various voltages inside the resistor bridge, and then computes SWR and (R, X) by separate routes. Because of the combination of errors in the voltage measurements, the computation and final rounding-off for display, the two different sets of results don't always agree.

However, the difference between the reported and calculated SWR does seem a bit extreme, compared with the kind of accuracy I found when reviewing the MFJ-269. The example you gave involves quite moderate values of R, X and SWR, so I'd have expected the results to agree better than that.

Since the accuracy of the instrument depends on the settings of a number of internal pots, it would be worth checking its performance with a range of R-X loads built from close-tolerance components.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

336. Re: Protectant Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 16:55:02 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <1pog1v0cpr7qodlq1k5228rrtogctfv08j@4ax.com>
Source record: 127725

On Sun, 5 Jan 2003 09:36:03 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Roger Halstead wrote:
>
>>>The old cloth insulating tape was used for "frictional" purposes as
>>
>>That was its primary purpose, hence the name "friction tape", although
>>it did end up used in electrical circuits. It's just that was not its
>>primary purpose.
>>
>Electrical use *was* its primary purpose over here, so the same stuff
>was called insulating tape instead. How strange.

Maybe I should have said, intended purpose as it was used a lot in
electrical work over here as well.

And I guess use defines purpose. <:-))

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>(My wife, who is American, just said that if I'd asked her at any time
>in the past 25 years, she could have told me all about friction tape. Oh
>well...)

337. Re: Directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 18:09:56 UTC
From: Ron <rons533@dejazzd.com>
Message-ID: <3E1872F9.136C@dejazzd.com>
Source record: 127726

I also am interested in a "cheap" yagi for 2 meters. Went to the site.
Antenna is very interesting but I have one question. The completed
antenna on the web page appears to be physically shorter than a similar
commercial one. Is this due to the design or is it not optimum spaced?

>Adam 9A4QV wrote:
>
> Try this, it works for me,
> http://www.clarc.org/Articles/uhf.htm
>

338. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 18:22:38 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <av9t3v$546$1@slb4.atl.mindspring.net>
Source record: 127727

Correct. I replaced the thin crap they sold me with some surgical tubing.
Works great.

Dan/W4NTI

"CW" <clinton.magers@attbi.com> wrote in message
news:mrKR9.630372$QZ.92637@sccrnsc02...
> A note on the slingshot. I noticed that the original poster was using one
> with tapered tubing. These are meant for speed with a light projectile.
The
> strait tubing gives more power.
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v1abcq918o3a6e@corp.supernews.com...
> > I've posted my experiences with this several times on this newsgroup, as
> > have a number of other people. If you do a search at
> > http://groups.google.com, you should find a good deal of information.
> >
> > Roy Lewallen, W7EL
> >
> > Ted Busky wrote:
> > > Hi,
> > > I made my first attempt at installing a rope in a tree with a
slingshot
> > > for my 75m dipole. In the past I borrowed a bow and had much better
> > > results both in targetting and having enough power to get the arrow up
> > > and weight to bring the line down. I changed the weight quite easily
by
> > > taping steel rod of various lengths to the arrow until it flew right.
> > > The arrow also seemed less likely to snap past a branch and tangle
than
> > > the nuts or bolts I used with the slingshot.The biggest problem with
the
> > > bow was losing arrows when the line broke from the bow as it was shot.
I
> > > also broke a few wood arrows that hit the tree head on. (I have
> > > collected some low cost aluminum arrows since then.) Since I own this
> > > sling shot, I wanted to get some ideas before giving up and searching
> > > out another bow to borrow.
> > >
> > > My setup includes the following: Marksman 3055 tapered band slingshot.
> > > Daiwa 2200A reel with 6 pound line. The reel is hose clamped to the
> > > slingshot. I used a 1/2"x2" bolt that barely made it up 50'. The bolt
is
> > > stuck on a branch that the line got tangled on. I need to go about

70'.
> > > Then I tried 1/2" and 5/16" nuts that went up high, but did not have

> > > enough weight to bring the line down. I lost them when they hung as I
> > > tried to pull them back.
> > >
> > > These are my questions:
> > > 1. Is there a site that explains how to aim a slingshot?
> > > 2. Can anyone suggest a reasonable weight to start with?
> > > 3. Is this the right reel? It has a plastic cup over the mechanism
that
> > > winds the line. Would an "open" reel be better? Is there something
about
> > > the reel I should be aware of for this application?
> > > 4. Is the a good shape for the weight to reduce the chances of the
> > > weight snagging as it is pulled back then springing up and tangling in
a
> > > branch? I image that a pointed back end would be helpful, but what
> > > easily available devices, in the right weight range, can I use.
> > > 5. Any other suggestions?
> > >
> > > Thanks in advance for any ideas.
> > >
> > > Ted
> > > N1XLW
> > >
> > >
> > >
> > >
> >
>
>

339. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 19:03:40 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E18818C.1050105@ieee.org>
Source record: 127728

William M. Bickley wrote:
> The few examples of R, X and SWR combinations in the manual for the 259B are
> consistent with the classical equations I'm familiar with. One such example
> in the manual is R=153, X=62 and SWR =3.61. When I plug real-world readings
> for R and X from my 259B into these equations, however, the SWR shown on the
> 259B does not match the computed value. An example is R=16, X=46 and
> SWR=4.1 on the 259B, when the equations I have say the SWR is 5.9 (Zc=50).
>
> It doesn't take much for this stuff to become black magic to me. What am I
> missing?

You are missing what you didn't pay for. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

340. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 19:14:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E18842D.9050006@ieee.org>
Source record: 127729

Ken wrote:
> I suspect that the optimum antenna for camping HF will be a 130 ft
> dipole fed with around 40 ft of twinlead (dictated by geometry, not HF
> theory) into the 4:1 balun, thence to the tuner. This ought to work
> OK from 160-10.

It will be pretty much a dog on 160m. It will work pretty well on 80m.
However, on 40m the impedance seen by the 4:1 balun will be around
23+j157 ohms. The 4:1 balun will try to take that to 5+j40 ohms, a
lossy, tough matching assignment for a tuner. At least for 40m, a 1:1
choke would be a lot better than a 4:1 balun.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

341. Re: Directional antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 19:32:37 UTC
From: Bob Cameron <bob.cameron.remove@optusnet.com.au>
Message-ID: <l81ava.d5m.ln@p400bob.lse.com.au>
Source record: 127730

Wes wrote:

> Hello... I posted this earlier with no replies. Any chance of someone
> helping me?
>
> Good day,
>
> Can someone provide me with a link or drawing so I can built an
> "inexpensive" directional receiver antenna for a 1.2 GHz color camera. I
> saw one shown on news television piece. My reception is okay, but I would
> like to make it better.

Have a look at www.cebik.com. Maybe scale a corner reflector to 1.2GHz..

Cheers Bob VK2YQA

342. Re: Cushcraft power divider

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-05 23:36:50 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <Uc3S9.13166$wQ1.11711@fe01>
Source record: 127731

Well, dennis, for almost 40 years, now, these have worked well for me on vhf-uhf, but if it is your wanting to enrich OUB's wallet, then , by all means, go ahead and spent the extra bux.
but, having myself, stacked more than a few antennas, (and also, because of needs for my old job, needed to combine signals to 2 radios, from one antenna (both recieving, and transmitting),
and ,keeping in mind that the PHASING has more to do with loss's in multi antenna feeds, then PHYSICAL COAX LOSS"S , in a piece (or even 2) of coaxs less than 2 foot long (loss's in 100th's of a dB) ,fail to see the logic of your arguement - Corse, that why articles published in QST Many moons ago on how to construct these. Point being is this isn't rocket science here! obviously, can build out of copper tubeing,and wire, makeing your own "do it yourself" oddball impedience, and soldering fittings (X4) for a 4 port power devider , if this is your bag, but remember-- that moonbounce, and long distance at vhf , and uhf LONG PREDATES the availability of "plug and play" moonbounce! but as for me, i am reluctant to reinvent the wheel !
Jim nn7k

Dennis Wrote: <k4oxg@tampabay.rr.com> wrote in message news:3E17A2CD.8020405@tampabay.rr.com...
> well yes it is easy to do if you dont care how well it works
> but for weak signal work on VHF line loss incertion loss and line lenght
> are big factors
> i have done the 4 array with the 3 Ts and coax jumpers that i made up
> myself and i have used store bought and i can tell you that the one that
> Directive systems or M2 makes is a lot less loss than the home built one
> and the phasing lines are electically exactly the same lenght which is
> very important
> now if all he wants this for is FM repeater hopping i would say build it
> yourself
> if you want to work weak signal stuff do it right and buy the stuff
> listening to these HF mentality folks will only discourage you when they
> put up a station most of there station budget goes for radio and mic and
> they spend the least amount on antenna and feedline
> good luck
>

343. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 00:20:18 UTC
From: cprstn54zz@att.net
Message-ID: <3e18c862.185098421@news-server.optonline.net>
Source record: 127732

On Sun, 05 Jan 2003 13:14:53 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:
>It will be pretty much a dog on 160m. It will work pretty well on 80m.
>However, on 40m the impedance seen by the 4:1 balun will be around
>23+j157 ohms. The 4:1 balun will try to take that to 5+j40 ohms, a
>lossy, tough matching assignment for a tuner. At least for 40m, a 1:1
>choke would be a lot better than a 4:1 balun.

Thanks. No problem to bring a foot of coax with ferrite beads and
switch to that when appropriate.

You say 160M on a 130 ft dipole will be a dog. What does that mean?
a 3 dB drop vs. a 260 ft dipole? See, e.g.:
http://www.qsl.net/arrlsb/digest/pages/antennas/antennas13.html

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

344. FA Old Book - ARRL VHF Manual

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 01:45:20 UTC
From: Martin <Martin@g1gyc.demon.co.uk>
Message-ID: <avan8u$b2m$2$830fa79f@news.demon.co.uk>
Source record: 127733
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Please look at this
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&category=1502&item=194923464
6&rd=1

345. Test...nothing to read.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 01:47:15 UTC
From: LJ <nt6b-vk7lm@dslextreme.com>
Message-ID: <v1ho164l43sf72@corp.supernews.com>
Source record: 127734

[No readable article body recovered]

346. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 01:51:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E18E13C.8060600@ieee.org>
Source record: 127735

Ken wrote:
> You say 160M on a 130 ft dipole will be a dog. What does that mean?

EZNEC sez the 130' dipole fed with 40' of 300 ohm twinlead will have an SWR of 430:1 on the twin lead and a 1.3-j280 ohm impedance looking into the twinlead. That impedance will be very hard to match and if you can match it, it will be just about worst case loss conditions inside your antenna tuner. The web page you referenced doesn't say how much loss there is in the tuner/balun.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

347. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 04:11:58 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E19020E.6030506@ieee.org>
Source record: 127737

Antti J. Huhtala wrote:
> These just aren't laboratory-grade
> measuring instruments, so each reading should be taken with a grain of salt.

For instance, my MFJ-259B reactance readings go 0, 4, 7, 10.
With my Bird Termoline dummy load attached it reads 54 ohms.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

348. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 05:19:07 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0501032119070001@bni030qny8kc.bc.hsia.telus.net>
Source record: 127738

In article <3E18E13C.8060600@ieee.org>, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

> Ken wrote:
> > You say 160M on a 130 ft dipole will be a dog. What does that mean?
>
> EZNEC sez the 130' dipole fed with 40' of 300 ohm twinlead will have
> an SWR of 430:1 on the twin lead and a 1.3-j280 ohm impedance looking
> into the twinlead. That impedance will be very hard to match and if
> you can match it, it will be just about worst case loss conditions
> inside your antenna tuner. The web page you referenced doesn't say
> how much loss there is in the tuner/balun.

I don't think a properly designed tuner would necessarily be that bad. We want to match 1.3 ohms to 50 ohms. Using an L-section tuner, Q = 6.12 to three significant figures. So we want to leave +/- j7.96 ohms in series with the 1.3 ohms. There are two ways to do that: (i) put an inductor of 272 ohms reactance in series with the load leaving a net reactance of -8 ohms, or (ii) put an inductor of 288 ohms reactance in series with the load leaving a net reactance of +8 ohms. Method (i) requires a shunt inductor with 8.17 ohms reactance, and method (ii) requires a shunt capacitor of 8.17 ohms reactance.

All this is fine if our series inductor has infinite Q. But it doesn't. If we assume the series inductor has a Q of on the order of 280, a not unreasonable assumption, then it introduces a loss resistance of 1 ohm, throwing the whole calculation above off because the total load resistance is now 2.3 ohms and not 1.3 ohms and the value Q = 6.12 is incorrect. Let's fix this by assuming the series inductor *is* going to have a resistance of 1 ohm. Then we need Q = 4.55 to three significant figures. So we want to leave +/- j10.5 ohms in series with the 1.3 ohms, and we can use (i) a series inductor of 269.5 ohms reactance, or (ii) a series inductor of 290.5 ohms reactance. Assume the Q of this inductor is (i) 269.5 or (ii) 290.5, so that our 1 ohm loss resistance assumption will hold. The shunt reactor will then have to be (i) another inductor, or (ii) a capacitor, in either case with 11 ohms reactance. There will be completely negligible loss in this second reactor if it is a capacitor (about 0.0076 mfd at 1.9 MHz), and very little loss in it if it is an inductor since with a Q on the order of 280 its equivalent shunt resistance will be over 60 times our 50 ohm figure.

So the result is that the network should have an efficiency of about 1.3/2.3 or about 56%, which isn't great but maybe it's better than not going on 160 metres at all!

I am assuming that the balun, placed on the 50 ohm side of the L network, will have negligible loss.

What does EZNEC say about longer feedlines than 40 ft? I would think the resistance would go up above 1.3 ohms and the reactance would be less extreme than -j280, making the matching job easier (but at the cost of higher feedline loss).

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

349. Re: Alpha-Delta DX-DD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 07:11:52 UTC
From: Ian <cls119@lycos.co.uk>
Message-ID: <V_9S9.1486$H94.253917@newsfep2-win.server.ntli.net>
Source record: 127739

"Donnie (N4JZH)" <n4jzh@knology.net> wrote in message
news:qmue1vcf646i9th79p0dtiunnpqpg620i3@4ax.com...
> I have limit area, comments, pros, cons
> let me know from your experience
> THANKS!
> ''Behold how good and pleasant it is for Brethren to dwell together in
unity''
> Donnie n4jzh@knology.net

Hello,

Comments about what?

350. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 07:14:19 UTC
From: "Antti J. Huhtala" <ahuhtal4@welho.com>
Message-ID: <3E192CCB.28060D74@welho.com>
Source record: 127736

"William M. Bickley" wrote:

> An example is R=16, X=46 and SWR=4.1 on the 259B, when the equations I have
> say the SWR is 5.9 (Zc=50).
>
> It doesn't take much for this stuff to become black magic to me. What am I
> missing?
>
> Bill W2ET

Though admittedly all important aspects of the problem have been covered
in previous posts, I'd like to add my comments:

My transmission line calculator program calculates SWR as 6.08 in this case.
I've used the MFJ-259 (older model) for years. It often shows an 1:1 SWR for
a feedpoint resistance of 30 ohms or so! These just aren't laboratory-grade
measuring instruments, so each reading should be taken with a grain of salt.

For once, everybody seems to agree with everybody. FB!

73, Antti, OH2DT

351. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 07:37:01 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <oSVs92BdITG+EA0M@ifwtech.co.uk>
Source record: 127740

OC_CAM's Razor wrote:
>Antti J. Huhtala wrote:
>> These just aren't laboratory-grade
>> measuring instruments, so each reading should be taken with a grain of salt.
>
>For instance, my MFJ-259B reactance readings go 0, 4, 7, 10.
>With my Bird Termoline dummy load attached it reads 54 ohms.

Assuming nobody has cooked your Bird, the 259B should do better than
that.

I don't have schematic details of the 259B, but when reviewing the
2*6*9, I found that:

"...With an accurate 50-ohm load, the MFJ-269 reported Rs=50, Xs = 0,
SWR = 1.0 at all frequencies from 1.74 to 162MHz, and then Rs = 49, Xs =
1 up to 174MHz. The SWR meter read exactly 1 and the IMPEDANCE meter
just a touch above 50...
"The next tests used an open or short circuit. These are extreme
situations which really stretch the abilities of any impedance analyser.
An open circuit is rather difficult to produce because fringing fields
inside the open N socket make it look like a capacitor at higher
frequencies. The MFJ-269 reported Z>1500 at all frequencies up to 30MHz,
and above that frequency it reported a capacitor with Rs=0 and a very
high X value. A good-quality N short-circuit was reported as Rs=0 at all
frequencies, and Xs only started to move away from zero at 50MHz."

That is the order of accuracy you could expect on simple
matched-open-short testing. The 259B may not perform quite so well at
higher frequencies because the bridge layout isn't quite so good as in
the 269.

I believe that both instruments rely on the same trimpots being
accurately set for calibration. By spending a bit extra time and TLC on
your own 259B, you should be able to calibrate it better than MFJ could
manage on the production line.

Try to pry a schematic out of MFJ.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

352. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 07:51:12 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <aC+gJIDwVTG+EAST@ifwtech.co.uk>
Source record: 127741

Antti J. Huhtala wrote:
>"William M. Bickley" wrote:
>
>
>> An example is R=16, X=46 and SWR=4.1 on the 259B, when the equations I have
>> say the SWR is 5.9 (Zc=50).
>>
>> It doesn't take much for this stuff to become black magic to me. What am I
>> missing?
>>
>> Bill W2ET
>
>Though admittedly all important aspects of the problem have been covered
>in previous posts, I'd like to add my comments:
>
>My transmission line calculator program calculates SWR as 6.08 in this case.
>I've used the MFJ-259 (older model) for years. It often shows an 1:1 SWR for
>a feedpoint resistance of 30 ohms or so! These just aren't laboratory-grade
>measuring instruments, so each reading should be taken with a grain of salt.
>
>For once, everybody seems to agree with everybody. FB!

Well, not quite. The difference between 5.9 and 6.08 is not a
measurement error - it comes from the equations which should agree
exactly.

The equation is too hard to write out in ASCII, so here it is in code.
It actually calculates reflection coefficient (RHO) first, and then VSWR

```
T1 = (R - Z0)^2 + X^2
T2 = (R + Z0)^2 + X^2
RHO = SQR(T1 / T2)
VSWR = (1 + RHO) / (1 - RHO)
```

Agreed?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

353. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 07:58:26 UTC
From: Sam <dr500s@yahoo.com>
Message-ID: <KGaS9.141$YG2.7958@nnrp1.ozemail.com.au>
Source record: 127742
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

Try http://www.qrz.com/download/antennas/index.html , I made my lowest frequency 100 mhz so in theory it works up tp 1000 mhz, but in fact works very down on the 14 mhz band as well.

> Can you provide a link to a page describing this please? Thanks.

354. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 08:14:26 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3E193AE2.49EA@wt.net>
Source record: 127743

54zz@att.net (Ken) wrote in message
>
> The tuner I would be bringing would not be the large MFJ-986, but a
> more diminutive MFJ-945E mobile tuner, which has the great virtue of
> being already owned by me -- and usable on 6M. Unfortunately it only
> has SO-239 jacks. So, I need the LDG 4:1 balun in front of it to go
> from balanced to unbalanced. What's the difference? If I used a
> tuner with balanced output to the antenna (like the MFJ-971), it would
> still have to have a 50 ohm connection to the radio. I would use
> short coax cables between the components -- one footers.

That would work I guess if you have no balun in the portable tuner, but
I wouldn't use a tuner except as a "line flattener" for coax if this
were me doing this.
>
> >I work the same exact type of operation on 80/40. I would use
> >nothing but a coax fed dipole.
>
> This might indeed be the optimum solution, but my expereince is that
> there is high SWR at the feedpoint and unacceptably big feed-line
> losses on 80M near the band limits. Using decent coax and keeping it
> short (25 ft?) would help.

But will you actually work both band limits? I almost never have to
operate on that large a range of frequencies on 80m. But even still,
with a dipole fed with coax, there is no way line losses will ever be
very large with any reasonable SWR. The very low losses of the coax per
foot at that frequency won't allow it. It's like ladder line at those
frequencies nearly.
If I'm tuned for the 80 phone band, and get a wild hair and decide to
work CW on 3.550, I'd clip extra pieces of wire on the ends of the
dipole to resonate the antenna where I want it. Either that or just use
the tuner as a line flattener, and accept the small loss. It will be a
small loss. The average coax fed 80m dipole will usually cover about
1/2 the band. 200-300 kc with an acceptable SWR.
>
> You say dipole, but do you mean dipoles? Or do you run 40 and 80 on
> the same coax-fed dipole?

I have two main setups I prefer when camping. First would be seperate
80/40 dipoles at right angles. If I only have room for a single wire,
then I make a 40 dipole. Tune it up for 40, and then add extender wires
and tune it for 80. When on 80, the wires would be connected together at
the insulators. When on 40, I unhook the 80m extensions. You could add
20m or any other band just by adding more insulators. You could make it

"all" band" with some work and tweaking. And it would be very efficient on any band it's use for, and also has a dipole pattern on any band it's used on. In other words, it's dang near perfect..:)
Also the 40m antenna will work fine for 15m with the tuner used as a line flattener. After thinking about all the times I've been camping, this "split" dipole setup is probably the antenna I use the most.

------------0-------------0---------00---------0-------------0------------

Would look sort like the above picture for a 20/40/80 version. "Not really drawn to scale". There are clips on each insulator to unhook or connect the wires together. With this setup, you can work most all bands, and have all the good virtues of a coax fed dipole.
>
> I suspect that the optimum antenna for camping HF will be a 130 ft
> dipole fed with around 40 ft of twinlead (dictated by geometry, not HF
> theory) into the 4:1 balun, thence to the tuner. This ought to work
> OK from 160-10. The big question will be whether the tuner can handle
> the match without attendant high losses. If not, I could use CAM's
> tuned twinlead feed and go 1:1 balun (i.e. coax wrapped around a
> toroid).

I guess it depends what you mean by optimum. As far as losses are concerned, the coax fed dipole can't really be beat. It's the optimum antenna as far as performance goes on 80 and 40. The system losses are nearly nil. It might not be the most convenient as far as working all bands though. For my tastes, performance always gets the nod over convenience. Also, when I did try a 80 m dipole fed with twin lead and a tuner, I found the high band performance was not that great due to the patterns. 10m was horrible. When I tried 10m on that antenna, the takeoff angle appeared to be so high that the antenna was useless. Or at least that appeared to be the problem to me...I don't think feeder losses were the problem.
>
> The tuned twinlead has the virtue of being adjustable on the ground by
> adding or removing sections. Nevertheless, it is still not as
> convenient as turning a dial on a tuner.

I'd rather adjust the dipole, and add and remove sections from it to change bands, not the feedline. When using coax, I'm assured very low losses with this method. Only Cecils "no tuner" method can approach the efficiency of the coax system. There's no way you will be as efficient using a tuner/twin lead fed 80m dipole. If I compared an "all band" jumpered dipole on each band 80-10, and compared to the 80m twin lead/tuner fed dipole on 80-10, I guaranty the jumpered dipole would win on most every band. Some bands like 10m where the pattern is more critical, by very large amounts. Judging from what I read, in your case, with my radio and antenna, it would be a coax fed jumpered dipole for me. I would not touch twin lead or ladder line with a ten foot pole, unless it was Cecils no-tuner method. But for my uses, I prefer the coax. Even if you used Cecils method, you still have the patterns to

think about. IE: 10m will still be lame, loss or no loss. Wouldn't have that problem with the jumpered dipole. MK

P.S I reposted this on my news server cuz google is acting strange. You may see dupes of this post...

--
http://web.wt.net/~nm5k

355. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 08:30:15 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301060030.4a1f1a10@posting.google.com>
Source record: 127744

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
>
> It will be pretty much a dog on 160m. It will work pretty well on 80m.
> However, on 40m the impedance seen by the 4:1 balun will be around
> 23+j157 ohms. The 4:1 balun will try to take that to 5+j40 ohms, a
> lossy, tough matching assignment for a tuner. At least for 40m, a 1:1
> choke would be a lot better than a 4:1 balun.

I wouldn't even worry about 160m if I were him. With 5 watts and a low
dipole type antenna , that will be like taking a whizz in a whirlwind.
He going to have enough problems getting a decent NVIS signal on 80m.
The low height of the wire, and the resulting high ground losses will
eat him for lunch on 160m. He might do ok if all the lightning in the
northern hemisphere quits for a while...:/ MK

356. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 08:40:13 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301060040.27071d81@posting.google.com>
Source record: 127745

>
> You say 160M on a 130 ft dipole will be a dog. What does that mean?
> a 3 dB drop vs. a 260 ft dipole? See, e.g.:
> http://www.qsl.net/arrlsb/digest/pages/antennas/antennas13.html
>
> Ken KC2JDY

A 1/2 size dipole has a low impedance- high reactance feedpoint. If
you use a tuner to match, you will lose much of your power to coil
losses in the tuner.
The best way to fedd such an animal would be to tie the shield to
center pin, and feed as a "T" vertical. But then you need
radials...I'd forget 160m with 5 watts. It's not worth the aggravation
unless you have a *very* good antenna. MK

357. Re: Cushcraft power divider correction

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 09:05:26 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <ZxbS9.15953$wQ1.920@fe01>
Source record: 127746

oh, and one Other error crept in-- for the two port (it is necessary for this to use a "tee" fitting, and 2 PIECES of 75 ohm coax, at 1/4 wave length, again figuring in the velocity factor of it - example shown would require 35 ohm coax, something rather difficult to obtain. But it can be easily built- M squared, and couple other sorces havwe been doing it for years out of coax fittings, and copper tubeing, with wire for center conductor, again 1/4 wave long.

BTW, the formula for this wasn't stated, but is : for a 1/4 wave transformer, take the SQUARE ROOT of the sum of your source impedence, and your Load impedence., then multiply by velocity factor (.66 for polyethylene dialectric, or .82 for foam dialectric coax).

At a source impedence of 50 ohm, with load impedence useing 2 of these , the sum total impedence is 1/2 of the required impedemce to be delivered, (and both of these are in parallel)

this gives us 50 ohm in, 100 ohm out and as these are paralleled at the tee fitting, becomes 50 ohm again. the value , useing the above formula is the square root of 50 x 100 ohms,
equals 70.71 ohms - that the reason for the 75 ohm lines , and for the 4 port, again, useing 2 1/4 wave lines , and in this case, square root of 25 ohm x 100 ohms = 1y4 wave length of 50 ohm coax--- I rest my case jim nn7k

<Jimnn7k@reno.rmci.net> wrote in message news:Uc3S9.13166$wQ1.11711@fe01...
> Well, dennis, for almost 40 years, now, these have worked well for me on
> vhf-uhf, but if it is your wanting to enrich OUB's wallet, then , by all
> means, go ahead and spent the extra bux.
> but, having myself, stacked more than a few antennas, (and also, because
of
> needs for my old job, needed to combine signals to 2 radios, from one
> antenna (both recieving, and transmitting),
> and ,keeping in mind that the PHASING has more to do with loss's in multi
> antenna feeds, then PHYSICAL COAX LOSS"S , in a piece (or even 2) of coaxs
> less than 2 foot long (loss's in 100th's of a dB) ,fail to see the logic
of
> your arguement - Corse, that why articles published in QST Many moons ago
on
> how to construct these. Point being is this isn't rocket science here!
> obviously, can build out of copper tubeing,and wire, makeing your own "do
> it yourself" oddball impedience, and soldering fittings (X4) for a 4 port
> power devider , if this is your bag, but remember-- that moonbounce, and
> long distance at vhf , and uhf LONG PREDATES the availability of "plug and
> play" moonbounce! but as for me, i am reluctant to reinvent the wheel !

> Jim nn7k
>
>
>
>
> Dennis Wrote: <k4oxg@tampabay.rr.com> wrote in message
> news:3E17A2CD.8020405@tampabay.rr.com...
> > well yes it is easy to do if you dont care how well it works
> > but for weak signal work on VHF line loss incertion loss and line lenght
> > are big factors
> > i have done the 4 array with the 3 Ts and coax jumpers that i made up
> > myself and i have used store bought and i can tell you that the one that
> > Directive systems or M2 makes is a lot less loss than the home built one
> > and the phasing lines are electically exactly the same lenght which is
> > very important
> > now if all he wants this for is FM repeater hopping i would say build it
> > yourself
> > if you want to work weak signal stuff do it right and buy the stuff
> > listening to these HF mentality folks will only discourage you when they
> > put up a station most of there station budget goes for radio and mic and
> > they spend the least amount on antenna and feedline
> > good luck
> >
>
>
>

358. Building My own ShortWave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 13:41:18 UTC
From: Jif <987JIF@anon.lcs.mit.edu>
Message-ID: <MAILSERVERQq12LRF5800000505@mailserver.shabakah.net.sa>
Source record: 127748

Hi

I like listing to shortwaves stations and I would like to know
how do i build my own very good shortwaves antenna.

Thanks

Jif

359. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 13:55:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E198ABC.3050903@ieee.org>
Source record: 127749

David or Jo Anne Ryeburn wrote:
> So the result is that the network should have an efficiency of about
> 1.3/2.3 or about 56%, which isn't great but maybe it's better than not
> going on 160 metres at all!

I don't know about that, David. Remember, he's running 5 watts to a low
dipole on 160m. Then he dissipates half his power in the tuner. Just
doesn't sound logical to me. 'Course, I'm not a masochist. :-)

> What does EZNEC say about longer feedlines than 40 ft? I would think the
> resistance would go up above 1.3 ohms and the reactance would be less
> extreme than -j280, making the matching job easier (but at the cost of
> higher feedline loss).

On the left side of the 430:1 SWR circle, the reactance goes up with the
resistance. On the right side of the SWR circle, the resistance is
very high, in this case around 130K ohms at the X axis.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

360. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 14:25:23 UTC
From: "Antti J. Huhtala" <ahuhtal4@welho.com>
Message-ID: <3E1991D3.BF70B7B0@welho.com>
Source record: 127747

"Ian White, G3SEK" wrote:

> Antti J. Huhtala wrote:
> >"William M. Bickley" wrote:
> >> An example is R=16, X=46 and SWR=4.1 on the 259B, when the equations I have
> >> say the SWR is 5.9 (Zc=50).
> >
> >My transmission line calculator program calculates SWR as 6.08 in this case.
> >
> >For once, everybody seems to agree with everybody. FB!
>
> Well, not quite. The difference between 5.9 and 6.08 is not a
> measurement error - it comes from the equations which should agree
> exactly.

I didn't say it is a measurement error. My number is derived from the values given in the example. However, my program calculates the *complex* reflection coefficient including the _reactance_ of the coax, instead of using the value of 'pure' 50 ohms. In my program, I have used the value of 50-j.44 ohms, obtained from some ARRL source. The apparent difference should be explained by this.

> The equation is too hard to write out in ASCII, so here it is in code.
> It actually calculates reflection coefficient (RHO) first, and then VSWR
>
> T1 = (R - Z0)^2 + X^2
> T2 = (R + Z0)^2 + X^2
> RHO = SQR(T1 / T2)
> VSWR = (1 + RHO) / (1 - RHO)
>
> Agreed?

If we consider '50 ohm coax' as pure 50 ohms, sure. If you're interested, I'll be

happy to send you the C source of my program, so you can see for yourself whether it is up to par...

> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

73 from Antti, OH2DT Technical editor, "Radioamatoori"

361. Re: Building My own ShortWave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 14:42:48 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <IBgS9.65744$L61.4094333@news1.west.cox.net>
Source record: 127750

Lots of links to SWL antenna projects ay URL;
http://ac6v.com/swl.htm#ANT

And a recommended book at
http://www.mfjenterprises.com/products.php?prodid=MFJ-38

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Jif" <987JIF@anon.lcs.mit.edu> wrote in message
news:MAILSERVERQq12LRF5800000505@mailserver.shabakah.net.sa...
> Hi
>
> I like listing to shortwaves stations and I would like to know
> how do i build my own very good shortwaves antenna.
>
> Thanks
>
> Jif

362. Re: Building My own ShortWave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 14:56:51 UTC
From: richardharrison@webtv.net
Message-ID: <10147-3E199933-466@storefull-2311.public.lawson.webtv.net>
Source record: 127751

Jif wrote:
"---how do I build my own very good antenna?"

There are many ways. The best for any situation depends on constraints. For cheap and easy, insulated wire strung out over tree branches can be used. A very long wire pointed in the desired reception direction works well.

For some immunity to local noise which is generally vertically polarized, a horizontal dipole can be used. Favored reception direction of a dipole is broadside.

Folded dipoles are simple, light, and useful when made from TV twinlead.

Since Jif`s question is not specific, he may browse AC6V`s pages for ideas.

Best regards, Richard Harrison, KB5WZI

363. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 15:48:53 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <X5ydne4LRMpZOYSjXTWcog@comcast.com>
Source record: 127752

Bill,

I repeated your experiment on an MFJ269. Here is what I got:

for Z=16 + j46 > SWR = 5.1

for Z=14 + j46 > SWR = 6.0

I haven't calculated the theoretical SWR for these, but seems like it is very sensitive to the small R value; so, any error in rhe R value will make a big difference in the SWR. It might be that the 259 gives the correct SWR value, and wrong R value. Looks like 10% makes a big difference, and I don't know that they claim any better than that.

Tam/WB2TT
"William M. Bickley" <bickley@dmv.com> wrote in message news:v1gdqb8gggr82f@corp.supernews.com...
> The few examples of R, X and SWR combinations in the manual for the 259B are
> consistent with the classical equations I'm familiar with. One such example
> in the manual is R=153, X=62 and SWR =3.61. When I plug real-world readings
> for R and X from my 259B into these equations, however, the SWR shown on the
> 259B does not match the computed value. An example is R=16, X=46 and
> SWR=4.1 on the 259B, when the equations I have say the SWR is 5.9 (Zc=50).
>
> It doesn't take much for this stuff to become black magic to me. What am I
> missing?
>
> Bill W2ET
>
>

364. Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 16:21:56 UTC
From: h4mb0ne@hotmail.com
Message-ID: <b0a445bd.0301060821.494e5978@posting.google.com>
Source record: 127753

I am looking for an antenna recommedation that will be used for portable operation with my Yaesu FT-817. Looking for something that will be used on 6 meter (QRP) when the band opens up. Any thoughts on which may be the best way to go? Looked at Miracle Whip, MP-1 Super Antenna, M2 HO Loop and the Buddipole.

Again, I am looking for something with QRP DXing in mind.

Thanks in advance.
H4mb0ne

365. Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 16:56:48 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301060856.687f0c45@posting.google.com>
Source record: 127754

Maybe a lame brain question but, what is the maximum voltage
that is impressed on a amateur antenna when using a amplifier
with a 3Kv plate voltage? This disregards 'end effect' voltages
but would include the use of stubs and lumped constants e.t.c
and would include the like of over modulated and other signal use.
Thanks
Art

366. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 17:29:59 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E19BCCB.2070800@attbi.com>
Source record: 127755

It can be virtually any credible voltage based on VSWR and series reactance in the antenna system.

Example: A series tuned circuit is driven by 1 VRMS into a resistor of 1 ohm in series with a capacitor of -j100 ohms in series with an inductor of j100 ohms. The two reactances cancel each other and the circuit is resonant. However #1, the voltage across the inductor is 100 VRMS. However #2, the voltage across the capacitor is 100 VRMS. However #3, the voltage across the resistor is 1 VRMS. Hmmm ... ?

In your question, assuming a 50 ohm resistive load at the antenna , and 1500 watts output the feedpoint voltage is a little over 273 VRMS. That is the minimum voltage. In a typical antenna system, e.g. Yagi, it will develop several thousands of volts at traps etc. End effect can approach 5000 VRMS or higher.

Deacon Dave, W1MCE

Art Unwin KB9MZ wrote:
> Maybe a lame brain question but, what is the maximum voltage
> that is impressed on a amateur antenna when using a amplifier
> with a 3Kv plate voltage? This disregards 'end effect' voltages
> but would include the use of stubs and lumped constants e.t.c
> and would include the like of over modulated and other signal use.
> Thanks
> Art

367. Re: Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 17:50:48 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <wcEZPsM1AQNa7oAgT2SlhKRct=Pv@4ax.com>
Source record: 127757

h4mb0ne@hotmail.com (h4mb0ne) wrote:

>I am looking for an antenna recommedation that will be used for
>portable operation with my Yaesu FT-817. Looking for something that
>will be used on 6 meter (QRP) when the band opens up. Any thoughts on
>which may be the best way to go? Looked at Miracle Whip, MP-1 Super
>Antenna, M2 HO Loop and the Buddipole.
>
>Again, I am looking for something with QRP DXing in mind.
>
>Thanks in advance.
>H4mb0ne

TV rabbit ears might adjust to the right length for a 6-meter dipole.

Bob
k5qwg

368. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 18:00:49 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <Mu2dndJefZotXoSjXTWc2Q@comcast.com>
Source record: 127756

Let's take a look at what +/- 10% would mean. That would be +/- 1.6 Ohms on the 16 Ohms, or 14.4 to 17.6. But the MFJ rounds this to 14 to 18. This seems to make a huge difference in SWR. 10% is not bad for an instrument that does not cost $8000. The number of bits in the A/D does not make any difference if the error is in the analog votage that it samples.

Tam/WB2TT

369. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 18:21:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E19C92F.2090106@ieee.org>
Source record: 127758

Art Unwin KB9MZ wrote:
> Maybe a lame brain question but, what is the maximum voltage
> that is impressed on a amateur antenna when using a amplifier
> with a 3Kv plate voltage?

Not enough information given, Art. What is the power output
of the amp?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

370. B&W AP10A *Questions*

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 18:45:04 UTC
From: Rob Oresteen <rob.oresteen@worldnet.att.net>
Message-ID: <Q8kS9.98319$hK4.7976403@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127759

Would anyone who has experience with the B&WAP10A portable antenna let me know what they think about it?

I will need a "portable solution" due to the fact I live on the second floor of an apartment. I plan to mount it to some kind of a boom to put it up another 10-15 ft. when in use.

Thanks,

R. Oresteen

371. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 18:58:02 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e19d6c5_1@news1.prserv.net>
Source record: 127760

Depends whether the blocking capacitor went short or not.

--
Crazy George
Remove NO and SPAM from return address
"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0301060856.687f0c45@posting.google.com...
> Maybe a lame brain question but, what is the maximum voltage
> that is impressed on a amateur antenna when using a amplifier
> with a 3Kv plate voltage? This disregards 'end effect' voltages
> but would include the use of stubs and lumped constants e.t.c
> and would include the like of over modulated and other signal use.
> Thanks
> Art

372. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:03:56 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E19D2D0.1080202@attbi.com>
Source record: 127761

That's simple: Primary V times turns ratio.

But what has that to do with the question?

Deacon Dave, W1MCE

Gilbert Mouget wrote:
> In article <85ed38d.0301060856.687f0c45@posting.google.com>,
> dated 6 Jan 2003 08:56:48 -0800,
> Art Unwin KB9MZ, <aunwin@insightbb.com> says...
>
>
>
>>Maybe a lame brain question but, what is the maximum voltage
>>that is impressed on a amateur antenna when using a amplifier
>>with a 3Kv plate voltage? This disregards 'end effect' voltages
>> but would include the use of stubs and lumped constants e.t.c
>>and would include the like of over modulated and other signal use.
>
>
> What is the maximum secondary voltage of a transformer with
> 3KV on the primary ?
>

373. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:13:33 UTC
From: jim breeeyar <james.breeyear@uvm.edu>
Message-ID: <3E19D55D.3090906@uvm.edu>
Source record: 127762

high Q - Low loss; I think Q used to indicate "Quality".... resistance reduced it. something like Q=X/R ....if R goes up q goes down..it is a ratio thing . I would say, use the best wire or tubing (silver plated) for RF.

Ian wrote:
> Hello,
>
> Always wondered, what do you mean when you talk about the "Q" of an antenna?
>
> Ian
>
>

374. Re: Antenna Q and space coupling efficiency?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:23:42 UTC
From: jim breeeyar <james.breeyear@uvm.edu>
Message-ID: <3E19D7BE.6000303@uvm.edu>
Source record: 127763

I would think that antenna elements with extremely high Q would be
harder to adjust than the reverse. Also would be affected more by
proximity objects.

Roy Lewallen wrote:
> Coupling between two antennas is well known. Graphs for mutual impedance
> for parallel wires can be found in many references including the ARRL
> Antenna Book. Coupling between more complex arrangements is easily found
> with any of the popular antenna modeling programs.
>
> It isn't necessary to know Q to make this calculation, and the mutual
> impedance depends only very weakly on wire diameter, while this is a
> primary determining factor of Q.
>
> You've asked why two high Q antennas wouldn't couple more strongly than
> two low Q antennas. Why do you think they should? Can you explain what
> effect Q should have on coupling and why?
>
> Roy Lewallen, W7EL
>
> Yuri Blanarovich wrote:
>
>>
>> What I meant for example: a. you have two circuits (antenna elements)
>> that have
>> low Q and then you have b. two circuits that have high Q, you place
>> them at the
>> same distance, wouldn't two high Q circuits "produce" mo coupling?
>> I remember when I was young and my elmers had never ending discussions on
>> effect of Q on tuned circuits in the PA output networks. Is this the
>> same f$%#@
>> Q? :-)
>>
>> Yuri, da Q BUm
>
>

375. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:33:33 UTC
From: jim breeeyar <james.breeyear@uvm.edu>
Message-ID: <3E19DA0D.9020503@uvm.edu>
Source record: 127764

I found that an end fed long wire and a tuner seemed to be about as good
as anything considering size , weight, and espense. Use 20-30 feet
of ladder line into the end of the wire which is connected to a balanced
tuner on the other end(small low power type). Handbook has them. This
assumes you are working in the HF band.

Ken wrote:
> Still looking for the ideal 40/80 camping QRP dipole (or doublet), I
> am trying to reconcile W5DXP's approach (130 ft dipole fed with
> variable-length ladder line) with W4RNL's suggestion (88 ft dipole,
> fed with ???).
>
> (1) How is the the 88 ft dipole fed? It is called a "doublet," so I
> would assume balanced feed line -- but how long?
>
> (2) How do these two antennas perform on 160, 20 and 10?
>
> See:
> http://www.qsl.net/w5dxp/notuner.htm
> http://www.cebik.com/aledz.html
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

376. Hexbeam Multi band HX5-b on ebay

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:35:36 UTC
From: Tom Shellberg <tshellberg@microlab.net>
Message-ID: <Xns92FB7FAD4DA82tshellbergmicrolabne@10.10.1.1>
Source record: 127765

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4672&item=1950112101
&rd=1

377. Re: Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:38:02 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E19DB1A.956A065D@cwis.net>
Source record: 127766

h4mb0ne,
You might try looking at 'eham' for a comparison of
those antennas. As with any 'shortened' antenna, or
an antenna fairly low to the ground, don't expect much
performance. Any of the examples should be capable of
'getting you on the air', but I wouldn't expect to set
any new records using them...
'Doc

378. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:47:20 UTC
From: jim breeeyar <james.breeyear@uvm.edu>
Message-ID: <3E19DD48.2000105@uvm.edu>
Source record: 127767

It is about time someone started looking at Rf pollution. Hams are not the problem. If RF suddenly became visible, we wouldnt be able to see beyond our noses. Could life have become as we know it with that much background RF. Mutation.

BICisfag wrote:
> I want to get a 500 w solid state amp for HF.
>
> I don't seem to have any interference problems with
> neighbors now with 100 w.
>
> I have dipoles for 80 and 40 and a vertical and inv. L.
>
> Am I asking for trouble with 500 w?
>
>
>

379. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:51:09 UTC
From: jim breeeyar <james.breeyear@uvm.edu>
Message-ID: <3E19DE2D.3090703@uvm.edu>
Source record: 127768

Go out 10 earth diameters and look at the "typical" horizon.

Richard Harrison wrote:
> Richard Fry wrote:
> "Don`t know if that height (1000 feet) above is the true average height
> of all US FM stations."
>
> I don`t either.
>
> My dictionary says:
> "Typical" means pertaining to, or of the nature of---." It says nothing
> about averages or median values. The question was:
> "What would be a typical FM-radio-station-antenna height?"
>
> I went to work for a broadcaster who had a highly profitable AM
> operation on 790 KHz in 1949. He also had an FM affiliate on a tower on
> Ennis Street in downtown Houston. It is still there, but the call sign
> and programming are different. It now speaks Spanish. FM time couldn`t
> be sold in 1949. It was given as a "bonus" to advertisers on the AM
> affiliate.
>
> The call leters of our FM affiliate were indicative of its programming.
> The call sign was: KOPY. Its main value to us was as a backup to the
> program line serving the AM transmitter site out of town.
>
> I think our FM operation was typical at the time. 1000-foot towers were
> used by serious entrepreneurs who hoped to profit from FM in the long
> run. The broadcaster wanted the range of his FM affiliate to rival his
> AM affiliate if he were ever to make a go of it. Most were convinced
> that FM would eventually pay off due to the superiority of FM reception.
> You had to have pioneering FM broadcasters if there were ever to be a
> critical mass of listeners to make FM broadcasting economically viable.
> Today, a broadcaster has to at least meet the competition to reach
> listeners in a large metropolitan area.
>
> Best regards, Richard Harrison, KB5WZI
>

380. Re: Cheapest, lightest QRP 40/80 dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:54:09 UTC
From: jim breeeyar <james.breeyear@uvm.edu>
Message-ID: <3E19DEE1.2030003@uvm.edu>
Source record: 127670

Bamboo poles work great also. 18 foot.

Ken wrote:
> On 31 Dec 2002 18:00:13 GMT, fmmck@aol.com (Fred McKenzie) wrote:
>
>>The company that makes the Hamstick antennas, also sells a bracket that allows
>>two mobile whips to be mounted as a dipole. They don't have to be Hamsticks,
>>but those are cheaper than other alternatives.
>
>
> I thought I mentioned -- but didn't -- that I have a new 20 ft. Black
> Widow crappie pole ($17 from Cabela's) that I intend to use as the
> feedpoint support where there are no trees. Actually, I can get it 23
> ft up because I keep it in a 4 ft PVC pipe case that doubles as the
> bottom section, adding another 3 ft.
>
> If that doesn't work, I'll spring for the MFJ item -- which goes to 30
> ft. That is a much, much better height (i.e. 3 dB better) for 80M.
> But $80 for the MFJ pole is not cheap -- and you can't fish for
> crappie with it, either.
>
> Ken KC2JDY
>
>
>
>
>
>
>
> Ken
> (to reply via email
> remove "zz" from address)

381. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 19:56:10 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <FkKdnTHhrtIkQ4SjXTWcow@comcast.com>
Source record: 127669

Dave has the right answer. Also, note that the 3000Volts has nothing to do with it.

Tam/WB2TT
"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message news:85ed38d.0301060856.687f0c45@posting.google.com...
> Maybe a lame brain question but, what is the maximum voltage
> that is impressed on a amateur antenna when using a amplifier
> with a 3Kv plate voltage? This disregards 'end effect' voltages
> but would include the use of stubs and lumped constants e.t.c
> and would include the like of over modulated and other signal use.
> Thanks
> Art

382. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 20:03:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E19E126.9030000@ieee.org>
Source record: 127671

jim breeeyar wrote:
> It is about time someone started looking at Rf pollution. Hams are not
> the problem. If RF suddenly became visible, we wouldnt be able to see
> beyond our noses. Could life have become as we know it with that much
> background RF. Mutation.

If it weren't for mutations, we wouldn't be here.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

383. Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 20:30:41 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <enpj1v0l174ur08rdpkoip5a7clb68bfvq@4ax.com>
Source record: 127672

I was wondering what everyone's take is on ground mounting vs roof mounting. The reason I ask is because I have a chance to get a Cushcraft R7 at a good price, but I am debating if I should mount it on the ground on on the roof. If it was on the roof, I'd probably only have it about 5 feet above the roof. If it's ground mounted, it would probably be 8 feet above the ground, as per the directions.

Any opinions would be appretiated. Also, I am not interested in other antennas, so please keep your comments to the R7, thanks!
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

384. New program. Design of simple L&C Bandpass Filters

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 20:35:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avcpab$g56$1@knossos.btinternet.com>
Source record: 127673

NOW AVAILABLE :

New Program "BANDPAS1.exe"

The great majority of inductance and capacitance filters consist of 1 or more cascaded basic T or Pi sections. This easy to use program calculates L and C component values of simple T and Pi bandpass filters used in applications where ripple in the pass-band response, frequencies of infinite attenuation in the stop band, exact impedance matching, etc., are not of great importance.

Insertion loss versus frequency is computed between source and terminating resistances through the stop and pass bands.

One small 32 kByte file only. Download BANDPAS1 in a few seconds from website below. Run immediately.

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

385. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 20:49:16 UTC
From: richardharrison@webtv.net
Message-ID: <3107-3E19EBCC-513@storefull-2314.public.lawson.webtv.net>
Source record: 127675

James wrote:
"Go out 10 earth diameters and look at the "typical" norizon."

Commercial satellites don`t park that high.

The question was how high is a typical FM broadcast antenna?

Terrestrial broadcasters typically in early days elevated FM antennas to reach the same audience AM stations reached in an area. The tradition lingers.

Best regards, Richard Harrison, KB5WZI

386. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:04:19 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E19EF43.78720870@shaw.ca>
Source record: 127674

Andy KC2SSB wrote:
>
> I was wondering what everyone's take is on ground mounting vs roof
> mounting. The reason I ask is because I have a chance to get a
> Cushcraft R7 at a good price, but I am debating if I should mount it
> on the ground on on the roof. If it was on the roof, I'd probably only
> have it about 5 feet above the roof. If it's ground mounted, it would
> probably be 8 feet above the ground, as per the directions.
>
> Any opinions would be appretiated. Also, I am not interested in other
> antennas, so please keep your comments to the R7, thanks!
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

I run my R7 on a piece of ten foot pipe sunk two feet into concrete.
I'm very pleased. I put the 10 ft pipe into a piece of PVC pipe so
it slides in and out easily. If I ever move, I just pull the pipe out
and saw off the PVC tube just below ground level and cover the hole with
dirt. I like the accessibility factor. I've had it up through two
winters with both freezing rain and blowing snow -- unguyed. No
problem!
I've
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

387. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:04:49 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <p6ydnf54mrtoYISjXTWcoQ@ctc.net>
Source record: 127681

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E19D2D0.1080202@attbi.com...
> That's simple: Primary V times turns ratio.
>
> But what has that to do with the question?
>
> Deacon Dave, W1MCE
>
> Gilbert Mouget wrote:
> > In article <85ed38d.0301060856.687f0c45@posting.google.com>,
> > dated 6 Jan 2003 08:56:48 -0800,
> > Art Unwin KB9MZ, <aunwin@insightbb.com> says...
> >
> >
> >
> >>Maybe a lame brain question but, what is the maximum voltage
> >>that is impressed on a amateur antenna when using a amplifier
> >>with a 3Kv plate voltage? This disregards 'end effect' voltages
> >> but would include the use of stubs and lumped constants e.t.c
> >>and would include the like of over modulated and other signal use.
> >
> >
> > What is the maximum secondary voltage of a transformer with
> > 3KV on the primary ?
> >
>

About as much as the origional question. It does not mater how much voltage
is on the plate, but how much output power the transmitter has.

388. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:23:39 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Y+UgmqCbPfG+EAQE@ifwtech.co.uk>
Source record: 127685

Antti J. Huhtala wrote:
>"Ian White, G3SEK" wrote:
>
>> Antti J. Huhtala wrote:
>> >"William M. Bickley" wrote:
>> >> An example is R=16, X=46 and SWR=4.1 on the 259B, when the
>> >>equations I have
>> >> say the SWR is 5.9 (Zc=50).
>> >
>> >My transmission line calculator program calculates SWR as 6.08 in this case.
>> >
>> >For once, everybody seems to agree with everybody. FB!
>>
>> Well, not quite. The difference between 5.9 and 6.08 is not a
>> measurement error - it comes from the equations which should agree
>> exactly.
>
>I didn't say it is a measurement error. My number is derived from the values
>given in the example. However, my program calculates the *complex* reflection
>coefficient including the _reactance_ of the coax, instead of using the
>value of
>'pure' 50 ohms. In my program, I have used the value of 50-j.44 ohms, obtained
>from some ARRL source. The apparent difference should be explained by this.
>
I'm sure that is true... but what coax is this? There doesn't have to be
any.

The conversion from (R, X) to SWR depends on the assumed system
impedance, which by convention in a "50-ohm system" is exactly (50 +j0).
The conversion must not be allowed to rely on the complex impedance of a
particular kind of transmission line - which may not even be present.

If there truly is a transmission line, and you really do want to
calculate the precise magnitude of the standing wave at any point along
that line, then of course you must use the longer equation that takes
account of the actual complex impedance of the line.

But if you want to use "SWR" simply as an indication of the quality of
the impedance match in a "50-ohm system" - as most people do - then the
simpler equation is exactly correct.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

389. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:36:13 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <hFmS9.13951$eB1.632936@twister.southeast.rr.com>
Source record: 127679

The difference in performance might be how low his horizon is.

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:J2ednaw_wv_Wa4SjXTWcpA@comcast.com...
> Andy,
>
> I ran an EZNEC simulation on a 1/4 vertical with 4 radials at heights of 1
> foot and 15 feet. The 15 feet was a whole lot better at low radiation
> angles. Don't remember the frequency, but I think it was either 15 or 20
m.
> Also, vote for not putting RF into your house.
>
> Tam/WB2TT
> "Andy KC2SSB" <nospam@nospam.com> wrote in message
> news:enpj1v0l174ur08rdpkoip5a7clb68bfvq@4ax.com...
> > I was wondering what everyone's take is on ground mounting vs roof
> > mounting. The reason I ask is because I have a chance to get a
> > Cushcraft R7 at a good price, but I am debating if I should mount it
> > on the ground on on the roof. If it was on the roof, I'd probably only
> > have it about 5 feet above the roof. If it's ground mounted, it would
> > probably be 8 feet above the ground, as per the directions.
> >
> > Any opinions would be appretiated. Also, I am not interested in other
> > antennas, so please keep your comments to the R7, thanks!
> > =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> > 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> > Beachwood, NJ USA Grid FM29vw
> > http://vhfradiobuff.tripod.com
>
>

390. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:36:44 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <J2ednaw_wv_Wa4SjXTWcpA@comcast.com>
Source record: 127676

Andy,

I ran an EZNEC simulation on a 1/4 vertical with 4 radials at heights of 1 foot and 15 feet. The 15 feet was a whole lot better at low radiation angles. Don't remember the frequency, but I think it was either 15 or 20 m. Also, vote for not putting RF into your house.

Tam/WB2TT
"Andy KC2SSB" <nospam@nospam.com> wrote in message
news:enpj1v0l174ur08rdpkoip5a7clb68bfvq@4ax.com...
> I was wondering what everyone's take is on ground mounting vs roof
> mounting. The reason I ask is because I have a chance to get a
> Cushcraft R7 at a good price, but I am debating if I should mount it
> on the ground on on the roof. If it was on the roof, I'd probably only
> have it about 5 feet above the roof. If it's ground mounted, it would
> probably be 8 feet above the ground, as per the directions.
>
> Any opinions would be appretiated. Also, I am not interested in other
> antennas, so please keep your comments to the R7, thanks!
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

391. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:45:19 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <QfcZPmFhyWtHZKGmrjeYJMWtW6+=@4ax.com>
Source record: 127677

Andy KC2SSB <nospam@nospam.com> wrote:

>I was wondering what everyone's take is on ground mounting vs roof
>mounting. The reason I ask is because I have a chance to get a
>Cushcraft R7 at a good price, but I am debating if I should mount it
>on the ground on on the roof. If it was on the roof, I'd probably only
>have it about 5 feet above the roof. If it's ground mounted, it would
>probably be 8 feet above the ground, as per the directions.

I couldn't tell you which one would be better, ground or roof, but I used to have a neighbor with a roof mounted R7. It was on his second story balcony, about 7 or 8 feet above the deck, but below the roofline. He loved the way it performed. I, at the same time, had a similar antenna -- an R5 -- and it did just fine roof mounted, about 5 feet above the roof. There was a huge pecan tree looming over it, but it seemed to have little effect on performance.

Bob
k5qwg

>
>Any opinions would be appretiated. Also, I am not interested in other
>antennas, so please keep your comments to the R7, thanks!
>=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA Grid FM29vw
>http://vhfradiobuff.tripod.com

392. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:48:12 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <N=kZPk7xjA2di6i+li=PxW513ggr@4ax.com>
Source record: 127678

"Tarmo Tammaru" <t-tammaru@home.com> wrote:

>Andy,
>
>I ran an EZNEC simulation on a 1/4 vertical with 4 radials at heights of 1
>foot and 15 feet. The 15 feet was a whole lot better at low radiation
>angles. Don't remember the frequency, but I think it was either 15 or 20 m.
>Also, vote for not putting RF into your house.

Tam, the R7 is one of those electrically "1/2-wave" designs, free of radials.

Bob
k5qwg

>
>Tam/WB2TT
>"Andy KC2SSB" <nospam@nospam.com> wrote in message
>news:enpj1v0l174ur08rdpkoip5a7clb68bfvq@4ax.com...
>> I was wondering what everyone's take is on ground mounting vs roof
>> mounting. The reason I ask is because I have a chance to get a
>> Cushcraft R7 at a good price, but I am debating if I should mount it
>> on the ground on on the roof. If it was on the roof, I'd probably only
>> have it about 5 feet above the roof. If it's ground mounted, it would
>> probably be 8 feet above the ground, as per the directions.
>>
>> Any opinions would be appretiated. Also, I am not interested in other
>> antennas, so please keep your comments to the R7, thanks!
>> =-
>> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>> Beachwood, NJ USA Grid FM29vw
>> http://vhfradiobuff.tripod.com
>

393. End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:48:44 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e1a0c37_1@news1.prserv.net>
Source record: 127686

Is there an impedance quantity for the end of a resonant half wave dipole which is generally accepted by the electromagnetics community? Where a Zepp is fed with an open wire feeder? Where the half wave radiator of a J-Pole is fed by the parallel portion for you VHFers? I have at least one reference which talks around 2400 ohms, without any mathematical development. Some old books lead you to believe that 600 ohm line "matches" the end of a Zepp, which we know isn't exactly true, while as a practical matter it can't be infinity which would produce infinite voltage. So, what mathematical approach would one use to calculate it, and what result accrues? Theoretical dipole, free space location, etc. to eliminate as many other variables as possible.

--
Crazy George
Remove NO and SPAM from return address

394. Re: PME and ELCB's, RCCD's & MCB's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:54:42 UTC
From: "r.dring" <r.dring@ntlworld.com>
Message-ID: <_eFS9.1$hB2.4205@newsfep2-win.server.ntli.net>
Source record: 127651
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,uk.radio.amateur

Hello Ian if you want to do away with PME you can disconnect the PME earth wire on the earth bar in your consumer unit after you have replaced it with a standard earth arrangement.
If you still have fuses you can usually find a direct plug in miniature circuit breaker for each fuse that will tighten up the overcurrent protection. You can run you own earth continuity conductor from your earth bar in the consumer unit to a new earth electrode. I should not have to tell you how to get a good low resistance earth electrode connection. Don't forget to label it "Main Earth connection do not remove". If you can it would be a good idea to install a suitably rated 30mA instantaneous RCCD in any circuits that feed sockets, with a 100mA 1second delay RCCD on the main feeder to the consumer unit. Again rated for the full load of the consumer unit, If you only can install one on the feeder make it a 30mA instantaneous RCCD,They give you protection against electric shock but you can get some nuisance tripping. Current IEE regulations are all about sizing cable and earth conductors, to ensure in a fault situation, sufficient current flows to trip the safety devices Evershed and Vignoles (Megger) do a very good pocket guide book to electricity testing. Finally many electrical wholesalers in the UK will hire out the line earth loop impedance testers
that you need to ensure the line earth and neutral earth loops have a sufficiently low impedance.
You may also be able to hire a 4 contact earth electrode impedance tester.
RayD
"Ian Pollard" <easthorton@msn.com> wrote in message news:9bl61vkusoaj7gn9b4du5l48950kkf26lv@4ax.com...
> On Wed, 1 Jan 2003 10:32:53 -0000, "r.dring" <r.dring@ntlworld.com>
> wrote:
>
> >There seems to be some confusion about PME, and circuit breakers. (UK only)
> >During the post world war 2 building boom there was a need to reduce the
> >cost of housing construction. PME could help, by allowing a reduction
> >in the number of cable cores that needed to be run in a domestic electrical
> >installation. The neutral and earth being the same conductor.
> <SNIP>
>
> I have a similar kind of installation with a few minor differences. My
> mains supply is delivered via overhead lines. I get one phase, neutral
> and earth delivered in separate single core conductors from the
> nearest distribution transformer (about 1km distant). I have concerns
> regarding the earth and reckon it is simply a connection to neutral at

> the distribution transformer. What should I do about earthing gear in
> the shack? I don't have any kind of circuit breaker, just fuses and a
> normal mains switch.
>
> Ian
>
> --
> Ian Pollard//Wooler//Northumberland//UK
> pollard@bigfoot.com

395. Re: Station Earth / RF Earth for shack on 2nd / 3rd floor

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 21:56:21 UTC
From: "r.dring" <r.dring@ntlworld.com>
Message-ID: <6fFS9.2$hB2.4205@newsfep2-win.server.ntli.net>
Source record: 127652
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,uk.radio.amateur

Gentlemen, gentlemen, with all your horror stories you will frighten Martin
in to giving up amateur radio.
We need to answer his questions, and to do that we need to define the
problems, as I see it they are
1 Is his supply PME, and if so what is to be done about it, and what is to
be done to separate the RF noise from the mains, and the mains earth.
2 The RF earth lead could be a resonant length on some bands giving high or
low impedances and voltages, what can be done about it, or even does he need
an RF earth connection at all. What can he do to ensure that no high voltage
RF conductors can come into contact with anyone.
3 What can he do about lightening protection.
4 What can he do to ensure he does not create TVI or BCI to his neighbours.
All of the forgoing questions can be answered, but Martin deeds to supply a
few more details about
his home and surroundings.
some of the questions are as follows:
Is he in the UK if not where is he.
What kind of electricity supply does he have, overhead or underground
feeder, is it PME,
Is his building a high rise block, if not what type/height is it.
Where are the antenna's going to be mounted, on his building or on separate
self supporting structures or other buildings.
Are the antenna's and feeders going to be coax, balanced, or end, fed. Are
they resonant, broadband, or tunable.
Can he use an RF earth or counterpoise.
Martin wants the safest, cost affective solutions for his installation. All
of the problems and hazards are curable with a little care, and he will
still have a suitable and sensitive installation.
I recommend he obtains a copy of the RSGB book "HF antenna collection" which
has the Peter Chadwick article "the Killing ground" reproduced in it.
Another version is in the RSGB Book "The radio amateur guide to EMC.
This reply is already too long so I will put more answers regarding ELCB's
and RCCD's and PME in another email.
Martin" <Martin@_NOSPAM_g1gyc.demon.co.uk> wrote in message
news:auiv4t$f10$1$8300dec7@news.demon.co.uk...
> Hi, and thank you for reading this.
> I am in stalling my radio station in to the small "box room" on the 2nd
> floor
> of the building and I have in the past not worried about a separate earth
> for
> the station. But as this station is going to be a more permanent
arrangement
> than my other previous locations I want to make sure that :-

> 1) the station is safe electrically. (of course the supply earth will be
> connected)
> 2) protected form static (lightening etc).
> 3) has a good RF performance. (this means low resistance earth connection)
> 4) is as clear of EMC problems as possible.
>
> So any one got some pointers or helpful hints on installing a separate
> station
> earth. The ground connection is easy 3 to 6 off 6' long 1" dia copper
pipes
> driven all the way in to the soil (I know it is a big is job but not
> impossible).
> The bit I am puzzling over is do I use a heavy copper strap as used on
> church
> lightening conductors to provide a common earth for every thing or just
for
> the
> static protection and then a separate heavy conductor to provide the shack
> equipment earth.
> In either case how can I ensure that the earthing does not radiate RF (I
> assume
> that making sure the aerials are correctly balanced with suitable baluns
> fitted is
> the answer here.)
> I did here about using RG8 type coax and connecting both inner and screen
> to the hardware in the ground but only connecting the shack earth buss to
> the
> inner - any thoughts on this.
>
> Cheers Martin
>
>

396. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 22:04:03 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E19FD06.7090807@attbi.com>
Source record: 127680

Well if the blocking Capacitor went short then the RF choke shunt to
ground would conduct DC to ground and, hopefully, pop a fuse or circuit
breaker someplace <grin>

Deacon Dave, W1MCE

Crazy George wrote:
> Depends whether the blocking capacitor went short or not.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> news:85ed38d.0301060856.687f0c45@posting.google.com...
>
>>Maybe a lame brain question but, what is the maximum voltage
>>that is impressed on a amateur antenna when using a amplifier
>>with a 3Kv plate voltage? This disregards 'end effect' voltages
>> but would include the use of stubs and lumped constants e.t.c
>>and would include the like of over modulated and other signal use.
>>Thanks
>>Art
>
>
>

397. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 22:07:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9uuj1vcu3bt721abagevtemkemot4bkkpm@4ax.com>
Source record: 127682

On Mon, 6 Jan 2003 14:49:16 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>James wrote:
>"Go out 10 earth diameters and look at the "typical" norizon."
>
>Commercial satellites don`t park that high.
>
>The question was how high is a typical FM broadcast antenna?
>
>Terrestrial broadcasters typically in early days elevated FM antennas to
>reach the same audience AM stations reached in an area. The tradition
>lingers.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

I believe you would agree that this still holds true as a bitter fact
of economics. In the early days, a lot of FM was co-broadcasting of
AM content. As such, the costs of FM were largely capital equipment
and maintenance costs. As a percentage of business cost, that
sometimes didn't really matter. The front-runner stations in the
early game could probably offer double advertising for a 10% surcharge
- and the surcharge was probably slightly profitable. What did matter
were the staff and personality costs when an FM station had to carry
unique content. Even worse, the business model of AM/FM pairs (each
with unique content) offered the dubious situation of FM robbing your
own AM listeners if FM became successful (there seemed no win-win
situation).

73's
Richard Clark, KB7QHC

398. Re: Alpha-Delta DX-DD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 22:07:26 UTC
From: "Donnie (N4JZH)" <n4jzh@knology.net>
Message-ID: <bdvj1vgpes2h3preca61g59ubtsuh0eh8v@4ax.com>
Source record: 127683

Comments on how the antenna works, user friendly, perfomance, how well built.
thanks ..
''Behold how good and pleasant it is for Brethren to dwell together in unity''
Donnie n4jzh@knology.net

399. Re: Station Earth / RF Earth for shack on 2nd / 3rd floor

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 22:14:23 UTC
From: "r.dring" <r.dring@ntlworld.com>
Message-ID: <efFS9.3$hB2.4205@newsfep2-win.server.ntli.net>
Source record: 127653
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,uk.radio.amateur

Have a look at other news item Re PME and ELCB's, RCCD's and MCB's
RayD
"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:v19rp180nnipcd@corp.supernews.com...
> Dear Dan and other UK amateurs:
> Wow. I always thought that the electrical distribution system in UK
> was designed with an emphasis on low cost - you have confirmed it. I
> shall add to my safety lectures how things are done in UK.
> My suspicions were aroused when the purchase of an electrical
> appliance in the UK did not include a plug. One went to a separate
> store for a plug. I just put it off to heightened liability concerns
> with some small justification being more than one set of socket
> standards.
> The only justification for the existence of a profession is the
> protection of the public. I make sure that my students understand the
> scheme used in NA for protecting people and property. Contrasting the
> requirements of the NEC (not the antenna one) with the scheme you are
> subjected to is bound to impress them more then just discussing the NEC.
> Thanks for the explanation. Wow!
> 73 Mac, N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>
>

400. FM Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 22:21:20 UTC
From: mcl <levinemc@remove_charter_remove.net>
Message-ID: <v1k0b1ervqcm6e@corp.supernews.com>
Source record: 127684

Most FM radios that come with an FM antenna obviously use a 58" (1/2 wavelength, the wavelength at 100 MHZ is ~ 118") antenna. Keeping things simple would you get anything from doubling that or even quadrupling that. I could do that easily using extra speaker wire. I could make a 1 wavelength antenna easily and 2 wavelengths by splicing each line of the speaker wire together. Would the splice induce a loss? I'm in an area (Asheville NC) where there are very few local stations. Most of our stations come from about 60 miles away and it's tough to get good reception. I live in an apartment and just want to lick the gain up a little.

401. Re: Oh Calamity ! SOS !

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 22:22:10 UTC
From: "r.dring" <r.dring@ntlworld.com>
Message-ID: <mfFS9.4$hB2.4205@newsfep2-win.server.ntli.net>
Source record: 127654

Oh no, I think we've had our fair share of republicans, and loyalists, over
the last 30 years I'm sorry to say.
live and let live
"Tdonaly" <tdonaly@aol.com> wrote in message
news:20021209232437.11708.00000282@mb-cc.aol.com...
> Reg wrote,
> >
> >Here in the civilised UK I am not bothered with rattlers, skunks or
mountain
> >lions and do not have a gun licence.
> >
> >But a domestic (jumping) wolf spider, about 3/8" across, before I could
find
> >something to swot him with, has just disappeared into a ventilation hole
on
> >my 14" video monitor.
> >
> >It's taken my mind right off reflected power.
> >
> >I've done an unsuccessful Google.
> >
> >What's the breakdown volts of a dry, 3/8", electrocuted, wolf spider?
> >
>
> He'll probably come out and walk all over your face tonight while you're
> asleep. Dinky spiders, wimpy earthquakes, no shootin' irons, no snakes,
> skunks, or
> Republicans... What do you fellows do for danger over there in
> the UK?
> 73,
> Tom Donaly, KA6RUH
>
>

402. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 23:04:07 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avd217$t7q$1@knossos.btinternet.com>
Source record: 127687

Art, you won't get a sensible answer to this one. Suggest you change
subject and try another. ;o)

Reg.

403. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 23:18:30 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1k3m5hcldo1f3@corp.supernews.com>
Source record: 127688

I guess you refuse to believe the Ralians contention we are all cloned
aliens...

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E19E126.9030000@ieee.org...
> jim breeeyar wrote:
> > It is about time someone started looking at Rf pollution. Hams are not
> > the problem. If RF suddenly became visible, we wouldnt be able to see
> > beyond our noses. Could life have become as we know it with that much
> > background RF. Mutation.
>
> If it weren't for mutations, we wouldn't be here.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

404. Re: FM Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 23:21:20 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <avd314$ehtpq$1@ID-175933.news.dfncis.de>
Source record: 127689

Adding extra length to that dipole will unfavorably change its pattern, and match to your radio, and likely will not give you performance as good as it has now, other things equal.

The best chance of success is to substitute a small, directional FM antenna installed on your roof or in your attic.

It could improve your situation if you install your 58" dipole higher. The dipole likely should be oriented broadside to the direction toward the stations you want to receive, but try others.

405. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-06 23:25:55 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1A1083.9080306@ieee.org>
Source record: 127690

Fred Hambrecht Sr. wrote:
> I guess you refuse to believe the Ralians contention we are all cloned
> aliens...

Aliens, God, Mother Nature, accident, ... Whoever or whatever created
us used mutations to accomplish the task. Our DNA is 99+% similar to
a chimp's.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

406. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 00:01:21 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <gn5k1v8fn1pofc20q2vu0o82ukomtbjoti@4ax.com>
Source record: 127691

On 6 Jan 2003 08:56:48 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Maybe a lame brain question but, what is the maximum voltage
>that is impressed on a amateur antenna when using a amplifier
>with a 3Kv plate voltage? This disregards 'end effect' voltages
> but would include the use of stubs and lumped constants e.t.c
>and would include the like of over modulated and other signal use.
>Thanks

It'll take one of the guys who does circuit analysis to give you a
good concrete answer, but...The plate voltage has little to do with
the actual voltage on the antenna.

The voltage on the antenna depends on the power, the impedance, and
the reactance at any given point on the antenna.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>Art

407. Newbie question: Height make a difference on shortwave longwires?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 00:03:58 UTC
From: will7370@yahoo.com
Message-ID: <e88e9b5a.0301061603.32afe528@posting.google.com>
Source record: 127692

For passive SWL, does the height of a longwire antenna improve reception? Or do you eventually reach a point of no gain? Reason I ask is because I have used a 100' longwire suspended 35' high between two trees. It would be easier to maintain if I brought it down to about 6' high where I could get to it easier, but if it will improve reception I guess I could go tree climbing again and raise it up another 20' to about 55' to 60' high.

Big question: will there be a noticable reception difference between a longwire 6' high and 60' high?

Appreciate the help,

Rob

408. Re: Newbie question: Height make a difference on shortwave longwires?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 00:20:06 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v1k79os2in7g82@corp.supernews.com>
Source record: 127693

Yes,without a doubt, but try it and see what happens!
"Robert Williams" <will7370@yahoo.com> wrote in message
news:e88e9b5a.0301061603.32afe528@posting.google.com...
> For passive SWL, does the height of a longwire antenna improve
> reception? Or do you eventually reach a point of no gain? Reason I
> ask is because I have used a 100' longwire suspended 35' high between
> two trees. It would be easier to maintain if I brought it down to
> about 6' high where I could get to it easier, but if it will improve
> reception I guess I could go tree climbing again and raise it up
> another 20' to about 55' to 60' high.
>
> Big question: will there be a noticable reception difference between a
> longwire 6' high and 60' high?
>
> Appreciate the help,
>
> Rob

409. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 00:27:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1k7n1slbtnv67@corp.supernews.com>
Source record: 127694

I'm not sure what could be meant by the impedance at the end of a wire (in space). How do you define that? Apply a current, and measure the voltage between the wire and. . . what?

If you connect one conductor of an open wire line to a single wire, current flows in the wire, and an equal and opposite common mode current flows down the open wire line -- that is, the line is the rest of the antenna. The impedance seen by the end of the open wire line is determined by the whole antenna, which is the "antenna" wire and the open wire line conductors in parallel. The impedance seen by the end of the feedline depends on the length and orientation of the open wire line in addition to the length of the "antenna" wire.

Exactly the same thing would happen if you fed the open wire line with coax, except it's easier to visualize what happens because the common mode current is physically separate from the differential current -- it flows down the outside of the coax. So you'll always have a (usually bent) dipole, with one conductor being the "antenna" wire and the other the outside of the coax. If you could make a "current" balun (common mode choke) with infinite impedance and put it at the feedpoint on the outside of the coax, or around the twinlead feedline, there would be no current at all in the "antenna" wire regardless of its length (since its end current equals the feedline common mode current which would be reduced to zero by the perfect balun), the feedline would see an infinite impedance, and there would be no radiation. So the best answer to your question is "infinite".

Roy Lewallen, W7EL

Crazy George wrote:
> Is there an impedance quantity for the end of a resonant half wave dipole
> which is generally accepted by the electromagnetics community? Where a Zepp
> is fed with an open wire feeder? Where the half wave radiator of a J-Pole
> is fed by the parallel portion for you VHFers? I have at least one
> reference which talks around 2400 ohms, without any mathematical
> development. Some old books lead you to believe that 600 ohm line "matches"
> the end of a Zepp, which we know isn't exactly true, while as a practical
> matter it can't be infinity which would produce infinite voltage. So, what
> mathematical approach would one use to calculate it, and what result
> accrues? Theoretical dipole, free space location, etc. to eliminate as many
> other variables as possible.
>
> --
> Crazy George
> Remove NO and SPAM from return address

>
>

410. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 01:27:23 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <avdack$a6e$1@slb6.atl.mindspring.net>
Source record: 127695

The higher and more in the clear the better.

Dan/W4NTI

"Andy KC2SSB" <nospam@nospam.com> wrote in message
news:enpj1v0l174ur08rdpkoip5a7clb68bfvq@4ax.com...
> I was wondering what everyone's take is on ground mounting vs roof
> mounting. The reason I ask is because I have a chance to get a
> Cushcraft R7 at a good price, but I am debating if I should mount it
> on the ground on on the roof. If it was on the roof, I'd probably only
> have it about 5 feet above the roof. If it's ground mounted, it would
> probably be 8 feet above the ground, as per the directions.
>
> Any opinions would be appretiated. Also, I am not interested in other
> antennas, so please keep your comments to the R7, thanks!
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

411. Re: FM Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 01:28:10 UTC
From: Robert Casey <wa2ise@ix.netcom.com>
Message-ID: <3E1A2D2A.E00004A4@ix.netcom.com>
Source record: 127696

Richard Fry wrote:

> Adding extra length to that dipole will unfavorably change its pattern, and
> match to your radio, and likely will not give you performance as good as it
> has now, other things equal.
>
> The best chance of success is to substitute a small, directional FM antenna
> installed on your roof or in your attic.

Odds are the landlord won't let you on the roof. Maybe if there
is a crawl space hatch in your apartment (in the ceiling of a closet
most likely) you can put it up there. Failing that, you can make
a directional antenna by taping the dipole to the ceiling, and a piece
of wire about 10% shorter in parallel (physically) about 2 feet in
front of it (in the direction of most of the FM stations of interest) and
another piece of wire 10% longer 2 feet in back. This creates a Yagi
directional antenna. You don't need a support rod as all that us
used for is to physically support the rods in a rooftop antenna. The
direction of the lengths of wire should be perpendicular to the direction
of the stations, so the stations see them broadside.

412. FS: Gap Challenger HF vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 01:36:19 UTC
From: "Bruce W.1" <bw1@NOSPAMcore.com>
Message-ID: <3E1A2F15.FF9B9DA1@NOSPAMcore.com>
Source record: 127697

For sale:

Gap Challenger antenna. Was setup for only one week. Now resides in a garage in Delray Beach, Florida.

Not interested in shipping it. Reply only if you are willing to pick it up.

This antenna works great. It was an impulse purchase for use while on vacation in Florida. Now it's just in storage.

Email me if you're interested.

Bruce AF8F
email: bw1@core.com

413. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 02:16:52 UTC
From: Quahog <quahog@localnet.com>
Message-ID: <v1ke4kbhsqv033@corp.supernews.com>
Source record: 127699

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in
news:3E1A1083.9080306@ieee.org:

> Fred Hambrecht Sr. wrote:
>> I guess you refuse to believe the Ralians contention we are all cloned
>> aliens...
>
> Aliens, God, Mother Nature, accident, ... Whoever or whatever created
> us used mutations to accomplish the task. Our DNA is 99+% similar to
> a chimp's.

And 98% similar to brocolli.

;^)) KB1GEJ

414. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 02:20:05 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E1A3946.BACD37B8@shaw.ca>
Source record: 127700

Tarmo Tammaru wrote:
>
> Andy,
>
> I ran an EZNEC simulation on a 1/4 vertical with 4 radials at heights of 1
> foot and 15 feet. The 15 feet was a whole lot better at low radiation
> angles. Don't remember the frequency, but I think it was either 15 or 20 m.
> Also, vote for not putting RF into your house.
>
> Tam/WB2TT
> "Andy KC2SSB" <nospam@nospam.com> wrote in message
> news:enpj1v0l174ur08rdpkoip5a7clb68bfvq@4ax.com...
> > I was wondering what everyone's take is on ground mounting vs roof
> > mounting. The reason I ask is because I have a chance to get a
> > Cushcraft R7 at a good price, but I am debating if I should mount it
> > on the ground on on the roof. If it was on the roof, I'd probably only
> > have it about 5 feet above the roof. If it's ground mounted, it would
> > probably be 8 feet above the ground, as per the directions.
> >
> > Any opinions would be appretiated. Also, I am not interested in other
> > antennas, so please keep your comments to the R7, thanks!
> > =-
> > 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> > Beachwood, NJ USA Grid FM29vw
> > http://vhfradiobuff.tripod.com

That's nice, but the R7 is a half wave!
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

415. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 02:23:19 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E1A3A09.6AA81B09@shaw.ca>
Source record: 127701

Roy Lewallen wrote:
>
> I'm not sure what could be meant by the impedance at the end of a wire
> (in space). How do you define that? Apply a current, and measure the
> voltage between the wire and. . . what?
>
> If you connect one conductor of an open wire line to a single wire,
> current flows in the wire, and an equal and opposite common mode current
> flows down the open wire line -- that is, the line is the rest of the
> antenna. The impedance seen by the end of the open wire line is
> determined by the whole antenna, which is the "antenna" wire and the
> open wire line conductors in parallel. The impedance seen by the end of
> the feedline depends on the length and orientation of the open wire line
> in addition to the length of the "antenna" wire.
>
> Exactly the same thing would happen if you fed the open wire line with
> coax, except it's easier to visualize what happens because the common
> mode current is physically separate from the differential current -- it
> flows down the outside of the coax. So you'll always have a (usually
> bent) dipole, with one conductor being the "antenna" wire and the other
> the outside of the coax. If you could make a "current" balun (common
> mode choke) with infinite impedance and put it at the feedpoint on the
> outside of the coax, or around the twinlead feedline, there would be no
> current at all in the "antenna" wire regardless of its length (since its
> end current equals the feedline common mode current which would be
> reduced to zero by the perfect balun), the feedline would see an
> infinite impedance, and there would be no radiation. So the best answer
> to your question is "infinite".
>
> Roy Lewallen, W7EL
>
> Crazy George wrote:
> > Is there an impedance quantity for the end of a resonant half wave dipole
> > which is generally accepted by the electromagnetics community? Where a Zepp
> > is fed with an open wire feeder? Where the half wave radiator of a J-Pole
> > is fed by the parallel portion for you VHFers? I have at least one
> > reference which talks around 2400 ohms, without any mathematical
> > development. Some old books lead you to believe that 600 ohm line "matches"
> > the end of a Zepp, which we know isn't exactly true, while as a practical
> > matter it can't be infinity which would produce infinite voltage. So, what
> > mathematical approach would one use to calculate it, and what result
> > accrues? Theoretical dipole, free space location, etc. to eliminate as many
> > other variables as possible.
> >

> > --
> > Crazy George
> > Remove NO and SPAM from return address
> >
> >

At the design frequency the current at the end has to be zero,
and therefore the voltage becomes infinite. In real world, it
rises to very high values. This is one reason why you find
balls on the end of some antennas, to prevent corona discharge.
The voltage even at low powers can rise to thousands of volts!
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

416. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 02:34:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avdechhql1@sparta.btinternet.com>
Source record: 127702

Yes George, you will be pleased to hear there is!

For given length and conductor diameter, as every other antenna characteristic must be, the end impedance is calculable.

But why bring "a value generally accepted by the electromagnetics community" into the argument? Does the shroud of mystery arise because neither Terman nor handbook and other Guru's appear to have an explicit answer to this FAQ, other than a waffling guess at a value without explanation?

The apparent problem arises because it is not possible actually to measure the end impedance in isolation because the measuring instrument and its connecting leads interfere with the antenna's near-field environment. And so a little imaginative modelling is needed.

An antenna wire is a transmission line formed from one conductor, the other 'conductor' being formed from the remainder of our universe. The wire has inductance and capacitance per unit length and so it has Ro = Sqrt(L/C). Let's forget end-effect. It has no bearing.

The wire also has an end-to-end resistance - its radiation resistance plus a little loss resistance.

Now if the 1/2-wave dipole is cut at its centre the resistance (mainly due to radiation) looking into the centre is measurable. (73 ohms or a little smaller. It is calculable).

It is clear that the two 1/4-wavelengths of transmission line wire, one on each of the dipole centre, behave as 1/4-WAVE TRANSFORMERS. Which is the key to the whole fascinating business.

If the line impedance Ro is known, then the 73-ohm radiation resistance at the dipole centre is transformed to -

RADIATION RESISTANCE BETWEEN THE TWO ENDS OF THE DIPOLE IS -

(Ro Squared) / 73 ohms.

It does exist but is impossible to measure. It can only be deduced.

Since the dipole should be considerd to be balanced about ground (and the rest of the universe) then the resistance looking into one end is clearly one half of this end-to-end value.

Ro, radiation resistance and loss resistance are all calculable from antenna dimensions and frequency.

Assuming Ro = 550 ohms and radiation resistance at the centre is 71 ohms, then the one-end resistance is 2130 ohms.

That this impedance must be purely resistive follows from the fact that the antenna is resonant.

There are other ways at arriving at the same conclusion. For example, if the antenna is considered to be a resonant LCR circuit then antenna Q becomes involved. But there's no need here to go into details.

It also turns out that the resistance looking into the top of a 1/4-wave vertical above a good ground is the same as looking into one end of an isolated 1/2-wave dipole.

End resistance, in effect, is the transformed radiation resistance. For a given transmitter power the voltage relative to ground can be calculated and such matters as insulator break-down voltage can be considered.

From the above, an efficient matching network can be designed for the bottom end of a 1/2-wave vertical fed against ground. Isn't it remarkable how the many different facets of radio, in the end, all fit neatly together.

Reg, G4FGQ

==========

"Crazy George" wrote -
> Is there an impedance quantity for the end of a resonant half wave dipole
> which is generally accepted by the electromagnetics community? Where a
Zepp
> is fed with an open wire feeder? Where the half wave radiator of a J-Pole
> is fed by the parallel portion for you VHFers? I have at least one
> reference which talks around 2400 ohms, without any mathematical
> development. Some old books lead you to believe that 600 ohm line
"matches"
> the end of a Zepp, which we know isn't exactly true, while as a practical
> matter it can't be infinity which would produce infinite voltage. So,
what
> mathematical approach would one use to calculate it, and what result
> accrues? Theoretical dipole, free space location, etc. to eliminate as
many
> other variables as possible.
>
> --
> Crazy George
> Remove NO and SPAM from return address
>
>

417. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 03:14:31 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301061914.31c55884@posting.google.com>
Source record: 127703

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:<3E19C92F.2090106@ieee.org>...
> Art Unwin KB9MZ wrote:
> > Maybe a lame brain question but, what is the maximum voltage
> > that is impressed on a amateur antenna when using a amplifier
> > with a 3Kv plate voltage?
>
> Not enough information given, Art. What is the power output
> of the amp?

O.K Clarification...Legal limit. Feed Impedance 15 ohms or 200 ohms
Sort of curious if a stub end voltage could aproach an end effect voltage
or if a case of overshoot of voltage occurs in some situations.
Thanks
Art

418. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 03:18:31 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e1a4c35_4@news1.prserv.net>
Source record: 127704

OK, Roy,

Then let me ask a related but slightly different question: What is the feedpoint impedance of a half wave vertical element above perfect ground, fed at the ground end? And can't we then extrapolate the answer (theoretically, of course) to the original question from that? It is done all the time with quarter wave verticals.

What does NEC show the coupling to be between two half wave elements end to end? If it is calculable, then the answer to your enigma is to measure the voltage between the ends of the two elements, and calculate the impedance. Or maybe I should have asked the simple question in the first place, what is the feedpoint impedance at the center of a full wave dipole?

--
Crazy George
Remove NO and SPAM from return address

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v1k7n1slbtnv67@corp.supernews.com...
> I'm not sure what could be meant by the impedance at the end of a wire
> (in space). How do you define that? Apply a current, and measure the
> voltage between the wire and. . . what?
>
> If you connect one conductor of an open wire line to a single wire,
> current flows in the wire, and an equal and opposite common mode current
> flows down the open wire line -- that is, the line is the rest of the
> antenna. The impedance seen by the end of the open wire line is
> determined by the whole antenna, which is the "antenna" wire and the
> open wire line conductors in parallel. The impedance seen by the end of
> the feedline depends on the length and orientation of the open wire line
> in addition to the length of the "antenna" wire.
>
> Exactly the same thing would happen if you fed the open wire line with
> coax, except it's easier to visualize what happens because the common
> mode current is physically separate from the differential current -- it
> flows down the outside of the coax. So you'll always have a (usually
> bent) dipole, with one conductor being the "antenna" wire and the other
> the outside of the coax. If you could make a "current" balun (common
> mode choke) with infinite impedance and put it at the feedpoint on the
> outside of the coax, or around the twinlead feedline, there would be no
> current at all in the "antenna" wire regardless of its length (since its
> end current equals the feedline common mode current which would be
> reduced to zero by the perfect balun), the feedline would see an
> infinite impedance, and there would be no radiation. So the best answer

> to your question is "infinite".
>
> Roy Lewallen, W7EL
>
> Crazy George wrote:
> > Is there an impedance quantity for the end of a resonant half wave
dipole
> > which is generally accepted by the electromagnetics community? Where a
Zepp
> > is fed with an open wire feeder? Where the half wave radiator of a
J-Pole
> > is fed by the parallel portion for you VHFers? I have at least one
> > reference which talks around 2400 ohms, without any mathematical
> > development. Some old books lead you to believe that 600 ohm line
"matches"
> > the end of a Zepp, which we know isn't exactly true, while as a
practical
> > matter it can't be infinity which would produce infinite voltage. So,
what
> > mathematical approach would one use to calculate it, and what result
> > accrues? Theoretical dipole, free space location, etc. to eliminate as
many
> > other variables as possible.
> >
> > --
> > Crazy George
> > Remove NO and SPAM from return address
> >
> >
>

419. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 03:24:38 UTC
From: richardharrison@webtv.net
Message-ID: <24234-3E1A4876-67@storefull-2318.public.lawson.webtv.net>
Source record: 127706

Crazy George wrote:
"Is there an impedance for the end of a resonant half wave dipole which is generally accepted---?"

I don`t know, but speculate that it would be the same a 1/2 the drive point impedance of a full-wave dipole.

Arnold Bailey gives a graph for thin-wire, medium-wire and fat-wire dipole drive-point impedances on page 351 of "TV and Other Receiving Antennas". The drive-point resistances for a full-wave dipole are:
2500 ohms (thin)
1200 ohms (medium)
450 ohms (fat)

!/2 of the full-wave dipole impedance:
1250 ohms (thin)
600 ohms (medium)
225 ohms (fat)

Bailey goes throuh an ivolved process of calculating an average surge impedance, radiation rsistace, and an emperical formula to convert these ito drive-point resistances..

Best regards, Richard Harrison,KB5WZI

420. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 03:36:46 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301061936.43c406d8@posting.google.com>
Source record: 127705

Very good. So using either 3 Kv or 5 Kv as the factor for either a
capacitor or an inductor is not a guarantee against failure, arcing
e.t.c.
for the amateur experimentor.
Thanks for your input
Art

it appeRSSDave Shrader <david.shrader@attbi.com> wrote in message
news:<3E19BCCB.2070800@attbi.com>...
> It can be virtually any credible voltage based on VSWR and series
> reactance in the antenna system.
>
> Example: A series tuned circuit is driven by 1 VRMS into a resistor of 1
> ohm in series with a capacitor of -j100 ohms in series with an inductor
> of j100 ohms. The two reactances cancel each other and the circuit is
> resonant. However #1, the voltage across the inductor is 100 VRMS.
> However #2, the voltage across the capacitor is 100 VRMS. However #3,
> the voltage across the resistor is 1 VRMS. Hmmm ... ?
>
> In your question, assuming a 50 ohm resistive load at the antenna , and
> 1500 watts output the feedpoint voltage is a little over 273 VRMS. That
> is the minimum voltage. In a typical antenna system, e.g. Yagi, it will
> develop several thousands of volts at traps etc. End effect can approach
> 5000 VRMS or higher.
>
> Deacon Dave, W1MCE
>
> Art Unwin KB9MZ wrote:
> > Maybe a lame brain question but, what is the maximum voltage
> > that is impressed on a amateur antenna when using a amplifier
> > with a 3Kv plate voltage? This disregards 'end effect' voltages
> > but would include the use of stubs and lumped constants e.t.c
> > and would include the like of over modulated and other signal use.
> > Thanks
> > Art

421. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 03:46:46 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <3E1A4DA6.682784EE@core.com>
Source record: 127707

OC_CAM's Razor wrote:

> Fred Hambrecht Sr. wrote:
> > I guess you refuse to believe the Ralians contention we are all cloned
> > aliens...
>
> Aliens, God, Mother Nature, accident, ... Whoever or whatever created
> us used mutations to accomplish the task. Our DNA is 99+% similar to
> a chimp's.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

Our DNA is also about 97% similar to slime mold.

Dave WD9BDZ

422. Did you know?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 03:53:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avdj0h$n8l$1@sparta.btinternet.com>
Source record: 127708

You can discover in detail the purpose of programs without downloading to a local folder or file directory.

Go to the "Download Progs from Here" page and click on the program name. Then choose "open" the program and you can run the program directly from the website without downloading.

(Yes, I know a program IS brought in to your computer to run it. But only while you are running it. It is not saved to clutter up the computer after you have finished.)

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================

423. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 04:01:43 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <9CednVQWpa8ezYejXTWc3A@comcast.com>
Source record: 127709

Alan,

Wish I still had the data, but I think there was a big difference in the
10 - 20 degree range.

Tam/WB2TT
"Alan" <alannc44@{nospam}ix.netcom.com> wrote in message
news:hFmS9.13951$eB1.632936@twister.southeast.rr.com...
> The difference in performance might be how low his horizon is.
>
> Alan

424. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 04:21:05 UTC
From: richardharrison@webtv.net
Message-ID: <20248-3E1A55B1-74@storefull-2317.public.lawson.webtv.net>
Source record: 127713

Art, KB9MZ wrote:
"---using an amplifier with a 3 Kv plate voltage (what`s the maximum antenna voltage)?"

The peak voltage on the plate is 3KV minus the tube saturation when switched-on. We will disregard modulation alluded to, but at 100% AM modulation, volts on the final double when the supply to the final is modulated.

For this puzzle, we are missing the impedance loading the final amplifier. It is chosen to limit current to the final to a safe value of tube dissipation.

Peak power is peak volts times peak amps. Average power is peak power divided by 2.

At the antenna, the volts produced depend on the impedance there, the power there, and Ohm`s law.

Best regards, Richard Harrison, KB5WZI

425. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 04:21:54 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1A55E2.9060707@ieee.org>
Source record: 127710

Art Unwin KB9MZ wrote:
> O.K Clarification...Legal limit. Feed Impedance 15 ohms or 200 ohms
> Sort of curious if a stub end voltage could aproach an end effect voltage
> or if a case of overshoot of voltage occurs in some situations.

RMS V = sqrt(1500W*200) = 548v

In a Z0=200 ohm stub the voltage can be double the above value.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

426. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 04:25:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1A56B2.9070806@ieee.org>
Source record: 127711

David G. Nagel wrote:
> Our DNA is also about 97% similar to slime mold.

The Creator's Motto: If it ain't broke, don't fix it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

427. Re: Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 04:33:04 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <oklk1v042rjasqqvtehdd6ur7ftiimo7r3@4ax.com>
Source record: 127712

Don't forget the tried and true dipole, easily made for a few dollars.
You will need two supports though; not sure if you are looking for a
permanent installation or temporary/portble.

Of the options you mention, I would go with the M2 loop due to ease of
setting it up (only one support needed), overall quality of M2
products and the fact that it does offer some gain if you can put it
at 11 feet or higher (which shouldn't be too tough even if portable).
If you want/need more gain and directivity then go with a yagi - a 3
element beam is only about 7 feet long and can be easily handled by a
"TV" rotor.
Good luck & 73,
Howard

On 6 Jan 2003 08:21:56 -0800, h4mb0ne@hotmail.com (h4mb0ne) wrote:

>I am looking for an antenna recommedation that will be used for
>portable operation with my Yaesu FT-817. Looking for something that
>will be used on 6 meter (QRP) when the band opens up. Any thoughts on
>which may be the best way to go? Looked at Miracle Whip, MP-1 Super
>Antenna, M2 HO Loop and the Buddipole.
>
>Again, I am looking for something with QRP DXing in mind.
>
>Thanks in advance.
>H4mb0ne

428. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 04:54:54 UTC
From: richardharrison@webtv.net
Message-ID: <20248-3E1A5D9E-76@storefull-2317.public.lawson.webtv.net>
Source record: 127715

Richard Clark wrote:
"Even worse, the business model of AM/FM pairs (each with unique content) offered the dubious situation of FM robbing your own AM listeners if FM became successful (there seened no win-win situation).

That`s right. Only hope was an expanding market to pay the higher expense. The broadcaster thought he had to have FM for fear AM would wither, being replaced by FM. That never quite happened.

FCC has now dropped most of the multiple-station owner prohibitions. Most of Houston`s audio broadcast stations of note are now owned by Clear Channel Communications. Another conglomerate owns most of the remaining stations. So far, so good.

But, I think the situation is dangerous, just as vitiating Glass-Stegal for the banks has been a disaster. Remember the "Resolution Trust Company" the Clinton Administration inherited?

Best regards, Richard Harrison, KB5WZI

429. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 04:58:44 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1knf43gdrlmaa@corp.supernews.com>
Source record: 127714

Does this qualify as a "troll"? He's way over S9 here.
-BM

jim breeeyar wrote:
> It is about time someone started looking at Rf pollution. Hams are not
> the problem. If RF suddenly became visible, we wouldnt be able to see
> beyond our noses. Could life have become as we know it with that much
> background RF. Mutation.
>
> BICisfag wrote:
>
>> I want to get a 500 w solid state amp for HF.
>>
>> I don't seem to have any interference problems with
>> neighbors now with 100 w.
>>
>> I have dipoles for 80 and 40 and a vertical and inv. L.
>>
>> Am I asking for trouble with 500 w?
>>
>>
>>
>

430. Re: FM Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 05:18:27 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1kok4a6t2q637@corp.supernews.com>
Source record: 127716

mcl wrote:
> Most FM radios that come with an FM antenna obviously use a 58" (1/2
> wavelength, the wavelength at 100 MHZ is ~ 118") antenna. Keeping things
> simple would you get anything from doubling that or even quadrupling that. I
> could do that easily using extra speaker wire. I could make a 1 wavelength
> antenna easily and 2 wavelengths by splicing each line of the speaker wire
> together. Would the splice induce a loss? I'm in an area (Asheville NC)
> where there are very few local stations. Most of our stations come from
> about 60 miles away and it's tough to get good reception. I live in an
> apartment and just want to lick the gain up a little.
>
>
I have the undesirable remembrance of having experienced Asheville in my
earlier days. You can move a few blocks UP the street and find the best
FM reception in the universe.
While moving might be the best answer, given your situation the first
goal would be to improvise an outdoor antenna. Most of what you suggest
doing to the 'provided' indoor antenna will be a waste of time at best
since all that would do is to f**k up a perfectly good antenna. But if
you have a favorite station, that weird lobe that may be created only by
chance might work.
All kidding aside, try to get an outdoor antenna. $16 at Radio Shack
will get you a fine antenna. I suspect you are after the good Charlotte
and Greenville stations which pour a major signal into Asheville if you
are in the right spot. I lived in Charlotte and Asheville/Greenville
boomed in on FM and TV in the right locations. WMIT from Mt. Mitchell
was THE quiet signal for classical music in Charlotte in those days.
Seems like local terrain and cliff-dwelling might be the major
contributors to your situation, not much you can do antenna wise to
overcome that.
-Bill M

431. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 05:41:52 UTC
From: "Antti J. Huhtala" <ahuhtal4@welho.com>
Message-ID: <3E1A68A0.CC5D7B55@welho.com>
Source record: 127698

"Ian White, G3SEK" wrote:

> Antti J. Huhtala wrote:
> >"Ian White, G3SEK" wrote:
> >
> >> Antti J. Huhtala wrote:
> >> >"William M. Bickley" wrote:
> >> >> An example is R=16, X=46 and SWR=4.1 on the 259B, when the
> >> >>equations I have
> >> >> say the SWR is 5.9 (Zc=50).
> >> >
> >> >My transmission line calculator program calculates SWR as 6.08 in this case.
> >> >
> >> >For once, everybody seems to agree with everybody. FB!
> >>
> >> Well, not quite. The difference between 5.9 and 6.08 is not a
> >> measurement error - it comes from the equations which should agree
> >> exactly.
> >
> >I didn't say it is a measurement error. My number is derived from the values
> >given in the example. However, my program calculates the *complex* reflection
> >coefficient including the _reactance_ of the coax, instead of using the
> >value of
> >'pure' 50 ohms. In my program, I have used the value of 50-j.44 ohms, obtained
> >from some ARRL source. The apparent difference should be explained by this.
> >
> I'm sure that is true... but what coax is this? There doesn't have to be
> any.

You're right, Ian, there doesn't. I guess I was carried away with 'Zc=50'
in the original example, the usual expression for the characteristic
impedance of a feedline. In this case, I assumed (and used) RG-213.

> The conversion from (R, X) to SWR depends on the assumed system
> impedance, which by convention in a "50-ohm system" is exactly (50 +j0).
> The conversion must not be allowed to rely on the complex impedance of a
> particular kind of transmission line - which may not even be present.

Again, agreed. Somehow I got the impression that Bill had measured the
values he quoted, in a system including coax - and then he proceeded to
put these values into equations not included in his post.
However, I agree that the only sensible way to calibrate a '50 ohm' bridge
is to put a pure 50 ohm resistance at the Rx terminals and adjust for
SWR=1.0, R=50, X=0.

> If there truly is a transmission line, and you really do want to
> calculate the precise magnitude of the standing wave at any point along
> that line, then of course you must use the longer equation that takes
> account of the actual complex impedance of the line.

Right. This was my assumption, as amply discussed above.

> But if you want to use "SWR" simply as an indication of the quality of
> the impedance match in a "50-ohm system" - as most people do - then the
> simpler equation is exactly correct.

No argument there, either.

> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

73, Antti, OH2DT

432. Re: antenna heights

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 05:43:13 UTC
From: dplatt@radagast.org
Message-ID: <v1kq7hs279nv5b@corp.supernews.com>
Source record: 127717

In article <20248-3E1A5D9E-76@storefull-2317.public.lawson.webtv.net>,
Richard Harrison <richardharrison@webtv.net> wrote:

>But, I think the situation is dangerous, just as vitiating Glass-Stegal
>for the banks has been a disaster. Remember the "Resolution Trust
>Company" the Clinton Administration inherited?

If I recall correctly, the original 20th-century Federal limitations
on station ownership in a single market, and the separation between
content providers and content carriers, came about when it became
clear to Congress that the country was very close to having a
situation in which two or three large companies would control almost
all of the politically-potent media channels (newspapers and radio in
those days). Exclusive editorial control of these channels would have
given the owners of those companies a large amount of political
power... they could skew news and editorial coverage enough to have a
very strong influence over who could or could not be elected.
Congress felt that this was a Bad Thing.

It will be interesting (to say the least) to see if those original
fears do actually play out, in today's era of renewed media
consolidation and "bigger is better". Some, of course, would argue
that they already have.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

433. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 06:01:32 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1kr9s81ft7mef@corp.supernews.com>
Source record: 127718

Not true Sir, as Reg would say... 'tis an old wives tale.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E1A1083.9080306@ieee.org...
> Fred Hambrecht Sr. wrote:
> > I guess you refuse to believe the Ralians contention we are all cloned
> > aliens...
>
> Aliens, God, Mother Nature, accident, ... Whoever or whatever created
> us used mutations to accomplish the task. Our DNA is 99+% similar to
> a chimp's.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

434. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 06:20:01 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1ks7ijf6o3q55@corp.supernews.com>
Source record: 127619

Fred Hambrecht Sr. unwittingly wrote:

Our 99% DNA relationship to chimps is also mirrored in our 99%
relationship with asparagus.
Excepting alien explanations that leads me to believe that disliking
each other is pretty much the norm and pretty much the way it should be.

-BM

> Not true Sir, as Reg would say... 'tis an old wives tale.
>
> --
> For Admiral Poindexter's folks:
> Bomb, anthrax, attack, acid, hijack, skyjack
> sniper, plutonium, nuclear, Big Mac, jihad
> Democrats, terror, Howdy Doody, Oprah
>
> "Those that sacrifice freedom for security deserve neither"
>
>
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E1A1083.9080306@ieee.org...
>
>>Fred Hambrecht Sr. wrote:
>>
>>>I guess you refuse to believe the Ralians contention we are all cloned
>>>aliens...
>>
>>Aliens, God, Mother Nature, accident, ... Whoever or whatever created
>>us used mutations to accomplish the task. Our DNA is 99+% similar to
>>a chimp's.
>>--
>>cheers, CAM

435. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 08:23:30 UTC
From: Ken Taylor <ken123@xtra.co.nz>
Message-ID: <f6wS9.14656$F63.243789@news.xtra.co.nz>
Source record: 127620
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

"kevcat" <kevcat@dodo.com.au> wrote in message
news:3E183079.2F44E013@dodo.com.au...
> Being in Melbourne what is the lowest latitude you have recieved, have
> you seen Antarctica at all
> my images start not much futher north than yours and I'm just Nth of
> Brisbane
>
> Kev
>
I've seen the edge of the ice from Melbourne, but only in deepest, darkest
winter. Generally not in Summer.

Ken

436. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 09:13:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1l6ipppbter08@corp.supernews.com>
Source record: 127621

Crazy George wrote:
> OK, Roy,
>
> Then let me ask a related but slightly different question: What is the
> feedpoint impedance of a half wave vertical element above perfect ground,
> fed at the ground end? And can't we then extrapolate the answer
> (theoretically, of course) to the original question from that? It is done
> all the time with quarter wave verticals.

The impedance is exactly half the value of a full wave dipole in free space. No, I don't see what this has to do with the question you asked. The impedance at the base of a half wave vertical isn't the same as, or directly related to, the impedance at the end of a half wavelength wire in free space.

> What does NEC show the coupling to be between two half wave elements end to
> end? If it is calculable, then the answer to your enigma is to measure the
> voltage between the ends of the two elements, and calculate the impedance.
> Or maybe I should have asked the simple question in the first place, what is
> the feedpoint impedance at the center of a full wave dipole?

EZNEC and similar programs will show you the impedance at the center of a dipole of your choice. You'll see that the value varies with wire diameter and dramatically with small changes in wire length.

But you asked what the impedance is at the end, not the center, of a dipole. The impedance at the end of a half wavelength wire in space isn't simply half the impedance at the center of a dipole made from two of those wires. That would be like claiming that the resistance of one lead of a resistor is half the resistance between the two leads.

Roy Lewallen, W7EL

>
> --
> Crazy George
> Remove NO and SPAM from return address
>
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v1k7n1slbtnv67@corp.supernews.com...
>
>>I'm not sure what could be meant by the impedance at the end of a wire
>>(in space). How do you define that? Apply a current, and measure the
>>voltage between the wire and. . . what?
>>

>>If you connect one conductor of an open wire line to a single wire,
>>current flows in the wire, and an equal and opposite common mode current
>>flows down the open wire line -- that is, the line is the rest of the
>>antenna. The impedance seen by the end of the open wire line is
>>determined by the whole antenna, which is the "antenna" wire and the
>>open wire line conductors in parallel. The impedance seen by the end of
>>the feedline depends on the length and orientation of the open wire line
>>in addition to the length of the "antenna" wire.
>>
>>Exactly the same thing would happen if you fed the open wire line with
>>coax, except it's easier to visualize what happens because the common
>>mode current is physically separate from the differential current -- it
>>flows down the outside of the coax. So you'll always have a (usually
>>bent) dipole, with one conductor being the "antenna" wire and the other
>>the outside of the coax. If you could make a "current" balun (common
>>mode choke) with infinite impedance and put it at the feedpoint on the
>>outside of the coax, or around the twinlead feedline, there would be no
>>current at all in the "antenna" wire regardless of its length (since its
>>end current equals the feedline common mode current which would be
>>reduced to zero by the perfect balun), the feedline would see an
>>infinite impedance, and there would be no radiation. So the best answer
>>to your question is "infinite".
>>
>>Roy Lewallen, W7EL
>>
>>Crazy George wrote:
>>
>>>Is there an impedance quantity for the end of a resonant half wave
>>
> dipole
>
>>>which is generally accepted by the electromagnetics community? Where a
>>
> Zepp
>
>>>is fed with an open wire feeder? Where the half wave radiator of a
>>
> J-Pole
>
>>>is fed by the parallel portion for you VHFers? I have at least one
>>>reference which talks around 2400 ohms, without any mathematical
>>>development. Some old books lead you to believe that 600 ohm line
>>
> "matches"
>
>>>the end of a Zepp, which we know isn't exactly true, while as a
>>
> practical
>
>>>matter it can't be infinity which would produce infinite voltage. So,

>>
> what
>
>>>mathematical approach would one use to calculate it, and what result
>>>accrues? Theoretical dipole, free space location, etc. to eliminate as
>>
> many
>
>>>other variables as possible.
>>>
>>>--
>>>Crazy George
>>>Remove NO and SPAM from return address
>>>
>>>
>>
>
>

437. 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 09:20:33 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0301070120.69dc149f@posting.google.com>
Source record: 127622

Hello,

For those still interested, I just released the latest 5.1 version for 4nec2 on www.qsl.net/wb6tpu/swindex.html

Besides the traditional hill-climbing optimzer now also a flexible genetic-algorithm based optimizer is available.

Due to some questions from this group I also made the following changes:

- It is now possible to optimize over a range/band of frequencies.
- More general approach for generating nec-2 output data.
- More consistent display of gain-, F/B and F/R data.
- Pre version 4.3 support for raw nec-2 input data re-enabled.

Arie.

438. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 09:29:10 UTC
From: Henrik <henrik>
Message-ID: <3e1ad324$0$179$edfadb0f@dread16.news.tele.dk>
Source record: 127628

Risk to comment on the experience with an R5....

DX worked a lot better when it was mounted over my roof, with the base abt 30 feet above ground...while mounted in my gargen 3 feet above ground, it seemed that the low angle radiation was absorbed. I tend to believe that it is dependent of the local topography, near by houses and trees....so if placed on an open hill top just above ground would work just fine, while getting it up where it can "see" the horizon in a domestic area is far better for performance.

I also recognised that i had to retune it for the different positions to get low SWR where i wanted it to be in the band.
H

439. Active vs. passive antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 10:46:40 UTC
From: Tom <tstimac@inet.hr>
Message-ID: <aveb2p$7ov$1@sunce.iskon.hr>
Source record: 127623

Im thinking about buying ICOM PCR-1000 wideband reciever for PC. I know that the most important thing is antenna. So let me ask you people who probably have both active and passive antennas about your opinios.

Antenna 1:
I was thinkig about buying Diamond D-707 active antenna (500 KHz - 1500 MHz) with ajustable 0-20dB gain. Like this one:
http://www.wimo.com/verteiler-e.htm?s71_e.htm
But the i've heard a lot of people complaining about overloading the scanner if connected to strong antenna. The same thing happens on AOR-8600 scanner (which should be better than PCR-1000). So i guess these scanners don't like powefull antennas. I wonder if this problem can be solved with adjusting the gain between 0-20dB but i have a feeling that it can't. Does anyone have this (or similar in gain) active antenna connected to scanner? What are your experiences?

Antenna2 (in case Antenna1 is a bad choice):
I have found passive wide band antenna AOR SA-7000 (30 kHz - 2000 MHz). It is pricey, but check out that response curve
http://www.thiecom.de/pdf/sa7000-e.pdf
Again, i don't expect you to have the same antenna. I would just like to know if such passive system can give me better results than active one - when connected to PCR-1000 or similar scanner (like AOR-8600...)?

Thanks in advance
Tom

440. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 10:51:46 UTC
From: John Elliott <jae3806@bigpond.com>
Message-ID: <S9yS9.18579$jM5.50974@newsfeeds.bigpond.com>
Source record: 127624
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

What wx satellites are are to be received in Australia these days ?. Any of
the Meteors left ??.

Anybody into HRPT in Melbourne ???.

--
Regards..

John Elliott
Melbourne Vic
Australia
jae3806@bigpond.com
"Ken Taylor" <ken123@xtra.co.nz> wrote in message
news:f6wS9.14656$F63.243789@news.xtra.co.nz...
> "kevcat" <kevcat@dodo.com.au> wrote in message
> news:3E183079.2F44E013@dodo.com.au...
> > Being in Melbourne what is the lowest latitude you have recieved, have
> > you seen Antarctica at all
> > my images start not much futher north than yours and I'm just Nth of
> > Brisbane
> >
> > Kev
> >
> I've seen the edge of the ice from Melbourne, but only in deepest, darkest
> winter. Generally not in Summer.
>
> Ken
>
>
>

441. Re: Active vs. passive antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 11:23:22 UTC
From: F8BOE Olivier <f8boeNOSPAM@free.fr>
Message-ID: <3e1ee692$0$11403$626a54ce@news.free.fr>
Source record: 127505

Hi!

The main problem with the wide band receivers is that they do a lot but never the good way, just as a swiss knife...
At the front end of the wide band receivers there's merely no band filters (because of the wide range). So every signal is received with the same strength (disired and QRM). Moreover, these receivers are so sensible...
I would avoid using a preamplified (or active antenna), it could overload the receiver's front end and the signal should be useless.
If you find that the in-the-box antenna is not sufficient, go for several antennas tuned to the wanted frequency ranges with a rotatory commutator or a wide band passive antenna coupled to a preselector/tuner.

Bye!

"Tom" <tstimac@inet.hr> a crit dans le message de news:
aveb2p$7ov$1@sunce.iskon.hr...
> Im thinking about buying ICOM PCR-1000 wideband reciever for PC. I know
that
> the most important thing is antenna. So let me ask you people who probably
> have both active and passive antennas about your opinios.
>
> Antenna 1:
> I was thinkig about buying Diamond D-707 active antenna (500 KHz - 1500
MHz)
> with ajustable 0-20dB gain. Like this one:
> http://www.wimo.com/verteiler-e.htm?s71_e.htm
> But the i've heard a lot of people complaining about overloading the
scanner
> if connected to strong antenna. The same thing happens on AOR-8600 scanner
> (which should be better than PCR-1000). So i guess these scanners don't
like
> powefull antennas. I wonder if this problem can be solved with adjusting
the
> gain between 0-20dB but i have a feeling that it can't. Does anyone have
> this (or similar in gain) active antenna connected to scanner? What are
your
> experiences?
>
> Antenna2 (in case Antenna1 is a bad choice):
> I have found passive wide band antenna AOR SA-7000 (30 kHz - 2000 MHz). It
> is pricey, but check out that response curve
> http://www.thiecom.de/pdf/sa7000-e.pdf
> Again, i don't expect you to have the same antenna. I would just like to

> know if such passive system can give me better results than active one -
> when connected to PCR-1000 or similar scanner (like AOR-8600...)?
>
> Thanks in advance
> Tom
>
>

442. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 12:55:37 UTC
From: cprstn54zz@att.net
Message-ID: <3e1acd03.317355062@news-server.optonline.net>
Source record: 127625

On Sun, 05 Jan 2003 21:19:07 -0800, ryeburn@sfu.caz (David or Jo Anne Ryeburn) wrote:
>So the result is that the network should have an efficiency of about >1.3/2.3 or about 56%, which isn't great but maybe it's better than not >going on 160 metres at all!

I would call that an OK compromise.

(1) What if for 160M only I clip on a suspended 65 ft Slinky off each end of the 130 ft dipole? Figure 1/4" between the turns.

(2) Can loading coils be clipped on the ends of a 130 ft (80M) dipole to make it a 160M dipole? I searched the ARRL Antenna Book and didn't see anthing on this.

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

443. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 12:56:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1ACE63.7040602@ieee.org>
Source record: 127626

Bill M wrote:
> Our 99% DNA relationship to chimps is also mirrored in our 99%
> relationship with asparagus.

What is really interesting is that chimps and humans are
genetically more closely related than are chimps and
orangutans.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

444. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 13:04:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1AD047.3000301@ieee.org>
Source record: 127627

Ken wrote:
> (2) Can loading coils be clipped on the ends of a 130 ft (80M) dipole
> to make it a 160M dipole? I searched the ARRL Antenna Book and didn't
> see anthing on this.

There was an article in one of the ham magazines about a spiral
pancake coil on each end of a dipole that acted like a coil and
an end hat capacitance.

Loading coils seem to work best near the center of each dipole leg.
How about loading coils for 160m that are simply shorted out for
the other bands?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

445. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 13:33:57 UTC
From: richardharrison@webtv.net
Message-ID: <1725-3E1AD745-2@storefull-2314.public.lawson.webtv.net>
Source record: 127629

Crazy George wrote:
"Is there an impedance quantity for the end of a resonant dipole---?"

Yes.

Arnold Bailey wrote on page 344 of "TV and Other Receiving Antennas":
"The center-fed antenna may be considered as two end-fed antennas in series, with an imaginary ground plane, located at the midpoint of the center-fed antenna and at right angles to the rods, cutting the system in two."

Best regards, Richard Harrison, KB5WZI

446. Re: Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 14:03:50 UTC
From: h4mb0ne@hotmail.com
Message-ID: <b0a445bd.0301070603.220b8e1f@posting.google.com>
Source record: 127630

Thanks guys for the suggestions. My main use would definately be for portable use only. I was really interested in the BUDDIPOLE from W3FF Antennas. I would be able to mount this in the back of my 4X4 either with the mast that would get it up around 10-12 feet.

Anyone have any experience with that antenna?

447. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 14:35:31 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301070635.66c4f84@posting.google.com>
Source record: 127631

Thanks everybody for replying
I suppose it really was a lame question.
I thought I better ask incase there was a high voltage
case that could lurk of the magnitude seen
in a small loop antenna. It would appear my
concern was unfounded.
Thanks again
Art

chardharrison@webtv.net (Richard Harrison) wrote in message
news:<20248-3E1A55B1-74@storefull-2317.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "---using an amplifier with a 3 Kv plate voltage (what`s the maximum
> antenna voltage)?"
>
> The peak voltage on the plate is 3KV minus the tube saturation when
> switched-on. We will disregard modulation alluded to, but at 100% AM
> modulation, volts on the final double when the supply to the final is
> modulated.
>
> For this puzzle, we are missing the impedance loading the final
> amplifier. It is chosen to limit current to the final to a safe value of
> tube dissipation.
>
> Peak power is peak volts times peak amps. Average power is peak power
> divided by 2.
>
> At the antenna, the volts produced depend on the impedance there, the
> power there, and Ohm`s law.
>
> Best regards, Richard Harrison, KB5WZI

448. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 14:51:05 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <bvkwiOAZIuG+EAAr@ifwtech.co.uk>
Source record: 127632

Antti J. Huhtala wrote, much earlier:

>> >> >For once, everybody seems to agree with everybody. FB!

We do now!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

449. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 15:24:24 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <averf0lnu1@slb3.atl.mindspring.net>
Source record: 127633

Arie:

Uh, oh...

Did you check with Chip before you released this?

He probably has several patents pending!

--
Peter K1PO

<4nec2@gmx.net> wrote in message
news:ee90361b.0301070120.69dc149f@posting.google.com...
> Hello,
>
> For those still interested, I just released the latest 5.1 version for
> 4nec2 on www.qsl.net/wb6tpu/swindex.html
>
> Besides the traditional hill-climbing optimzer now also a flexible
> genetic-algorithm based optimizer is available.
>
> Due to some questions from this group I also made the following
> changes:
>
> - It is now possible to optimize over a range/band of frequencies.
> - More general approach for generating nec-2 output data.
> - More consistent display of gain-, F/B and F/R data.
> - Pre version 4.3 support for raw nec-2 input data re-enabled.
>
> Arie.

450. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 15:27:22 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <QY2cnUYOX9wQaIejXTWcoQ@comcast.com>
Source record: 127635

Bob,

I just ran EZNEC on a 20 meter center fed vertical dipole with the bottom end at 1 foot, and 21 feet. The gain at 21 feet was 1db more, and the radiation angle 5 degrees lower, at 14 degrees, instead of 19.

Tam/WB2TT

451. Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 15:33:19 UTC
From: Richard Cassano <rcassano@optonline.net>
Message-ID: <3rCS9.567$G01.76378@news4.srv.hcvlny.cv.net>
Source record: 127634

I'm relatively new to this hobby and would like some advice on setting up a base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230 antenna tuner and fifty feet of wire hung about ten feet up between house and a tree. I did this just to get started and realize it is a flaky set-up. Have lots of RFI on all bands during the day. At this time I'm willing to spend some money, ($300) on a better antenna system and would like any advice on the biggest bang for the buck. One goal for me is to communicate with some Ham friends who are cruising aboard sailboats in the Caribbean, (south of me). In addition, one of these cruisers will be heading for the Azores, (east of me) in the spring and I would like to be able to stay in touch with him while he is underway. Any antenna system I purchase should have sufficient gain to enable reaching mid-ocean. I can put a short mast on the chimney, (ranch house), however very large beams are not going to get by the town code. Any advice would be much appreciated - thanks.
Richard Cassano, KC2ISG
Greenlawn, NY, USA

452. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 15:45:13 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avesm1$66d$1@slb9.atl.mindspring.net>
Source record: 127636

Roy:

[snip]
> EZNEC and similar programs will show you the impedance at the center of
> a dipole of your choice.
[snip]

Are you sure that you literally meant the above statement!

We all know that you are the EZNEC author and so I am hesitant to tell *you* that I have
often used NEC codes, and especially EZNEC - it's great thanks, to calculate the impedance
at places other than the center of a dipole.

e.g. NEC with appropriate input data will produce outputs to enable calculation of the driving
point impedance at poinjts wherever you place the source on a driven element. The source
driving and element does not *have* to be at the center of a driven element to do this. But
then you already knew this! One can place the source anywhere along the element from the
center and outwards towards the ends of the elements and observe the resultant impedance
changes.

Of course one cannot place the source *exactly* at the element's end, but the end feed driving
point impedance can be approached as closely as may be needed for practical purposes
[Remember the story of the mathematician and the engineer in the desert approaching the
naked lady?] if one ensures that an *appropriate* number of segments are included in the
simulation.

Aside
--
Of course the far field patterns will not represent reality very closely since in reality sources
cannot be located directly on the elements, but rather in practice are remotely located via
an appropriate feedline. With off center feed, the feedline will carry significant antenna
currents [common modes] which will seriously distort the far fields and so

the fields predicted
by placing the source directly on the element will not reflect the reality
of the transmission line
fed case. But the [differential mode] driving point impedance should be
close. The common
mode driving point impedance and the total driving point impedance would
require much
more detailed modeling.

--
Peter K1PO

453. Re: Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 15:54:34 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <uPMaPpg1AIYKtH7BNJShdfBO5aA3@4ax.com>
Source record: 127637

h4mb0ne@hotmail.com (h4mb0ne) wrote:

>Thanks guys for the suggestions. My main use would definately be for
>portable use only. I was really interested in the BUDDIPOLE from W3FF
>Antennas. I would be able to mount this in the back of my 4X4 either
>with the mast that would get it up around 10-12 feet.
>
>Anyone have any experience with that antenna?

What would be the advantage of a buddipole, a shortened dipole with loading coils, versus a full-size 6-meter dipole, which would be only about 9.5 feet long? You could easily homebrew a portable dipole with a couple of sticks of aluminum tubing, and save a few hundred dollars.

Bob
k5qwg

454. Re: Active vs. passive antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 16:05:51 UTC
From: Maarten Hagg <maartenmiriam@hetnet.nl>
Message-ID: <avetucduj1@reader08.wxs.nl>
Source record: 127638

Hi Tom,

Look at http://home.hetnet.nl/~maartenmiriam/index.html
Maybe a good suggestion?

Maarten

"Tom" <tstimac@inet.hr> wrote in message news:aveb2p$7ov$1@sunce.iskon.hr...
> Im thinking about buying ICOM PCR-1000 wideband reciever for PC. I know
that
> the most important thing is antenna. So let me ask you people who probably
> have both active and passive antennas about your opinios.
>
> Antenna 1:
> I was thinkig about buying Diamond D-707 active antenna (500 KHz - 1500
MHz)
> with ajustable 0-20dB gain. Like this one:
> http://www.wimo.com/verteiler-e.htm?s71_e.htm
> But the i've heard a lot of people complaining about overloading the
scanner
> if connected to strong antenna. The same thing happens on AOR-8600 scanner
> (which should be better than PCR-1000). So i guess these scanners don't
like
> powefull antennas. I wonder if this problem can be solved with adjusting
the
> gain between 0-20dB but i have a feeling that it can't. Does anyone have
> this (or similar in gain) active antenna connected to scanner? What are
your
> experiences?
>
> Antenna2 (in case Antenna1 is a bad choice):
> I have found passive wide band antenna AOR SA-7000 (30 kHz - 2000 MHz). It
> is pricey, but check out that response curve
> http://www.thiecom.de/pdf/sa7000-e.pdf
> Again, i don't expect you to have the same antenna. I would just like to
> know if such passive system can give me better results than active one -
> when connected to PCR-1000 or similar scanner (like AOR-8600...)?
>
> Thanks in advance
> Tom
>
>

455. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 16:07:11 UTC
From: Maarten Hagg <maartenmiriam@hetnet.nl>
Message-ID: <aveu0s$e0r$1@reader08.wxs.nl>
Source record: 127639

Hi Richard,
A suggestion look at http://home.hetnet.nl/~maartenmiriam/index.html
Maybe something for you?

Maarten

"Richard Cassano" <rcassano@optonline.net> wrote in message
news:3rCS9.567$G01.76378@news4.srv.hcvlny.cv.net...
> I'm relatively new to this hobby and would like some advice on setting up
a
> base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230
> antenna tuner and fifty feet of wire hung about ten feet up between house
> and a tree. I did this just to get started and realize it is a flaky
set-up.
> Have lots of RFI on all bands during the day. At this time I'm willing to
> spend some money, ($300) on a better antenna system and would like any
> advice on the biggest bang for the buck. One goal for me is to communicate
> with some Ham friends who are cruising aboard sailboats in the Caribbean,
> (south of me). In addition, one of these cruisers will be heading for the
> Azores, (east of me) in the spring and I would like to be able to stay in
> touch with him while he is underway. Any antenna system I purchase should
> have sufficient gain to enable reaching mid-ocean. I can put a short mast
on
> the chimney, (ranch house), however very large beams are not going to get
by
> the town code. Any advice would be much appreciated - thanks.
> Richard Cassano, KC2ISG
> Greenlawn, NY, USA
>
>

456. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 16:09:55 UTC
From: Maarten Hagg <maartenmiriam@hetnet.nl>
Message-ID: <aveu60$e3s$1@reader08.wxs.nl>
Source record: 127640

Hi Arie,
Please look at the editor in the new release.
Its not the real editor anymore like in version 5.0!
The program now opens my notepad!

maarten

<4nec2@gmx.net> wrote in message
news:ee90361b.0301070120.69dc149f@posting.google.com...
> Hello,
>
> For those still interested, I just released the latest 5.1 version for
> 4nec2 on www.qsl.net/wb6tpu/swindex.html
>
> Besides the traditional hill-climbing optimzer now also a flexible
> genetic-algorithm based optimizer is available.
>
> Due to some questions from this group I also made the following
> changes:
>
> - It is now possible to optimize over a range/band of frequencies.
> - More general approach for generating nec-2 output data.
> - More consistent display of gain-, F/B and F/R data.
> - Pre version 4.3 support for raw nec-2 input data re-enabled.
>
> Arie.

457. Re: Building My own ShortWave Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 16:11:21 UTC
From: Maarten Hagg <maartenmiriam@hetnet.nl>
Message-ID: <aveu8m$e61$1@reader08.wxs.nl>
Source record: 127641

Hi Jif

Or look at http://home.hetnet.nl/~maartenmiriam/index.html

Maybe something for you?

Maarten

"Jif" <987JIF@anon.lcs.mit.edu> wrote in message
news:MAILSERVERQq12LRF5800000505@mailserver.shabakah.net.sa...
> Hi
>
> I like listing to shortwaves stations and I would like to know
> how do i build my own very good shortwaves antenna.
>
> Thanks
>
> Jif

458. Re: WTB B&W All BAnd Wire Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 16:14:29 UTC
From: Maarten Hagg <maartenmiriam@hetnet.nl>
Message-ID: <aveueiecc1@reader08.wxs.nl>
Source record: 127642

Or look at http://home.hetnet.nl/~maartenmiriam/index.html

maarten

<jdprislupski@aol.com> wrote in message
news:5sh91vo4i9jq0kjnhq5sp99h6jtoqihd4f@4ax.com...
> Hello,
> I am looking for a used B&W AC-1.8 to 30 end fed wire antenna, or a
> BWD 1.8 to 30 Folded Dipole antenna. I am also looking for the BC-7
> 12:1 Balun that comes with these antennas.
>
> My AC-1.8 to 30 end fed fell, and the BAlun Shattered. The cost is
> $75 to replace the balun. I have seen full used antennas here for that
> or less.
> Thanks, John WC3Z
>

459. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 16:23:51 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <FOecnb_6N-yFYoejXTWcpA@comcast.com>
Source record: 127643

Do you have any trees that would let you put up a 20 meter dipole at least
30 - 40 feet high?

Tam/WB2TT
"Richard Cassano" <rcassano@optonline.net> wrote in message
news:3rCS9.567$G01.76378@news4.srv.hcvlny.cv.net...
> I'm relatively new to this hobby and would like some advice on setting up
a
> base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230
> antenna tuner and fifty feet of wire hung about ten feet up between house
> and a tree. I did this just to get started and realize it is a flaky
set-up.
> Have lots of RFI on all bands during the day. At this time I'm willing to
> spend some money, ($300) on a better antenna system and would like any
> advice on the biggest bang for the buck. One goal for me is to communicate
> with some Ham friends who are cruising aboard sailboats in the Caribbean,
> (south of me). In addition, one of these cruisers will be heading for the
> Azores, (east of me) in the spring and I would like to be able to stay in
> touch with him while he is underway. Any antenna system I purchase should
> have sufficient gain to enable reaching mid-ocean. I can put a short mast
on
> the chimney, (ranch house), however very large beams are not going to get
by
> the town code. Any advice would be much appreciated - thanks.
> Richard Cassano, KC2ISG
> Greenlawn, NY, USA
>
>

460. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 16:38:38 UTC
From: richardharrison@webtv.net
Message-ID: <11848-3E1B028E-50@storefull-2316.public.lawson.webtv.net>
Source record: 127644

CAM wrote:
"Loading coils seem to work best near the center of each dipole leg."

William Orr, W6SAI said less succinctly something similar in "All About Vertical Antennas":
"---the missing portion of the antenna taking the form of a loading coil---can be placed at, or near, the center point.---a compromise between coil size and loss indicates placement near the center point of the antenna (conductor)."

Best regards, Richard Harrison, KB5WZI

461. Re: Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 17:10:07 UTC
From: Benson Wills <blackhole@doozy.us>
Message-ID: <blackhole-26B888.12100707012003@corp.supernews.com>
Source record: 127645

And don't forget the Par Electronics 6m antenna. I've read some good reviews of the build quality, portability, and performance. And you can't beat the cost either. Well, except the homebrew stuff anyway.

--
E-mail replies: change 'blackhole' to 'usenet3'

462. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 17:27:41 UTC
From: richardharrison@webtv.net
Message-ID: <11849-3E1B0E0D-21@storefull-2316.public.lawson.webtv.net>
Source record: 127646

Andy, KC2SSB wrote:
"Any opinions would be appreciated."

The R7 may be a vertical dipole, but the closer it approaches the earth, the more radials it needs to shield the earth from displacement current and loss this can cause in the earth`s resistance.

Best regards, Richard Harrison, KB5WZI

463. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 17:45:04 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <90GS9.2490$rJ.15897@newsfep4-win.server.ntli.net>
Source record: 127655

Hi Richard

Be cautious when looking at commercial antennas for this application. Many make great claims that cannot be realistic. Also remember that quoted figures for gain and bandwidth are likely to be for ideal conditions. The environment into which an antenna is placed can have a huge impact on it's performance.

For your application I would recommend using more than one antenna. A decent vertical will get you a signal out on all bands without the visual impact of a beam. Despite what the ham "greats" say deriding their use, those of us who lack their kind of real estate and more permissive local administrations work round the world with such antennas.

For higher power use I would add one or more dipoles situated so that you can get the signal; to where it needs to go. Two mounted perpendicular should give full circle coverage. Wire has very little visual impact. Remember a simple dipole spreads a signal out over quite a large area so do not think that rotating the dipole in order to cure RFI problems will prevent you working where you want to.

Put the effort into getting a good low impedance RF earth. This will not only help the effectiveness of your vertical antennas but will also help reduce noise. One earthiing rod hammered into the lawn is not good enough. With a decent earth in place you will be able to tune one side against earth or short both sides together and use it as a capacity loaded vertical tuned against earth. Thus you will be able to use a wire dipole for more bands than the one it is cut for.

American readers should substitute the word "ground" for "earth" in the above.

Good luck

Alec Wood M1BNK
Teesside UK

"Richard Cassano" <rcassano@optonline.net> wrote in message
news:3rCS9.567$G01.76378@news4.srv.hcvlny.cv.net...
> I'm relatively new to this hobby and would like some advice on setting up
a
> base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230
> antenna tuner and fifty feet of wire hung about ten feet up between house
> and a tree. I did this just to get started and realize it is a flaky
set-up.
> Have lots of RFI on all bands during the day. At this time I'm willing to
> spend some money, ($300) on a better antenna system and would like any

> advice on the biggest bang for the buck. One goal for me is to communicate
> with some Ham friends who are cruising aboard sailboats in the Caribbean,
> (south of me). In addition, one of these cruisers will be heading for the
> Azores, (east of me) in the spring and I would like to be able to stay in
> touch with him while he is underway. Any antenna system I purchase should
> have sufficient gain to enable reaching mid-ocean. I can put a short mast
on
> the chimney, (ranch house), however very large beams are not going to get
by
> the town code. Any advice would be much appreciated - thanks.
> Richard Cassano, KC2ISG
> Greenlawn, NY, USA
>
>

464. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 18:03:57 UTC
From: Richard Cassano <rcassano@optonline.net>
Message-ID: <hEES9.1974$G01.477317@news4.srv.hcvlny.cv.net>
Source record: 127647

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:FOecnb_6N-yFYoejXTWcpA@comcast.com...
> Do you have any trees that would let you put up a 20 meter dipole at least
> 30 - 40 feet high?

I may be able to get 25 feet up into the tree, (when it's not full of ice).
20 meters requires about 33 feet (?) of antenna - can I configure it as an
"L" with the bottom of the "L" going to the house and the long side
vertical?
Richard

465. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 18:07:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <985m1vo5q201db65d08uo2vc5tdeqak7p1@4ax.com>
Source record: 127648

On 6 Jan 2003 19:36:46 -0800, aunwin@insightbb.com (Art Unwin KB9MZ) wrote:

>Very good. So using either 3 Kv or 5 Kv as the factor for either a
>capacitor or an inductor is not a guarantee against failure, arcing
>e.t.c.
>for the amateur experimentor.
>Thanks for your input
>Art
>

Hi Art,

The voltage at the tips and the voltage across an element (or inductor or capacitor) is not the same thing unless that component is connected to Common or ground with very short leads. However, the dimension of wavelength (which suggests those leads are in fact very long) is going to transform that expectation into something very different.

Seeing that your purpose appears to be about loads, the components are really only going to be stressed by what is dropped across the leads, not by what is happening out at the end of the radiator tips with respect to ground.

73's
Richard Clark, KB7QHC

466. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 18:27:58 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <hl6m1vs83l7vl3fvsl9m0ahli94gfne4co@4ax.com>
Source record: 127649

On Tue, 07 Jan 2003 15:33:19 GMT, "Richard Cassano"
<rcassano@optonline.net> wrote:

>I'm relatively new to this hobby and would like some advice on setting up a
>base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230
>antenna tuner and fifty feet of wire hung about ten feet up between house
>and a tree. I did this just to get started and realize it is a flaky set-up.
>Have lots of RFI on all bands during the day. At this time I'm willing to
>spend some money, ($300) on a better antenna system and would like any
>advice on the biggest bang for the buck. One goal for me is to communicate
>with some Ham friends who are cruising aboard sailboats in the Caribbean,
>(south of me). In addition, one of these cruisers will be heading for the
>Azores, (east of me) in the spring and I would like to be able to stay in
>touch with him while he is underway. Any antenna system I purchase should
>have sufficient gain to enable reaching mid-ocean. I can put a short mast on
>the chimney, (ranch house), however very large beams are not going to get by
>the town code. Any advice would be much appreciated - thanks.
>Richard Cassano, KC2ISG
>Greenlawn, NY, USA

Richard,

Sounds to me like you'd do well wit a roof mounted vertical for that
purpose.. you did not say were you wer located but with the KC2 Call
i'm assuming NY/NJ.. a vertical first hop on 40 30 or 20 M should work
well in the Cribbean and should work very well into the Azores as
well.. Since you already own a SGC 230 Remote tuner I would put a
vertical element between 18 and 25 feet long and let the tuner tune it
to the band of interest.. you'll need 4 radials, and you can lay them
right on the roof.. 6 to 8 would be even better.. Thats what I would
try first.. it would be fairly cheap and not too intrusive.

Best of luck,
73 Dave KC1DI
P.S. I regularly work in the Caribbean on 30 Meters CW..

467. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 18:28:45 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <x%ES9.377$hG5.90773@news1.west.cox.net>
Source record: 127650

The Cushcraft R7 and R5 and other Cushcrafts are half wave - end fed
verticals (not quarter wave) and Cushcraft sez -- they do not require
"traditional radials" -- the spokes at the bottom of the antenna are termed
counterpoises whose function is to isolate the antenna from ground.
See URL: http://www.cushcraft.com/support/pdf/r5.pdf

DO NOT add radials to these antennas ---screws them all up -- I know I tried
and a phone call to Cushcraft sed don't do that.

One can add a screen or radials at the ground level below the antenna but
not connected to the antenna electrically.
I didn't notice a big difference when I did this.

My R7 was 8 feet off the ground and free of obstructions. I worked a lot of
DX with it. Not particularly a good 40M antenna - narrow bandwidth
questionable efficiency. But worked well on the other bands. A friend put
his on the roof -- 23 feet up - didn't notice a big difference as compared
to the 8-foot level.

Remember these are half wave end fed antennas -- they are fed at a high
impedance point -- the black box at the base of the antenna is for
impedance matching.

R5 and R7s are not quarter waves. 1/4 waves do require radials. (Lots of em
if ground radials -- 3 or 4 will do if elevated)

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:11849-3E1B0E0D-21@storefull-2316.public.lawson.webtv.net...
> Andy, KC2SSB wrote:
> "Any opinions would be appreciated."
>
> The R7 may be a vertical dipole, but the closer it approaches the earth,
> the more radials it needs to shield the earth from displacement current
> and loss this can cause in the earth`s resistance.
>
> Best regards, Richard Harrison, KB5WZI
>

468. Re: Scanning Satelites

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 19:39:40 UTC
From: Ken Taylor <ken123@xtra.co.nz>
Message-ID: <avfadu$edh2e$1@ID-76636.news.dfncis.de>
Source record: 127656
Cross-posted to: rec.radio.amateur.antenna,aus.radio.scanner

See: http://www.oso.noaa.gov/operation/polar-bus.htm
for NOAA series craft. I believe Meteor 3-15 still chugs along but not any
others (prepared to be proved wrong on that one!).

Cheers.

Ken

"John Elliott" <jae3806@bigpond.com> wrote in message
news:S9yS9.18579$jM5.50974@newsfeeds.bigpond.com...
> What wx satellites are are to be received in Australia these days ?. Any
of
> the Meteors left ??.
>
> Anybody into HRPT in Melbourne ???.
>
>
> --
> Regards..
>
> John Elliott
> Melbourne Vic
> Australia
> jae3806@bigpond.com
> "Ken Taylor" <ken123@xtra.co.nz> wrote in message
> news:f6wS9.14656$F63.243789@news.xtra.co.nz...
> > "kevcat" <kevcat@dodo.com.au> wrote in message
> > news:3E183079.2F44E013@dodo.com.au...
> > > Being in Melbourne what is the lowest latitude you have recieved, have
> > > you seen Antarctica at all
> > > my images start not much futher north than yours and I'm just Nth of
> > > Brisbane
> > >
> > > Kev
> > >
> > I've seen the edge of the ice from Melbourne, but only in deepest,
darkest
> > winter. Generally not in Summer.
> >
> > Ken
> >
> >
> >
>

>

469. Re: Active vs. passive antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 19:46:01 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o47m1v08m9233vipkq90ovaedi1jnv440b@4ax.com>
Source record: 127657

On Tue, 7 Jan 2003 11:46:40 +0100, "Tom" <tstimac@inet.hr> wrote:

>Im thinking about buying ICOM PCR-1000 wideband reciever for PC. I know that
>the most important thing is antenna. So let me ask you people who probably
>have both active and passive antennas about your opinios.
>
>Antenna 1:
>I was thinkig about buying Diamond D-707 active antenna (500 KHz - 1500 MHz)
>with ajustable 0-20dB gain. Like this one:
>http://www.wimo.com/verteiler-e.htm?s71_e.htm
>But the i've heard a lot of people complaining about overloading the scanner
>if connected to strong antenna.

They wish.

Fantasies of a strong antenna or simply front end overload from
unfiltered nearby services (exceptionally common problem)?

>The same thing happens on AOR-8600 scanner
>(which should be better than PCR-1000). So i guess these scanners don't like
>powefull antennas.

More dreams of wish fulfillment. Look at the ad copy to the page
offered - no antenna is shown at all, just the little amp.

> I wonder if this problem can be solved with adjusting the
>gain between 0-20dB but i have a feeling that it can't. Does anyone have
>this (or similar in gain) active antenna connected to scanner? What are your
>experiences?
>
>Antenna2 (in case Antenna1 is a bad choice):
>I have found passive wide band antenna AOR SA-7000 (30 kHz - 2000 MHz). It
>is pricey, but check out that response curve
>http://www.thiecom.de/pdf/sa7000-e.pdf
>Again, i don't expect you to have the same antenna. I would just like to
>know if such passive system can give me better results than active one -
>when connected to PCR-1000 or similar scanner (like AOR-8600...)?
>
>Thanks in advance
>Tom
>
Hi Tom,

Unfortunately the curves that so delight you at the second page are
nothing more than window dressing and have absolutely nothing to do
with anything that is meaningful. If anything, they would reveal the

flaw of my first observation above: willing to amplify anything (especially those signals that you are not listening to).

A wide band preamp is only good to a receiver with a tuned front end so that the receiver can reject the garbage that is getting amplified along with the signal of interest. If your receiver has a wide front end, then the combination of the two is a classic case of invitation for front end overload.

A wide front end and scanning are joined twins, I realize. You have to make do with noisy services (like pagers) that will take out your front end (and described as a hot antenna). The solution there is to learn about notch filters (wide band, except here, there and possibly over there too).

A wide frequency range and one antenna is another myth you have to learn to live without. True, there may be 100 vendors willing to offer specs and antennas to match, but I will bet that they speak little of just WHERE the antenna might be listening over that stretch of frequencies.

The common Discone is the classic scanner antenna that is spec'd to match 60 MHz out to 2 GHz and yet is deaf above 500 MHz. That is because as the frequency climbs, so does its elevation angle for sensitivity. It is looking at the horizon at 60 MHz (where most of the transmitters are). At about 440 it is beginning to lose sensitivity to higher angles (aviation) and as the numbers climb, the antenna looks higher towards the satellites. The antenna will even begin to develop some "gain" too, if you want to listen to the birds that is.

73's
Richard Clark, KB7QHC

470. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 20:04:15 UTC
From: cprstn54zz@att.net
Message-ID: <3e1b3089.16714453@news-server.optonline.net>
Source record: 127658

On Tue, 07 Jan 2003 12:55:37 GMT, cprstn54zz@att.net (Ken) wrote:
>(1) What if for 160M only I clip on a suspended 65 ft Slinky off each
>end of the 130 ft dipole? Figure 1/4" between the turns.

Preliminary investigation indicates that the standard zinc-plated
steel Slinky toy is 66.4 ft long -- fully stretched out (deformed).
If a Slinky is clipped to each end of a 130 ft dipole and stretched
out to, say, 4 ft, would it not act like an extra 66 ft of wire on
each side? Wouldn't it be a fairly efficient 160M antenna? After
all, most of the energy coming off a dipole is concentrated in the
middle.

Undoubtedly, a helix is not as efficient and an elongated wire, but it
would create resonance. Some of the compact antennas are made 100% of
Slinky.

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

471. Quad diamond and gamma match

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 20:22:26 UTC
From: zig2 <zigouille@free.fr>
Message-ID: <3e1b34c8$0$27698$626a54ce@news.free.fr>
Source record: 127659

Sorry for my poor language...

Antenna is monoband cubical quad 3 elements on 28 Mhz in DIAMOND
CONFIGURATION.

I surch the best connecting for the lowest angle of radiation.

It is correct to build a gamma match on the driver ?

It is possible to connect coax 50 Ohms to the gamma match on the driver ?

GG

472. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 20:22:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1mdoojfa71g8e@corp.supernews.com>
Source record: 127660

But this is not the same as two end-fed antennas without the ground
plane at the midpoint. There's a very big difference.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Crazy George wrote:
> "Is there an impedance quantity for the end of a resonant dipole---?"
>
> Yes.
>
> Arnold Bailey wrote on page 344 of "TV and Other Receiving Antennas":
> "The center-fed antenna may be considered as two end-fed antennas in
> series, with an imaginary ground plane, located at the midpoint of the
> center-fed antenna and at right angles to the rods, cutting the system
> in two."
>
> Best regards, Richard Harrison, KB5WZI
>

473. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 20:23:58 UTC
From: deWA7ZPU@aztec.asu.edu
Message-ID: <90a0ea69.0301071223.368441bd@posting.google.com>
Source record: 127661

OK, so now we know how to get the line up in a traditional tree. What if it's a palm tree with no branches? Or, how about an abandoned power/light/phone pole? How do you get something to stick to or wrap the pole?

Thanks,

Mike WA7ZPU Phoenix (palms) AZ

474. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 20:30:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1me6dc67vrj52@corp.supernews.com>
Source record: 127662

Peter O. Brackett wrote:
> Roy:
>
> [snip]
>
>>EZNEC and similar programs will show you the impedance at the center of
>>a dipole of your choice.
>
> [snip]
>
> Are you sure that you literally meant the above statement!

Yes. And, as you say, EZNEC will also tell you the impedance at other points along a dipole. The impedance at the very end will approach infinity, since at that point you have a source with one terminal connected to nothing.

People expect an ohmmeter with one lead disconnected to read infinite, but for some reason expect something else when one lead is connected to an antenna and the other to nothing. Kirchoff's current law applies just as surely to antennas as to any other circuit.

This isn't another one of those Christmas-Fools-Day jokes, is it?

Roy Lewallen, W7EL

>
> We all know that you are the EZNEC author and so I am hesitant to tell *you*
> that I have
> often used NEC codes, and especially EZNEC - it's great thanks, to calculate
> the impedance
> at places other than the center of a dipole.
>
> e.g. NEC with appropriate input data will produce outputs to enable
> calculation of the driving
> point impedance at poinjts wherever you place the source on a driven
> element. The source
> driving and element does not *have* to be at the center of a driven element
> to do this. But
> then you already knew this! One can place the source anywhere along the
> element from the
> center and outwards towards the ends of the elements and observe the
> resultant impedance
> changes.
>
> Of course one cannot place the source *exactly* at the element's end, but

> the end feed driving
> point impedance can be approached as closely as may be needed for practical
> purposes
> [Remember the story of the mathematician and the engineer in the desert
> approaching the
> naked lady?] if one ensures that an *appropriate* number of segments are
> included in the
> simulation.
>
> Aside
> --
> Of course the far field patterns will not represent reality very closely
> since in reality sources
> cannot be located directly on the elements, but rather in practice are
> remotely located via
> an appropriate feedline. With off center feed, the feedline will carry
> significant antenna
> currents [common modes] which will seriously distort the far fields and so
> the fields predicted
> by placing the source directly on the element will not reflect the reality
> of the transmission line
> fed case. But the [differential mode] driving point impedance should be
> close. The common
> mode driving point impedance and the total driving point impedance would
> require much
> more detailed modeling.
>
> --
> Peter K1PO
>
>
>

475. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 20:34:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1meeeotnge0ca@corp.supernews.com>
Source record: 127663

I'd expect the antenna you describe to be moderately efficient, although narrow banded. (If it's not narrow banded, it means it's not efficient.)

The reason you have a shot for good efficiency isn't because "the energy coming off a dipole is concentrated in the middle" -- a point which amateurs love to argue about -- but rather that the current is highest in the middle. Loss is proportional to I^2, so the farther from the middle that the Slinky is, the less current it carries, and consequently the less loss it incurs.

Roy Lewallen, W7EL

Ken wrote:
> On Tue, 07 Jan 2003 12:55:37 GMT, cprstn54zz@att.net (Ken) wrote:
>
>>(1) What if for 160M only I clip on a suspended 65 ft Slinky off each
>>end of the 130 ft dipole? Figure 1/4" between the turns.
>
>
> Preliminary investigation indicates that the standard zinc-plated
> steel Slinky toy is 66.4 ft long -- fully stretched out (deformed).
> If a Slinky is clipped to each end of a 130 ft dipole and stretched
> out to, say, 4 ft, would it not act like an extra 66 ft of wire on
> each side? Wouldn't it be a fairly efficient 160M antenna? After
> all, most of the energy coming off a dipole is concentrated in the
> middle.
>
> Undoubtedly, a helix is not as efficient and an elongated wire, but it
> would create resonance. Some of the compact antennas are made 100% of
> Slinky.
>
> Ken KC2JDY
> Ken
> (to reply via email
> remove "zz" from address)

476. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 20:56:13 UTC
From: "William M. Bickley" <bickley@dmv.com>
Message-ID: <v1mfnbji0f8c70@corp.supernews.com>
Source record: 127664

Antti:

I don't know if this ends the discussion or prolongs it, but I DID DO as you presumed. The values quoted were observed on the meter. The computed number was derived from the equations in W2DU's REFLECTIONS.

Bill W2ET

"Antti J. Huhtala" <ahuhtal4@welho.com> wrote in message news:3E1A68A0.CC5D7B55@welho.com...
> "Ian White, G3SEK" wrote:
>
> > Antti J. Huhtala wrote:
> > >"Ian White, G3SEK" wrote:
> > >
> > >> Antti J. Huhtala wrote:
> > >> >"William M. Bickley" wrote:
> > >> >> An example is R=16, X=46 and SWR=4.1 on the 259B, when the
> > >> >>equations I have
> > >> >> say the SWR is 5.9 (Zc=50).
> > >> >
> > >> >My transmission line calculator program calculates SWR as 6.08 in this case.
> > >> >
> > >> >For once, everybody seems to agree with everybody. FB!
> > >> >
> > >> Well, not quite. The difference between 5.9 and 6.08 is not a
> > >> measurement error - it comes from the equations which should agree
> > >> exactly.
> > >
> > >I didn't say it is a measurement error. My number is derived from the values
> > >given in the example. However, my program calculates the *complex* reflection
> > >coefficient including the _reactance_ of the coax, instead of using the
> > >value of
> > >'pure' 50 ohms. In my program, I have used the value of 50-j.44 ohms, obtained
> > >from some ARRL source. The apparent difference should be explained by this.
> > >
> > I'm sure that is true... but what coax is this? There doesn't have to be
> > any.
>
> You're right, Ian, there doesn't. I guess I was carried away with 'Zc=50'

> in the original example, the usual expression for the characteristic
> impedance of a feedline. In this case, I assumed (and used) RG-213.
>
> > The conversion from (R, X) to SWR depends on the assumed system
> > impedance, which by convention in a "50-ohm system" is exactly (50 +j0).
> > The conversion must not be allowed to rely on the complex impedance of a
> > particular kind of transmission line - which may not even be present.
>
> Again, agreed. Somehow I got the impression that Bill had measured the
> values he quoted, in a system including coax - and then he proceeded to
> put these values into equations not included in his post.
> However, I agree that the only sensible way to calibrate a '50 ohm' bridge
> is to put a pure 50 ohm resistance at the Rx terminals and adjust for
> SWR=1.0, R=50, X=0.
>
> > If there truly is a transmission line, and you really do want to
> > calculate the precise magnitude of the standing wave at any point along
> > that line, then of course you must use the longer equation that takes
> > account of the actual complex impedance of the line.
>
> Right. This was my assumption, as amply discussed above.
>
> > But if you want to use "SWR" simply as an indication of the quality of
> > the impedance match in a "50-ohm system" - as most people do - then the
> > simpler equation is exactly correct.
>
> No argument there, either.
>
> > --
> > 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> > Editor, 'The VHF/UHF DX Book'
> > http://www.ifwtech.co.uk/g3sek
>
> 73, Antti, OH2DT
>

477. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 21:02:58 UTC
From: "William M. Bickley" <bickley@dmv.com>
Message-ID: <v1mg3vt6osil41@corp.supernews.com>
Source record: 127665

Very helpful, Tam. I plan to have a discussion with the MFJ people to clear up which are the more precise measurements. It's interesting that the examples in the manual (where the R values are 38 and 153) are spot-on, but nothing else is.

Bill W2ET

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:Mu2dndJefZotXoSjXTWc2Q@comcast.com...
> Let's take a look at what +/- 10% would mean. That would be +/- 1.6 Ohms on
> the 16 Ohms, or 14.4 to 17.6. But the MFJ rounds this to 14 to 18. This
> seems to make a huge difference in SWR. 10% is not bad for an instrument
> that does not cost $8000. The number of bits in the A/D does not make any
> difference if the error is in the analog votage that it samples.
>
> Tam/WB2TT
>
>

478. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 21:18:06 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1mh0itdav5gb9@corp.supernews.com>
Source record: 127666

(Beating chest and making oou oou oou noises)
I refuse to believe I am related to a monkey :>)
--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E1ACE63.7040602@ieee.org...
> Bill M wrote:
> > Our 99% DNA relationship to chimps is also mirrored in our 99%
> > relationship with asparagus.
>
> What is really interesting is that chimps and humans are
> genetically more closely related than are chimps and
> orangutans.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

479. Re: PME and ELCB's, RCCD's & MCB's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 21:49:50 UTC
From: gareth@lightfox.demon.co.uk
Message-ID: <20030107.214950.57@lightfox.demon.co.uk>
Source record: 127668
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,uk.radio.amateur

In article <_eFS9.1$hB2.4205@newsfep2-win.server.ntli.net>,
"r.dring" wrote:

> Finally many electrical wholesalers in the UK will hire out the line
> earth loop impedance testers that you need to ensure the line earth
> and neutral earth loops have a sufficiently low impedance.

One little point for anyone contemplating - if you have an RCD in the mains supply, and you are hiring or buying one of these devices, do make sure it is of the variety built to work without tripping any RCD in circuit when testing.

The type of earth loop impedance tester that shorts half-a-cycle of mains from live to earth is pretty good at testing for the presence of RCDs, and if one is in circuit, not a lot else.

Does anyone know what the status is of having lighting circuits fed through a 'main' RCD ? There was a period in time when this was felt to not be a quite a good idea to have a home plunged in to darkness when a pinhole appeared in the kettle element.

There is an interesting item on earthing power conditioners which may be of relevance - and which includes having a 'clean earth' at:

http://www.advance-galatrek.co.uk/lowlevel/hb/hb022.htm

73, G.

--
http://www.rat.org.uk/

480. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 21:51:06 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avfi49$bp2$1@sparta.btinternet.com>
Source record: 127667

Bill said -
> I plan to have a discussion with the MFJ people to clear
> up which are the more precise measurements.
==========
Bill, I wish you luck.

While on the land line ask how accurate are the moving coil meter scales.

Reg, G4FGQ

481. Re: Ground mounting vs roof mounted HF vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 22:14:15 UTC
From: richardharrison@webtv.net
Message-ID: <10318-3E1B5137-116@storefull-2311.public.lawson.webtv.net>
Source record: 127522

AC6V wrote:
"Cushcraft sez--they do not require "traditional radials"---.

A vertical dipole is perpendicular, balanced, and has nulls at its ends.

No radials are needed to shield the earth from energy which is not
there.

Sorry I mis-spoke.

Best regards, Richard Harrison, KB5WZI

482. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 22:14:59 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E1B5115.2040803@attbi.com>
Source record: 127519

You are correct, 3 kv or 5kv are nice design parameters but at the KW+ level they might exhibit stress failure. If you are not planning a KW class station then a 3 kv design would be great.

Many traps in Yagi or multiband dipole antennas designed for 1.5 KW fail after some usage. It's not a 100% certainty that failure will occur but it happens often enough to be a problem. The typical failure mode is arcing or burning the dielectric in the capacitor. Failures in the inductor, very infrequent, are generally caused by foreign objects [bugs].

The design is based on a maximum value of POWER AND VSWR. If the antenna is used at a frequency just outside the VSWR maximum the voltages increase and failure results. I lost a 20 meter trap in a quality antenna tuned for the 20 m CW DX window [14.025 MHz] while operating on the Maritime net on 14.3 MHz at a VSWR of just over 2:1.

Many high power DX operators use antennas with no traps simply to avoid this potential <pun intended> problem. [Monoband Long Johns].

I have switched over to an 8 element Log Periodic for 20, 17, 15, 12 and 10 meters <no traps>.

BTW I run 800 to 1000 watts.

Deacon Dave, W1MCE
Manager, Strategic Product Design, Electronic, retired
Textron Systems.
Art Unwin KB9MZ wrote:
> Very good. So using either 3 Kv or 5 Kv as the factor for either a
> capacitor or an inductor is not a guarantee against failure, arcing
> e.t.c.
> for the amateur experimentor.
> Thanks for your input
> Art
>
>
>
> it appeRSSDave Shrader <david.shrader@attbi.com> wrote in message
news:<3E19BCCB.2070800@attbi.com>...
>
>>It can be virtually any credible voltage based on VSWR and series
>>reactance in the antenna system.
>>
>>Example: A series tuned circuit is driven by 1 VRMS into a resistor of 1
>>ohm in series with a capacitor of -j100 ohms in series with an inductor
>>of j100 ohms. The two reactances cancel each other and the circuit is

>>resonant. However #1, the voltage across the inductor is 100 VRMS.
>>However #2, the voltage across the capacitor is 100 VRMS. However #3,
>>the voltage across the resistor is 1 VRMS. Hmmm ... ?
>>
>>In your question, assuming a 50 ohm resistive load at the antenna , and
>>1500 watts output the feedpoint voltage is a little over 273 VRMS. That
>>is the minimum voltage. In a typical antenna system, e.g. Yagi, it will
>>develop several thousands of volts at traps etc. End effect can approach
>>5000 VRMS or higher.
>>
>>Deacon Dave, W1MCE
>>
>>Art Unwin KB9MZ wrote:
>>
>>>Maybe a lame brain question but, what is the maximum voltage
>>>that is impressed on a amateur antenna when using a amplifier
>>>with a 3Kv plate voltage? This disregards 'end effect' voltages
>>> but would include the use of stubs and lumped constants e.t.c
>>>and would include the like of over modulated and other signal use.
>>>Thanks
>>>Art
>>

483. Re: Active vs. passive antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 22:31:13 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <LFMbPjBZyYt9+mGjxFmc187haRTz@4ax.com>
Source record: 127520

"Tom" <tstimac@inet.hr> wrote:

>Im thinking about buying ICOM PCR-1000 wideband reciever for PC. I know that
>the most important thing is antenna. So let me ask you people who probably
>have both active and passive antennas about your opinios.
>
>Antenna 1:
>I was thinkig about buying Diamond D-707 active antenna (500 KHz - 1500 MHz)
>with ajustable 0-20dB gain. Like this one:
>http://www.wimo.com/verteiler-e.htm?s71_e.htm
>But the i've heard a lot of people complaining about overloading the scanner
>if connected to strong antenna. The same thing happens on AOR-8600 scanner
>(which should be better than PCR-1000). So i guess these scanners don't like
>powefull antennas. I wonder if this problem can be solved with adjusting the
>gain between 0-20dB but i have a feeling that it can't. Does anyone have
>this (or similar in gain) active antenna connected to scanner? What are your
>experiences?

I have an NRD-525 receiver with a Stoner Dymek active antenna. The antenna control has up to a 20 db attenuator. It works fine at attenuating the signal, tho' I never find the need to. The receiver also has an attenuator, which I also never have the need to use. If I use either attenuator, the signal is dramatically reduced. So the attenuators work.

Check the attenuation that is available on the receiver you're going to get. As well as on the active antenna.

Bob
k5qwg

>
>Antenna2 (in case Antenna1 is a bad choice):
>I have found passive wide band antenna AOR SA-7000 (30 kHz - 2000 MHz). It
>is pricey, but check out that response curve
>http://www.thiecom.de/pdf/sa7000-e.pdf
>Again, i don't expect you to have the same antenna. I would just like to
>know if such passive system can give me better results than active one -
>when connected to PCR-1000 or similar scanner (like AOR-8600...)?
>
>Thanks in advance
>Tom
>

484. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 22:43:47 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0701031443470001@bni030qny8kc.bc.hsia.telus.net>
Source record: 127523

In article <3E198ABC.3050903@ieee.org>, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

> David or Jo Anne Ryeburn wrote:
> > So the result is that the network should have an efficiency of about
> > 1.3/2.3 or about 56%, which isn't great but maybe it's better than not
> > going on 160 metres at all!
>
> I don't know about that, David. Remember, he's running 5 watts to a low
> dipole on 160m. Then he dissipates half his power in the tuner. Just
> doesn't sound logical to me. 'Course, I'm not a masochist. :-)

Nor am I. But how much weaker is his signal on 160 if he stays off the band completely, for lack of an antenna? The network I described would only make his signal 2.5 db weaker than he would have with a dipole at the same low height (ignoring loss in the twin lead, which I'm afraid we shouldn't, even at 1.9 MHz, with the SWR that high -- see below).

> > What does EZNEC say about longer feedlines than 40 ft? I would think the
> > resistance would go up above 1.3 ohms and the reactance would be less
> > extreme than -j280, making the matching job easier (but at the cost of
> > higher feedline loss).
>
> On the left side of the 430:1 SWR circle, the reactance goes up with the
> resistance. On the right side of the SWR circle, the resistance is
> very high, in this case around 130K ohms at the X axis.

Of course you're right. I wasn't thinking about the Smith chart, and I should have been. At a current loop the impedance would only be about 0.7 ohms. I^2R losses would likely be enormous, and our assumptions about circles, instead of spirals, on the Smith chart are woefully wrong.

Seems to me the best bet would be to end-load both ends of the dipole when using it on 160, say with additional (vertical) wires dropping down and/or capacity hats. This would present the top end of the 300 ohm feedline with a tamer impedance than before, and the SWR on the twinlead would be lower. Then an L-network (or better, a balanced double-L network, with half-sized inductors in series with each side of the line and a single shunt capacitor or inductor, otherwise designed along the lines I indicated before), followed up by a current balun on the 50 ohm side of the network, would finish the job. The problem would be attaching/detaching the end loading for use on/off 160, and the first solution that comes to mind is to use parallel-resonant traps tuned to 80 metres, but that would likely mess things up good on higher frequency bands.

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

485. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 22:49:05 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avflgo$g2i$1@slb0.atl.mindspring.net>
Source record: 127524

Roy:

[snip]
> This isn't another one of those Christmas-Fools-Day jokes, is it?
>
> Roy Lewallen, W7EL
[snip]

Well no, Christmas has come and gone, and April Fools day is a few months away
but here's the lines I was thinking along...

Place the NEC source driving the element within one segment of the element end. Then
NEC produces the data for evaluating the driving point impedance value at that second
last element segment. Call this DPI x Ohms, [x might be say around 2000 Ohms for
AWG 14 wire and 20 segments]. Then for the other side [which is simply free space!]
we take Yuri's advice and simply place that x value from the side with the actual
element in series with the 377 Ohm free space impedance on the empty element side,
resulting in a total modeled impedance of 377 plus the modeled second last segment
DPI!

2000 + 377 = 2377 Ohms.

Is this about right?

It's gotta be just as good as Reg Edwards estimate. ;-)

--
Peter K1PO [A guy who loves "in-the-limit" arguments...]

486. Re: Quad diamond and gamma match

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 22:54:40 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <BNJS9.1843$lw1.452378673@news.inreach.com>
Source record: 127525

GG:

This site has design info for quads, including gamma match:
http://www.cvarc.org/QUAD/CubQuad.html

Roger K6XQ

487. Re: Active vs. passive antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 22:55:56 UTC
From: Tom <tstimac@inet.hr>
Message-ID: <avfnv1$he7$2@sunce.iskon.hr>
Source record: 127528

"Maarten Hagg" <maartenmiriam@hetnet.nl> wrote in message
> Hi Tom,
>
> Look at http://home.hetnet.nl/~maartenmiriam/index.html
> Maybe a good suggestion?

Hello Maarten,

I saw the page. Are there some tables and graphs available? I like to see antenna being used on real equipment and measurements of how device works.

About magnetic loop antenna.
I know the loop theory. In fact i've built two. One with 0.4qmm copper wire, and the other one with 2.5qmm wire. They both perform well. I use them for ELF/VLF 1Hz to 20kHz. But they remain flat from 1 Hz to1 MHz. With some modifications (specially type size of wire, number of turns) i think i could chage my antenna to work like yours in 10kHz - 30MHz. In fact this is exactly the same coverage, the only difference is that my antenna starts earlier and finishes earlier on Hz scale. But if price is not too high, i could try yours. It is probabbly better than my "hand made".

What will be its final price ?
How will you ship it (i guess requers a large package) ?

Best Regards,
Tom

488. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 23:18:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1B6054.8040404@ieee.org>
Source record: 127526

Fred Hambrecht Sr. wrote:
> (Beating chest and making oou oou oou noises)
> I refuse to believe I am related to a monkey :>)

The difference between chimps and humans is relatively small,
i.e. about 1.6% but humans did not descend from chimps. However,
you are related to virtually every living thing on earth. If
I remember correctly, your ability to process oxygen comes from
an ancient section of bacterial DNA.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

489. Re: Quad diamond and gamma match

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 23:22:07 UTC
From: Zoran Brlecic <WA7AA@attbi.com>
Message-ID: <3E1B6108.1040805@attbi.com>
Source record: 127527

zig2 wrote:

> Antenna is monoband cubical quad 3 elements on 28 Mhz in DIAMOND
> CONFIGURATION.
>
> I surch the best connecting for the lowest angle of radiation.

Angle of radiation depends exclusively on the antenna height over
ground, not a feedpoint.

> It is correct to build a gamma match on the driver ?

If you need one to match the antenna impedance, yes.

> It is possible to connect coax 50 Ohms to the gamma match on the driver ?

That's the whole point of matching.

73 ... Zoran WA7AA

490. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 23:40:46 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <avfohg$f2t6u$1@ID-175933.news.dfncis.de>
Source record: 127529

Are our lives so perfect that we have the inclination & time to worry about such trivia as the original subject of this post, and similar on this NG?

How about...

- North Korea probably has the atomic bomb, according to the news tonight.
- AIDS is killing millions.
- Soon there may be a war in the Middle East.
- The world economy is in the tank.

etc.

I've been guilty of such, but hope to get some better perspective.

491. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-07 23:45:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1mpk4k87q3sb7@corp.supernews.com>
Source record: 127530

Let's see. According to this theory, the impedance looking into an open circuit is 377 ohms. Then if I disconnect the antenna wire, the source should see 377 ohms looking each way, or 2 X 377 ohms = 754 ohms. But EZNEC doesn't report 754 ohms when you put a source on a very short, one segment wire. And my GR doesn't show 754 ohms when I measure an open circuit. Hmph. Must be defective.

Maybe you get 377 ohms only when looking to the left, and not to the right? Maybe the aether is sort of like a diode, and the aether wind blows one way stronger than the other?

Yes, you can explain a lot of things very simply, if you don't mind using oversimplifications that are wrong.

Roy Lewallen, W7EL

Peter O. Brackett wrote:
> Roy:
>
> [snip]
>
>>This isn't another one of those Christmas-Fools-Day jokes, is it?
>>
>>Roy Lewallen, W7EL
>
> [snip]
>
> Well no, Christmas has come and gone, and April Fools day is a few months
> away
> but here's the lines I was thinking along...
>
> Place the NEC source driving the element within one segment of the element
> end. Then
> NEC produces the data for evaluating the driving point impedance value at
> that second
> last element segment. Call this DPI x Ohms, [x might be say around 2000
> Ohms for
> AWG 14 wire and 20 segments]. Then for the other side [which is simply free
> space!]
> we take Yuri's advice and simply place that x value from the side with the
> actual
> element in series with the 377 Ohm free space impedance on the empty element
> side,
> resulting in a total modeled impedance of 377 plus the modeled second last
> segment

> DPI!
>
> 2000 + 377 = 2377 Ohms.
>
> Is this about right?
>
> It's gotta be just as good as Reg Edwards estimate. ;-)
>
> --
> Peter K1PO [A guy who loves "in-the-limit" arguments...]
>
>
>
>

492. L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 00:10:50 UTC
From: jgboyles@aol.com
Message-ID: <a5889e9c.0301071610.72025246@posting.google.com>
Source record: 127532

Hi,
In Chapter 14 of "Reflections II" Maxwell gives some equations concerning equivalent series and parallel circuits with both R and X.

Eq. 14.1: Q=Xs/Rs=Rp/Xp where Xs=series reactance, Rs=series resistance, Xp=parallel reactance ect.

Eq. 14.2: Rp=Rs(Q^2+1)

Try as I may I don't see how you get equation 14.2 from 14.1.
I am trying to get a better handle on the design of L networks and the importance of Q in the process.
Any hints would be appreciated.

73 Gary N4AST

493. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 01:01:10 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avft8m$o71$1@helle.btinternet.com>
Source record: 127533

Cec sez,
> If
> I remember correctly, your ability to process oxygen comes from
> an ancient section of bacterial DNA.

==========

The ability of life on this planet to process, oxygen, carbon, hydrogen and a few other odds-and-ends has now advanced to the stage of generating gigabytes of waffle on Reflected Power, Conjugal Matches, So-called SWR meters, Dipole End-Z, Virtual Short Circuits, etc.

Anybody taking bookings for Andromeda?

Reg.

494. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 01:06:54 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <OQKS9.602027$WL3.178885@rwcrnsc54>
Source record: 127534

Blow gun with barbed darts.
--

CW
KC7NOD

"Mike Radtke" <deWA7ZPU@aztec.asu.edu> wrote in message
news:90a0ea69.0301071223.368441bd@posting.google.com...
> OK, so now we know how to get the line up in a traditional tree. What
> if it's a palm tree with no branches? Or, how about an abandoned
> power/light/phone pole? How do you get something to stick to or wrap
> the pole?
>
> Thanks,
>
> Mike WA7ZPU Phoenix (palms) AZ

495. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 01:26:24 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <47LS9.22163$9N5.2004493@newsread2.prod.itd.earthlink.net>
Source record: 127535

Gary Boyles <jgboyles@aol.com> wrote in message
news:a5889e9c.0301071610.72025246@posting.google.com...
> Hi,
> In Chapter 14 of "Reflections II" Maxwell gives some equations
concerning
> equivalent series and parallel circuits with both R and X.
>
> Eq. 14.1: Q=Xs/Rs=Rp/Xp where Xs=series reactance, Rs=series resistance,
> Xp=parallel reactance ect.
>
> Eq. 14.2: Rp=Rs(Q^2+1)
>
> Try as I may I don't see how you get equation 14.2 from 14.1.

You can't, they are independent equations.

14.1 States the Quality factor for series form and parallel form.
(Both are true.)

14.2 States the transform of Parallel to Series (or reverse).

> I am trying to get a better handle on the design of L networks and the
> importance of Q in the process.

A good thing to do!
Be aware that there are SEVERE limitations on how much Q you can expect a
system to have!
I wouldn't count on more than 15, without extreme measures.

> Any hints would be appreciated.
>
> 73 Gary N4AST

--
*
| __O Thomas C. Sefranek WA1RHP@ARRL.net
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

496. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 01:46:50 UTC
From: K4IA <K4ia@novacoxmail.com>
Message-ID: <eqLS9.6972$t06.160282@news2.east.cox.net>
Source record: 127536

Short mast - directivity - able to rotate - small . . . easy answer. Look
at the TGM Quagi mini beam. Check out the reviews on eHam. Probably one of
the highest rated antennas of all time.
--
Radio K4IA
Craig "Buck"
Fredericksburg, Virginia USA

FISTS 6702 CC 788 Diamond 64
K1# 470 K2# 2460
"Richard Cassano" <rcassano@optonline.net> wrote in message
news:3rCS9.567$G01.76378@news4.srv.hcvlny.cv.net...
> I'm relatively new to this hobby and would like some advice on setting up
a
> base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230
> antenna tuner and fifty feet of wire hung about ten feet up between house
> and a tree. I did this just to get started and realize it is a flaky
set-up.
> Have lots of RFI on all bands during the day. At this time I'm willing to
> spend some money, ($300) on a better antenna system and would like any
> advice on the biggest bang for the buck. One goal for me is to communicate
> with some Ham friends who are cruising aboard sailboats in the Caribbean,
> (south of me). In addition, one of these cruisers will be heading for the
> Azores, (east of me) in the spring and I would like to be able to stay in
> touch with him while he is underway. Any antenna system I purchase should
> have sufficient gain to enable reaching mid-ocean. I can put a short mast
on
> the chimney, (ranch house), however very large beams are not going to get
by
> the town code. Any advice would be much appreciated - thanks.
> Richard Cassano, KC2ISG
> Greenlawn, NY, USA
>
>

497. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 02:24:48 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E1B8B9E.30407@attbi.com>
Source record: 127537

CONJUGAL MATCH --- WOW! How did we move from transmission lines, VSWR, antennas etc. to SEX??

I hope the group understands CONJUGATE MATCH?

DD, W1MCE

Reg Edwards wrote:
> Cec sez,
>
>>If
>>I remember correctly, your ability to process oxygen comes from
>>an ancient section of bacterial DNA.
>
>
> ======================
>
> The ability of life on this planet to process, oxygen, carbon, hydrogen and
> a few other odds-and-ends has now advanced to the stage of generating
> gigabytes of waffle on Reflected Power, Conjugal Matches, So-called SWR
> meters, Dipole End-Z, Virtual Short Circuits, etc.
>
> Anybody taking bookings for Andromeda?
> ---
> Reg.
>
>
>

498. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 02:30:28 UTC
From: "Antti J. Huhtala" <ahuhtal4@welho.com>
Message-ID: <3E1B8D43.EA11AADE@welho.com>
Source record: 127521

"William M. Bickley" wrote:

> Antti:
>
> I don't know if this ends the discussion or prolongs it, but I DID DO as you
> presumed. The values quoted were observed on the meter. The computed
> number was derived from the equations in W2DU's REFLECTIONS.
>
> Bill W2ET
>

Thanks, Bill. That's what I thought. However, we already agreed with Ian
on the underlying principles at play here. Hope you got your answer...

73, Antti, OH2DT

499. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 02:40:19 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <ncMS9.32643$p_6.2744504@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127538

while about your bsineess, ask the tree service guy to come over your house for 20 bucks, how about the dudes with cherry pickers? Or, call the cable company, tell em you got a problem with your cable, the guy comes, he checks it, (you loosen connections on the ground) oh, by the way, since you are here could you stick this in the tree for me?
--

Those who want to be successful, will find a way,
those that don't, will find an excuse!

500. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 02:44:56 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avg3b7$8jt$1@venus.btinternet.com>
Source record: 127539

"Gary Boyles" wrote
> Hi,
> In Chapter 14 of "Reflections II" Maxwell gives some equations
concerning
> equivalent series and parallel circuits with both R and X.
>
> Eq. 14.1: Q=Xs/Rs=Rp/Xp where Xs=series reactance, Rs=series resistance,
> Xp=parallel reactance ect.
>
> Eq. 14.2: Rp=Rs(Q^2+1)
>
> Try as I may I don't see how you get equation 14.2 from 14.1.
> I am trying to get a better handle on the design of L networks and the
> importance of Q in the process.
> Any hints would be appreciated.

==========
Q is an algebraic symbol.

Q is merely a means of shortening, reducing, a ratio of a reactance to resistance to an algebraic symbol. It save printers ink when a quantity has to be repeated a number of times in a formula or equation. It also makes an equation more simple and easier to understand by the reader.

For example, the symbol L in the frequently used formula F = 1/Sqrt(L*C) represents an even more complicated formula for the inductance of a coil of given length and diameter and number of turns. C represents another formula for the capacitance beween a number of N plates of given length and breadth stacked with given spacing apart, multiplied by the dielectric constant of the insulating material.

See how algebraic symbols simplify matters? But if Maxwell simultaneously prefers to attach another meaning to Q for some entirely different purpose then he is entirely free to do so.

This elementary calculation can be done in their heads by 14-year old street kids inhabiting S.American city sewers, selling cannabis for a living and subjected to culling by policemen when their numbers are an embarassment to rich N.American tourists.

Gary, if you suspect I am pulling your leg just a little bit then you are right. As Cecil says, the Devil makes me do it. ;o)

Design of L-matching networks is the subject of program L_TUNER available in a few seconds, free of charge, from website below. I can't remember whether Q is mentioned. But whenever Q is mentioned in connection with antenna

tuners it is just a measure of the selectivity or broadness of tuning when adjusting the knobs on the front of the box. Low Q = Low selectivity.

Q is not an input to the design formula. It is what you have to accept when the design is complete. In general, the greater the ratio of the two impedances to be matched the greater the value of Q. We prefer, of course to have low values. But there's little we can do about it.

Download program L_TUNER now. You may also be interested in program T_TUNER. Same price.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

501. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 02:57:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1n4t6mspeaiab@corp.supernews.com>
Source record: 127540

Reg Edwards wrote:
> . . .
> Q is not an input to the design formula. It is what you have to accept when
> the design is complete. In general, the greater the ratio of the two
> impedances to be matched the greater the value of Q. We prefer, of course
> to have low values. But there's little we can do about it.
> . . .

You've put your finger on a reason for the popularity of pi networks.
The added degree of freedom you get with another adjustable component
allows you to choose the Q (within limits) while at the same time
effecting the impedance match. Likewise for tee, L-C-C, and other three
component matching networks.

Roy Lewallen, W7EL

502. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 03:15:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1B97ED.7090705@ieee.org>
Source record: 127541

Richard Fry wrote:
> - The world economy is in the tank.

Look at the bright side - gold was up 25% in 2002 and
short selling stock investors made money hand over fist.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

503. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 03:20:03 UTC
From: Greg Ordy <ordy@seed-solutions.com>
Message-ID: <avg5bv$3ho$1@slb0.atl.mindspring.net>
Source record: 127542

It is my belief, which could certainly be incorrect, that most of the current "antenna analyzers" measure SWR and Z, and compute R and X from SWR and Z.

I am aware of the discussion about "measuring" SWR versus "inferring" SWR. Without regard for that distinction, SWR can be "measured" with a bridge in the analyzer.

Somebody wrote:

>>>Actually, neither your faithful old servant nor your 259B measure SWR. What
>>>do you do with the numerical SWR value when you think you know it? You
>>>can't even calculate back to R+jX.

If you additionally know the Z, you can compute R and X, but without resolving the sign of X.

Without going into all of the details, SWR suggests a circle of points on the Smith Chart which include the desired R, X. The impedance (Z) line is usually a curve which can be drawn on the same Smith Chart. The line will intersect the circle at two points. One is R +jX and the other is R - jX. That's why the first generation of these units can't resolve the sign of X.

That's the graphical solution to computing R and X from "measured" SWR and Z. There is additional information in the AEA VIA-HF manual about the numeric solution.

Links to that page as well as general information on the accuracy of these antenna analyzers can be found on:

http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/EvalAnalyzers.htm

Greg Ordy, W8WWV

504. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 03:28:03 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1n6m7hbvuil20@corp.supernews.com>
Source record: 127543

While that solution may be available to the morally bankrupt, the rest of us
will use other, but more acceptable means.

And people wonder why it was acceptable for the Enron folks to act the way
they did.

You Sir, are a scoundrel of the first order.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"George Kinzer" <horseflygk@worldnet.att.net> wrote in message
news:ncMS9.32643$p_6.2744504@bgtnsc04-news.ops.worldnet.att.net...
> while about your bsineess, ask the tree service guy to come over your
house
> for 20 bucks, how about the dudes with cherry pickers? Or, call the cable
> company, tell em you got a problem with your cable, the guy comes, he
> checks it, (you loosen connections on the ground) oh, by the way, since
you
> are here could you stick this in the tree for me?
> --
>
>
>
>
> Those who want to be successful, will find a way,
> those that don't, will find an excuse!
>
>
>

505. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 04:07:40 UTC
From: "Antti J. Huhtala" <ahuhtal4@welho.com>
Message-ID: <3E1BA40B.CE91011F@welho.com>
Source record: 127531

Tarmo Tammaru wrote:

> Bill,
>
> I repeated your experiment on an MFJ269. Here is what I got:
>
> for Z=16 + j46 > SWR = 5.1
>
> for Z=14 + j46 > SWR = 6.0
>
> I haven't calculated the theoretical SWR for these, but seems like it is
> very sensitive to the small R value; so, any error in rhe R value will make
> a big difference in the SWR. It might be that the 259 gives the correct SWR
> value, and wrong R value. Looks like 10% makes a big difference, and I don't
> know that they claim any better than that.
>
> Tam/WB2TT
> "William M. Bickley" <bickley@dmv.com> wrote in message
> news:v1gdqb8gggr82f@corp.supernews.com...
> > The few examples of R, X and SWR combinations in the manual for the 259B
> are
> > consistent with the classical equations I'm familiar with. One such
> example
> > in the manual is R=153, X=62 and SWR =3.61. When I plug real-world
> readings
> > for R and X from my 259B into these equations, however, the SWR shown on
> the
> > 259B does not match the computed value. An example is R=16, X=46 and
> > SWR=4.1 on the 259B, when the equations I have say the SWR is 5.9 (Zc=50).
> >
> > It doesn't take much for this stuff to become black magic to me. What am
> I
> > missing?
> >
> > Bill W2ET

Tam, my calculation shows a theoretical SWR of 5.92 for your first example,
and 6.73 for the second, in a 'pure 50 ohm' system. Thus, measured SWR values
are in error by 16 % and 12 %, respectively, provided that your R and X values
are true values ie. do not contain measurement errors.
If 'real coax' was included, theoretical SWR values would be slightly higher.
As CAM showed on another thread of this subject, R and X values measured
with his MFJ-259B are not 100 % accurate. Therefore, theoretical SWR values
calculated on the basis of these are little more than of academic interest
only.

Like I indicated earlier in dealing with my MFJ-259, I don't put too much weight
on R values my analyser shows. The same goes for the *magnitude* of SWR.
However, the *frequency* on which _minimum_ SWR occurs if/when I measure
an antenna at its feedpoint, coincides with the frequency on which my SWR
bridge shows lowest value. Therefore, I use my MFJ-259 to establish only the
resonant frequency of an antenna - if I can reach the feedpoint.

73, Antti, OH2DT

506. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 04:12:58 UTC
From: richardharrison@webtv.net
Message-ID: <10318-3E1BA54A-160@storefull-2311.public.lawson.webtv.net>
Source record: 127547

Roy Lewallen wrote:
"But this is not the same as two end fed antennas without the
groundplane at the midpoint."

What difference do you refer to?

I took George`s question to be:
What is the drive point impedance of a 1/2-wave rod at one end?

If at first resonance a 74-ohm dipole in free space is related to a 37-ohm monopole, perpendicular and adjacent to a perfect conducting plane, by a factor of (2), it appears to me that the same dipole at second resonance would have the same relationship. That is that the entire dipole will have double the drivepoint resistance of the monopole.

At second resonance, the dipole is one wavelength, or 1/2-wavelength per side. Bailey gives the resistance at the drivepoint of a center-fed full-wave dipole. The end-fed 1/2-wave rod is 1/2 the resistance of the whole dipole. This resistance depends on the circumference of the rod material.

Bailey`s numbers answer George`s question, if I correctly understood the question.

Best regards, Richard Harrison, KB5WZI

507. Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 04:23:40 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <9JNS9.2443$7h3.640287@news20.bellglobal.com>
Source record: 127545

It is really quite amazing what one can find on the Internet...

http://appft1.uspto.gov/netahtml/PTO/srchnum.html
Enter in Patent Application number: "20020190904"
(without the quotes)

Or just click below and be done with it...
http://makeashorterlink.com/?F61C23003

Hey look !

Inventor name: Cohen, Nathan
Title: Cylindrical conformable antenna on a planar substrate
Dated: December 19, 2002 - Just a few weeks ago...
(Apologies for not noticing sooner - holidays and all...)

A *very* interesting admission: "The complex pattern (40) preferably is a fractal pattern, deterministic or otherwise, but NEED NOT BE A FRACTAL."

Also: "What is claimed is: <snip> 4. The system of claim 2, wherein said complex pattern has at least one characteristic selected from a group consisting of <snip> (e) said complex pattern does NOT DEFINE A FRACTAL."

<gasp...> (implications sink in...)

BwaaahahahahahaHAHAHAHA...
<thunk> (laughing so much, fell off chair...)
<gasping for air...> <gasping for air...>
BwaaahahahahahaHAHardeeharhar...
(ROFLMAO...)

Regards,

Jeff Harvey, VE1BLL/VE3
Ottawa

508. Re: Can more than one vertical element be fed with the same coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 04:32:23 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3E1BA9D7.8050005@comcast.net>
Source record: 127544

Michael,

I did this years ago. A 20 M vertical fed with coax and a 10 m and 15 m fed from the same point. I spaced the two extra elements about 6 inched either side of the 20 M element. I cut the 10 and 15 M elements too short and fed them from the 20 M element with some stiff bare wire. I could tune the 10 and 15m elements by varying the length of this wire. This really made things simple.

I used several radials cut for 20 meters and laid out across the roof of the house and tucked under the shingles. This antenna served me well for years!

Les, AA4F

Michael wrote:

> Forgive the dumb question but I can't for the life of me remember if
> this is possible and all my reference material is packed away at the
> moment. I know it's possible to feed several dipoles cut for different
> bands from the same coax but can that be done with quarter wave
> verticals? In other words, I want to cut one vertical element for 10
> meters and one for 20 meters, then attach the shiled of the coax to a
> ground radial sytem and the center conductor to both quarter wave
> elements. Will the antennas resonate on their respective bands?
> I don't want to go to the trouble of building a trap vertical. I
> figure for only two bands that I can make two elements. Am I way off
> base on this?
> Tnx and 73,
> Michael, W4HIJ
>

509. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 04:41:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avga59erk1@venus.btinternet.com>
Source record: 127546

"Roy Lewallen" wrote -
.
> Reg Edwards wrote:
> > . . .
> > Q is not an input to the design formula. It is what you have to accept
when
> > the design is complete. In general, the greater the ratio of the two
> > impedances to be matched the greater the value of Q. We prefer, of
course
> > to have low values. But there's little we can do about it.
> > . . .
>
> You've put your finger on a reason for the popularity of pi networks.
> The added degree of freedom you get with another adjustable component
> allows you to choose the Q (within limits) while at the same time
> effecting the impedance match. Likewise for tee, L-C-C, and other three
> component matching networks.

==========

I beg to differ. The reason for the popularity of T networks as antenna tuners is NOT the facility to control Q. More likely it's the cost!

This is because, to maximise power efficiency, the lowest posssible operating Q is required.

The lowest value of Q also maximises combined antenna+feedline+tuner bandwidth. This improves operating convenience by reducing the number of times the tuner needs adjusting (to maintain low SWR) when changing frequency within an amateur band.

Unfortunately a T network ALWAYS has a higher Q than its equivalent Pi network when matching the same external impedances. And so tuner component losses are ALWAYS greater when using a T network. The extra degree of freedom provided by the third knob, if used just to vary Q, can only makes things worse. We should not use an antenna tuner as an extra high-Q means of filtering transmitter harmonics from the antenna.

The ONLY reason a T is more popular than the L is that the L often requires inconvenient, impractical, expensive component values such as 100 uH roller-coasters and 2000 pF high-voltage variable capacitors, switching facilities to change direction of transmission through the network, facilities to interchange L an C, facilities to insulate BOTH sets of capacitor plates from ground.

The extra parasitic reactances in wiring and switches would themselves make a mess of operation on 15m and 10m bands.

But T network losses are not unduly excessive and we are happy to accept an inexpensive pair of 300 pF tuning capacitors in the T network even though it constitutes a high pass filter when according to Terman we should prefer a low pass.

Reg, G4FGQ

510. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 05:14:21 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E1BB3AC.A56929FA@northwest.com>
Source record: 127548

the patent descriptions have to be deliberately vague, yet all-encompassing,
to inhibit future patent infringements...

.....

"J. Harvey" wrote:

> It is really quite amazing what one can find on the Internet...
>
> http://appft1.uspto.gov/netahtml/PTO/srchnum.html
> Enter in Patent Application number: "20020190904"
> (without the quotes)
>
> Or just click below and be done with it...
> http://makeashorterlink.com/?F61C23003
>
> Hey look !
>
> Inventor name: Cohen, Nathan
> Title: Cylindrical conformable antenna on a planar substrate
> Dated: December 19, 2002 - Just a few weeks ago...
> (Apologies for not noticing sooner - holidays and all...)
>
> A *very* interesting admission: "The complex pattern (40) preferably is a
> fractal pattern, deterministic or otherwise, but NEED NOT BE A FRACTAL."
>
> Also: "What is claimed is: <snip> 4. The system of claim 2, wherein said
> complex pattern has at least one characteristic selected from a group
> consisting of <snip> (e) said complex pattern does NOT DEFINE A FRACTAL."
>
> <gasp...> (implications sink in...)
>
> BwaaahahahahahaHAHAHAHA...
> <thunk> (laughing so much, fell off chair...)
> <gasping for air...> <gasping for air...>
> BwaaahahahahahaHAHardeeharhar...
> (ROFLMAO...)
>
> Regards,
>
> Jeff Harvey, VE1BLL/VE3
> Ottawa

511. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 05:17:26 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <GvOS9.782$IC6.75863@news20.bellglobal.com>
Source record: 127549

"L Caracciolo"
> the patent descriptions have to be deliberately vague,
> yet all-encompassing, to inhibit future patent infringements...

Perhaps you've missed some of the history on this newsgroup.

He has claimed that fractal geometry provides some benefit to humanity with respect to antenna performance. His latest patent application now admits that any complex (but non-fractal) squiggly line provides similar benefits. This is *exactly* what others have been trying to tell him for quite some time.

The admission implicit in his patent application is extremely funny given the history.

512. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 06:14:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E1BC1DF.6A74C215@cwis.net>
Source record: 127550

J. Harvey,
Be careful! He'll sue you...
'Doc

513. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 06:22:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1ngsulhth035d@corp.supernews.com>
Source record: 127551

George used a Zepp antenna as an example of the antenna he was asking about, and asked about the impedance at the end of a dipole. I took all this to mean that the antenna was in free space, or at least well elevated, and not protruding from a ground plane.

Mount a vertical antenna on a ground plane and place a source at its base, with one wire connected to the ground plane and the other to the base of the vertical. The impedance is well known, and is half the impedance of a free-space dipole of twice the length of the vertical. Now make the ground plane go away, leaving one of the source terminals dangling. This is what I interpret George's question to ask: What is the impedance seen by this source? I don't seem able to communicate that it's not the same as it was when the ground plane was there and the source was connected to it.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:
> "But this is not the same as two end fed antennas without the
> groundplane at the midpoint."
>
> What difference do you refer to?
>
> I took George`s question to be:
> What is the drive point impedance of a 1/2-wave rod at one end?
>
> If at first resonance a 74-ohm dipole in free space is related to a
> 37-ohm monopole, perpendicular and adjacent to a perfect conducting
> plane, by a factor of (2), it appears to me that the same dipole at
> second resonance would have the same relationship. That is that the
> entire dipole will have double the drivepoint resistance of the
> monopole.
>
> At second resonance, the dipole is one wavelength, or 1/2-wavelength per
> side. Bailey gives the resistance at the drivepoint of a center-fed
> full-wave dipole. The end-fed 1/2-wave rod is 1/2 the resistance of the
> whole dipole. This resistance depends on the circumference of the rod
> material.
>
> Bailey`s numbers answer George`s question, if I correctly understood the
> question.
>
> Best regards, Richard Harrison, KB5WZI
>

514. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 06:47:42 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avghi6$qd4$1@slb2.atl.mindspring.net>
Source record: 127553

Roy:

[snp]
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v1mpk4k87q3sb7@corp.supernews.com...
> Let's see. According to this theory, the impedance looking into an open
> circuit is 377 ohms. Then if I disconnect the antenna wire, the source
> should see 377 ohms looking each way, or 2 X 377 ohms = 754 ohms. But
> EZNEC doesn't report 754 ohms when you put a source on a very short, one
> segment wire. And my GR doesn't show 754 ohms when I measure an open
> circuit. Hmph. Must be defective.
[snip]

Heh, heh... When was the last time you had your GR calibrated? ;-)

On a related note...

It is well known that "gamma" or "delta" matching techniques may be used to
transform the
driving point impedance [DPI] of an antenna element. The first introduces
antenna currents
[common modes] on the transmission line, while the second does not.

Iv'e always wondered about the "limits" to this kind of matching, and what
happens to the
"reflected wave" at the match. ;-)

i.e. What is the limit reached by the DPI for these techniques as the
matching point approaches
the element ends [for finite diameter wire/tubing]?

In the beginning the delta match is simply a short circuit at the element
center, then as the matching
points are spread out... the delta match is a small delta loop with "end
loading" ears, and ultimately
the "delta" match "morphs" into a full delta loop when the matching points
reach the end of the element.

In such a "continuous" morph, the DPI must be continuous in some sense,
starting at zero and
ultimately approaching the DPI of a delta loop, but how high does it get
between those two end
points?

This is not impossible, but is difficult, to "model" with NEC, since it
involves transmission lines that
radiate.

--
Peter K1PO

515. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 06:52:39 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avghre$23$1@slb0.atl.mindspring.net>
Source record: 127554

Jeff:

[snip]
> Inventor name: Cohen, Nathan
> Title: Cylindrical conformable antenna on a planar substrate
:
:
> A *very* interesting admission: "The complex pattern (40) preferably is a
> fractal pattern, deterministic or otherwise, but NEED NOT BE A FRACTAL."
>
> Also: "What is claimed is: <snip> 4. The system of claim 2, wherein said
> complex pattern has at least one characteristic selected from a group
> consisting of <snip> (e) said complex pattern does NOT DEFINE A FRACTAL."
>
> <gasp...> (implications sink in...)
[snip]

Uh, oh... that series of claims, when carried to the limit, could put the
Universe under patent
control.

What will the "evil Doctor" attempt next?

Time to call in James A. Bond! [Did you know the "A" stands for Aerial?]

--
Peter K1PO

516. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 06:56:04 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avgi1r$4eb$1@slb2.atl.mindspring.net>
Source record: 127555

"L":

[snip]
"L Caracciolo" <larryc@northwest.com> wrote in message
news:3E1BB3AC.A56929FA@northwest.com...
> the patent descriptions have to be deliberately vague, yet
all-encompassing,
> to inhibit future patent infringements...
[snip]

Unhh... Oh yeah.

Thanks for that bit of wisdom!

Luckily, even tho the poor overworked USPO examiners now operate under
duress, our courts still allow for a
much more persistent defense against such practices.

--
Peter K1PO

517. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 07:01:46 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avgichopt1@slb9.atl.mindspring.net>
Source record: 127556

Jeff:

[snip]
> His latest patent application now admits
> that any complex (but non-fractal) squiggly line provides similar
benefits.
> This is *exactly* what others have been trying to tell him for quite some
> time.
>
> The admission implicit in his patent application is extremely funny given
> the history.
[snip]

Hey!

Maybe not given the history of "mini-Meglamania"! The "evil Doctor"
may just be attempting to patent all of Euclidean Geometry!

Uh, oh... he studied Physics, maybe he also knows about non-Euclidean
Geometry!

If so then... even the netherworld may be held hostage to his evil schemes.

We need for URSI to send in the inspectors and have our politicos declare
a desire for a regime change in the realm of antenna Geometry.

--
Peter K1PO

518. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 07:27:58 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avgjtm$sb0$1@slb6.atl.mindspring.net>
Source record: 127557

Reg, Roy, et al:

[snip]
> But T network losses are not unduly excessive and we are happy to accept
an
> inexpensive pair of 300 pF tuning capacitors in the T network even though
it
> constitutes a high pass filter when according to Terman we should prefer a
> low pass.
> ---
> Reg, G4FGQ
[snip]

High Q, low Q... everyone is entitled to go to hell their own way.

Here's a contrarian thought...

One of the "cons" of using the "conventional" wisdom for adjusting T-tuners
tuners, especially
on the lower bands [i.e. for a T-tuner use the lowest capacitance, hence
highest Q setting] is
that the system is then not sufficiently broadbanded for those of us
"operators" who like to
make [rapid] QSYs. i.e. T-tuner setting where, at least on 160/75 m, one
can only shift a
handful of kHz before grabbing for the tuner knobs makes rapid QSY
difficult.

I have often found it convenient, especially with low band CW net operations
to operate
with a much lower T-tuner Q setting thus allowing rapid no-hands QSY when
NCS requests
QNV on a busy traffic night.

With the extra degree of freedom resulting from three adjustable elements it
is possible to
set the T-tuner elements for a larger capacitance, hence lower Q, tuner
setup so that one
achieves a broader bandwidth.

I never see anyone offering such "operating" advice for tuners. It seems
that most advice
on adjusting tuners emanates from "techies" who are trying to maximize power
transfer and
not from traffic handlers who wish to maximize operating convenience.

I presume the same might be true for DX'ers.

--
Peter K1PO

519. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 08:52:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1npm0shbeq1fd@corp.supernews.com>
Source record: 127558

What justification do you have in stating that a delta match doesn't introduce common mode current on the feedline? If the delta match is anywhere except at the center of the dipole, it certainly does introduce common mode current.

When there's common mode current, the impedance seen by the source depends just as much on the feedline as it does on the "antenna" wire, since the feedline is just as much a part of the antenna as the "antenna" wire.

If you eliminate common mode current on the feedline, by means of a magical perfect balun, magical delta match, or other scheme, then one terminal of the source is open circuited when you move it to the end of the antenna wire -- there's no current flowing from it since there's nowhere for the current to flow to. Consequently, the impedance it sees is infinite. If you don't choke the feedline common mode current, then you're not at the end of the antenna at all -- you've got a (perhaps bent) dipole, where one leg is the feedline.

I've said it about every way I can think of. Anyone who still doesn't understand why a source having one terminal disconnected won't see an infinite impedance and why no current flows from it will have to go back to beginning circuit analysis and learn Kirchoff's current law before we can have much of a meaningful conversation.

But I know you guys can do beginning technician level circuit analysis, so this must be another of those Christmas-Fools-Day jokes on me. Right? Haha. That's all, folks.

Roy Lewallen, W7EL

Peter O. Brackett wrote:
> Roy:
>
> [snp]
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v1mpk4k87q3sb7@corp.supernews.com...
>
>>Let's see. According to this theory, the impedance looking into an open
>>circuit is 377 ohms. Then if I disconnect the antenna wire, the source
>>should see 377 ohms looking each way, or 2 X 377 ohms = 754 ohms. But
>>EZNEC doesn't report 754 ohms when you put a source on a very short, one
>>segment wire. And my GR doesn't show 754 ohms when I measure an open
>>circuit. Hmph. Must be defective.
>
> [snip]

>
> Heh, heh... When was the last time you had your GR calibrated? ;-)
>
> On a related note...
>
> It is well known that "gamma" or "delta" matching techniques may be used to
> transform the
> driving point impedance [DPI] of an antenna element. The first introduces
> antenna currents
> [common modes] on the transmission line, while the second does not.
>
> Iv'e always wondered about the "limits" to this kind of matching, and what
> happens to the
> "reflected wave" at the match. ;-)
>
> i.e. What is the limit reached by the DPI for these techniques as the
> matching point approaches
> the element ends [for finite diameter wire/tubing]?
>
> In the beginning the delta match is simply a short circuit at the element
> center, then as the matching
> points are spread out... the delta match is a small delta loop with "end
> loading" ears, and ultimately
> the "delta" match "morphs" into a full delta loop when the matching points
> reach the end of the element.
>
> In such a "continuous" morph, the DPI must be continuous in some sense,
> starting at zero and
> ultimately approaching the DPI of a delta loop, but how high does it get
> between those two end
> points?
>
> This is not impossible, but is difficult, to "model" with NEC, since it
> involves transmission lines that
> radiate.
>
> --
> Peter K1PO
>
>

520. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 09:11:27 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0301080111.6f3c6104@posting.google.com>
Source record: 127559

> Hi Arie,
> Please look at the editor in the new release.
> Its not the real editor anymore like in version 5.0!
> The program now opens my notepad!
>
Select 'Nec-2 editor' in the 'Settings' menu on the 'Main' (F2) form
and you will have your nec-2 based editor back.

For know there are two minor bugs reported and fixed. Let me know if
one should think he found a bug or would like to receive the latest
bugfix.

Concerning the patents, I don't think so, because the information I
used is all freely available on the Internet and not just related to
antenna optimization. If you wish I could give you all the links where
I found the documents I used as background for creating the routines.

Arie.

521. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 10:00:00 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avgsqsbrh1@slb5.atl.mindspring.net>
Source record: 127560

Roy:

[snip]
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v1npm0shbeq1fd@corp.supernews.com...
> What justification do you have in stating that a delta match doesn't
> introduce common mode current on the feedline? If the delta match is
> anywhere except at the center of the dipole, it certainly does introduce
> common mode current.
[snip]

Sorry if I wasn't clear. I was not "fooling around" when I wrote those
delta feed musings. The
other parts of my previous post was "writ ironic" as I am sometimes wont to
do.

I was envisioning two styles of delta match. In the asymmetric feed case,
the delta is held fixed
and then "slid" along the element towards the end. In the symmetric feed
case, the delta is always
centered but is widened until the attachment points reach the element ends.

My prior comments and thoughts re the delta match "morphing" were meant to
apply *only* to
the center fed alignment. In that case there will be no common modes
excited.

In general, the driving point impedance of an antenna element is a function
of the feedpoint
attachment points on the element whether centered or not. This phenomena
has often been used
to effect driving point impedance [DPI] transformations for antennas.

The DPI increases as the source approaches the ends of the elements.

In the case of asymmetric feed clearly the DPI tends towards infinity as the
feedpoint approaches the
end of the element [It simply becomes an open circuit on one side,
notwithstanding the 377 Ohm
ratio of epsilon to mu of free space, heh, heh.] The rate at which the DPI
approaches infinity should
as the feed point approaches the element ends must be a function of the
element diameter and the width
of the delta. It may not actually reach infinity in the case of a finite
non-zero delta width, even when the
feedpoint reaches the end.

Of course there will be common modes [feedline antenna currents] excited by
the asymmetry.

When a feedline is used to remote the source, it is possible to "choke" off
some of the feedline antenna
currents using common mode chokes/a.k.a current baluns, to achieve a more
typical far field pattern. But
asymmetric feed approaches to increasing the DPI will always suffer from
some remnants of the [usually
unwanted] common mode excitation.

In the case of a symmetric delta feed the DPI increases but does not tend
towards infiinity as the
delta is widened until the attachment points reach the element ends, since
the geometry
then "morphs" towards a delta loop and the delta obviously becomes part of
the radiating element.
Here there will be no common modes excited, but the DPI will not tend to
infinity at any delta feed
attachment points on the element.

Similar effects occur with "gamma" matches... In these musings, "the devil
is in the details" and
degenerate forms of deltas and gammas may invalidate some of these
assertions.

--
Aside:

In any case, I believe the OP seemed to be interested in the "engineering"
details and the practical
methods or techniques of "end feeding" an element or dipole. And... we all
probably have not helped
the OP with any of these comments.

i.e. From the OP's view point, "we" have told him that

End fed dipoles won't work because the feed point is an open circuit!

While, clearly end feeding does "work" since many [including myself] have
done so, and this technique
is written up in many editions of amateur antenna handbooks as well as
advertised by antenna manufacturers
of "on glass" antennas and end fed 1/2 wave verticals, etc...

For the elucidation of the OP "we" should have been more direct and told him
that in the case of end feeding
a dipole, the dipole will radiate, sometimes quite effectively, but the
feedline will always form part of the antenna,
consequently the far field pattern will not be that of a dipole, and the
driving point impedance to be expected
will depend upon the feedline length but in most ham locations/applications
it will be finite and quite large in
the range of thousands of Ohms.

--
Peter K1PO

522. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 10:15:57 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avgtom$2un$1@slb0.atl.mindspring.net>
Source record: 127561

Arie:

[snip]
> Concerning the patents, I don't think so, because the information I
> used is all freely available on the Internet and not just related to
> antenna optimization. If you wish I could give you all the links where
> I found the documents I used as background for creating the routines.
>
> Arie.
[snip]

Sorry, I was just being facietious when I wrote about patents. A reaction
to
the continuous stream of "fractenna" postings threatening litigation against
literally
everyone who dares to think about antenna optimization.

If it is not too much trouble for you I am sure that there will be some here
who would appreciate your posting links and documents on genetic
opitmization
of antennas.

I am particularly interested comparisons of the speed of convergence of
genetic
optimization compared to other methods of mathematical optimization of
antennas.

--
Peter K1PO

523. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 10:17:34 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <BPN26YF+q$G+EAwd@ifwtech.co.uk>
Source record: 127562

Reg Edwards wrote:
>"Roy Lewallen" wrote -
>> You've put your finger on a reason for the popularity of pi networks.
>> The added degree of freedom you get with another adjustable component
>> allows you to choose the Q (within limits) while at the same time
>> effecting the impedance match. Likewise for tee, L-C-C, and other three
>> component matching networks.
>
>==
>
>I beg to differ. The reason for the popularity of T networks as antenna
>tuners is NOT the facility to control Q. More likely it's the cost!
>

Beg to differ again: neither of the above.

The popularity of T-networks arises from their wide matching range.

You have three adjustments to match only two variables, R and X of the load impedance, so a third thing is varying as well - the operating (or loaded) Q of the network.

This ability to match the required values of R and X at more than one value of operating Q is a *drawback* of T-networks. It means that the network can easily be set up with a higher operating Q than necessary... and that means internal higher losses than necessary.

The instruction book can tell you to look for the impedance match that involves the *lowest* possible value of L, but the manufacturer cannot make you do that, or protect you from your own actions. The ability to smoke the or arc the capacitors is the price you pay for flexible matching.

In contrast, there are 8 different configurations of L-network, and each one has a much more limited matching range than the T. You can't make a wide-range L-network tuner without switching or reversing the network to change the configuration. None of the configurations is very practical for matching loads close to (50 + j0).

However, the L-network has one big advantage over the T: there are only two adjustments to match two variables, so the operating Q is fixed. Operating Q = minimum Q = maximum Q = optimum Q.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

524. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 10:21:28 UTC
From: "Antti J. Huhtala" <ahuhtal4@welho.com>
Message-ID: <3E1BFBA8.D0CF011C@welho.com>
Source record: 127552

Greg Ordy wrote:

> It is my belief, which could certainly be incorrect, that most of the
> current "antenna analyzers" measure SWR and Z, and compute
> R and X from SWR and Z.
>
> I am aware of the discussion about "measuring" SWR versus "inferring"
> SWR. Without regard for that distinction, SWR can be "measured"
> with a bridge in the analyzer.
>
> Somebody wrote:
>
> >>>Actually, neither your faithful old servant nor your 259B measure SWR. What
> >>>do you do with the numerical SWR value when you think you know it? You
> >>>can't even calculate back to R+jX.
>
> If you additionally know the Z, you can compute R and X, but without resolving the sign
> of X.
>
> Without going into all of the details, SWR suggests a circle of points on the Smith Chart
> which include the desired R, X. The impedance (Z) line is usually a curve which can be
> drawn on the same Smith Chart. The line will intersect the circle at two points.
> One is R +jX and the other is R - jX. That's why the first generation of these units
> can't resolve the sign of X.
>
> That's the graphical solution to computing R and X from "measured" SWR and Z.
> There is additional information in the AEA VIA-HF manual about the numeric
> solution.
>
> Links to that page as well as general information on the accuracy of these
> antenna analyzers can be found on:
>
> http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/EvalAnalyzers.htm
>
> Greg Ordy, W8WWV

Greg, reading hastily through your EvalAnalyzers.htm, I was duly impressed
with all the tedious effort that went into its preparation. The results seemed,
well, surprisingly good for the analyzers evaluated.
A few years back I wrote a "Product review" on RF-1 in Radioamatoori, our
national ham magazine. In preparing the review, I did some testing, though
not nearly as extensively as you. Most of my tests were not included in the
published review, but for my own record I found that the accuracy left
something to be desired. Of course, I had just one unit to evaluate.
To get an explanation of some curious _field_ measurement results (both

SWR and Z), I wrote to Autek. The designer (W6WO, I think) suspected
the presence of strong RF fields.
And indeed, some 8 miles away, the strongest TV and FM-radio transmitters
in Southern Finland were pushing megawatts of ERP into the "aether". My
MFJ-259 was off the mark, too, but not quite as much. So, if you happen to
live near a BC station, don't rely on your readings too much.
As a side note, I wonder why you decided to use ON4UN's software instead
of N6BV's TLA which _does_ take into account the fact that real coax is not
'pure 50 ohms'? Calculated SWR and Z would have been slightly different.

73, Antti, OH2DT Technical editor, "Radioamatoori"

525. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 10:28:31 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <AeRm+jAP1$G+EARl@ifwtech.co.uk>
Source record: 127563

Roy Lewallen wrote:
>
>Yes, you can explain a lot of things very simply, if you don't mind
>using oversimplifications that are wrong.
>

"There is always an easy solution to every human problem - neat,
plausible, and wrong." H L Mencken

Never a truer word...

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

526. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 12:17:06 UTC
From: fractenna@aol.com
Message-ID: <20030108071706.29733.00000500@mb-cv.aol.com>
Source record: 127418

>Concerning the patents, I don't think so, because the information I
>used is all freely available on the Internet and not just related to
>antenna optimization. If you wish I could give you all the links where
>I found the documents I used as background for creating the routines.
>
>Arie.
>

No Arie;

It is not "freely" available. There is a patent in the US for the process you want folks to use. It is someone else's property.

This acknowledges that you are now so informed.

73,
Chip N1IR

527. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 12:24:48 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <kMUS9.680568$NH2.47583@sccrnsc01>
Source record: 127564

The responses to date to Gary's question are typical of this NG - they rarely answer the original question!

The answer to the original question is:

Find the impedance of the parallel circuit from 1/Z = 1/Rp + 1/jXp and invert the result.

Now set Z = Rs + jXs and equate the real and imaginary components on each side.

This gives Rs=(Xp^2)Rp/(Rp^2 + Xp^2) and Xs=(Rp^2)Xp/(Rp^2 + Xp^2)

Divide one expression by the other and Rs/Xs = Xp/Rp, which is defined as Q.

Now back substitute Rp = Xp/Q into the expression for Rs and the result is Rs = Rp/(Q^2 + 1)

Q.E.D.

Malcolm, W1/GW3NJY

"Gary Boyles" <jgboyles@aol.com> wrote in message news:a5889e9c.0301071610.72025246@posting.google.com...
> Hi,
> In Chapter 14 of "Reflections II" Maxwell gives some equations concerning
> equivalent series and parallel circuits with both R and X.
>
> Eq. 14.1: Q=Xs/Rs=Rp/Xp where Xs=series reactance, Rs=series resistance,
> Xp=parallel reactance ect.
>
> Eq. 14.2: Rp=Rs(Q^2+1)
>
> Try as I may I don't see how you get equation 14.2 from 14.1.
> I am trying to get a better handle on the design of L networks and the
> importance of Q in the process.
> Any hints would be appreciated.
>
>
> 73 Gary N4AST

528. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 12:31:07 UTC
From: fractenna@aol.com
Message-ID: <20030108073107.29733.00000501@mb-cv.aol.com>
Source record: 127326

>He has claimed that fractal geometry provides some benefit to humanity with
>respect to antenna performance.

Almost true: I state it as a fact. The humanity part is hyperbolic on your
part.

His latest patent application now admits
>that any complex (but non-fractal) squiggly line provides similar benefits.

No; I claim an invention and in doing so attempt to capture all embodiments
which are not prior art. That has nothing to do with any advantages of fractal
geometry. It has to do with ownership of novelty.

Also, this is not my latest patent application. It is a patent, and not even my
latest one. The latest patent application deals with artificial intelligence.
I have, oh I lost count, maybe 20 pending patents.

If you would like a short bio with patents see:

http://www.fractenna.com/nca_cohen_bio.html

>This is *exactly* what others have been trying to tell him for quite some
>time.

Of course they have, and since these folks you are referring to work for
competitors, why is your misinterrpretation surprising? Its not to me....

>The admission implicit in his patent application is extremely funny given
>the history.
>

The admission is in the novelty. Not the performance.I am glad novelty fills
you with pleasure.

Incidentally, the patent you seem to be referring to (inaccurately) protects
Comcyl(R) antennas, a variety of which have been sold and are out in the field,
demonstrating superior performance over broad band whips.

If you are a commercial concern, and have a need, we can sign an NDA and I can
show you some data

The word is "superior" performance.

Thanks for bringing this to the attention of
many of the fine folks here. Obviously, unsolicited.

73,
Chip N1IR

529. Feedback Request: SteppIR 3 el. Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 12:45:33 UTC
From: JS <wd1v@amsat.org>
Message-ID: <wd1v-96BCB3.07452208012003@netnews.attbi.com>
Source record: 127565

I'm looking at possibly purchasing a SteppIR 3 el. Yagi and am curious
what kinds of results anyone might report - especially folks that live
in extreme cold weather or windy areas.

http://www.steppir.com/

While not inexpensive at about $1200,

The upside seems to be
6 bands
no traps
1 coax feed
no tuner required
fast 180 degree direction switch
Great reports on customer service

The possible downside seems to be
Electro-Mechanical reliability over time due to temperature
Electro-Mechanical reliability over time due wind stress
Electro-Mechanical reliability of feedline to driven element brushes

Can you imagine other issues?

73,

John ~ WD1V
wd1v@amsat.org
Scope FAQ http://www.qsl.net/wd1v

530. VX5-r

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 13:00:18 UTC
From: Youngblood <youngbloodnospam@msn.com>
Message-ID: <ex2UaaxtCHA.2116@cpimsnntpa03>
Source record: 127566

Any success on replacement antennas for the Yaesu VX5-r?

--
We come. We go. And in between
we try to understand.

Rod Steiger

531. Re: Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 13:51:51 UTC
From: Glynn Kevin <kfglynn@mindspring.com>
Message-ID: <avhads$tq0$1@slb4.atl.mindspring.net>
Source record: 127567

Maybe you can work with a dipole/inverted-v mounted on a 10 Meter fiberglass pole. Or a half-square?

73 Kevin N2TO

"h4mb0ne" <h4mb0ne@hotmail.com> wrote in message news:b0a445bd.0301060821.494e5978@posting.google.com...
> I am looking for an antenna recommedation that will be used for
> portable operation with my Yaesu FT-817. Looking for something that
> will be used on 6 meter (QRP) when the band opens up. Any thoughts on
> which may be the best way to go? Looked at Miracle Whip, MP-1 Super
> Antenna, M2 HO Loop and the Buddipole.
>
> Again, I am looking for something with QRP DXing in mind.
>
> Thanks in advance.
> H4mb0ne

532. Re: Feedback Request: SteppIR 3 el. Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 13:53:41 UTC
From: fractenna@aol.com
Message-ID: <20030108085341.01997.00000081@mb-fx.aol.com>
Source record: 127416

Because the element separations are fixed, this limits the overall performance in terms of gain and F/B when looking at all 6 bands. I would, however, tend to think it works very well on 15 and 20, equivalent to a 3 el monobander. I would suspect the gain and F/B for the other bands are not as high.

I have seen the antenna and mechanically it is very impressive, so I doubt weather is an issue.

73,
Chip N1IR

533. splicing twinlead TV antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 14:09:44 UTC
From: WJSchaible <donovan820@attbi.com>
Message-ID: <IiWS9.610082$%m4.195398@rwcrnsc52.ops.asp.att.net>
Source record: 127568

There is a TV antenna in my attic that I will soon put into service for the first time (first for me anyway).
The feed wire (cable) runs down inside the living room wall. The cable appears to be a fancy version of the standard flat twinlead TV antenna wire. It has 2 parallel conductors and is lens-shaped in crossection. It is filled with a dense plastic foam which holds the conductors in their parallel orientation. It is the foam core that is lens-shaped in cross section. There is a foil wrapping on the outside of the foam and a tough plastic jacket on top of the foil. There are also some fine bare strands of wire running along with the foil.

The insulation is cut away at the end where the conductors are terminated in a plastic wall receptacle. The receptacle has 2 screw terminals on the back and corresponding holes on the front where it apparently mates with a plug - though I have never seen the plug. The receptacle actually has 3 holes: 2 for the screw terminals and a third hole (off set) that may be an alignment hole. The third hole is simply a hole in the plastic and there is no metal contact on the back side associated with the third hole. The conductor spacing in the cable is 0.28 inches, however the receptacle holes are 0.50 inches apart.

MY QUESTION IS: What is the 'nice' way to connect between this fancy cable and the TV set?

My inclination is to forget about the receptacle and simply solder a piece of regular flat twinlead wire onto the fancy lense-shaped twinlead that is in the wall. The receptacle is a nice tidy setup, but I don't know what to connect to it that has 0.50 inch spacing. This receptacle seems like a big discontinuity because it forces a transition from the 0.28 inch spacing to 0.50.

Also, should I connect the foil shield in the lens-shaped cable to the ground lug on the back of the TV set?

The antenna itself is not grounded. I will connect a wire on the vertical metal tube that supports the antenna and run it down to the basement and connect it to a water pipe. Maybe I should ground the horizontal member (the mast?) that holds all the cross pieces (directors and reflector?). I don't know which one to ground.

I appreciate your help.

Thank you.
Bill Schaible - in Seattle, WA, USA

534. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 14:17:40 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <llco1vga45siekq097vkvciqjdpsn8rmms@4ax.com>
Source record: 127569

On Wed, 8 Jan 2003 05:15:57 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> sent into the ether:

>Arie:
>
>[snip]
>> Concerning the patents, I don't think so, because the information I
>> used is all freely available on the Internet and not just related to
>> antenna optimization. If you wish I could give you all the links where
>> I found the documents I used as background for creating the routines.
>>
>> Arie.
>[snip]
>
>Sorry, I was just being facietious when I wrote about patents. A reaction
>to
>the continuous stream of "fractenna" postings threatening litigation against
>literally
>everyone who dares to think about antenna optimization.
Snip
Hi Peter,
He should have no patent problem as long as he does not put Buffoon in
the title of the program :<}
Dan
Need a construction safety person?
Direct hire or contract.
Safe Today - Here Tomorrow
Don't Just Say It - Live It
Remove left x for direct reply

535. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 14:26:41 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1od91ir3g5n4f@corp.supernews.com>
Source record: 127570

And note that he contrasted it with a Radio Shack antenna, certainly a
comparison with cutting edge state of the art.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:9JNS9.2443$7h3.640287@news20.bellglobal.com...
> It is really quite amazing what one can find on the Internet...
>
> http://appft1.uspto.gov/netahtml/PTO/srchnum.html
> Enter in Patent Application number: "20020190904"
> (without the quotes)
>
> Or just click below and be done with it...
> http://makeashorterlink.com/?F61C23003
>
> Hey look !
>
> Inventor name: Cohen, Nathan
> Title: Cylindrical conformable antenna on a planar substrate
> Dated: December 19, 2002 - Just a few weeks ago...
> (Apologies for not noticing sooner - holidays and all...)
>
> A *very* interesting admission: "The complex pattern (40) preferably is a
> fractal pattern, deterministic or otherwise, but NEED NOT BE A FRACTAL."
>
> Also: "What is claimed is: <snip> 4. The system of claim 2, wherein said
> complex pattern has at least one characteristic selected from a group
> consisting of <snip> (e) said complex pattern does NOT DEFINE A FRACTAL."
>
> <gasp...> (implications sink in...)
>
> BwaaahahahahahaHAHAHAHA...
> <thunk> (laughing so much, fell off chair...)
> <gasping for air...> <gasping for air...>
> BwaaahahahahahaHAHardeeharhar...
> (ROFLMAO...)
>
> Regards,

>
> Jeff Harvey, VE1BLL/VE3
> Ottawa
>
>

536. Re: Feedback Request: SteppIR 3 el. Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 14:43:28 UTC
From: k3bu@aol.com
Message-ID: <20030108094328.06387.00000813@mb-fp.aol.com>
Source record: 127329

>
>Because the element separations are fixed, this limits the overall
>performance
>in terms of gain and F/B when looking at all 6 bands. I would, however, tend
>to
>think it works very well on 15 and 20, equivalent to a 3 el monobander. I
>would
>suspect the gain and F/B for the other bands are not as high.
>
>I have seen the antenna and mechanically it is very impressive, so I doubt
>weather is an issue.
>
>73,
>Chip N1IR
>
>
>

Just displays the ignorance in the field of antenna design.

Bada BUm

537. Re: Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 14:52:51 UTC
From: cprstn54zz@att.net
Message-ID: <3e1c38f8.84409078@news-server.optonline.net>
Source record: 127571

On 6 Jan 2003 08:21:56 -0800, h4mb0ne@hotmail.com (h4mb0ne) wrote:
>I am looking for an antenna recommedation that will be used for
>portable operation with my Yaesu FT-817. Looking for something that
>will be used on 6 meter (QRP) when the band opens up. Any thoughts on
>which may be the best way to go? Looked at Miracle Whip, MP-1 Super
>Antenna, M2 HO Loop and the Buddipole.

I was thinking about this myself. What about a 6 meter pocket J-pole
out of twinlead? It would be around 12 ft long and cost less than $1.
You would hoist it with a line thrown over a branch. It could stow in
a shirt pocket.

Not to mention that it would also work on 3 meters -- which according
to my frequency chart is FM broadcast. I.e., it might well be a very
good hi-fi RX antenna too.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

538. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 15:18:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1C4135.4090006@ieee.org>
Source record: 127572

Roy Lewallen wrote:
> But I know you guys can do beginning technician level circuit analysis,
> so this must be another of those Christmas-Fools-Day jokes on me. Right?
> Haha. That's all, folks.

All you have to do, Roy, is substitute a fractal space plane for your
ground plane. If it had an infinite number of bends, it could be really
small, maybe even infinitesimal.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

539. Re: Feedback Request: SteppIR 3 el. Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 15:21:26 UTC
From: fractenna@aol.com
Message-ID: <20030108102126.01977.00000448@mb-fi.aol.com>
Source record: 127417

>>73,
>>Chip N1IR
>>
>>
>>
>
>
>Just displays the ignorance in the field of antenna design.
>
>Bada BUm
>

Sir:

What information am I lacking?

Cordially,

NC

540. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 15:25:37 UTC
From: jgboyles@aol.com
Message-ID: <a5889e9c.0301080725.752f6951@posting.google.com>
Source record: 127573

"Thomas C. Sefranek" <WA1RHP@ARRL.net> wrote in message
news:<47LS9.22163$9N5.2004493@newsread2.prod.itd.earthlink.net>...
> Gary Boyles <jgboyles@aol.com> wrote in message
> news:a5889e9c.0301071610.72025246@posting.google.com...
> > Hi,
> > In Chapter 14 of "Reflections II" Maxwell gives some equations
> concerning
> > equivalent series and parallel circuits with both R and X.
> >
> > Eq. 14.1: Q=Xs/Rs=Rp/Xp where Xs=series reactance, Rs=series resistance,
> > Xp=parallel reactance ect.
> >
> > Eq. 14.2: Rp=Rs(Q^2+1)
> >
> > Try as I may I don't see how you get equation 14.2 from 14.1.
>
> You can't, they are independent equations.
>
> 14.1 States the Quality factor for series form and parallel form.
> (Both are true.)
>
> 14.2 States the transform of Parallel to Series (or reverse).
>

Hi Thomas, Thanks for the response. I was thinking that eq. 14.1
gives Q by definition, and that 14.2 could be derived by manipulation,
expansion, or handwaving of 14.1. You are saying 14.2 is true by
definition?
73 Gary N4AST

541. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 16:21:19 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301080821.2ed70635@posting.google.com>
Source record: 127574

Arie
Is this an expanded form that provides a similar
format of the old 'AO ' program ?
How does it differ or improve its scope ?

Thanks again for generously
providing these to the amateur community.
Regards
Art

4nec2@gmx.net wrote in message news:<ee90361b.0301070120.69dc149f@posting.google.com>...
> Hello,
>
> For those still interested, I just released the latest 5.1 version for
> 4nec2 on www.qsl.net/wb6tpu/swindex.html
>
> Besides the traditional hill-climbing optimzer now also a flexible
> genetic-algorithm based optimizer is available.
>
> Due to some questions from this group I also made the following
> changes:
>
> - It is now possible to optimize over a range/band of frequencies.
> - More general approach for generating nec-2 output data.
> - More consistent display of gain-, F/B and F/R data.
> - Pre version 4.3 support for raw nec-2 input data re-enabled.
>
> Arie.

542. Re: splicing twinlead TV antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 16:53:16 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3E1C540F.3E8F07A5@verizon.net>
Source record: 127575

Forget the teinlead and use it as a fish line to pull coaxial cable through the wall. Install a 75:300 BALUN at the antenna and be done with it.

Dale W4OP

543. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 16:57:09 UTC
From: K4WGE <k4wge@msn.com>
Message-ID: <aef8300260e9d12c7f114fe485711b60.8246@mygate.mailgate.org>
Source record: 127576

"L Caracciolo"

>> the patent descriptions have to be deliberately vague,
>> yet all-encompassing, to inhibit future patent infringements...

: J. Harvey (JM002.Harvey_ANTI*SPAM_@Sympatico.ca)

>Perhaps you've missed some of the history on this newsgroup.

>He has claimed that fractal geometry provides some benefit to humanity >with respect to antenna performance. His latest patent application >now admits that any complex (but non-fractal) squiggly line provides >similar benefits.

>This is *exactly* what others have been trying to tell him for quite >some time.

In particular, one Steven Best, whom Nathan Cohen challeged to a
debate on the issue. Cohen said he would refute Dr. Best at WWW.N1IR.COM
but the site has been "under construction" for at least two years.

>The admission implicit in his patent application is extremely funny >given the history.

Steve Best should be quietly smiling to himself.

We won't expect Chip to admit defeat; his head is empty, but
unbowed.

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

544. Re: MFJ-259B SWR Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 18:00:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3upo1vkj3u7nt32q489dl5c0h85hm08jqa@4ax.com>
Source record: 127578

On Tue, 7 Jan 2003 22:20:03 -0500, "Greg Ordy"
<ordy@seed-solutions.com> wrote:

>Links to that page as well as general information on the accuracy of these
>antenna analyzers can be found on:
>
>http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/EvalAnalyzers.htm
>
> Greg Ordy, W8WWV
>

Hi Greg,

An excellent piece of work.

73's
Richard Clark, KB7QHC

545. Re: splicing twinlead TV antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 18:04:00 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <avhp64$9a6$1@slb6.atl.mindspring.net>
Source record: 127577

Or take a standard balun type f connector to 300 ohm. Hook the downlead (300ohm) just the wires not the shield. And put a jumper cable from the f connector to the f connector on the TV set.

Dan/W4NTI

"Dale Parfitt" <parinc@verizon.net> wrote in message news:3E1C540F.3E8F07A5@verizon.net...
>
> Forget the teinlead and use it as a fish line to pull coaxial cable through the
> wall. Install a 75:300 BALUN at the antenna and be done with it.
>
> Dale W4OP
>

546. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 18:34:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avhqv5$7ae$1@helle.btinternet.com>
Source record: 127579

Ian, you didn't differ from me - you just described the situation using
different words.

Reg

547. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 18:52:24 UTC
From: dplatt@radagast.org
Message-ID: <v1osr893pgp3d5@corp.supernews.com>
Source record: 127580

In article <avgichopt1@slb9.atl.mindspring.net>,
Peter O. Brackett <ab4bc@ix.netcom.com> wrote:

>Maybe not given the history of "mini-Meglamania"! The "evil Doctor"
>may just be attempting to patent all of Euclidean Geometry!
>
>Uh, oh... he studied Physics, maybe he also knows about non-Euclidean
>Geometry!

I can hear it now. "Back off! I've got a singularity, and I know how
to use it!"

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

548. Re: splicing twinlead TV antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 18:59:10 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E1C74FE.2853B9F2@cwis.net>
Source record: 127581

Bill,
You can do a couple of things. If you can find the
1/2" plug for the jack, you can just run twin lead to
the TV. Or, you can use a balun and run coax to the TV.
I don't think there would be much difference either way.
Also don't think running the grounded 'foil' to the TV
would have any advantage, or, grounding the antenna's
mast.
If you can't find the plug for the wall receptacle you
might be able to fabricate one. Polarity shouldn't be
much of an issue, but it should be easy to find out, just
turn the plug over. If you have an electronics supply
house near you you might see if they carry the plug...
'Doc

549. Re: splicing twinlead TV antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 19:03:02 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <avhsel$2jv6$1@news1.tribune.com>
Source record: 127582

The three prong wall plate was a very common TV connector, you might even still find one some where like a Radio shack with old stock.
KA9CAR

"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message news:avhp64$9a6$1@slb6.atl.mindspring.net...
> Or take a standard balun type f connector to 300 ohm. Hook the downlead
> (300ohm) just the wires not the shield. And put a jumper cable from the f
> connector to the f connector on the TV set.
>
> Dan/W4NTI
>
> "Dale Parfitt" <parinc@verizon.net> wrote in message
> news:3E1C540F.3E8F07A5@verizon.net...
> >
> > Forget the teinlead and use it as a fish line to pull coaxial cable
> through the
> > wall. Install a 75:300 BALUN at the antenna and be done with it.
> >
> > Dale W4OP
> >
>
>

550. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 19:50:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1C80FB.4010104@ieee.org>
Source record: 127583

Dave Platt wrote:
> I can hear it now. "Back off! I've got a singularity, and I know how
> to use it!"

Guess we'll probably never see fractal hand guns. Who would be
afraid of a .45 cal fractal hand gun the size of a peanut?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

551. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 20:08:50 UTC
From: jgboyles@aol.com
Message-ID: <a5889e9c.0301081208.6807ebbc@posting.google.com>
Source record: 127584

"Bibby" <bibby@attbi.com> wrote in message news:<kMUS9.680568$NH2.47583@sccrnsc01>...
> The responses to date to Gary's question are typical of this NG - they
> rarely answer the original question!
>
> The answer to the original question is:
>
> Find the impedance of the parallel circuit from 1/Z = 1/Rp + 1/jXp and
> invert the result.
>
> Now set Z = Rs + jXs and equate the real and imaginary components on each
> side.
>
> This gives Rs=(Xp^2)Rp/(Rp^2 + Xp^2) and Xs=(Rp^2)Xp/(Rp^2 + Xp^2)
>
> Divide one expression by the other and Rs/Xs = Xp/Rp, which is defined as Q.
>
> Now back substitute Rp = Xp/Q into the expression for Rs and the result is
> Rs = Rp/(Q^2 + 1)
>
> Q.E.D.
>
> Malcolm, W1/GW3NJY

Thank you Malcolm, that was just what I was looking for and helped lots.
73 Gary N4AST

552. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 20:13:58 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301081213.23fe0abf@posting.google.com>
Source record: 127585

What surprises me about this patent application is that information is
being disclosed before the patent has been reviewed by the Patent
Office!
This certainly takes away from the inventor any incentive to disclose
anything
until the invention is completed in its entirety.While he is consumed
with other matters such as patent office attorneys,business dealings
others can take it to the next level and sweep his feet from under
him. Are paper wrapper disclosures also published?
Art

mbrecht Sr." <w4jle@charter.net> wrote in message
news:<v1od91ir3g5n4f@corp.supernews.com>...
> And note that he contrasted it with a Radio Shack antenna, certainly a
> comparison with cutting edge state of the art.
>
> --
> For Admiral Poindexter's folks:
> Bomb, anthrax, attack, acid, hijack, skyjack
> sniper, plutonium, nuclear, Big Mac, jihad
> Democrats, terror, Howdy Doody, Oprah
>
> "Those that sacrifice freedom for security deserve neither"
>
>
> "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
> news:9JNS9.2443$7h3.640287@news20.bellglobal.com...
> > It is really quite amazing what one can find on the Internet...
> >
> > http://appft1.uspto.gov/netahtml/PTO/srchnum.html
> > Enter in Patent Application number: "20020190904"
> > (without the quotes)
> >
> > Or just click below and be done with it...
> > http://makeashorterlink.com/?F61C23003
> >
> > Hey look !
> >
> > Inventor name: Cohen, Nathan
> > Title: Cylindrical conformable antenna on a planar substrate
> > Dated: December 19, 2002 - Just a few weeks ago...
> > (Apologies for not noticing sooner - holidays and all...)
> >
> > A *very* interesting admission: "The complex pattern (40) preferably is a

> > fractal pattern, deterministic or otherwise, but NEED NOT BE A FRACTAL."
> >
> > Also: "What is claimed is: <snip> 4. The system of claim 2, wherein said
> > complex pattern has at least one characteristic selected from a group
> > consisting of <snip> (e) said complex pattern does NOT DEFINE A FRACTAL."
> >
> > <gasp...> (implications sink in...)
> >
> > BwaaahahahahahaHAHAHAHA...
> > <thunk> (laughing so much, fell off chair...)
> > <gasping for air...> <gasping for air...>
> > BwaaahahahahahaHAHardeeharhar...
> > (ROFLMAO...)
> >
> > Regards,
> >
> > Jeff Harvey, VE1BLL/VE3
> > Ottawa
> >
> >

553. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 20:34:08 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <sAednRSILJvfFoGjXTWcoA@comcast.com>
Source record: 127586

Since the feedline connects to the middle of the dipole, I don't see the advantage of having one end go towards the house. You want to keep it symmetrical, like drop both ends in an inverted V. With the highest point at 25 feet, and the ends dropping down, you migh be better of with a roof mounted vertical as some people have suggested. The dipole costs almost nothing; so you could try it first.

Somebody suggested 40m. Keep in mind that the only way you can work the Azores on 40m SSB is split frequency.

Tam/WB2TT
"Richard Cassano" <rcassano@optonline.net> wrote in message news:hEES9.1974$G01.477317@news4.srv.hcvlny.cv.net...
>
> "Tarmo Tammaru" <t-tammaru@home.com> wrote in message
> news:FOecnb_6N-yFYoejXTWcpA@comcast.com...
> > Do you have any trees that would let you put up a 20 meter dipole at least
> > 30 - 40 feet high?
>
> I may be able to get 25 feet up into the tree, (when it's not full of ice).
> 20 meters requires about 33 feet (?) of antenna - can I configure it as an
> "L" with the bottom of the "L" going to the house and the long side
> vertical?
> Richard
>
>

554. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 20:39:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <772p1vocr5b9b9lrplnsli8jbhdn3dnfsh@4ax.com>
Source record: 127587

On 8 Jan 2003 12:13:58 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>What surprises me about this patent application is that information is
>being disclosed before the patent has been reviewed by the Patent
>Office!
>This certainly takes away from the inventor any incentive to disclose
>anything
>until the invention is completed in its entirety.While he is consumed
>with other matters such as patent office attorneys,business dealings
>others can take it to the next level and sweep his feet from under
>him. Are paper wrapper disclosures also published?
>Art
>

Hi Art,

You completely missed the humor that Jeff found; and there was nothing
said about an "application."

Be that as it may, an inventor has up to a year FOLLOWING any
disclosure to apply for a patent and still preserve that privilege -
barring, of course, earlier applications (not disclosures to the PTO)
that predate a public disclosure.

As a side bar to Jeff's ironic discovery, I would offer an example
patent from 60 years earlier, and around the block from an outfit
known simply as General Radio: patent 2,294,941 (all of 7 pages long
with one page illustration and 4 formulas).

Compare GR's depth of knowledge, their description of the art, and
their discussions of the underlying principles to these marketing
scabs bloated with gibberish describing inconsequential minutia.

73's
Richard Clark, KB7QHC

555. Re: Feedback Request: SteppIR 3 el. Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 21:02:36 UTC
From: Bill Aycock <baycock@hiwaay.net>
Message-ID: <3E1C91EC.6050605@hiwaay.net>
Source record: 127588

I would look at the mailing list about the SteppUR in yhr Yahoo groups.

JS wrote:
> I'm looking at possibly purchasing a SteppIR 3 el. Yagi and am curious
> what kinds of results anyone might report - especially folks that live
> in extreme cold weather or windy areas.
>
> http://www.steppir.com/
>
> While not inexpensive at about $1200,
>
> The upside seems to be
> 6 bands
> no traps
> 1 coax feed
> no tuner required
> fast 180 degree direction switch
> Great reports on customer service
>
> The possible downside seems to be
> Electro-Mechanical reliability over time due to temperature
> Electro-Mechanical reliability over time due wind stress
> Electro-Mechanical reliability of feedline to driven element brushes
>
> Can you imagine other issues?
>
> 73,
>
> John ~ WD1V
> wd1v@amsat.org
> Scope FAQ http://www.qsl.net/wd1v

556. Re: splicing twinlead TV antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 21:15:07 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v1p572ageg8l6c@corp.supernews.com>
Source record: 127589

Grounding is probably a waste of time since the antenna is in the attic,
lightning has to go thru the roof first and you'll have other major problems
then...
Your twin lead probably has much less loss than coax so if you are in weak
signal area you my want to stay with foam or at least std 300 twin lead to
the set and install a balun there....
Make sure you put about one twist per foot in the lead and that will help to
cancel any noise pickup by the leadin.
"WJSchaible" <donovan820@attbi.com> wrote in message
news:IiWS9.610082$%m4.195398@rwcrnsc52.ops.asp.att.net...
> There is a TV antenna in my attic that I will soon put into service for
the
> first time (first for me anyway).
> The feed wire (cable) runs down inside the living room wall. The cable
> appears to be a fancy version of the standard flat twinlead TV antenna
wire.
> It has 2 parallel conductors and is lens-shaped in crossection. It is
> filled with a dense plastic foam which holds the conductors in their
> parallel orientation. It is the foam core that is lens-shaped in cross
> section. There is a foil wrapping on the outside of the foam and a tough
> plastic jacket on top of the foil. There are also some fine bare strands
of
> wire running along with the foil.
>
> The insulation is cut away at the end where the conductors are terminated
in
> a plastic wall receptacle. The receptacle has 2 screw terminals on the
back
> and corresponding holes on the front where it apparently mates with a
plug -
> though I have never seen the plug. The receptacle actually has 3 holes: 2
> for the screw terminals and a third hole (off set) that may be an
alignment
> hole. The third hole is simply a hole in the plastic and there is no
metal
> contact on the back side associated with the third hole. The conductor
> spacing in the cable is 0.28 inches, however the receptacle holes are 0.50
> inches apart.
>
> MY QUESTION IS: What is the 'nice' way to connect between this fancy
cable
> and the TV set?
>
> My inclination is to forget about the receptacle and simply solder a piece

> of regular flat twinlead wire onto the fancy lense-shaped twinlead that is
> in the wall. The receptacle is a nice tidy setup, but I don't know what
to
> connect to it that has 0.50 inch spacing. This receptacle seems like a
big
> discontinuity because it forces a transition from the 0.28 inch spacing to
> 0.50.
>
> Also, should I connect the foil shield in the lens-shaped cable to the
> ground lug on the back of the TV set?
>
> The antenna itself is not grounded. I will connect a wire on the vertical
> metal tube that supports the antenna and run it down to the basement and
> connect it to a water pipe. Maybe I should ground the horizontal member
> (the mast?) that holds all the cross pieces (directors and reflector?). I
> don't know which one to ground.
>
> I appreciate your help.
>
> Thank you.
> Bill Schaible - in Seattle, WA, USA
>
>
>
>
>
>
>
>

557. Re: Antenna recommendation 6 meter portable (FT-817)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 21:37:47 UTC
From: cprstn54zz@att.net
Message-ID: <3e1c998a.109130890@news-server.optonline.net>
Source record: 127590

On Wed, 08 Jan 2003 14:52:51 GMT, cprstn54zz@att.net (Ken) wrote:
>Not to mention that it would also work on 3 meters -- which according
>to my frequency chart is FM broadcast. I.e., it might well be a very
>good hi-fi RX antenna too.

As pointd out by W4OP in an email, this is incorrect. I made an
arithmetic error. I think MarineVHF is where the high band would be
resonant. This is also not bad, if you are near the water and have
the right radio.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

558. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 21:48:54 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avi6bsinj1@slb2.atl.mindspring.net>
Source record: 127591

Thread:

[snip]
> on the lower bands [i.e. for a T-tuner use the lowest capacitance, hence
> highest Q setting] is
:
:
> set the T-tuner elements for a larger capacitance, hence lower Q, tuner
> setup so that one
> achieves a broader bandwidth.
[snip]

Oops!

I mispoke here, clearly the lower Q settings of a T-tuner correspond to
smaller
capacitance settings, not larger!

--
Peter K1PO

559. Re: splicing twinlead TV antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 21:54:52 UTC
From: jder8745@aol.com
Message-ID: <20030108165452.15395.00000492@mb-fs.aol.com>
Source record: 127411

Remember that coax has more loss than the twin lead. If your signal strength is low (fringe area) and you have a very long run of TL, you may find that u get a better picture with the twin lead.

If and when the twin lead gets wet, there will be some degradation of signal quality.

Jack

560. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 22:30:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1CA671.9040809@ieee.org>
Source record: 127592

Peter O. Brackett wrote:
> I mispoke here, clearly the lower Q settings of a T-tuner correspond to
> smaller capacitance settings, not larger!

Peter, aren't losses less at the high-Q settings? i.e. minimum L,
maximum C?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

561. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 22:40:21 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avi9ccgve1@slb0.atl.mindspring.net>
Source record: 127594

Cecil:

[snip]
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E1CA671.9040809@ieee.org...
> Peter O. Brackett wrote:
> > I mispoke here, clearly the lower Q settings of a T-tuner correspond to
> > smaller capacitance settings, not larger!
>
> Peter, aren't losses less at the high-Q settings? i.e. minimum L,
> maximum C?
> --
> cheers, CAM http://www.qsl.net/w5dxp
[snip]

Yep, losses are less and bandwidth is narrower at the high-Q settings, i.e.
minimum L, maximum C as you stated.

I applogize for my confusion and any incorrect assertions.

What I try to set up when I expect to make rapid QSY's to nearby frequencies
is to set the T-tuner up for a
broader bandwidth, lower-Q setting, i.e. with larger losses, i.e. a larger L
and smaller C settings.

My point was that this style of low-Q T-tuner setting is not the one usually
recommended by technology jocks
who are after the last drop of output power. Instead this setting offers
more operating convenience.

--
Peter K1PO

562. Two Sets And one Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 22:40:34 UTC
From: Robert11 <rgsrose@tiac.net>
Message-ID: <avi9afeqd1@slb3.atl.mindspring.net>
Source record: 127593

Hi,

Will be using one of two scanners at a time. (30 MHz to 2 GHz)
Have only one aerial, a Discone in the attic.

I guess an antenna switch makes the most sense, but was wondering about
other approaches also. So, let me ask:

a. Does the switch make the most practical sense?
Again, only one radio in use at a time.

b. What about couplers? (freq range of 30 MHz to about 2 GHz)

c. what about "just" feeding the signal all the time to both inputs? One
set would be Off, as i mentioned

I guess I should also ask how any of the above might change if the second
set "accidentally or otherwise," is also on.

What are the differences in the sets aerial input impedance for a set being
on or off?

Much thanks,
Bob

563. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 23:02:38 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <g62T9.2017$Yr2.793911@news20.bellglobal.com>
Source record: 127596

"Art Unwin KB9MZ"
> What surprises me about this patent application
> is that information is being disclosed before the
> patent has been reviewed by the Patent Office!

I am not an expert in Patent Law, but this publishing of Patent Applications has something to do with the extension of patents from 17 years to 20 years and to discourage so-called "submarine patents"...

Supposedly, some unethical inventors were submitting an application (thereby gaining priority) and then submitting endless amendments to intentionally delay issuance of their own patent (for years) until the invention was in widespread use. Then they would allow the patent to be issued (years later), with priority in advance of everyone else (they have the priority from their hidden and delayed application), and then they would hold others ransom for royalties for a patent that should never have been issued. The new rules mean that the applications are published (and public domain), and to compensate the inventor, the term is extended by three more years. Something like that...

Or maybe not...
www.ipcreators.org/congress/104cong/articles104/katona1.htm
(!!!)

Pre-canned google search on "submarine patents":
www.google.com/search?q=%22submarine+patents%22

564. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 23:03:12 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <QbfyfUBw4KH+EArH@ifwtech.co.uk>
Source record: 127595

Peter O. Brackett wrote:
>>
>> Peter, aren't losses less at the high-Q settings? i.e. minimum L,
>> maximum C?
>> --
>> cheers, CAM http://www.qsl.net/w5dxp
>[snip]
>
>Yep, losses are less and bandwidth is narrower at the high-Q settings,

There's confusion here between the unloaded Qs of the individual components, and the loaded (operating) Q of the matching network.

For lowest losses, component Qs need to be as high as possible... but the operating network Q needs to be as LOW as possible.

However, it is still correct that the minimum loaded Q of a CLC T-network occurs with...
>minimum L, maximum C as you stated.

In other words, you don't need to change your tuning habits, only your perception of why you're doing it.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

565. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-08 23:11:06 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <de2T9.2024$Yr2.795512@news20.bellglobal.com>
Source record: 127597

"K4WGE"
> We won't expect Chip to admit defeat...

He's undoubtedly reading this newsgroup (he always does), but he is too embarassed to post right now. Except that - now that I've predicted that he won't post, he will make some small harmless posting just to prove the opposite (damn Heisenberg ! *). Uh oh - now he won't post because I said he would (damn Heisenberg again !) and he'll want to pretend he's not monitoring the newsgroup. But then again, now that I've said that, he'll want to prove the opposite again.

Who knows...?

(*) www.aip.org/history/heisenberg/

566. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 00:03:16 UTC
From: fractenna@aol.com
Message-ID: <20030108190316.02175.00000065@mb-bk.aol.com>
Source record: 127410

>Supposedly, some unethical inventors were submitting an application (thereby
>gaining priority) and then submitting endless amendments to intentionally
>delay issuance of their own patent (for years) until the invention was in
>widespread use. Then they would allow the patent to be issued (years
>later), with priority in advance of everyone else (they have the priority
>from their hidden and delayed application), and then they would hold others
>ransom for royalties for a patent that should never have been issued. The
>new rules mean that the applications are published (and public domain), and
>to compensate the inventor, the term is extended by three more years.
>Something like that...
>
>Or maybe not...
>www.ipcreators.org/congress/104cong/articles104/katona1.htm
>(!!!)
>
>Pre-canned google search on "submarine patents":
>www.google.com/search?q=%22submarine+patents%22
>
>

I believe Lemelson used this method, but I don't see why it is unethical. Can
you elaborate?

I thought the publication disclosures were set up to be compatible with other
patent countries. I don't seem to recall ethics, or a supposed lack of them, as
being part of that decision. Do you have a citation which supports your
statement?

73,
Chip N1IR

567. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 00:20:10 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0801031620100001@bni030qny8kc.bc.hsia.telus.net>
Source record: 127598

In article <kMUS9.680568$NH2.47583@sccrnsc01>, "Bibby" <bibby@attbi.com> wrote:

> The responses to date to Gary's question are typical of this NG - they
> rarely answer the original question!
>
> The answer to the original question is:
>
> Find the impedance of the parallel circuit from 1/Z = 1/Rp + 1/jXp and
> invert the result.
>
> Now set Z = Rs + jXs and equate the real and imaginary components on each
> side.
>
> This gives Rs=(Xp^2)Rp/(Rp^2 + Xp^2) and Xs=(Rp^2)Xp/(Rp^2 + Xp^2)

So far, so good.

> Divide one expression by the other and Rs/Xs = Xp/Rp, which is defined as Q.

Should be: Xs/Rs = Rp/Xp, which is defined as Q.

> Now back substitute Rp = Xp/Q

Should be: Xp = Rp/Q

> into the expression for Rs and the result is
> Rs = Rp/(Q^2 + 1)
>
> Q.E.D.
>
> Malcolm, W1/GW3NJY

Very nice explanation. Right idea and slightly wrong algebra is much nicer
than right algebra and slightly wrong idea!

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

568. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 00:52:23 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ufhp1vg6ih3c4n0f8ktbc7r7gt32h01mgo@4ax.com>
Source record: 127599

On Wed, 8 Jan 2003 04:41:14 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

[SNIP]
|
|Unfortunately a T network ALWAYS has a higher Q than its equivalent Pi
|network when matching the same external impedances. And so tuner component
|losses are ALWAYS greater when using a T network.

What do you mean by equivalent?

If I want to match a 50 ohm source to a load = 25+j0, I can use three
components, two C's, with Xc = 35.355 and one L, with Xl = 35.355.

A low pass pi using these parts will have a network Q of 2.121 and a
hi-pass T using exactly the same parts will also have a network Q of
2.121.

Aren't these equivalent by your definition?

569. Re: splicing twinlead TV antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 01:01:28 UTC
From: KAZeringue <kazeringue@aol.com>
Message-ID: <3E1CCA62.5080809@aol.com>
Source record: 127600

What sort of connector is on the TV/VCR/whatever that you are planning to use with the antenna?

If your TV has a 75 ohm F connector:
If the twinlead is already fed to a box, why bother fishing coax back up to the attic? You could more easily put the balun in the receptacle box, and replace the three hole socket in the box with the current 75 ohm TV standard, the F connector. The 300 ohm twinlead is probably okay.

If your TV has a 300 ohm input, you can run the twinlead right to the TV. Finding a three prong connector might be a challenge. Finding 300 ohm twinlead has become a bit of a challenge, the local Radio Shack can order it, but may have already tossed it out to make room for cell phone accessories and computer cables. The more rural places are more likely to stock it than the cable wired cities.

Just my two cents worth.

kaz

570. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 01:12:04 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E1CCC16.8030808@attbi.com>
Source record: 127601

The world is full of UNCERTAINTY. For the Physics challenged ...
Heisenburg defined or stated or restated the 'Uncertainty Principle'
that is applicable in sub-atomic physics [really] and human behavior
[not really].

DD, W1MCE

J. Harvey wrote:
> "K4WGE"
>
>>We won't expect Chip to admit defeat...
>
>
> He's undoubtedly reading this newsgroup (he always does), but he is too
> embarassed to post right now. Except that - now that I've predicted that he
> won't post, he will make some small harmless posting just to prove the
> opposite (damn Heisenberg ! *). Uh oh - now he won't post because I said he
> would (damn Heisenberg again !) and he'll want to pretend he's not
> monitoring the newsgroup. But then again, now that I've said that, he'll
> want to prove the opposite again.
>
> Who knows...?
>
> (*) www.aip.org/history/heisenberg/
>
>
>

571. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 01:14:12 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <E14T9.1859$bB6.260@sccrnsc02>
Source record: 127602

Thanks David. Too much of a hurry using the back of an envelope!

Malcolm

"David or Jo Anne Ryeburn" <ryeburn@sfu.caz> wrote in message
news:ryeburn-0801031620100001@bni030qny8kc.bc.hsia.telus.net...
> In article <kMUS9.680568$NH2.47583@sccrnsc01>, "Bibby" <bibby@attbi.com>
wrote:
>
> > The responses to date to Gary's question are typical of this NG - they
> > rarely answer the original question!
> >
> > The answer to the original question is:
> >
> > Find the impedance of the parallel circuit from 1/Z = 1/Rp + 1/jXp and
> > invert the result.
> >
> > Now set Z = Rs + jXs and equate the real and imaginary components on
each
> > side.
> >
> > This gives Rs=(Xp^2)Rp/(Rp^2 + Xp^2) and Xs=(Rp^2)Xp/(Rp^2 + Xp^2)
>
> So far, so good.
>
> > Divide one expression by the other and Rs/Xs = Xp/Rp, which is defined
as Q.
>
> Should be: Xs/Rs = Rp/Xp, which is defined as Q.
>
> > Now back substitute Rp = Xp/Q
>
> Should be: Xp = Rp/Q
>
> > into the expression for Rs and the result is
> > Rs = Rp/(Q^2 + 1)
> >
> > Q.E.D.
> >
> > Malcolm, W1/GW3NJY
>
> Very nice explanation. Right idea and slightly wrong algebra is much nicer
> than right algebra and slightly wrong idea!
>
> David, ex-W8EZE

>
> --
> David or Jo Anne Ryeburn
> ryeburn@sfu.caz
> To send e-mail, remove the letter "z" from this address.

572. Re: Two Sets And one Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 02:24:54 UTC
From: k9sqg@aol.com
Message-ID: <20030108212454.02093.00000043@mb-fr.aol.com>
Source record: 127415

Bob,

Any and all of the approaches you mentioned have been used. Each has a pro/con.

Antenna switch is the most efficient and practical perhaps and, if there is a nearby (not direct) lightenting strike, there is a lower probabbility that both scanners would be taken out, but again, no gurantees.

Couplers will introduce some degree of loss, which might not be too great, but there is a good chance that spurious products (birdies) from one scanner will find their way into the other scanner.

Feeding the antenna to both receivers will attenuate the signals slightly and encourage passage of birdies, per above.

Best of luck.

Evan

573. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 03:48:56 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301081948.42cf6309@posting.google.com>
Source record: 127603

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<772p1vocr5b9b9lrplnsli8jbhdn3dnfsh@4ax.com>...
> On 8 Jan 2003 12:13:58 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >What surprises me about this patent application is that information is
> >being disclosed before the patent has been reviewed by the Patent
> >Office!
snip
> >
>
> Hi Art,
>
> You completely missed the humor that Jeff found; and there was nothing
> said about an "application."
>
> Be that as it may, an inventor has up to a year FOLLOWING any
> disclosure to apply for a patent and still preserve that privilege -
> barring, of course, earlier applications (not disclosures to the PTO)
> that predate a public disclosure.
Very good Richard I now understand what the thread is all about. Seems
like my humor has deserted me.n
>
> As a side bar to Jeff's ironic discovery, I would offer an example
> patent from 60 years earlier, and around the block from an outfit
> known simply as General Radio: patent 2,294,941 (all of 7 pages long
> with one page illustration and 4 formulas).
>
> Compare GR's depth of knowledge, their description of the art, and
> their discussions of the underlying principles to these marketing
> scabs bloated with gibberish describing inconsequential minutia.

Yes I fully understand your dismay but now we are a litigaceous
society and thus the only thing of consequence in the courts are the
actual claims. Ofcourse this completely defeats the original purpose
of a patent .
Having gone thru the patent office procedures I now find that those
who process
the actual aplications have little technical knoweledge and only view
what keywords in an application bring forth after insertion into
computor records.
They also rearrange the grammer of the application even tho Enhglish
is their second language. Now applicators have to go with the flow and
concentrate more on the actual claims.

Thanks for the clarification.
Regards
Art

>
> 73's
> Richard Clark, KB7QHC

574. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 04:28:10 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avitoghne1@slb0.atl.mindspring.net>
Source record: 127604

Ian:

[snip]
> In other words, you don't need to change your tuning habits, only your
> perception of why you're doing it.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
[snip]

Heh, heh...

"Perception is reality." --Tom Peters

Happy New Year,

--
Peter K1PO

575. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 04:43:55 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <aviumb$na6$1@slb1.atl.mindspring.net>
Source record: 127606

Larry:

[snip]
> > Heh, heh...
> >
> > "Perception is reality." --Tom Peters
> >
> > Happy New Year,
> >
> > --
> > Peter K1PO
>
> Are you sure that quote wasn't from a politician?
> --
> 73,
> Larry N8LP
[snip]

No, but Peters is an MBA "trainer", IMHO... worse than a politico!

Best,

Peter K1PO

576. Re: VX5-r

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 05:16:42 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <hc1q1voat6qedvjfboji1bgtlai8povl7o@4ax.com>
Source record: 127607

On Wed, 8 Jan 2003 08:00:18 -0500, "Youngblood"
<youngbloodnospam@msn.com> wrote:

>Any success on replacement antennas for the Yaesu VX5-r?

What do you need a replacement for? I bought an MFJ triband antenna
for it and I can notice no difference between the two, so I use the
one that came with it.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

577. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 05:33:05 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avj1ig$18f$1@knossos.btinternet.com>
Source record: 127608

A T network (in its black box) is equivalent to an L network (in its black box) when both are adjusted to match the same pair of terminating impedances. They do identical jobs except that their power efficiencies, in general, will differ.

Let's go back to basics. For the purpose of comparing efficiencies let's assume all individual components in both boxes are of identical 'Quality'. It should be obvious (but it probably isn't), efficiency of the L will be higher than that of the T because it has only 2 components whereas the T network has 3.

In a (vain?) attempt to satisfy lurking nit-pickers I could take matters further by considering there is only one internal circulating current in the L network whereas there are two circulating currents in the T. To state the obvious, it is these circulating currents, magnified by the working Q's, which cause the tuner loss.

Furthermore, the Q of a T-network is inevitably greater than that of of its equivalent L. Higher Q is due entirely to using two smaller capacitors and larger coils for the same terminating impedances because we choose to sacrifice power efficiency (interference and signal-to-noise ratio) for greater impedance operating range and convenience and lower capital costs.

And that's why T networks are more popular than L's. Automatic tuners are are also less expensive using two-C T-networks. Vices are often descibed as virtues.

(Incidentally it has a lot to do with why Pi networks, with two whacking great high-voltage variable capacitors, are never mentioned except when used unavoidably for PA tank circuits.)

T'was ever thus !

See programs L_TUNER and T-TUNER from following website.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

578. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 05:37:14 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <eU7T9.55684$4j5.8154396@newssvr28.news.prodigy.com>
Source record: 127605

> Heh, heh...
>
> "Perception is reality." --Tom Peters
>
> Happy New Year,
>
> --
> Peter K1PO
>
>

Are you sure that quote wasn't from a politician?

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

579. Re: VX5-r

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 06:28:26 UTC
From: dplatt@radagast.org
Message-ID: <v1q5kat2dlsmd1@corp.supernews.com>
Source record: 127609

>>Any success on replacement antennas for the Yaesu VX5-r?
>
>What do you need a replacement for? I bought an MFJ triband antenna
>for it and I can notice no difference between the two, so I use the
>one that came with it.

I found the stock antenna on mine to be annoying rigid, on the frequent occasions when I had it clipped to my belt. I was forever poking myself with the antenna, and I was worried about the strain I was putting on the (somewhat notoriously vulnerable) SMA jack.

I bought a Premier RD-8 (6.5" dualband, flexible ducky with a BNC connector) and one of Robert Gulyas's really excellent SMA-to-BNC adapters.

This combination seems to work as well on 2M and 440 as the original Yaesu antenna, it's a bit lighter, and a lot more flexible (doesn't jab me in the side, puts much less strain on the SMA jack.

There's so little 6-meter FM activity here in the SF bay area that I rarely operate there at all, and don't miss the lack of the 6M extender option for the VX5.

If you don't want to use a separate adapter, you could go with the Premier RD-9 SMA antenna - similar length and nature.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

580. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 08:22:22 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <4jc4hEE+ETH+EA9r@ifwtech.co.uk>
Source record: 127612

Wes Stewart wrote:
>On Wed, 8 Jan 2003 04:41:14 +0000 (UTC), "Reg Edwards"
><g4fgq.regp@btinternet.com> wrote:
>
>[SNIP]
>|
>|Unfortunately a T network ALWAYS has a higher Q than its equivalent Pi
>|network when matching the same external impedances. And so tuner component
>|losses are ALWAYS greater when using a T network.
>
>What do you mean by equivalent?
>
>If I want to match a 50 ohm source to a load = 25+j0, I can use three
>components, two C's, with Xc = 35.355 and one L, with Xl = 35.355.
>
>A low pass pi using these parts will have a network Q of 2.121 and a
>hi-pass T using exactly the same parts will also have a network Q of
>2.121.
>
>Aren't these equivalent by your definition?

From the context of Reg's previous message, and from his subsequent reply to Wes, it looks like there may have been a typo.

Reg, had you meant to type "a T network always has a higher Q than its equivalent *L* [not Pi] network when matching the same external impedances"?

We probably all agree that is true. When adjusted for the minimum operating Q that is necessary to achieve the impedance transformation, a T-network always has higher operating Q (= higher losses) than an L-network doing the same job.

On the other hand, Wes is equally correct to say that any T-network can be transformed into an exactly equivalent pi-network with exactly the same operating Q.

The situation where a T-network has the largest "excess Q" are when matching a low impedance at a low frequency, when one of the Cs is at its maximum value but that still isn't enough. This forces you to increase the loaded Q in order to achieve a match, and thus increases the losses.

G3LNP has published a simple cure for this problem. He added a rotary-switch to each capacitor shaft, which shorts it out completely at the high-C end of travel. This transforms the T-network into the more

efficient L-network, and the unnecessary losses disappear. You have
T-network when you need it for the flexibility, and two different kinds
of L-network when you need those for the efficiency.

This is *so* simple! Which branch of MFJ/Vectronics/Ameritron will get
there first?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

581. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 08:33:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1D33CF.7090105@ieee.org>
Source record: 127610

Reg Edwards wrote:
> Let's go back to basics. For the purpose of comparing efficiencies let's
> assume all individual components in both boxes are of identical 'Quality'.
> It should be obvious (but it probably isn't), efficiency of the L will be
> higher than that of the T because it has only 2 components whereas the T
> network has 3.

The L network has one coil and one cap. Let's assume we are talking about
a T network that has one coil and two caps. Are you saying that minimum
inductance is achieved with the L network?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

582. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 09:36:05 UTC
From: mrheadz@fastmail.fm
Message-ID: <7cf18cd7.0301090136.d7ebb32@posting.google.com>
Source record: 127611

Ian,
I am new to all this and I am trying to get an understanding of the T-Network Tuner. From this thread I have deducted the following:

High Q settings: Narrow bandwidth (of tuning range), Minimum L, Maximum C, more efficiency, less power loss and more power handling capabilty of the tuner.

Low Q settings: Broader bandwidth (of tuning range),Larger L than above , Smaller C than above, Less efficiency, more power loss and less power handling capability of the tuner.

Hope I am close.
Your following comments then confuse me:

"For lowest losses, component Qs need to be as high as possible... but the operating network Q needs to be as LOW as possible."

Now you say that the Network Q needs to be Low. I don't follow this. Could you please give an example per say?

Then you say "This ability to match the required values of R and X at more than one
value of operating Q is a *drawback* of T-networks. It means that the network can easily be set up with a higher operating Q than necessary...
and that means internal higher losses than necessary."

If higher Q is better as far as losses, how can you set it up Higher than necessary with higher loss?

I probably am missing something or don't understand,mainly the component Q's being high and the network Q being low. I just got an antenna tuner (T-network) and have found out that indeed matches can be found at diffrent settings. I was tryng to figure out which one would be the best and safest. Could you please give me a few general tips on the best matching routine for the T tuner? Thank you..

583. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 09:59:05 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0301090159.1f6ec46c@posting.google.com>
Source record: 127613

> Is this an expanded form that provides a similar
> format of the old 'AO ' program ?
> How does it differ or improve its scope ?

I can only be relatively short about this, because it takes too much effort to write a correct english/american posting for me, as this is not quite my mother language.

Something about the 4nec2 history.

Already some years ago I noticed an article about the nice VOACAP/ICEPAC propagation prediction freeware. But soon I felt the lack of not being able to specify my own antenna type/geometry with this. Somehow then I came aware of the public available nec-2 engine, and I used this engine in the 4nec2 package to create my own interface files (containing 3D radiation patterns) to use with the VOACAP/ICAPAC software.
After this I noticed the scaled down freeware version of AO, called NF.exe at arrl.org. This package also contained a detailed description about how it is used. Especially the optimization function caught my attention and I thought it would be nice to add a similar function to the 4nec2 package. So I did, using the same principles. Note however that 4nec2 uses the nec-2 engine where AO uses the mininec engine.
Then the YGO3 software (using genetic algorithms for Yagi optimization) caught my attention. However this software is only usable for optimization of YAGI type antennas where I would like to use it for all types of antennas.
This time I did not quite follow the YGO3 path, but red a fair amount of (scientific) articles about how to use genetic algorithms for optimization. This resulted in the addition of a genetic-algorithm based optimizer in 4nec2.

There is a lot to tell about the pro's and contra's between genetic-algorithm based optimization and the more traditionally hill-climbing optimization techniques. For those interested I would suggest to download the 4nec2 package and read what is said about this in the help-file.

To be short, both optimization methods can fill up the other one's gap, but as with many other things, one must know a bit about what he is doing and have some understanding about antenna behavour, at least when using the optimizer.

Arie.

584. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 11:43:34 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <XkqDAtOmBWH+EAJ4@ifwtech.co.uk>
Source record: 127614

mrheadz wrote:

[snip]

Forgive me for not quoting most of your posting... but it's mostly misconceptions. It doesn't help to reply specifically to what you wrote, because that would be letting your misconceptions set the agenda.

Instead, please let's start again.

>I probably am missing something or don't understand,mainly the
>component Q's being high and the network Q being low.

YES! That is exactly what you need... but it's better to talk about the network's "loaded" or "operating" Q.

To achieve a given transformation between two impedances, the network must have a certain minimum value of operating Q. The same transformation can also be achieved at higher operating Qs, but the losses will be higher.

(Forget about bandwidth - it is totally irrelevant for antenna matching. You shouldn't ever choose an antenna matching circuit for its bandwidth properties.)

An L-network always has the lowest possible value of operating Q - in fact this is the *only* possible value. An L-network does not allow operating Q to be varied independently.

A T-network will always have a higher operating Q than an L-network doing the same job, and therefore higher losses. But you can also set a T-network to have an operating Q - and therefore losses - that are way higher than necessary. This is what lets the smoke out!

>I just got an antenna tuner (T-network) and have found out that indeed
>matches can be found at diffrent settings. I was tryng to figure out
>which one would be the best and safest. Could you please give me a few
>general tips on the best matching routine for the T tuner?

The instructions should tell you. If it's an MFJ tuner, and you don't have the instructions, go to http://www.mfjenterprises.com/manuals.php and download the whole manual (Vectronics and Ameritron tuner manuals should be somewhere else at the same site).

A general-purpose set of instructions would be:

1. Set both C1 and C2 at or near to MAXIMUM. (If you don't know where maximum is, remove the cover and find out.)

2. Adjust L for maximum receiver noise (this may be a very broad peak, but don't worry).

3. Transmitting low power on a clear frequency, adjust C1 and C2 for the lowest possible VSWR. (The adjustments will interact - to be sure of finding the lowest possible VSWR, change one capacitor in small steps; and for each step, sweep the other capacitor across its whole range.)

4. Reduce the inductance of L and repeat step 3. (Again, if you don't know which direction of the roller or switch reduces L, remove the cover and find out. A good clue is that the receiver noise peak in step 2 will be closest to minimum L on 10m, and closest to maximum L on 80 or 160m.)

5. Two possibilities here:

(a) If the VSWR minimum is lower after you've reduced L, you're heading in the right direction. Reduce L again and keep repeating steps 3, 4 and 5a until you have both minimum VSWR *and* are using the minimum possible value of L. You're done!

(b) If the lowest possible VSWR is higher than before, undo the last change you made to L, and try increasing L, just a little. Go back to step 3, and repeat steps 3 and 4 until you can exit via step 5a.

One more time: you are aiming to use the LOWEST possible value of L that will give an acceptable match.

This is *much* easier to do than it is to describe! If somebody shows you, you go "Oh... was that all it ever was?"

(Somebody should make an MPEG movie... it needs less than a minute.)

When you've done this once, you don't have to go through the whole performance again. You can mark the settings of C1, L and C2 on the panel with felt-tip pens, using different-coloured dots for each band.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

585. Re: VX5-r

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 13:34:23 UTC
From: Youngblood <youngbloodnospam@msn.com>
Message-ID: <Oa3BPP#tCHA.1204@cpimsnntpa03>
Source record: 127615

OK, thanks for the opinions. I just thought there might be something better. I have absolutely no ability to hit my club repeater except when I take off the stock and connect it to my mobile MFJ antenna. Since I have a base station I have no need for this and just wanted a portable way to access it. I guess the only way to go is to buy a cross repeat radio. I sure wish there was some other way.

73,
Fred
"Andy KC2SSB" <nospam@nospam.com> wrote in message
news:hc1q1voat6qedvjfboji1bgtlai8povl7o@4ax.com...
> On Wed, 8 Jan 2003 08:00:18 -0500, "Youngblood"
> <youngbloodnospam@msn.com> wrote:
>
> >Any success on replacement antennas for the Yaesu VX5-r?
>
> What do you need a replacement for? I bought an MFJ triband antenna
> for it and I can notice no difference between the two, so I use the
> one that came with it.
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

586. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 14:46:01 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <JWfT9.55709$4j5.8197862@newssvr28.news.prodigy.com>
Source record: 127616

Yes, I've edited a few training videos featuring him...a lot of hot air
IMHO. But the quote is unfortunately pretty much true. It should be
"Perception becomes reality" though...the key to propaganda and advertising
;-)
--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:aviumb$na6$1@slb1.atl.mindspring.net...
> Larry:
>
> [snip]
> > > Heh, heh...
> > >
> > > "Perception is reality." --Tom Peters
> > >
> > > Happy New Year,
> > >
> > > --
> > > Peter K1PO
> >
> > Are you sure that quote wasn't from a politician?
> > --
> > 73,
> > Larry N8LP
> [snip]
>
> No, but Peters is an MBA "trainer", IMHO... worse than a politico!
>
> Best,
>
> ---
> Peter K1PO
>
>

587. Re: Two Sets And one Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 15:01:37 UTC
From: richardharrison@webtv.net
Message-ID: <1986-3E1D8ED1-11@storefull-2316.public.lawson.webtv.net>
Source record: 127617

Bob wrote:
"Does a switch make the most practical sense?"

Yes, unless this is a diversity receiving system.

Multicouplers are used between several receivers and a single antenna to preserve the impedance match.

The radiation resistance of a receiving antenna is the source to be matched for maximum power transfer to a receiver or multicoupler input. An antenna perfectly matched to its receiver re-radiates half the energy captured. That is as good as it gets. A mismatch means more than 50% re-radiation.

Feeding a receiving antenna to more than one input divides the signal. Switching off power to the unused receiver makes little difference.

30 MHz to 2 GHz is an enormous range to maintain constant impedance for a receiver or a multicoupler. Where a simple switch can be used, it is the likely solution.

Best regards, Richard Harrison, KB5WZI

588. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 15:28:22 UTC
From: richardharrison@webtv.net
Message-ID: <23752-3E1D9516-144@storefull-2314.public.lawson.webtv.net>
Source record: 127618

Roy Lewallen wrote:
"Now make the ground plane go away, leaving one of the terminals dangling."

That has no meaning. An unbalanced antenna has a counterpoise. In the Zepp, it`s the feedline. In the ground plane, it`s the radials. Electricity needs two terminals to allow current to flow through any circuit.

Best regards, Richard Harrison, KB5WZI

589. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 16:20:56 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <kqAdPu8pQjHlQkMfY9t66aW=3w5Z@4ax.com>
Source record: 127469

"Richard Cassano" <rcassano@optonline.net> wrote:

>I'm relatively new to this hobby and would like some advice on setting up a
>base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230
>antenna tuner and fifty feet of wire hung about ten feet up between house
>and a tree. I did this just to get started and realize it is a flaky set-up.
>Have lots of RFI on all bands during the day. At this time I'm willing to
>spend some money, ($300) on a better antenna system and would like any
>advice on the biggest bang for the buck. One goal for me is to communicate
>with some Ham friends who are cruising aboard sailboats in the Caribbean,
>(south of me). In addition, one of these cruisers will be heading for the
>Azores, (east of me) in the spring and I would like to be able to stay in
>touch with him while he is underway. Any antenna system I purchase should
>have sufficient gain to enable reaching mid-ocean. I can put a short mast on
>the chimney, (ranch house), however very large beams are not going to get by
>the town code. Any advice would be much appreciated - thanks.
>Richard Cassano, KC2ISG
>Greenlawn, NY, USA

I'm guessing a 20 meter dipole, hung vertically or horizontally, or bent like an
"L", would be your best bet -- for something simple and cheap.

Go to http://www.cebik.com/radio.html

... and look at some of his ideas for wire antennas.

Bob
k5qwg

590. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 16:35:19 UTC
From: David Shrader <david.shrader@attbi.com>
Message-ID: <3E1DA479.3020405@attbi.com>
Source record: 127470

I did not make or offer any comment regarding the patent application.
Please read my post again.

For those readers of the news group who may not be familiar with
Heisenburg I was simply giving a clarification that the Heisenburg
Uncertainty Principle is applicable to sub atomic physics not people.

Deacon Dave, W1MCE

Fractenna wrote:
>>UNCERTAINTY. For the Physics challenged ...
>>Heisenburg defined or stated or restated the 'Uncertainty Principle'
>>that is applicable in sub-atomic physics [really] and human behavior
>>[not really].
>>
>>DD, W1MCE
>>
>
>
> Hi Dave,
>
> I am not a rat in a a maze. Please don't attempt to practice psychiatry here.
>
> My behavior, in case you and others didn't notice, is purposeful, thoughtful,
> focused,and translates to action. The very fact that (the non sequitar) of one
> of my patent applications is discussed on this NG indicates that the above is
> so.
>
> Now, if you wish to discuss one of my patent applications, I really don't care.
> But this is not an open invitation to personal attacks and characterizations.
>
> Thanks you.
>
> 73,
> Chip N1IR
>

591. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 16:43:52 UTC
From: derswede@aol.comspam.com
Message-ID: <20030109114352.18073.00001042@mb-mv.aol.com>
Source record: 127413

>> But this is not an open invitation to personal attacks and characterizations.

I'm sorry....did someone move the Usegroup? Or have I been TimeWarped to some other dimension?

Don't want comments and have no sense of humor? Don't post here.

A

(Who knows Heisenburg's principle and who ALSO has a sense of humor. Cicero was right, BTW.)

592. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 16:56:45 UTC
From: fractenna@aol.com
Message-ID: <20030109115645.02811.00001050@mb-ch.aol.com>
Source record: 127414

>
>I'm sorry....did someone move the Usegroup? Or have I been TimeWarped to
>some
>other dimension?
>
>Don't want comments and have no sense of humor? Don't post here.
>
>A
>
>(Who knows Heisenburg's principle and who ALSO has a sense of humor. Cicero
>was right, BTW.)
>

I didn't post it. It was sent as e-mail. You will find no public post sent to Dave from me that says this.

I interpret Dave's public posting of my private corres[ondence as out of line and consistent with using me in a negative characterization.

And, I might add, so do others who read this NG.

So, Dave, tell us why you decided to post this publicly?

Chip N1IR

593. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 17:25:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <m0cr1v40ip4dkn1gkcpa1tf5nvfpebl9kp@4ax.com>
Source record: 127471

On Thu, 9 Jan 2003 09:28:22 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Roy Lewallen wrote:
>"Now make the ground plane go away, leaving one of the terminals
>dangling."
>
>That has no meaning. An unbalanced antenna has a counterpoise. In the
>Zepp, it`s the feedline. In the ground plane, it`s the radials.
>Electricity needs two terminals to allow current to flow through any
>circuit.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

That was Roy's exasperated point.

73's
Richard Clark, KB7QHC

594. Re: End point Z of a half-wave dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 18:10:01 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1renkfh3fdk9d@corp.supernews.com>
Source record: 127472

Bingo. I couldn't have said it better.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:
> "Now make the ground plane go away, leaving one of the terminals
> dangling."
>
> That has no meaning. An unbalanced antenna has a counterpoise. In the
> Zepp, it`s the feedline. In the ground plane, it`s the radials.
> Electricity needs two terminals to allow current to flow through any
> circuit.
>
> Best regards, Richard Harrison, KB5WZI
>

595. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 18:16:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <efdr1vgjvv60imiabjlo2r5l4kr76ebbg0@4ax.com>
Source record: 127473

On Thu, 09 Jan 2003 16:35:19 GMT, David Shrader
<david.shrader@attbi.com> wrote:

>I did not make or offer any comment regarding the patent application.
>Please read my post again.
>
>For those readers of the news group who may not be familiar with
>Heisenburg I was simply giving a clarification that the Heisenburg
>Uncertainty Principle is applicable to sub atomic physics not people.
>
>Deacon Dave, W1MCE
>

Hi OM,

Your observation of not having made a comment... contradicts the
statement about Heisenburg/people.
>>The world is full of UNCERTAINTY.
The correspondence that elicited your response above is a clear
example of the Conservation of UNCERTAINTY.

The standard quantum paradox: The posting you responded to, was it
From the Future? It presumes motivation and statements where none
were made; in other words, it either anticipates a future outcome or
it speaks from that perspective. That, or it's random noise from a
known source. ;-)

To paraphrase: "god doesn't play dice on the internet."

73's
Richard Clark, KB7QHC

596. Re: Two Sets And one Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 18:44:43 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <GzadnTY3nq-AXoCjXTWcqQ@comcast.com>
Source record: 127474

Robert,

You would probably be best off with three antennas:

A) A VHF low that works 30 - 54 MHz.
B) a VHF high/UHF low that goes from 108 to 470
C) A UHF/Microwave that goes from 800 -2000
Note that A will be a rather large antenna, about 6 feet high. B could be a ground plane vertical or dipole cut near the middle of the range. C could be a your present discone, or one more optimized for the frequency range. I have left out the TV frequencies. If you do nothing else, at least get the VHF low antenna, which will probably work quite well up to 150 MHz or so.

Do not use RG58 cable above 54 MHz. If you do not want to string fat cable, like 9913, get some Times Microwave LMR240; but even that will have a loss of about 12 db/100 feet at 2 Ghz (I think the 9913 is 6 or 7).

Tam/WB2TT

"Robert11" <rgsrose@tiac.net> wrote in message
news:avi9afeqd1@slb3.atl.mindspring.net...
> Hi,
>
> Will be using one of two scanners at a time. (30 MHz to 2 GHz)
> Have only one aerial, a Discone in the attic.
>
> I guess an antenna switch makes the most sense, but was wondering about
> other approaches also. So, let me ask:
>
> a. Does the switch make the most practical sense?
> Again, only one radio in use at a time.
>
> b. What about couplers? (freq range of 30 MHz to about 2 GHz)
>
> c. what about "just" feeding the signal all the time to both inputs? One
> set would be Off, as i mentioned
>
> I guess I should also ask how any of the above might change if the second
> set "accidentally or otherwise," is also on.
>
> What are the differences in the sets aerial input impedance for a set
being
> on or off?
>
> Much thanks,

> Bob
>

597. Re: VX5-r

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 20:01:27 UTC
From: dplatt@radagast.org
Message-ID: <v1rl8n2n9nbnc9@corp.supernews.com>
Source record: 127475

>OK, thanks for the opinions. I just thought there might be something better.
>I have absolutely no ability to hit my club repeater except when I take off
>the stock and connect it to my mobile MFJ antenna.

Ah - well, if that's your problem, there may very well be a solution,
although you may not care for it.

Buy one of the telescoping whip antennas - the MFJ 1714 might do.
Closed, it functions a lot like a rubber duck. Open (40" long!) it's
an end-fed halfwave dipole.

The disadvantage is that it's fairly long even when closed, completely
rigid, and has enough length and leverage to put a lot of strain on
the SMA jack (it's a BNC antenna so you'd need an adapter).

I keep one in my RACES go-pack, just in case, but I don't think it's a
good everyday antenna.

A longer flexible whip might work better for you than the
shortened/loaded stock dipole - MFJ 1717 would be one possibility.

You could experiment a bit before spending any money... solder a piece
of somewhat-flexible wire to the center pin of a BNC connector, tune
it to a quarter-wave low-SWR length up for your repeater frequency
using an antenna analyzer, hook to your HT with an SMA/BNC connector,
and you could have a cheap and effective whip for just a few bucks.

One significant problem with HT antennas is that they don't have a
very good ground plane to work against. Rather than having a metal
car body, or a tuned set of radials, they have only the metal in the
HT case, and the operator's body (directly or capacitively coupled) to
serve as a ground plane. This is part of what makes the traditional
ducky antenna so inefficient, and a mobile or mag-mount antenna so
much better. The end-fed halfwave dipoles (as above) don't have this
limitation, as they're complete radiators and don't need a ground
plane, but they're big and rather clumsy.

Another approach - easier on the HT socket, portable, but clumsy - is
to use a roll-up twinlead J-pole (buy, or build - they're easy to make
from cookbook directions, although using an antenna analyzer when
trimming them can be a help). You'd have to fling it up into a
convenient tree or hang it from the ceiling, whenever you wanted to
use it. Once again, they're great to have in the go-pack, but not
well suited for everyday use.

--
Dave Platt <dplatt@radagast.org> AE6EO

Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

598. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-09 21:15:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avkoq9oij1@venus.btinternet.com>
Source record: 127476

Cec sez -
> Are you saying that minimum
> inductance is achieved with the L network?

No Cec! A minimum implies something has to be varied obtain it. Unless you say what is to be varied your question doesn't make sense. If you know what is to be varied then you can work things out for yourself.

==========

But to go back again to basics, here's a simple 'proof' that the T network must be more lossy than the L :-

When it is required to match a 50-ohm generator to a 50-ohm load via an L network we adjust both coil and capacitor sensibly to zero. The internal losses are also sensibly zero.

But if for some operational advantage in the station we INSIST on matching 50 ohms to 50 ohms with a T network, in which the variable capacitors have some maximum settings, then it is obvious there must be an inductance somewhere inside the box - which has an appreciable loss resistance.

It is also true the inductance in the T network is greater than in the L network. The extra inductance is needed to tune out the extra reactance of the additional capacitor.

The same general argument can be extended to any other pair of impedances to be matched. KISS.

==========

If one is still needed here's another way of looking at it -

A T network is equivalent to TWO back-to-back L networks, each L network having its own loss. It is impossible for the total loss to be less than in the simple L network. It can only increase. And everything else being 'equal' it always does!

==========

Incidentally, the working Q of an L-network is completely determined by the impedances it has been adjusted to match. When matching two resistances R1 and R2, Q = Squareroot(R1 / R2).

So when transforming 50 ohms up to 450 ohms, Q = 3 and there's nothing to be done about it.

Reg, G4FGQ

599. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 00:10:30 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0901031610300001@bni030qny8kc.bc.hsia.telus.net>
Source record: 127477

In article <avkoq9oij1@venus.btinternet.com>, "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

> Incidentally, the working Q of an L-network is completely determined by the
> impedances it has been adjusted to match. When matching two resistances R1
> and R2, Q = Squareroot(R1 / R2).
>
> So when transforming 50 ohms up to 450 ohms, Q = 3 and there's nothing to
> be done about it.

Not true. In an L network R1/R2 = Q^2 + 1, so Q = sqrt((R1/R2) - 1). To
match 450 ohms to 50 ohms, Q = 2*sqrt(2) or about 2.828. That's nearly 3
and the losses will be almost as high as if it were 3. But to match 75
ohms to 50 ohms, Q = 1/sqrt(2) or about 0.707 whereas sqrt(1.5) is about
1.22 and the losses will be considerably less than they would have been at
the higher Q value.

Of course if R1 >> R2 (often the case) then Q is almost as large as
sqrt(R1/R2) so the simplified formula is usually good enough.

David, ex-W8EZE, whose first L network consisted of the rotary inductor
inside an ARC5 transmitter and a two-gang tuning capacitor scrounged from
a defunct AM BC receiver. I didn't worry about the losses when this let me
use a way too short antenna to work other stations on 80 metres -- better
than no antenna at all!

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

600. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 00:29:15 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v1s4sffaeo0m55@corp.supernews.com>
Source record: 127478

Dear Arie:
One can, and may, use one's own antenna pattern with VOACAP. It is not an obvious scheme. One tailors an antenna in the antenna part of the suite of programs that go along with VOACAP, one gives it a name, one stores it where it can be found by VOACAP, one goes to VOACAP and imports the stored antenna file, and one runs VOACAP.
I have such an antenna file for each of my antennas. I have made extensive use of VOACAP, and its predecessors, for several decades. What once took a main-frame computer, punched cards, and a day is now done with a Wall-Mart computer and in seconds. ...and before that, I did such predictions by hand... what changes I have seen...

My comments have nothing to do with your optimizer or your computer program. 73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

<4nec2@gmx.net> wrote in message
news:ee90361b.0301090159.1f6ec46c@posting.google.com...
<snip>
> I can only be relatively short about this, because it takes too much
> effort to write a correct english/american posting for me, as this is
> not quite my mother language.
>
> Something about the 4nec2 history.
>
> Already some years ago I noticed an article about the nice
> VOACAP/ICEPAC propagation prediction freeware. But soon I felt the
> lack of not being able to specify my own antenna type/geometry with
> this.
<big snip>

>
> Arie.

601. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 00:43:40 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3E1E173C.7737B3EC@oda.com.au>
Source record: 127479

Richard Cassano wrote:
>
> I'm relatively new to this hobby and would like some advice on setting up a
> base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230
> antenna tuner and fifty feet of wire hung about ten feet up between house

My understanding is that the SG-230 tuner is designed to have one side earthed (although there will be no shortage of people who will tell you how they use it to feed open wire lines), it is meant to be installed close to the ground (or a substantial artificial ground). It is able to match a wide range of load impedances presented by an end fed wire, be frequency agile and quite convenient.

Four main thoughts come to mind:
- install the tuner close to an adequate ground and connect it effectively;
- get a decent amount of wire in the air to cover the bands you want to use;
- avoid radiator lengths that offer very low driving impedances so as to avoid the need for a very low loss earth system; and
- avoid lengths that offer very high driving impedances so as to keep the voltages in the tuner moderate.

I use a similar configuration (Alinco DX-70TH and EDX-2) at a holiday place. The earth for the tuner is connected by a 1.5m 4mm2 copper conductor to the copper water service which goes underground for a subtantial length. The radiator is broadly a sloper of 26m length, low end on the tuner at ground level, and the high end at 15m height in the clear but supported by a tree. It works real well from 10MHz down to 1.8MHz. This antenna models as a bit of a cloud warmer, but that it what is needed for local contacts (within say 1000Km).

If you want to consistenly work DX, especially on the higher bands, random wires are not likely to give very good gain at low radiation angles, think of something other than the SG-230 + wire.

Owen

602. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 02:13:31 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <6uas1vg89s7tmhll68biekbj08f6vbu6g4@4ax.com>
Source record: 127480

On 7 Jan 2003 01:20:33 -0800, 4nec2@gmx.net wrote:

>Hello,
>
>For those still interested, I just released the latest 5.1 version for
>4nec2 on www.qsl.net/wb6tpu/swindex.html
>
>Besides the traditional hill-climbing optimzer now also a flexible
>genetic-algorithm based optimizer is available.
>
>Due to some questions from this group I also made the following
>changes:
>
>- It is now possible to optimize over a range/band of frequencies.
>- More general approach for generating nec-2 output data.
>- More consistent display of gain-, F/B and F/R data.
>- Pre version 4.3 support for raw nec-2 input data re-enabled.
>
>Arie.

Arie:

I downloaded and tried the program but with trouble.

I'm using Windows XP/Pro, 512 MB RAM.

What I get is an error from the NEC2d512 program when it tries to run
the nec input file. The error message is Stack Fault, and it generates
no output.

Anyone else with this problem? Related to XP/Pro's treatment of DOS
programs?

Jack

603. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 02:15:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1E2CC5.9090503@ieee.org>
Source record: 127481

Reg Edwards wrote:
> But to go back again to basics, here's a simple 'proof' that the T network
> must be more lossy than the L :-
>
> When it is required to match a 50-ohm generator to a 50-ohm load via an L
> network we adjust both coil and capacitor sensibly to zero. The internal
> losses are also sensibly zero.
>
> But if for some operational advantage in the station we INSIST on matching
> 50 ohms to 50 ohms with a T network, in which the variable capacitors have
> some maximum settings, then it is obvious there must be an inductance
> somewhere inside the box - which has an appreciable loss resistance.

Well, that proves it for one trivial case. How about all the other cases?
Is there no combination of impedances where the T-network is less lossy
than an L-network?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

604. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 03:06:17 UTC
From: Pete Ritter <cpritter@attbi.com>
Message-ID: <JMqT9.303966$qF3.37237@sccrnsc04>
Source record: 127482

DIE THREAD, DIE DIE DIE
--
*
* This Space For Hire
*

605. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 03:34:32 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <9brT9.6591$7h3.1049509@news20.bellglobal.com>
Source record: 127483

"Pete Ritter"
> DIE THREAD, DIE DIE DIE

No - not until Chip shows up to explain his side of the story. I'm sure
that right now he's busy working on a faintly plausible plot line for his
side of the story.

606. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 03:49:29 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <dprT9.103667$hK4.8419278@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127484

>> Richard Cassano wrote:
>> I'm relatively new to this hobby and would like some advice on setting up a
>> base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230
>> antenna tuner and fifty feet of wire hung about ten feet up between house

> Owen Duffy replied:
> My understanding is that the SG-230 tuner is designed to have one side
> earthed (although there will be no shortage of people who will tell you
> how they use it to feed open wire lines), it is meant to be installed
> close to the ground (or a substantial artificial ground). It is able to
> match a wide range of load impedances presented by an end fed wire, be
> frequency agile and quite convenient.

I agree. The output of the SGC-230 is supposed to feed a
random wire against a ground system. On a boat, this is
the keel plate or some such thing. On a vehicle, the vehicle
body. At a fixed station, a set of ground radials. The
ground connection for the SGC-230 is the REAR mounting
bracket, the one where the coax and control/power wiring
enters the unit. The front mounting bracket, the one nearest
the output feedthrough insulator is floating and is for
mechanical support only.

Several have suggested using a dipole with coax feedline.
The SGC-230 can be used as one would a conventional,
manual tuner, with coax input and output, if the
ground connection on the rear mounting bracket is
carried forward to the output feedthrough insulator
via a low-inductance conductor, which then connects
to the shield of the output coax. The inner conductor
of the output (antenna side) coax connects to the
output feedthrough insulator, of course. In my mobile
installation, I mounted the SGC-230 on a common, aluminum
cookie sheet for the low-inductance ground connection.

Now, a disclaimer: the coax run to the base of my mobile
antenna is relatively short, about 10 feet. And my principal
bands are 80, 40 and 17 meters. I can see a situation
developing where quite long runs of coax could make the
impedance back at the SGC-230, the match point, contain
too much variation with frequency so that the SGC-230
cannot resolve the fine frequency differences and readjust
itself automatically. The scheme I propose is NOT
recommended by SGC for that reason. But I just can't
bring myself to put a $500 box out in the bed of my

pickup truck to be ripped off. And maybe you don't
want to put it out in your garden, similarly exposed.

Good luck with your station.

--
Jim Bromley, K7JEB k7jeb (at) arrl (dot) net
Glendale, Arizona

607. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 04:09:29 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avlh1g$3tf$1@slb2.atl.mindspring.net>
Source record: 127485

Jeff:

[snip]
"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:9brT9.6591$7h3.1049509@news20.bellglobal.com...
> "Pete Ritter"
> > DIE THREAD, DIE DIE DIE
>
> No - not until Chip shows up to explain his side of the story. I'm sure
> that right now he's busy working on a faintly plausible plot line for his
> side of the story.
[snip]

I recall postings to this NG about the new science of "fractal
electromagnetics" which
appeared to indicate that literally *all* antenna geometries may be subsumed
under a
fractal taxonomy.

Aparently the ubiquitous 1/2 wave Hertzian dipole is also to be considered
to be a
degenerate form of fractal.

The patent application claims under discussion are apparently an attempt to
legitimize
claims of proprietary ownership of such an all inclusive taxonomy.

Typical of the meglamania we have seen from the fractal electromagnetics
society.

God help the poor overworked USPTO examiners!

Hertz must be turning over in his grave.

--
Peter K1PO

608. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 04:28:30 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avli5d$ls3$1@helle.btinternet.com>
Source record: 127487

"David or Jo Anne Ryeburn" wrote -

>Not true.

==========

The discrepancy is small enough I didn't think it worth the trouble of
saying it was an approximation.

Reg.

609. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 04:28:31 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avli5e$ls3$2@helle.btinternet.com>
Source record: 127486

Cecil said -
> Well, that proves it for one trivial case. How about all the other cases?
> Is there no combination of impedances where the T-network is less lossy
> than an L-network?

==========
Cecil,

You know damn well there isn't !

All individual cases are trivial. In an infinity of individuals there is not one which is more trivial than another.

As I said "The same general argument can be extended to any other pair of impedances to
be matched."

If you wish to find me wrong you had better start searching. Make sure you have a fresh battery in your pocket calculator. ;o)

Reg

610. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 04:37:33 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <e6sT9.6621$7h3.1067809@news20.bellglobal.com>
Source record: 127488

"Peter O. Brackett"
> ...indicate that literally *all* antenna geometries may
> be subsumed under a fractal taxonomy.
> ...such an all inclusive taxonomy.

Well, no. Now he's including all "complex patterns" even if they are not fractal. That is funny for several reasons.

1) It is exactly what people have been telling him for some time.
2) It apparently now includes any squiggly line even if not fractal.

There are an infinite variety of fractal patterns of the types that he has listed. The number of "complex patterns" is infinitely times larger than the infinite number of possible fractals. Scope creep on an infinte scale.

611. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 04:55:20 UTC
From: mrheadz@fastmail.fm
Message-ID: <7cf18cd7.0301092055.4777f38f@posting.google.com>
Source record: 127489

Ian,
I think I am getting closer.Thanks for the tutorial on tuning up.
Yours was much easier to understand than the manual. Still trying to
get the Low and high Q theory that others have posted as an
alternative method to get a wider bandwith, so you don't have to
adjust the tuner every time you change the frequency with small
changes.

Maybe you can tell me if I am any closer. Tuner is a MFJ 989C.
Knobs are as follows:
Inductor- Max L=000
Min L=125
Transmitter(C1)- Max C=0
Min C=10
Antenna(C2)- Max C=0
Min C=10
Say I tune to Frequency X and get a match 1.1 with:
L=98
C1=2
C2=2
Another match with:
L=96
C1=4
C2=4
The first match would be a Higher Q than the second? The first would
be the best. Is this what you mean by the network Q being Low?
The second would give me a slightly wider bandwidth letting me move
around the freq X without retuning?

Another question.
C1 and C2 as above have Max C at 0. Max C is when Capacitors are fully
meshed. Min C at 10. Min C when capacitors are fully open. This is a
180 degree turn of knob, from 0 to 10.

0__________10
C1

Can you use a match when C1 or C2 knobs are at the -1 or -2 (neg)
position? Marked below as A? Another words, counterclockwise from 0.
As they are being unmeshed, is the capcitance being reduced also?

0__________10

A

Geez I'm slow. Thank you for your patience.

612. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 05:05:24 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0901032105240001@bni030qny8kc.bc.hsia.telus.net>
Source record: 127491

In article <3E1E2CC5.9090503@ieee.org>, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

> Reg Edwards wrote:
> >...(argument for the 50 ohm to 50 ohm case snipped)
> Well, that proves it for one trivial case. How about all the other cases?
> Is there no combination of impedances where the T-network is less lossy
> than an L-network?

Here's an argument for the purely resistive case, with load impedance
Routput and impedance to be provided to the source Rinput.

View a T network as two L networks back-to-back. The right hand L network
matches the load impedance up to a higher impedance which I will call K,
and the left hand L network matches that higher impedance K down to a
lower impedance, typically 50 ohms. (The actual inductor used in the
middle of the T network will be the parallel equivalent of two inductors,
one the shunt inductor for the right hand L network, and the other the
shunt inductor for the left hand L network. Or in the unlikely event that
you are using an L-C-L T network, the middle capacitor is the parallel
equivalent of the two corresponding capacitors.)

Then Qoutput = sqrt((K/Routput) - 1) and Qinput = sqrt((K/Rinput) - 1).
K can be any value you like as long as it is no smaller than either
Routput or Rinput.

In the limiting case where K = Routput, then Qoutput = 0 and the ouput
capacitor must be infinite while the shunt inductor for the right hand L
network also becomes infinite, and the T network degenerates to just the
left hand L network. This solution is only available for the case where
Routput > Rinput.

Likewise for the limiting case where K = Rinput.

And especially likewise for the case where K = Rinput = Routput where the
whole thing degenerates to a wire from the input SO239 connector to the
output SO239 connector!

If Xout = K/Qout is the reactance of the right hand L network's inductor and
Xin = K/Qin is the reactance of the left hand L network's inductor then
their equivalent reactance in parallel is K/(Qin + Qout) and the effective
Q using this single shunt reactance in the middle is Qin + Qout.

But Qin is at least the minimum value sqrt((Rout/Rin) - 1) that would be
used if Rout > Rin and we adopted an L network solution with shunt
inductor across the output, because K > Rout. Likewise Qout is at least
the minimum value sqrt((Rin/Rout) - 1) that would be used if Rin > Rout

and we adopted an L network soluton with shunt inductor across the input, because K > Rin. So one of the two terms in Qin + Qout is at least as large as the Q used in the L network solution, and the addition of the second term only makes it even worse.

The extension to the case where the load impedance (or the desired input impedance) is complex is left to the reader. (Hint: sometimes the L network solution then looks a bit strange, as suggested in one of my solutions for the 80 metre dipole to be used on 160.)

David, ex-W8EZE, who, while a working mathematician, never liked algebra, and still doesn't

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

613. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 05:10:27 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1sl8p1addlr15@corp.supernews.com>
Source record: 127490

Peter O. Brackett wrote:

> God help the poor overworked USPTO examiners!
>
> Hertz must be turning over in his grave.
>
> --
> Peter K1PO

Better still, lets hope Heinrich has/had a sense of humour and can enjoy this whole hoax in the way that "Snake Oil" Chip has so professionally devised.
A year from now Chipper (a new age mix of Dr. Brinkly and Reverend Ike) will be lording over us because he has PATENTED his schmoozle.
Har!

-WX4A

614. Re: Separation between multiple 2M J-Poles?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 05:31:49 UTC
From: Steve Silverwood <kb6ojs@arrl.net>
Message-ID: <MPG.1887e80bd2c6f85a9896d0@newstest2.earthlink.net>
Source record: 127492

In article <3dfd7d19.12198941@news.charter.net>, filbert009@charter.net says...
> who still uses packet?

The Tournament of Roses Radio Amateurs still do. We use it in the post-parade float viewing area for matching up lost parents and the kids who are looking for them. ;-)

There's also a major-big 100Km foot race across the Angeles Crest trail that they use packet for in a big way. They even drop off self-contained digipeaters (rig, tnc, antenna and battery in an ammo can) via helicopter on various peaks along the way to fill in the gaps in coverage. Works great for keeping track of what runners have come through which checkpoints. They did a seminar about it at a Southwest Division Convention a couple of years ago. Impressive system!

--

-- //Steve//

Steve Silverwood, KB6OJS
Fountain Valley, CA
Email: kb6ojs@arrl.net
Web: http://home.earthlink.net/~kb6ojs_steve

615. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 06:13:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1E64A5.8040702@ieee.org>
Source record: 127493

Reg Edwards wrote:

> Cecil said -
>>Well, that proves it for one trivial case. How about all the other cases?
>>Is there no combination of impedances where the T-network is less lossy
>>than an L-network?
>
> You know damn well there isn't !

Actually, I don't know that, Reg. After all, I don't know everything. :-)
That's why I asked the question.

> If you wish to find me wrong you had better start searching. Make sure you
> have a fresh battery in your pocket calculator. ;o)

Like you, I'm more likely to write a BASIC program that works while I'm
sleeping.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

616. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 06:29:36 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <m0qs1v80jqp7fn0art0698aqkn0gm21r92@4ax.com>
Source record: 127494

On Thu, 9 Jan 2003 05:33:05 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

|A T network (in its black box) is equivalent to an L network (in its black
|box) when both are adjusted to match the same pair of terminating
|impedances. They do identical jobs except that their power efficiencies, in
|general, will differ.
|
|Let's go back to basics. For the purpose of comparing efficiencies let's
|assume all individual components in both boxes are of identical 'Quality'.
|It should be obvious (but it probably isn't), efficiency of the L will be
|higher than that of the T because it has only 2 components whereas the T
|network has 3.

Let me offer an example where fewer components in the network *do not*
offer lower loss:

Let's match the gate impedance of a large fet rf transistor to a 50
ohm source. Let the hypothetical transistor Zg = 1 -j1 (not an
unreasonable value). Our real (non-ideal) components have Q's; Qc =
500, Ql = 100. Again, not unreasonable values.

Example 1:

A single L network comprised of a -j6.3 reactance in series with the
gate and a +j7.4 reactance in shunt with the input will provide a 50
+j0 match. The network loss will be 0.36 dB.

Example 2:

A high pass T network is used. Starting at the gate and working toward
the input the values are:

Series Xc = -j6.38
Shunt Xl = +j7.36
Series Xc = -j7.07

The network loss is 0.37 dB. One added lossy component, yet the
network loss is basically unchanged.

Example 3:

Two L networks are used with an intermediate matching value of 9 ohm.
Starting at the gate and working toward the input the values are:

Series Xl = +j3.8
Shunt Xc = -j3.2
Series Xl = +j18.9

Shunt Xc = -j23

The network loss is 0.3 dB. Four lossy components give lower loss
than two do.

Sometimes the "obvious" isn't so obvious.

All of the above easily calculated using XLZIZL.xls freely available
from www.qsl.net/ac6la
Example 2 can be verified using your own T-Tuner.

|In a (vain?) attempt to satisfy lurking nit-pickers I could take matters
|further by considering there is only one internal circulating current in the
|L network whereas there are two circulating currents in the T. To state the
|obvious, it is these circulating currents, magnified by the working Q's,
|which cause the tuner loss.

Obviously :)
|
|Furthermore, the Q of a T-network is inevitably greater than that of of its
|equivalent L. Higher Q is due entirely to using two smaller capacitors and
|larger coils for the same terminating impedances because we choose to
|sacrifice power efficiency (interference and signal-to-noise ratio) for
|greater impedance operating range and convenience and lower capital costs.
|
|And that's why T networks are more popular than L's. Automatic tuners are
|are also less expensive using two-C T-networks. Vices are often descibed as
|virtues.

That's what we call "Engineering", which is a trade off between
optimum performance, lowest cost and ease of production.

617. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 07:14:54 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1ssng17ilkp34@corp.supernews.com>
Source record: 127495

I had planned to reply to this message, and then found out all the type fonts were composed of twisty lines and hence were covered by Chip's patent...

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Bill M" <don'tspamme-exray@caribe.net> wrote in message
news:v1sl8p1addlr15@corp.supernews.com...
> Peter O. Brackett wrote:
>
> > God help the poor overworked USPTO examiners!
> >
> > Hertz must be turning over in his grave.
> >
> > --
> > Peter K1PO
>
> Better still, lets hope Heinrich has/had a sense of humour and can enjoy
> this whole hoax in the way that "Snake Oil" Chip has so professionally
> devised.
> A year from now Chipper (a new age mix of Dr. Brinkly and Reverend Ike)
> will be lording over us because he has PATENTED his schmoozle.
> Har!
>
> -WX4A
>

618. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 07:57:56 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1sv2t2k9qnqff@corp.supernews.com>
Source record: 127496

Fred Hambrecht Sr. wrote:
> I had planned to reply to this message, and then found out all the type
> fonts were composed of twisty lines and hence were covered by Chip's
> patent...
>

OOps. Sorry for stealing Chips ACE card when I capped "PATENTED".
Chipper better sign back in here before we start yakking about his momma.

-ex

619. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 09:23:18 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0301100123.48d7044f@posting.google.com>
Source record: 127497

Jack Smith <jsmith@mnsinc.com> wrote in message
>
> I downloaded and tried the program but with trouble.
> I'm using Windows XP/Pro, 512 MB RAM.
>
> What I get is an error from the NEC2d512 program when it tries to run
> the nec input file. The error message is Stack Fault, and it generates
> no output.
>
Hello Jack,

I think I know what's causing your problems. Due to the fact that I am not able to run XP overhere yet, this OS type is causing me relatively much trouble. Also because it's more distinct from DOS than the other windows OS types.

You should use the Nec2dXS engine when running on XP. Use the 'Settings' menu-option on the 'Main (F2)' form to select this. If done so you should be able to run a nec-file. (See the _ReadMeFirst.txt file)

To overcome this 'problem', I thougt it would be smart to add an automatic message saying that on XP you should select the nec2dXS engine. However I performed the wrong test, and now the message shows up when using the correct Nec2dXS engine.

I'll update the package on the 'unofficial nec-pages' as soon as possible. Hopefully within one or two day's (if you see an nec2d.exe dated 10-jan-2003' you will have the version without this XP related bug. (and some other minor fixes).

Concerning Mac's reply, the following:

> tailors an antenna in the antenna part of
> the suite of programs that go along with VOACAP, one gives it a name,
> one stores it where it can be found by VOACAP, one goes to VOACAP and
> imports the stored antenna file, and one runs VOACAP.

Yes you are right, but one is still restricted to a limited number of more general types of antennas. For instance, that time, if I remember correctly, I was trying to figure out how an Inverted-V on 40m would work and this type of antenna was not part of the available ones.

Arie.

620. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 12:21:53 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <BVyT9.634839$P31.244369@rwcrnsc53>
Source record: 127498

To address the last question, why don't you open the case and look!?

Malcolm W1/GW3NJY

"mrheadz" <mrheadz@fastmail.fm> wrote in message
news:7cf18cd7.0301092055.4777f38f@posting.google.com...
> Ian,
> I think I am getting closer.Thanks for the tutorial on tuning up.
> Yours was much easier to understand than the manual. Still trying to
> get the Low and high Q theory that others have posted as an
> alternative method to get a wider bandwith, so you don't have to
> adjust the tuner every time you change the frequency with small
> changes.
>
> Maybe you can tell me if I am any closer. Tuner is a MFJ 989C.
> Knobs are as follows:
> Inductor- Max L=000
> Min L=125
> Transmitter(C1)- Max C=0
> Min C=10
> Antenna(C2)- Max C=0
> Min C=10
> Say I tune to Frequency X and get a match 1.1 with:
> L=98
> C1=2
> C2=2
> Another match with:
> L=96
> C1=4
> C2=4
> The first match would be a Higher Q than the second? The first would
> be the best. Is this what you mean by the network Q being Low?
> The second would give me a slightly wider bandwidth letting me move
> around the freq X without retuning?
>
> Another question.
> C1 and C2 as above have Max C at 0. Max C is when Capacitors are fully
> meshed. Min C at 10. Min C when capacitors are fully open. This is a
> 180 degree turn of knob, from 0 to 10.
>
> 0__________10
> C1
>
> Can you use a match when C1 or C2 knobs are at the -1 or -2 (neg)
> position? Marked below as A? Another words, counterclockwise from 0.

> As they are being unmeshed, is the capcitance being reduced also?
>
> 0__________10
>
> A
>
> Geez I'm slow. Thank you for your patience.

621. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 12:32:44 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <t8ft1vorbu19pi91hm7dcle9fkmalt94gp@4ax.com>
Source record: 127499

On 10 Jan 2003 01:23:18 -0800, 4nec2@gmx.net wrote:

Stuff snipped below
>>
>Hello Jack,
>
>I think I know what's causing your problems. Due to the fact that I am
>not able to run XP overhere yet, this OS type is causing me relatively
>much trouble. Also because it's more distinct from DOS than the other
>windows OS types.
>
>You should use the Nec2dXS engine when running on XP. Use the
>'Settings' menu-option on the 'Main (F2)' form to select this. If done
>so you should be able to run a nec-file. (See the _ReadMeFirst.txt
>file)
>
>To overcome this 'problem', I thougt it would be smart to add an
>automatic message saying that on XP you should select the nec2dXS
>engine. However I performed the wrong test, and now the message shows
>up when using the correct Nec2dXS engine.
>
>I'll update the package on the 'unofficial nec-pages' as soon as
>possible. Hopefully within one or two day's (if you see an nec2d.exe
>dated 10-jan-2003' you will have the version without this XP related
>bug. (and some other minor fixes).
>

>
>Arie.

Arie:

Received the fix and that solved the problem.

Thanks again for all the hard work on this program!

JACK K8Z0A

622. Hustler 6-BTV Vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 12:51:59 UTC
From: abcincowbay@ns.sympatico.ca
Message-ID: <3E1EC16E.6DA2E4C2@ns.sympatico.ca>
Source record: 127500

Gid-day:
I'm looking for comments on the durability, ease of use, and
performance of this
antenna before deciding to buy one. Thanks
rgds / 73 / de VE1NB

623. Re: Hustler 6-BTV Vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 13:08:34 UTC
From: "Alan P. Biddle" <APBIDDLE@ATT.NET>
Message-ID: <pvgt1vcn5kjakt7h3sj1blhifj9m0ed4ii@4ax.com>
Source record: 127501

It has been around for decades. I had one in the 1970s, and had a great time with it running about 150 watts. DXCC with fairly casual operating. It is sturdily made, and stood up to some stiff winds mounded on a mast clamped to the side of the house. A friend later bought it, and cooked a trap running full power, but it was easily replaced.

There are other options, especially with the advent of auto tuners you can mount at the antenna. However, you can have a lot of fun with this antenna.

--
Alan
WA4SCA

624. Re: splicing twinlead TV antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 14:34:31 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <jOqcnR86HbVqRIOjXTWcqw@comcast.com>
Source record: 127502

The ground foil is there to shield against local noise pickup. As, for instance, if the cable is run parallel to the AC line inside the wall. Try connecting the foil to an electrical ground (box) and/or to the antenna boom to see if it makes any difference.

Tam/WB2TT
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v1p572ageg8l6c@corp.supernews.com...
> Grounding is probably a waste of time since the antenna is in the attic,
> lightning has to go thru the roof first and you'll have other major
problems
> then...
> Your twin lead probably has much less loss than coax so if you are in weak
> signal area you my want to stay with foam or at least std 300 twin lead to
> the set and install a balun there....
> Make sure you put about one twist per foot in the lead and that will help
to
> cancel any noise pickup by the leadin.
> "WJSchaible" <donovan820@attbi.com> wrote in message
> news:IiWS9.610082$%m4.195398@rwcrnsc52.ops.asp.att.net...
> > There is a TV antenna in my attic that I will soon put into service for
> the
> > first time (first for me anyway).
> > The feed wire (cable) runs down inside the living room wall. The cable
> > appears to be a fancy version of the standard flat twinlead TV antenna
> wire.
> > It has 2 parallel conductors and is lens-shaped in crossection. It is
> > filled with a dense plastic foam which holds the conductors in their
> > parallel orientation. It is the foam core that is lens-shaped in cross
> > section. There is a foil wrapping on the outside of the foam and a
tough
> > plastic jacket on top of the foil. There are also some fine bare
strands
> of
> > wire running along with the foil.
> >
> > The insulation is cut away at the end where the conductors are
terminated
> in
> > a plastic wall receptacle. The receptacle has 2 screw terminals on the
> back
> > and corresponding holes on the front where it apparently mates with a
> plug -
> > though I have never seen the plug. The receptacle actually has 3 holes:

2
> > for the screw terminals and a third hole (off set) that may be an
> alignment
> > hole. The third hole is simply a hole in the plastic and there is no
> metal
> > contact on the back side associated with the third hole. The conductor
> > spacing in the cable is 0.28 inches, however the receptacle holes are
0.50
> > inches apart.
> >
> > MY QUESTION IS: What is the 'nice' way to connect between this fancy
> cable
> > and the TV set?
> >
> > My inclination is to forget about the receptacle and simply solder a
piece
> > of regular flat twinlead wire onto the fancy lense-shaped twinlead that
is
> > in the wall. The receptacle is a nice tidy setup, but I don't know what
> to
> > connect to it that has 0.50 inch spacing. This receptacle seems like a
> big
> > discontinuity because it forces a transition from the 0.28 inch spacing
to
> > 0.50.
> >
> > Also, should I connect the foil shield in the lens-shaped cable to the
> > ground lug on the back of the TV set?
> >
> > The antenna itself is not grounded. I will connect a wire on the
vertical
> > metal tube that supports the antenna and run it down to the basement and
> > connect it to a water pipe. Maybe I should ground the horizontal member
> > (the mast?) that holds all the cross pieces (directors and reflector?).
I
> > don't know which one to ground.
> >
> > I appreciate your help.
> >
> > Thank you.
> > Bill Schaible - in Seattle, WA, USA
> >
> >
> >
> >
> >
> >
> >
> >
>

>

625. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 14:36:47 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301100636.3991ddc9@posting.google.com>
Source record: 127503

cprstn54zz@att.net (Ken) wrote in message
>
> Undoubtedly, a helix is not as efficient and an elongated wire, but it
> would create resonance. Some of the compact antennas are made 100% of
> Slinky.

A 100% slinky antenna would not be very good at all though. For the same reason that a 100% coiled hamstick is a lousy antenna. You must have some capacitance on the ends of the coils to "pull" the current through the coil, for a lack of a better way to decribe it. This is why I often have very good results using helical whips on cars. I use very long stingers. If you use a long enough stinger, you can have very good results, even with a coil that would normally be considered very low Q. I had a 20 m hamstick that had very little stinger on the top. On 20m, the antenna was a joke. But, use that same stick on 40m , with a very tall stinger, "5 ft in my case", and you will have a very good antenna that performs on the level close to a bugcatcher or screwdriver. One reason for this on a mobile, is ground losses usually overshadow coil losses. Anyway, you NEVER want to use a helically wound antenna with no capacitive loading on the ends. Will be a very poor antenna. Now, if you use the slinky's as lumped inductance, and placed say halfway to 3/4 of the way out from the center feedpoint, than that would be fine. But a normally built loading coil from copper wire would better than the steel used in a slinky. Not a very good material to build coils from. I have built two or three "loaded" dipoles for 160m. They work fairly well. As far as loaded dipoles are concerned, high Q lumped coils are the best way to go. And even with those, it's still VERY important to use enough capacitive loading on the ends. "wires or hats". BTW, I just converted my 6 ft 20m hamstick into a new improved all band mobile antenna this week. It uses a 3 inch 80m coil 5 ft above the base. Uses a 5 ft stinger, and is exactly a center loaded antenna in it's "driving mode". For parked use, I also have a 3 ft extender mast, that can raise the coil to 8 ft above the base. The antenna is working very well, and quite an improvement over my older all band stick with the coil only 2 ft above the base. I've tried it on 80/40/20/17. On 80m, no one has given me a report of less than S 9 so far with 100w. I was talking to a guy at 4:30 in the afternoon a couple of days ago. He's about 200 miles north. I was given solid 10 over 9 reports. Pretty good for daytime 75m sitting in my truck. And thats with the short 10 ft antenna. With the 13 ft antenna, it's even better. On 40m, they say I sound like I'm at the house on my dipole. So far, this antenna has not cost me a dime. Made totally from a junked 6 ft 20m hamstick. I just wish I had an easy way to mount a top hat on the thing...Would be even better. But thats hard

to do being the 5 ft stinger above the coil is thin and flimsy. MK

626. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 14:43:37 UTC
From: fractenna@aol.com
Message-ID: <20030110094337.02797.00001074@mb-ch.aol.com>
Source record: 127408

10 January, 2003

To Whom it may Concern:

William Meachum made the following public statements:

>Peter O. Brackett wrote:
>
>> God help the poor overworked USPTO examiners!
>>
>> Hertz must be turning over in his grave.
>>
>> --
>> Peter K1PO
>
>Better still, lets hope Heinrich has/had a sense of humour and can enjoy
>this whole hoax in the way that "Snake Oil" Chip has so professionally
>devised.
>A year from now Chipper (a new age mix of Dr. Brinkly and Reverend Ike)
>will be lording over us because he has PATENTED his schmoozle.
>Har!
>
>-WX4A
>

In a private correspondence, William Meachum, aka WX4A, of Vieques Island,
Puerto Rico, and Charlotte,NC, has been requested to retract these defamatory
statements.

They are demonstrably false and injurious.

Nathan Cohen,Ph.D.
aka Chip N1IR

627. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 14:45:38 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1tmv5f1kuo557@corp.supernews.com>
Source record: 127504

Bill M wrote:
> Peter O. Brackett wrote:
>
>> God help the poor overworked USPTO examiners!
>>
>> Hertz must be turning over in his grave.
>>
>> --
>> Peter K1PO
>
>
> Better still, lets hope Heinrich has/had a sense of humour and can enjoy
> this whole hoax in the way that "Snake Oil" Chip has so professionally
> devised.
> A year from now Chipper (a new age mix of Dr. Brinkly and Reverend Ike)
> will be lording over us because he has PATENTED his schmoozle.
> Har!
>
> -WX4A
>
I immediately and publicly apologize for my false statement
and have no basis to state or imply fraud or smear the character of
Nathan Cohen, also known as Chip N1IR.

William Meachum aka WX4A
of Puerto Rico and Charlotte NC

628. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 16:20:53 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1tsn6245vne9c@corp.supernews.com>
Source record: 127506

As Q = XL/r and XL=2PiFL as you reduce the number of turns used in the coil your reduce both the XL and the resistance. The ratio would be determined by the conductivity of the coil material. That being said irrespective of Q, the losses are due to R and one should select the setting using the least amount of coil in a tuner. Your first example would be the correct setting.

Q is a "figure of merit" and is best used to compare one coil against another for some intended purpose. In this instance, the net effect of 2 turns of coil, your picking fly crap out of pepper.

>
> "mrheadz" <mrheadz@fastmail.fm> wrote in message
> news:7cf18cd7.0301092055.4777f38f@posting.google.com...
> > Ian,
> > I think I am getting closer.Thanks for the tutorial on tuning up.
> > Yours was much easier to understand than the manual. Still trying to
> > get the Low and high Q theory that others have posted as an
> > alternative method to get a wider bandwith, so you don't have to
> > adjust the tuner every time you change the frequency with small
> > changes.
> >
> > Maybe you can tell me if I am any closer. Tuner is a MFJ 989C.
> > Knobs are as follows:
> > Inductor- Max L=000
> > Min L=125
> > Transmitter(C1)- Max C=0
> > Min C=10
> > Antenna(C2)- Max C=0
> > Min C=10
> > Say I tune to Frequency X and get a match 1.1 with:
> > L=98
> > C1=2
> > C2=2
> > Another match with:
> > L=96
> > C1=4
> > C2=4
> > The first match would be a Higher Q than the second? The first would
> > be the best. Is this what you mean by the network Q being Low?
> > The second would give me a slightly wider bandwidth letting me move
> > around the freq X without retuning?
> >
> > Another question.
> > C1 and C2 as above have Max C at 0. Max C is when Capacitors are fully
> > meshed. Min C at 10. Min C when capacitors are fully open. This is a

> > 180 degree turn of knob, from 0 to 10.
> >
> > 0__________10
> > C1
> >
> > Can you use a match when C1 or C2 knobs are at the -1 or -2 (neg)
> > position? Marked below as A? Another words, counterclockwise from 0.
> > As they are being unmeshed, is the capcitance being reduced also?
> >
> > 0__________10
> >
> > A
> >
> > Geez I'm slow. Thank you for your patience.
>
>

629. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 16:27:00 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v1tt2m2pqk4l33@corp.supernews.com>
Source record: 127507

OH OH, you must have received the standard "If you don't immediately render
and apology, you will be sued" SPAM from the Chipster...

> >
> I immediately and publicly apologize for my false statement
> and have no basis to state or imply fraud or smear the character of
> Nathan Cohen, also known as Chip N1IR.
>
> William Meachum aka WX4A
> of Puerto Rico and Charlotte NC
>

630. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 16:35:20 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <0ftt1vcqguqrvinri0kogv8f42c5n9u4ss@4ax.com>
Source record: 127509

On 10 Jan 2003 04:37:12 -0800, O_Epstein@att.net (O. Epstein) sent
into the ether:

>David Shrader <david.shrader@attbi.com> wrote in message
news:<3E1DA479.3020405@attbi.com>...
>> I did not make or offer any comment regarding the patent application.
>> Please read my post again.
>>
>> For those readers of the news group who may not be familiar with
>> Heisenburg I was simply giving a clarification that the Heisenburg
>> Uncertainty Principle is applicable to sub atomic physics not people.
>>
>> Deacon Dave, W1MCE
>/
>>
>>
>
>>This thread is closed.
>>
>>NC
>>
>>
>>
>>Early Academic Workï¿½Tour of the Charles then High Above Cayuga's
>Waters
>>
>>Nathan Cohen, 47, started his academic career, at 17, at Harvard
>University
>>under Jack Pierce, where he worked as a research assistant on VLF
>radio
>>propagation and radionavigation (OMEGA). While taking an NSF summer
>course
>>for high school seniors in physics and astronomy at the University of
>Iowa,

Snip<<<<

>That's impressive, Chip!
>
>But why is your picture at http://www.fractenna.com/nca_cohen_bio.html
>one that was taken at least twenty years ago?
>
>You're not a Boy Genius anymore....

Impressive, maybe. The real question is, why does he act like a
Buffoon?
Dan
Need a construction safety person?
Direct hire or contract.
Safe Today - Here Tomorrow
Don't Just Say It - Live It
Remove left x for direct reply

631. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 16:37:35 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v1tth1p6grqg04@corp.supernews.com>
Source record: 127508

Fred Hambrecht Sr. wrote:
> OH OH, you must have received the standard "If you don't immediately render
> and apology, you will be sued" SPAM from the Chipster...

My legal counsel advises me not to tell you that.
-BM

632. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 19:02:28 UTC
From: cprstn54zz@att.net
Message-ID: <3e1f171b.272350218@news-server.optonline.net>
Source record: 127510

On 10 Jan 2003 06:36:47 -0800, nm5k@wt.net (Mark Keith) wrote:
>A 100% slinky antenna would not be very good at all though.

Well, I know that if the slinky is compressed, it is just like a tin can around 4" long. So if I have a half slinky (35 ft) on the end of a 32 ft wire dipole half, I will have 32.33 ft of wire. If it is only slightly stretched, it will be like a choke, effectively terminating the antenna -- not much different from compressed. However, if I stretch it a bit, so that I have, say, 0.5" - 1.0" between the coils -- what happens then? Is there still significant inductance? Or have I just added 35 ft of wire to my 32 ft wire?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

633. Re: Hustler 6-BTV Vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 19:26:38 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <rd7u1vcoee9frjqabj7ucku6nf8t475jkr@4ax.com>
Source record: 127511

On Fri, 10 Jan 2003 12:51:59 GMT, abcincowbay@ns.sympatico.ca wrote:

>Gid-day:
> I'm looking for comments on the durability, ease of use, and
>performance of this
>antenna before deciding to buy one. Thanks
>rgds / 73 / de VE1NB

\
Very Sound construction very rugged.. some trap losses but if you have a good ground system will perform well for you.. I Had a 4BTV and used it for many many years.. still have it and it may go back up in the spring.

73 Dave kc1di

634. Need antenna for HP 117A comparator

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 20:09:44 UTC
From: douglasfir@charter.net
Message-ID: <v1ua4870iaav6b@corp.supernews.com>
Source record: 127512
Cross-posted to: rec.radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.hombrew,rec.amateur.misc

Hi,

I have a HP 117A comparator, and need the 10509A antenna.

Thanks,

Dennis

635. Re: Hustler 6-BTV Vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 20:10:34 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E1F2869.9040205@attbi.com>
Source record: 127513

Just a quick 'YES'. I use a 4BTV as a temporary antenna. It is rugged
and reliable. I have 3 sets of radials. Each set has 10, 15, 20 and 40
meter radials [three on eacxh band].

Deacon Dave, W1MCE

BTW as I wait for summer and re-installation of my tower and Log
Periodic the 4 BTV is my low band antenna.
++++++++++

KC1DI wrote:
> On Fri, 10 Jan 2003 12:51:59 GMT, abcincowbay@ns.sympatico.ca wrote:
>
>
>>Gid-day:
>> I'm looking for comments on the durability, ease of use, and
>>performance of this
>>antenna before deciding to buy one. Thanks
>>rgds / 73 / de VE1NB
>
>
> \
> Very Sound construction very rugged.. some trap losses but if you have
> a good ground system will perform well for you.. I Had a 4BTV and used
> it for many many years.. still have it and it may go back up in the
> spring.
>
> 73 Dave kc1di
>

636. Re: Antenna advice request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 20:51:54 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <KnGT9.515901$GR5.231109@rwcrnsc51.ops.asp.att.net>
Source record: 127514

I had a similar set of goals and constraints and went through a LOT of antennas with less than great results UNTIL I discovered the new Cushcraft MA5V vertical. It operates on 10m, 12m, 15m, 17m and 20m. These are all my favorite DX bands, but I supplement it with a 40m dipole. The great thing about this antenna is that it's less than 15 ft high, low windage and does NOT need radials! Just assemble it, tune it, and strap it to your chimney. I get very good 5x7 to 5x9 reports on DX. Cost is $209. I now have 3 other friends who are very satisfied with my recommendation. One replaced his expensive R8 with this antenna, and is considering getting a second for his RV.

Rudi - WA6RW

"Richard Cassano" <rcassano@optonline.net> wrote in message news:3rCS9.567$G01.76378@news4.srv.hcvlny.cv.net...
> I'm relatively new to this hobby and would like some advice on setting up a
> base station. Purchased an Icom 706 MkIIG and rigged it with an SG-230
> antenna tuner and fifty feet of wire hung about ten feet up between house
> and a tree. I did this just to get started and realize it is a flaky set-up.
> Have lots of RFI on all bands during the day. At this time I'm willing to
> spend some money, ($300) on a better antenna system and would like any
> advice on the biggest bang for the buck. One goal for me is to communicate
> with some Ham friends who are cruising aboard sailboats in the Caribbean,
> (south of me). In addition, one of these cruisers will be heading for the
> Azores, (east of me) in the spring and I would like to be able to stay in
> touch with him while he is underway. Any antenna system I purchase should
> have sufficient gain to enable reaching mid-ocean. I can put a short mast on
> the chimney, (ranch house), however very large beams are not going to get by
> the town code. Any advice would be much appreciated - thanks.
> Richard Cassano, KC2ISG
> Greenlawn, NY, USA
>
>

637. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 21:04:47 UTC
From: Anonymous <nobody@paranoici.org>
Message-ID: <f5164806d1f90bafa58b293dfdb73dc9@paranoici.org>
Source record: 127515

ROTFLMAO........
>Arecibo Observatory NRAO the VLA and other facilities.

Now that is a "Story in itself", lets just say that a South Park
character was based on good old Chipster.

>Since 1985, Cohen has applied analytical techniques to stock
>and options trading, both off-floor, and on-floor as an AMEX
>options trader.

OK Now we Know the Answer, Must have been the Famous Fractal analytical techniques
that he convinced Greenspan of that account for the dumpster economy.

>In 1987, Cohen joined Boston University, where he retired in 2002
>after various appointments as a professor of science engineering
>telecommunications and mechanical engineering.

Retired, what other option did he have....

Professor of mechanical engineering, that must be why the
"Plastic Fractal Pot" antenna was so resiliant, did
any one ever find the parts after the "Perfect Storm"?

Poor Mary must be working 2 jobs just to cover !

638. Re: Good stubby antenna for hand held scanner?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 21:06:50 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <KBGT9.635321$WL3.197977@rwcrnsc54>
Source record: 127516

I built a pocketable freestanding omni antenna with 5dB gain that can be easily setup and adjusted (no tools) from 120MHz (aircraft band) to 450MHz (70cm ham band) and anything in between. Parts cost is less than $35.
Check it out at:
http://home.attbi.com/~wiedemann/private/portable_antenna.htm

"Gadget150" <gadgetgru@netscape.net> wrote in message
news:3E17DDBD.3060702@netscape.net...
> Hi all,
> Just wondering if anyone has had any luck finding a stubby antenna that
> works well?..I have a Yaesu VR-120 hand held and am looking for
> something a little smaller for the pocket?..anyone have any they might
> recommend?
> I monitor a lot in the 860.00Mhz range as well as other bands.
> Please e-mail me directly as I don't always check the N.G's
> Thanks-Russ
> gadgetgru@netscape.net
>

639. Re: which vertical for 10/15/20?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 21:11:33 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <9GGT9.637802$P31.245810@rwcrnsc53>
Source record: 127517

Check out the new Cushcraft MA5V. 5 bands on 10m-20m with no need for
radials. Less than 15 ft tall. $209USD. Great DX antenna.

Rudi - WA6RW

"tore stabell kulo" <stabern@chello.no> wrote in message
news:R22R9.3622$T41.13685@amstwist00...
> Hi, there!
> I want to buy a vertical for 10/15/20 meters. I am currently using a 40/80
> trap dipole.
> But I am not going to buy a Cushcraft R8, priced here in Norway at about
900
> dollars, that is too expensive for me.
> Does anyone know which of the cheaper vericals that perform really good
> (Butternut/Hygain/Hustler..)
>
> Thank's in advance!
>
> (I am going to place it on a 4 meter mast on top of a flat concrete
> building)
>
> Regards,
> Tore Stabell Kulo,
> LA7FKA
>
>

640. Re: Hustler 6-BTV Vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 21:12:04 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3E1F3724.6A57A720@yahoo.com>
Source record: 127419

abcincowbay@ns.sympatico.ca wrote:
>
> Gid-day:
> I'm looking for comments on the durability, ease of use, and
> performance of this
> antenna before deciding to buy one. Thanks
> rgds / 73 / de VE1NB

I used one for 5 or 6 years. Its a great little antenna. I had it on an Apartment Balcony with radials where I could in Calif and worked a lot. Then I was transfered to Spain and when we got Reciprocal I put it up on top of my Base Housing unit and worked alot. It then went to Maine with me and I sold it there to get a Butternut HF6V. The guy that bought it from me there in Maine put it up on his garage and had it up for 10 more years or so. Then he sold it. Dunno if its still working or not but Id say 15+ years is worth it :D.

Works great (although not gonna compete with beams) but its rugged. Survived 3 diff climes and was shipped from Calif to Spain to Maine and still worked flawless.

Id say go for it.

641. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 21:15:01 UTC
From: Nomen Nescio <nobody@dizum.com>
Message-ID: <f5164806d1f90bafa58b293dfdb73dc9@dizum.com>
Source record: 127518

ROTFLMAO........
>Arecibo Observatory NRAO the VLA and other facilities.

Now that is a "Story in itself", lets just say that a South Park
character was based on good old Chipster.

>Since 1985, Cohen has applied analytical techniques to stock
>and options trading, both off-floor, and on-floor as an AMEX
>options trader.

OK Now we Know the Answer, Must have been the Famous Fractal analytical techniques
that he convinced Greenspan of that account for the dumpster economy.

>In 1987, Cohen joined Boston University, where he retired in 2002
>after various appointments as a professor of science engineering
>telecommunications and mechanical engineering.

Retired, what other option did he have....

Professor of mechanical engineering, that must be why the
"Plastic Fractal Pot" antenna was so resiliant, did
any one ever find the parts after the "Perfect Storm"?

Poor Mary must be working 2 jobs just to cover !

642. Anyone Using This Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 21:46:09 UTC
From: "Donnie (N4JZH)" <n4jzh@knology.net>
Message-ID: <0lfu1vg2clpp99dt4dtcpjrfo4vchntstu@4ax.com>
Source record: 127420

Anyone using a alpha-delta dx-dd?
any coments? pros, cons, construction e.t.c.
thanks in advance
''Behold how good and pleasant it is for Brethren to dwell together in unity''
Donnie n4jzh@knology.net

643. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 22:12:52 UTC
From: k1bqt@aol.com
Message-ID: <20030110171252.02018.00000320@mb-mn.aol.com>
Source record: 127219

>Professor of mechanical engineering<

Is that the same as part-time associate professor attached to the Metro extension school?

Rick K1BQT

644. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-10 22:24:38 UTC
From: fractenna@aol.com
Message-ID: <20030110172438.18019.00001079@mb-mv.aol.com>
Source record: 127233

>
>>Professor of mechanical engineering<
>
>Is that the same as part-time associate professor attached to the Metro
>extension school?
>
>Rick K1BQT
>

Dunno Rick. I was full time for 13 years before I retired, and mech eng professors are ENG profs, not MET profs:-)

So, obviously you are not asking about me.

Hope you had a pleasant new year. Nice to hear from you. Hope your new year's rez was to keep to the facts.

73,
Chip N1IR

645. cellphone Antenna boosters? (not the stupid stickers)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 00:09:46 UTC
From: dude <makecash@hotpop.com.nospam>
Message-ID: <3e1f605b_1@news.iprimus.com.au>
Source record: 127421

Hiya guys,

Hope theres some educated responses out here somewhere...

I'm looking to buy/construct a booster (passive) for my mobile phone..
nobody will
seem to sell me one, god knows why, the market for a decent real antenna
booster for mobiles must be massive in Australia... everyone wants one...

I have had a bit to do with making antenna for the 2.4ghZ for wireless data,
but i have had nothing to do with phone freq's .... but i dont see much of a
problem here..

if i just do the math to change the antenna from a 2.4ghZ to say 1850MHz to
1990MHz then this should give me an antenna that will pick up mobile signal
right???

2.4ghZ antenna are drop dead easy to make....

anyone else toyed with this??

the dude.

646. Re: cellphone Antenna boosters? (not the stupid stickers)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 00:42:01 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <qLJT9.8440$Yr2.1210409@news20.bellglobal.com>
Source record: 127423

"dude" wants a...
> booster (passive)

Can you define what you mean (beyond "not the stupid sticker") ? Are you refering to the stupid ones that mount on the rear view mirror ?

647. triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 00:43:35 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA44A9120018775FF0284600@news.west.cox.net>
Source record: 127422

I am looking at putting up a loop antenna.

On my property getting a 4 sided loop, while possible,
would be difficult. A triangle would be much easier to install.

The ARRL antenna handbook that I have (1982 edition)
says that "angles that are less than 90 degrees cause serious
cancellations of the rf energy."

The question I have is how serious is "serious"?

Would the station on the other end actually notice the
difference under most conditions?

I sure would like to have a warm fuzzy feeling that going
to a lot of extra work for that "additional side" of the
loop would actually make a noticeable difference.

Thanks,
Bill Mahaffey
KA6DVN

648. Re: cellphone Antenna boosters? (not the stupid stickers)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:15:24 UTC
From: dude <makecash@hotpop.com.nospam>
Message-ID: <3e1f6fbc$1_1@news.iprimus.com.au>
Source record: 127424

nono..

in the US mostly they sell these little stickers, that look similar to
say... a magnetic strip that are on products in stores to trigger the alarm.

there is a pic here of one - http://www.antennabooster.net/

i dont want to know aout these, thats why i put it in the subject line.

I am refering to actual antenna, anything from the "car kit" typ to building
my own yagi if i have to..

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:qLJT9.8440$Yr2.1210409@news20.bellglobal.com...
"dude" wants a...
> booster (passive)

Can you define what you mean (beyond "not the stupid sticker") ? Are you
refering to the stupid ones that mount on the rear view mirror ?

649. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:19:18 UTC
From: fractenna@aol.com
Message-ID: <20030110201918.01881.00000105@mb-df.aol.com>
Source record: 127409

>Retired, what other option did he have

I assume you are asking if I had to retire.

Of course I didn't. I chose to retire.

Thanks for your interest.

73,
Chip N1IR

650. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:32:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1F7427.2010209@ieee.org>
Source record: 127426

Bill Mahaffey wrote:
> The ARRL antenna handbook that I have (1982 edition)
> says that "angles that are less than 90 degrees cause serious
> cancellations of the rf energy."

Consider a folded dipole. The angle is virtually zero. I'm
wondering if the above worry is about radiation patterns,
not about power dissipation.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

651. Re: cellphone Antenna boosters? (not the stupid stickers)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:33:46 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <evsu1vgpp0rhhft31abos6fo3a8k392k3p@4ax.com>
Source record: 127425

On Sat, 11 Jan 2003 11:15:24 +1000, "dude"
<makecash@hotpop.com.nospam> wrote:

>nono..
>
>in the US mostly they sell these little stickers, that look similar to
>say... a magnetic strip that are on products in stores to trigger the alarm.
>
>there is a pic here of one - http://www.antennabooster.net/
>
>i dont want to know aout these, thats why i put it in the subject line.
>
>I am refering to actual antenna, anything from the "car kit" typ to building
>my own yagi if i have to..
>
>
>"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
>news:qLJT9.8440$Yr2.1210409@news20.bellglobal.com...
>"dude" wants a...
>> booster (passive)
>
>Can you define what you mean (beyond "not the stupid sticker") ? Are you
>refering to the stupid ones that mount on the rear view mirror ?
>
The real problem is interfacing it to the phone. Not all (or even
many) phone have provisions for external antennas. It is possible
that putting an antenna onto a cell phone will violate some law or
regulation, not to mention burning up the finals with a mismatch.

Russ

652. Re: cellphone Antenna boosters? (not the stupid stickers)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:35:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1F74D1.50702@ieee.org>
Source record: 127427

Russ wrote:
> The real problem is interfacing it to the phone. Not all (or even
> many) phone have provisions for external antennas. It is possible
> that putting an antenna onto a cell phone will violate some law or
> regulation, not to mention burning up the finals with a mismatch.

My Motorola cellphone has a coax connector on it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

653. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:37:29 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avnsgo$d9b$1@venus.btinternet.com>
Source record: 127428

"Wes Stewart" wrote -

> "Reg Edwards" wrote -
>
> |A T network (in its black box) is equivalent to an L network (in its
black
> |box) when both are adjusted to match the same pair of terminating
> |impedances. They do identical jobs except that their power efficiencies,
in
> |general, will differ.
> |
> |Let's go back to basics. For the purpose of comparing efficiencies let's
> |assume all individual components in both boxes are of identical
'Quality'.
> |It should be obvious (but it probably isn't), efficiency of the L will be
> |higher than that of the T because it has only 2 components whereas the T
> |network has 3.
>
> Let me offer an example where fewer components in the network *do not*
> offer lower loss:
==========

Wes,

Thank you for taking the trouble to demonstrate that, under certain circumstances, I was wrong. Cecil, just delete the sentence involving the number of components in a matching network. The incorrect statement was intended to provide a little more support to my assertion that a T-match, as used to broaden the operating range of antenna tuners, has a greater internal loss than an equivalent L. Which indeed it has although not enough to make the T-match unpopular. Most T-match users are unaware of it although there are occasional reports on this newsgroup of T-match overheating.

Wes's example (matching 50-ohms to the very low and reactive input impedance of an FET power transistor) of achieving less loss when using two L-networks in cascade (4 components) instead of a single L-network (2 components) is a special case where the design objective is actually to prevent overheating.

Overheating should be guarded against whenever the ratio (Generator Rg)/(Load RL) is very high. It is well known that the tuner or loading coil in a very short vertical antenna can be very lossy.

If component Q has already come to the end of its tether, the trick is to use TWO L-networks of the same high quality and match both Rg and RL to an internal (fictional, design) resistance which is INTERMEDIATE in value

between the two. The pair are connected together where they meet.

The optimum internal resistance is Squareroot(Rg * RL). When the total internal loss is calculated it will be found to be less than that of the equivalent single L-network.

In principle there can be any number of intermediate networks which merge into a minimum-loss tapered transmission line transformer. But nobody ever bothers. ;o)

Returning to our common-or-garden T-tuner, which is identical to two dissimilar back-to-back L-networks, the real reason it is more lossy is because the internal design resistance, instead of being intermediate in value between Rg and RL, is often manually set to greater than either of them - and up soars the working Q.

Thank you for your patience.

Reg, G4FGQ

654. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:40:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1uth1edpvn98f@corp.supernews.com>
Source record: 127429

Egad, I hope that phrase isn't in the current Antenna Book. If anyone sees it, please let me know and I'll pass it along to the editor.

RF energy can't be made to disappear or be "cancelled" by changing wire angle. But inverted vees and loops with very acute angles will have low feedpoint impedance, resulting in poor efficiency in some cases. If the efficiency is maintained by minimizing loss, then the bandwidth will be narrow. So as a general practice it's not a good idea. But if you're willing to put up with the narrow bandwidth and are willing to use larger wire if necessary to maintain efficiency, there's no other reason not to use acute angles.

The demo version of EZNEC will be adequate to determine the bandwidth, pattern, and field strength for a loop, except when used at high harmonics of its resonant frequency. (The full version is necessary for the latter.) You can get the free demo from http://eznec.com.

Roy Lewallen, W7EL

Bill Mahaffey wrote:
> I am looking at putting up a loop antenna.
>
> On my property getting a 4 sided loop, while possible,
> would be difficult. A triangle would be much easier to install.
>
> The ARRL antenna handbook that I have (1982 edition)
> says that "angles that are less than 90 degrees cause serious
> cancellations of the rf energy."
>
> The question I have is how serious is "serious"?
>
> Would the station on the other end actually notice the
> difference under most conditions?
>
> I sure would like to have a warm fuzzy feeling that going
> to a lot of extra work for that "additional side" of the
> loop would actually make a noticeable difference.
>
> Thanks,
> Bill Mahaffey
> KA6DVN
>

655. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:44:35 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avnsu2$4h4$1@helle.btinternet.com>
Source record: 127430

Bill, to answer all your questions -

Download from website below in a few seconds and run immediately program
MAGLOOP4. User friendly.

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================

656. QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:46:46 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E1F7786.6010905@ieee.org>
Source record: 127432

Anyone looked at the brainteaser on page 61 of the latest
QEX? It has two sources, one at each end of a piece of coax.
When reflections cause standing waves, the voltage standing
wave nodes and the current standing wave nodes are 1/4 WL
apart. With two sources, would the voltage standing wave
nodes and the current standing wave nodes be at the same
points? If so, does an associated SWR circle exist?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

657. Re: cellphone Antenna boosters? (not the stupid stickers)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:48:44 UTC
From: dude <makecash@hotpop.com.nospam>
Message-ID: <3e1f778d_1@news.iprimus.com.au>
Source record: 127431

mmm,

i have an ericcson T28, which has a plug in the back of it, for an external antenna.

now with the legals, it's perfectly fine to attach an antenna as big as you want to, as long as you dont boost the actual power... like those 3 watt boosters that were around for a while.. there a BIG nono..

All i want to do is buy or build an antenna... dick smith sell little antenna with a magnetic base, but they nor anyone else sell the correct plug to go into the phone.. but looking at it, it doesnt appear it will be to hard to find a fitting.

It seems funny to me that nobody has played around with this much...

"Russ" <carlzomer@hotmail.com> wrote in message
news:evsu1vgpp0rhhft31abos6fo3a8k392k3p@4ax.com...
On Sat, 11 Jan 2003 11:15:24 +1000, "dude"
<makecash@hotpop.com.nospam> wrote:

>nono..
>
>in the US mostly they sell these little stickers, that look similar to
>say... a magnetic strip that are on products in stores to trigger the
alarm.
>
>there is a pic here of one - http://www.antennabooster.net/
>
>i dont want to know aout these, thats why i put it in the subject line.
>
>I am refering to actual antenna, anything from the "car kit" typ to
building
>my own yagi if i have to..
>
>
>"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
>news:qLJT9.8440$Yr2.1210409@news20.bellglobal.com...
>"dude" wants a...
>> booster (passive)
>
>Can you define what you mean (beyond "not the stupid sticker") ? Are you
>refering to the stupid ones that mount on the rear view mirror ?
>
The real problem is interfacing it to the phone. Not all (or even
many) phone have provisions for external antennas. It is possible

that putting an antenna onto a cell phone will violate some law or regulation, not to mention burning up the finals with a mismatch.

Russ

658. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:55:34 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avntim$5hk$1@helle.btinternet.com>
Source record: 127434

Sorry Bill, on second reading it seems you are not interested in magloops.

Nevertheless Program MAGLOOP wiill give you relationships between
triangular, square and other shaped loops. There's not a lot between them.

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================

659. Re: Cushcraft power divider

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 01:55:38 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <rQKT9.4412$Dn.622@sccrnsc03>
Source record: 127433

```
It's a proven fact that anything one makes is crap unless they put a price
tag on it. The price tag then squeezes that last little bit of performance
out of it.
--

CW
KC7NOD

"Dennis Kaylor" <k4oxg@tampabay.rr.com> wrote in message
news:3E17A2CD.8020405@tampabay.rr.com...
> well yes it is easy to do if you dont care how well it works
> but for weak signal work on VHF line loss incertion loss and line lenght
> are big factors
> i have done the 4 array with the 3 Ts and coax jumpers that i made up
> myself and i have used store bought and i can tell you that the one that
> Directive systems or M2 makes is a lot less loss than the home built one
> and the phasing lines are electically exactly the same lenght which is
> very important
> now if all he wants this for is FM repeater hopping i would say build it
> yourself
> if you want to work weak signal stuff do it right and buy the stuff
> listening to these HF mentality folks will only discourage you when they
> put up a station most of there station budget goes for radio and mic and
> they spend the least amount on antenna and feedline
> good luck
>
> Jimnn7k@reno.rmci.net wrote:
> > correction: for 4 way , use 50 ohm coax (times 2 pieces), and 3 "tee"
> > fittings ! again figuring the lengths of these as : .66 times a 1/4
wave
> > length (for polyethlyne insulated coax), or .82 times 1/4 wavelenght
(for
> > foam dielectric-- jim
> >
> >
> >
> >
> >
> > <Jimnn7k@reno.rmci.net> wrote in message
news:fGKR9.10226$wQ1.4775@fe01...
> >
> >>Good Greif! The ARRL handbook tells how to make these!, but to suffice,
> >
> > for
> >
```

> >>a 2 Port power devider, at 50 ohms to 2x 50 ohm loads:
> >> L-1
> >>s ------------------[length of 75 ohm coax=
> >> L-2 velocity
factor,
> >>.66 times 1/4 wavelength, .82 times wavelength for Foam dielectric
> >
> > coax
> >
> >>at operating frequency
> >>
> >>source = xmitter side, L1, and L2 = loads
> >>
> >>for 4 way, double this (2 of these lines, and 3 "TEE" fittings)
> >>
> >>
> >>L-1
> >>L-3
> >>]-----------------------]X[----------------------[
> >>L-2
> >>L-4
> >>
> >>
> >>
> >>Source = "X" , "]x[" -- [and] -- = "tee"
fittings
> >>
> >>
> >>jim nn7k nn7k@reno.rmci.net
> >>
> >>
> >>"Edward Lewis" <kq6dx@pacbell.net> wrote in message
> >>news:s4he1vodkq7fa0vrf7etaf3b6p9ififfja@4ax.com...
> >>
> >>>is the cushcraft PD2 power divider simply a uhf tee or is there more
> >>>to it?
> >>>Edward Lewis KQ6DX
> >>>kq6dx@pacbell.net
> >>
> >>
> >>
> >>
> >>
> >>
>

660. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 02:02:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8uuu1vgj1fk50ajco335qck9v27402qgpa@4ax.com>
Source record: 127435

On Fri, 10 Jan 2003 19:46:46 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Anyone looked at the brainteaser on page 61 of the latest
>QEX? It has two sources, one at each end of a piece of coax.
>When reflections cause standing waves, the voltage standing
>wave nodes and the current standing wave nodes are 1/4 WL
>apart. With two sources, would the voltage standing wave
>nodes and the current standing wave nodes be at the same
>points? If so, does an associated SWR circle exist?

Does a Shaggy Dog bark?

73's
Richard Clark, KB7QHC

661. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 02:04:26 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA44BC05001CE874F0284600@news.west.cox.net>
Source record: 127436

On Fri, 10 Jan 2003 17:44:35 -0800, Reg Edwards wrote
(in message <avnsu2$4h4$1@helle.btinternet.com>):

> http://www.g4fgq.com

Thanks for the offer.
Wrong platform though.

bill

662. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 02:07:22 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA44BCB6001D11C8F0284600@news.west.cox.net>
Source record: 127437

On Fri, 10 Jan 2003 17:40:46 -0800, Roy Lewallen wrote
(in message <v1uth1edpvn98f@corp.supernews.com>):

> Egad, I hope that phrase isn't in the current Antenna Book. If anyone
> sees it, please let me know and I'll pass it along to the editor.
>

That is the latestissue I have.
THe statement is in the description of a 40 meter loop
in the "Fixed antennas and supports" section, chapter 8.

663. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 02:09:52 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA44BD4C001D3504F0284600@news.west.cox.net>
Source record: 127438

On Fri, 10 Jan 2003 17:32:23 -0800, OC_CAM's Razor wrote
(in message <3E1F7427.2010209@ieee.org>):

> Bill Mahaffey wrote:
>> The ARRL antenna handbook that I have (1982 edition)
>> says that "angles that are less than 90 degrees cause serious
>> cancellations of the rf energy."
>
> Consider a folded dipole. The angle is virtually zero. I'm
> wondering if the above worry is about radiation patterns,
> not about power dissipation.
>

I described the folded dipole to an "interested party"
(read non ham but interested) and the descrepency is evident,
but still....

thanks for the reply,
bill

664. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 02:58:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v1v22hkqkl1ld9@corp.supernews.com>
Source record: 127440

Around 15 years ago, Jerry Hall completely redid the Antenna Book, and got rid of all the incorrect stuff he could find that had crept in over the years. Since then, the editors have been scrupulous in trying to keep it accurate. Consequently, the Antenna Book you have doesn't bear a great deal of resemblance to modern editions.

Roy Lewallen, W7EL
(ARRL Technical Advisor)

Bill Mahaffey wrote:
> On Fri, 10 Jan 2003 17:40:46 -0800, Roy Lewallen wrote
> (in message <v1uth1edpvn98f@corp.supernews.com>):
>
>
>>Egad, I hope that phrase isn't in the current Antenna Book. If anyone
>>sees it, please let me know and I'll pass it along to the editor.
>>
>
>
> That is the latestissue I have.
> THe statement is in the description of a 40 meter loop
> in the "Fixed antennas and supports" section, chapter 8.
>

665. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 03:01:32 UTC
From: k1bqt@aol.com
Message-ID: <20030110220132.02129.00000104@mb-bk.aol.com>
Source record: 127234

>I had a joint position with ME. It was a professorial one Rick.<

Anyone from academia has the picture.

>Say, can we talk about you now?<

If you like. What would you like to attack or dispute?

>Tell me a little about your background in the broadcast industry. Weren't you
a
sound man or something?<

Nope. Never worked in the sound or broadcast industries.

>Now wait a minute-- how's that got to do with being an antenna designer?<

Nothing.

>I'm sure that beats some part time editing bit for a small town newspaper<

Never did that either.

>Where do you think a winter place would be best: Aspen? Breckenridge?
Maybe Tahoe?<

The Horney Toad in FJ1--about a mile from the airport on the beach. Ask for
Earl, he owns the place.

>Any suggestions on which has the best ground and least obstruction
for low take off angles?<

Clearly the Horney Toad. Lots of warm salt water (cold mountains are
insulators).

>(I don't think coming up with a covert antenna is an issue for me Rick:-)<

As a full cavity search may reveal.

>There's some antenna questions for you; any 'elp?<

Yeah, can't figure out how to beat Steve's antenna challenge with a fractal.
You having any better luck?

Rick K1BQT

666. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 03:12:42 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA44CC060020A8AEF0284600@news.west.cox.net>
Source record: 127441

Aha.
I had been qrt for a bit over ten years.
Just got active again about a month ago.
I looked at buying the new version then, but saw
it heavily "endorsed" dos.
So, as a very small protest (but with feeling),
I bought "the antenna file" and "vertical antenna classics"
instead.

Thanks...It feels good to have the obvious be
correct for once. <grin>

bill

On Fri, 10 Jan 2003 18:58:25 -0800, Roy Lewallen wrote
(in message <v1v22hkqkl1ld9@corp.supernews.com>):

> Around 15 years ago, Jerry Hall completely redid the Antenna Book, and
> got rid of all the incorrect stuff he could find that had crept in over
> the years. Since then, the editors have been scrupulous in trying to
> keep it accurate. Consequently, the Antenna Book you have doesn't bear a
> great deal of resemblance to modern editions.
>
> Roy Lewallen, W7EL
> (ARRL Technical Advisor)
>
> Bill Mahaffey wrote:
>> On Fri, 10 Jan 2003 17:40:46 -0800, Roy Lewallen wrote
>> (in message <v1uth1edpvn98f@corp.supernews.com>):
>>
>>
>>> Egad, I hope that phrase isn't in the current Antenna Book. If anyone
>>> sees it, please let me know and I'll pass it along to the editor.
>>>
>>
>>
>> That is the latestissue I have.
>> THe statement is in the description of a 40 meter loop
>> in the "Fixed antennas and supports" section, chapter 8.
>>
>

667. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 03:20:46 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <i4MT9.57878$4j5.8407087@newssvr28.news.prodigy.com>
Source record: 127439

To find out, recite these words...
In canis corpore transmuto.
--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:8uuu1vgj1fk50ajco335qck9v27402qgpa@4ax.com...
> On Fri, 10 Jan 2003 19:46:46 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
> >Anyone looked at the brainteaser on page 61 of the latest
> >QEX? It has two sources, one at each end of a piece of coax.
> >When reflections cause standing waves, the voltage standing
> >wave nodes and the current standing wave nodes are 1/4 WL
> >apart. With two sources, would the voltage standing wave
> >nodes and the current standing wave nodes be at the same
> >points? If so, does an associated SWR circle exist?
>
> Does a Shaggy Dog bark?
>
> 73's
> Richard Clark, KB7QHC

668. Re: cellphone Antenna boosters? (not the stupid stickers)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 04:32:16 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <rh7v1v4bk8urvma6su04lkhqs9kvg88rpt@4ax.com>
Source record: 127442

On Fri, 10 Jan 2003 20:33:46 -0500, Russ <carlzomer@hotmail.com>
wrote:

>The real problem is interfacing it to the phone. Not all (or even
>many) phone have provisions for external antennas. It is possible
>that putting an antenna onto a cell phone will violate some law or
>regulation, not to mention burning up the finals with a mismatch.

Maybe you can find a 500 watt linear on Yahoo! auctions.. :)
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

669. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 09:27:04 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <fgnv1v84sqkjjhctphk9l0k83ch8bv9257@4ax.com>
Source record: 127443

On Fri, 10 Jan 2003 11:27:00 -0500, "Fred Hambrecht Sr."
<w4jle@charter.net> wrote:

>> >
>> I immediately and publicly apologize for my false statement
>> and have no basis to state or imply fraud or smear the character of
>> Nathan Cohen, also known as Chip N1IR.
>>
>> William Meachum aka WX4A
>> of Puerto Rico and Charlotte NC
>>
>

>OH OH, you must have received the standard "If you don't immediately render
>and apology, you will be sued" SPAM from the Chipster...
>
>

To wit:

http://www.opsyhopsy.com/MiscJunk/who_is_nc.htm
>

670. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 09:34:37 UTC
From: mrheadz@fastmail.fm
Message-ID: <7cf18cd7.0301110134.2f236a7e@posting.google.com>
Source record: 127444

Fred,
Thanx for the simple and straight to the point answer. Loved the
flycrap/pepper thang. Very well said. Never heard that one!....Peace

671. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 11:23:56 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301110323.1a7dd3c5@posting.google.com>
Source record: 127445

cprstn54zz@att.net (Ken) wrote in message
news:<3e1f171b.272350218@news-server.optonline.net>...
> On 10 Jan 2003 06:36:47 -0800, nm5k@wt.net (Mark Keith) wrote:
> >A 100% slinky antenna would not be very good at all though.
>
> Well, I know that if the slinky is compressed, it is just like a tin
> can around 4" long. So if I have a half slinky (35 ft) on the end of
> a 32 ft wire dipole half, I will have 32.33 ft of wire. If it is only
> slightly stretched, it will be like a choke, effectively terminating
> the antenna -- not much different from compressed. However, if I
> stretch it a bit, so that I have, say, 0.5" - 1.0" between the coils
> -- what happens then? Is there still significant inductance? Or have
> I just added 35 ft of wire to my 32 ft wire?

You are just changing the pitch ratio of the coil. If you have a
narrow spacing between windings, you may actually have a higher Q with
that fairly thin wire, than with the wider .5-1.0 " spacing. Just
depends..Usually the preferred spacing will be about equal to the
width of the wire for the highest Q. As you use a wider spacing, you
will need more wire for an equal inductance to the narrower spaced
coil. You have many variables...In general, as far as efficiency goes,
a wider spacing is better, but that wider spacing does not always mean
the highest Q if the wire size doesn't match the pitch ratio. Hope
this make some sense...Others on here can probably explain coils
better than I can. You can play with one of Reg's programs that use
coils such as "vertload", and see what happens by changing this and
that with the coil wire, dia, pitch, etc...I use that program to help
design my mobile antennas and coils used. MK
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

672. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 12:54:34 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301110454.671dea00@posting.google.com>
Source record: 127446

Bill Mahaffey <ka6dvn@cox.net> wrote in message
news:<0001HW.BA44CC060020A8AEF0284600@news.west.cox.net>...
> Aha.
> I had been qrt for a bit over ten years.
> Just got active again about a month ago.
> I looked at buying the new version then, but saw
> it heavily "endorsed" dos.

Huh??? I haven't seen the latest issue. My latest issue is the 16th edition, 1991. But I've never known them to "endorse" any operating system. There was a collection of antenna, coil, etc, etc programs that was included with the book, but I think they were written by 3rd parties, and were just thrown in with the book as a bonus. Just guessing anyway...They were fairly old programs that were written when DOS was the popular platform in use at that time. They may still be included, but I don't think it's meant as an endorsment of DOS. Of course, you may be reading something new that I haven't seen. Very few people in the US still use DOS as the primary platform. So for the ARRL to endorse that, just doesn't really make sense. Windows is by far the most popular these days. Mac, linux, etc, etc still drag way behind in total users. But, it also depends on what applications the user is running to what they might prefer. For my needs, running flight simulators, and the sound card devices I use for the radio, windows makes the most sense. Of course, many blast windows, but I don't care, thats their problem. I have no problems with it. They can run whatever they want. But I can still run a DOS program no problemo in a DOS box.
I don't see the protest. So what? Whats the big problem with DOS? And how is the ARRL endorsing DOS? If I had to bet money, I'd bet 90% of the boxes at ARRL headquarters are probably running windows of some type. Thats just a guess though, I have no idea really. MK

673. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 13:38:37 UTC
From: fractenna@aol.com
Message-ID: <20030111083837.29663.00000727@mb-cv.aol.com>
Source record: 127412

>To wit:
>
>http://www.opsyhopsy.com/MiscJunk/who_is_nc.htm
>>
>

Information:

3 year statute of limitation for civil suit for libel in Commonwealth of Massachusetts;

3 year statute of limitation for copyright infringement

Exposure very very high.

Downside very very low.

Best Wishes,

Nathan Cohen, Ph.D.

674. Re: cellphone Antenna boosters? (not the stupid stickers)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 14:30:19 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <YTVT9.8666$SQ5.1419154@news20.bellglobal.com>
Source record: 127447

"dude"
> I am refering to actual antenna, anything from
> the "car kit" typ to building my own yagi if i have to..

So the word 'booster' is an unnecessary distraction. You're simply looking for an external antenna. As others have mentioned, the first step is to wander around your cell phone and see if it has provision for connecting an external antenna. You might need to hit Google with your cell phone brand, model number and the words 'external antenna'. Some portable cell phone have a provision for an external antenna, but it can be well hidden (in a multipin connector, or the whip can be yanked out).

675. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 14:56:44 UTC
From: fractenna@aol.com
Message-ID: <20030111095644.01948.00000280@mb-mn.aol.com>
Source record: 127335

>>...that's how it is.<
>
>No luck, either, eh? Oh well. Hi to Mary.
>
>Rick K1BQT

Well Rick, I think we're both seasoned enough in age to know that folks make their own luck. And THAT'S how it is:-)

Thanks for your well wishes.

73,
Chip N1IR

676. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 16:31:49 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA45875000079A03F0284600@news.west.cox.net>
Source record: 127448

On Sat, 11 Jan 2003 4:54:34 -0800, Mark Keith wrote
(in message <25eb70d7.0301110454.671dea00@posting.google.com>):

> Bill Mahaffey <ka6dvn@cox.net> wrote in message
> news:<0001HW.BA44CC060020A8AEF0284600@news.west.cox.net>...
>> Aha.
>> I had been qrt for a bit over ten years.
>> Just got active again about a month ago.
>> I looked at buying the new version then, but saw
>> it heavily "endorsed" dos.
>
> Huh??? I haven't seen the latest issue. My latest issue is the 16th
> edition, 1991. But I've never known them to "endorse" any operating
> system. There was a collection of antenna, coil, etc, etc programs
> that was included with the book, but I think they were written by 3rd
> parties, and were just thrown in with the book as a bonus. Just
> guessing anyway...They were fairly old programs that were written when
> DOS was the popular platform in use at that time. They may still be
> included, but I don't think it's meant as an endorsment of DOS. Of
> course, you may be reading something new that I haven't seen. Very few
> people in the US still use DOS as the primary platform. So for the
> ARRL to endorse that, just doesn't really make sense. Windows is by
> far the most popular these days. Mac, linux, etc, etc still drag way
> behind in total users. But, it also depends on what applications the
> user is running to what they might prefer. For my needs, running
> flight simulators, and the sound card devices I use for the radio,
> windows makes the most sense. Of course, many blast windows, but I
> don't care, thats their problem. I have no problems with it. They can
> run whatever they want. But I can still run a DOS program no problemo
> in a DOS box.
> I don't see the protest. So what? Whats the big problem with DOS? And
> how is the ARRL endorsing DOS? If I had to bet money, I'd bet 90% of
> the boxes at ARRL headquarters are probably running windows of some
> type. Thats just a guess though, I have no idea really. MK

Perhaps you didn't notice that I enclosed the word "endorsed" in quotes.
Or, don't know why that would be done.

I've used windows since the very first release. I've supported
software products on it that also ran on unix. The difference between
windows and a decent o.s. is tremendous.

But, windows users don't want to hear that. After all, how could they
possibly be wrong? Doesn't everybody use windows? Can everybody be wrong?

Perhaps if ms ever conjured up an original thought I wouldn't have the attitude that they are a ball and chain around the neck of innovation and progress.

Bill
KA6DVN

677. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 16:51:50 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ale02v8ulhfu616fpbntkukpjdf38p205h@4ax.com>
Source record: 127449

On Sat, 11 Jan 2003 01:37:29 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

|
|Thank you for taking the trouble to demonstrate that, under certain
|circumstances, I was wrong.

Thank you for admitting it :)

|Cecil, just delete the sentence involving the
|number of components in a matching network. The incorrect statement was
|intended to provide a little more support to my assertion that a T-match, as
|used to broaden the operating range of antenna tuners, has a greater
|internal loss than an equivalent L. Which indeed it has although not enough
|to make the T-match unpopular. Most T-match users are unaware of it although
|there are occasional reports on this newsgroup of T-match overheating.
|
|Wes's example (matching 50-ohms to the very low and reactive input
|impedance of an FET power transistor) of achieving less loss when using two
|L-networks in cascade (4 components) instead of a single L-network (2
|components) is a special case where the design objective is actually to
|prevent overheating.

Additionally, the network has better BW. Speaking of overheating, I
read a report once about a designer watching in amazement as the
matching capacitors on his high power solid state amp slowly slid down
the microstrip lines after the solder melted.

|
|Overheating should be guarded against whenever the ratio (Generator
|Rg)/(Load RL) is very high. It is well known that the tuner or loading coil
|in a very short vertical antenna can be very lossy.
|
|If component Q has already come to the end of its tether, the trick is to
|use TWO L-networks of the same high quality and match both Rg and RL to an
|internal (fictional, design) resistance which is INTERMEDIATE in value
|between the two. The pair are connected together where they meet.
|
|The optimum internal resistance is Squareroot(Rg * RL). When the total
|internal loss is calculated it will be found to be less than that of the
|equivalent single L-network.

In my example I started with the geometric mean as the intermediate
value, but with judicious tinkering using the Smith chart, I found a
slightly better value. Resonating each section isn't necessarily the
lowest loss condition. I believe the reason for this is the choice of

unloaded Qc and Ql values. Since they are not equal, where they are placed and the load Q value at that point affects the loss.

|
|In principle there can be any number of intermediate networks which merge
|into a minimum-loss tapered transmission line transformer. But nobody ever
|bothers. ;o)

Correct and that would also give the greatest match BW. If constant Q circles are drawn (or in my case visualized) on the Smith chart, it is possible to effect the match in little steps, each of which has a Q of less than some desired value.

I cannot overemphasize the value of Dan's Excel workbook for doing this stuff.

|
|Returning to our common-or-garden T-tuner, which is identical to two
|dissimilar back-to-back L-networks, the real reason it is more lossy is
|because the internal design resistance, instead of being intermediate in
|value between Rg and RL, is often manually set to greater than either of
|them - and up soars the working Q.
|

True.

678. UHF Anpassungszeiger NAD BN26223/60

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 17:42:07 UTC
From: la8ak.xnd@online.no
Message-ID: <3e204239.77466209@news.online.no>
Source record: 127450
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

Got the UHF Anpassungszeiger und UHF-Wattmeter NAD BN26223/60.

Has somebody changed connectors from Dezifix to N-type, and changed
impedance from 60 to 50 ohm? Also have a 1kW probe for it

Have the books, is it some interest to post data to a particular site?

it is not for sale!!!!!

73 jan-martin
LA8AK
--
remove ,xnd to reply

679. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 18:12:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <t0n02v4lfklu462kr2q4arm04ho5rsjpl8@4ax.com>
Source record: 127451

On 11 Jan 2003 03:23:56 -0800, nm5k@wt.net (Mark Keith) wrote:

> If you have a
>narrow spacing between windings, you may actually have a higher Q with
>that fairly thin wire, than with the wider .5-1.0 " spacing. Just
>depends..Usually the preferred spacing will be about equal to the
>width of the wire for the highest Q.

Hi Mark,

In a condition related to skin depth (the same one actually), we find the proximity of coil windings has one wire inducing the losses due to skin effect into the other wire (read this as both wires as this is mutual and simultaneous). The closer the wires (doesn't have to be coils, just parallel conductors with current in the same direction), the more loss that arises out of reduced penetration (less conductive volume, more resistance, Q drops).

The effect is significant out to 3 wire diameters and diminishes to low values at 5 diameters. Q follows many independent variables, and turn separation is one, there is more the question: is it the significant one?

As for the slinky, being composed of steel, the proximity of the next loop of the coil is a deadly embrace - best to spread that sucker out, way out.

73's
Richard Clark, KB7QHC

680. Re: Hustler 6-BTV Vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 20:00:01 UTC
From: suluvar@tr.net
Message-ID: <d3e73311.0301111200.27ff3cec@posting.google.com>
Source record: 127452

Hi,
You may also check the comments with:
http://www.eham.net/reviews/detail/248
Regards & 73s
TA3DO

abcincowbay@ns.sympatico.ca wrote in message news:<3E1EC16E.6DA2E4C2@ns.sympatico.ca>...
> Gid-day:
> I'm looking for comments on the durability, ease of use, and
> performance of this
> antenna before deciding to buy one. Thanks
> rgds / 73 / de VE1NB

681. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 20:06:46 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <B1udnRN-BLfJ5L2jXTWcrg@comcast.com>
Source record: 127453

Bill,

I am trying to visualize how you have room for a triangular loop, and not a square (the triangular requires more height). The only thing that comes to mind is that you want to put the apex at the top. Now there are a couple a things to consider. At 40 meters, for instance, the loop requires 145 feet of wire with each side being 48.3 feet. this compares to an inverted V with each side being 32.5 feet. For the two cases, and the center at the same height, the ends of the inverted V will be higher off the ground, and you won't have the third side at some low height.

A few years ago QST had an article on rectangular loops. I think higher than wide. If you get the proportions right, it will present a 50 ohm feedpont impedance, as opposed to about 110 for the square loop.

I have a full size 75m loop that is in the shape of a trapazoid, with the lower horizontal wire about 30-40 feet longer than the top. Top wire @75'bottom@15'. I have gotten good report on it from Europeans. Impedance is about 110 ohms, though. I am feeding one corner, with the shield of the coax going to the horizontal wire. According to EZNEC, the gain is 6.2dBi @ 30 degrees, and 2.2 @ 10 degrees over average ground.

Tam/WB2TT
"Bill Mahaffey" <ka6dvn@cox.net> wrote in message
news:0001HW.BA44A9120018775FF0284600@news.west.cox.net...
> I am looking at putting up a loop antenna.
>
> On my property getting a 4 sided loop, while possible,
> would be difficult. A triangle would be much easier to install.
>
> The ARRL antenna handbook that I have (1982 edition)
> says that "angles that are less than 90 degrees cause serious
> cancellations of the rf energy."
>
> The question I have is how serious is "serious"?
>
> Would the station on the other end actually notice the
> difference under most conditions?
>
> I sure would like to have a warm fuzzy feeling that going
> to a lot of extra work for that "additional side" of the
> loop would actually make a noticeable difference.
>
> Thanks,
> Bill Mahaffey

> KA6DVN
>

682. Linear Amp Relay not Working on TS-940SAT

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 20:45:45 UTC
From: chick.gregg@greaterhomes.com
Message-ID: <d7d639b5.0301111245.3fdf5a8a@posting.google.com>
Source record: 127454

I have a TS-940 and a Yaesu FL2100B linear and have made the
connection through an external relay to key the amp upon keying the
mic on the 940. This same set-up worked with my TS-450, but the relay
on the 940 doesn't seem to be closing when I key the mic and therefore
the external relay is not closing and keying the amp. Any suggestions
for where to start looking?

683. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 21:11:28 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E208880.10108@ieee.org>
Source record: 127455

Tarmo Tammaru wrote:
> I am trying to visualize how you have room for a triangular loop, and not a
> square (the triangular requires more height).

I got the impression that it was a horizontal loop, not a vertical
loop. If so, he may have a triangular shaped lot or three trees.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

684. Auction for ARRL VHF Manual ends in under 1 hour

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 21:20:00 UTC
From: Martin <Martin@g1gyc.demon.co.uk>
Message-ID: <avq1r8rrl2$8302bc10@news.demon.co.uk>
Source record: 127456
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

This auction ends at 21:53:23 GMT Please take a look

http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=1949234646

then look at my other auctions
http://cgi6.ebay.co.uk/ws/eBayISAPI.dll?ViewSellersOtherItems&userid=g1gyc

685. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 22:38:33 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA45DD44001BBF68F0284600@news.west.cox.net>
Source record: 127457

On Sat, 11 Jan 2003 12:06:46 -0800, Tarmo Tammaru wrote
(in message <B1udnRN-BLfJ5L2jXTWcrg@comcast.com>):

> Bill,
>
> I am trying to visualize how you have room for a triangular loop, and not a
> square (the triangular requires more height). The only thing that comes to
> mind is that you want to put the apex at the top. Now there are a couple a
> things to consider. At 40 meters, for instance, the loop requires 145 feet
> of wire with each side being 48.3 feet. this compares to an inverted V with
> each side being 32.5 feet. For the two cases, and the center at the same
> height, the ends of the inverted V will be higher off the ground, and you
> won't have the third side at some low height.
>
> A few years ago QST had an article on rectangular loops. I think higher than
> wide. If you get the proportions right, it will present a 50 ohm feedpont
> impedance, as opposed to about 110 for the square loop.
>
> I have a full size 75m loop that is in the shape of a trapazoid, with the
> lower horizontal wire about 30-40 feet longer than the top. Top wire
> @75'bottom@15'. I have gotten good report on it from Europeans. Impedance
> is about 110 ohms, though. I am feeding one corner, with the shield of the
> coax going to the horizontal wire. According to EZNEC, the gain is 6.2dBi @
> 30 degrees, and 2.2 @ 10 degrees over average ground.
>
> Tam/WB2TT
> "Bill Mahaffey" <ka6dvn@cox.net> wrote in message
> news:0001HW.BA44A9120018775FF0284600@news.west.cox.net...
>> I am looking at putting up a loop antenna.
>>
>> On my property getting a 4 sided loop, while possible,
>> would be difficult. A triangle would be much easier to install.
>>
>> The ARRL antenna handbook that I have (1982 edition)
>> says that "angles that are less than 90 degrees cause serious
>> cancellations of the rf energy."
>>
>> The question I have is how serious is "serious"?
>>
>> Would the station on the other end actually notice the
>> difference under most conditions?
>>
>> I sure would like to have a warm fuzzy feeling that going
>> to a lot of extra work for that "additional side" of the

>> loop would actually make a noticeable difference.
>>
>> Thanks,
>> Bill Mahaffey
>> KA6DVN
>>
>
>

A very fair question, I would think.

The problem is available supports, not room.

I have one support of any height, a tree located on one side
of my backyard. My yard is shaped like a slice of pie, with
the back of the back yard being the wide part. I have two
10 feet long pipes that I will put near each end of the
wide end of the yard. That will give me about 80 feet or
so of base. The tree has an enticing branch about 50' high.

The line from the tree would go to each pipe, and the angle
from one pipe to the tree would be about 90 deg. I would have
a rough estimate of about 90 meters total of wire out, not
counting the ladder line I would use.

The side of the yard opposite the tree (where a possible fourth
support would/should be) has a small hill and buildings that
impede the installation of another support. Impede, not prohibit.
I would probably have to use cement on the fourth support and I
am trying to avoid doing that.

This is probably more verbage than necessary, but I hope I was
able to describe my situation.

bill

686. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 23:14:21 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301111514.5132ff8@posting.google.com>
Source record: 127458

Bill Mahaffey <ka6dvn@cox.net> wrote in message
news:<0001HW.BA45875000079A03F0284600@news.west.cox.net>...
> On Sat, 11 Jan 2003 4:54:34 -0800, Mark Keith wrote
> (in message <25eb70d7.0301110454.671dea00@posting.google.com>):
>
> > Bill Mahaffey <ka6dvn@cox.net> wrote in message
> > news:<0001HW.BA44CC060020A8AEF0284600@news.west.cox.net>...
> >> Aha.
> >> I had been qrt for a bit over ten years.
> >> Just got active again about a month ago.
> >> I looked at buying the new version then, but saw
> >> it heavily "endorsed" dos.
> >
> > Huh??? I haven't seen the latest issue. My latest issue is the 16th
> > edition, 1991. But I've never known them to "endorse" any operating
> > system. There was a collection of antenna, coil, etc, etc programs
> > that was included with the book, but I think they were written by 3rd
> > parties, and were just thrown in with the book as a bonus. Just
> > guessing anyway...They were fairly old programs that were written when
> > DOS was the popular platform in use at that time. They may still be
> > included, but I don't think it's meant as an endorsment of DOS. Of
> > course, you may be reading something new that I haven't seen. Very few
> > people in the US still use DOS as the primary platform. So for the
> > ARRL to endorse that, just doesn't really make sense. Windows is by
> > far the most popular these days. Mac, linux, etc, etc still drag way
> > behind in total users. But, it also depends on what applications the
> > user is running to what they might prefer. For my needs, running
> > flight simulators, and the sound card devices I use for the radio,
> > windows makes the most sense. Of course, many blast windows, but I
> > don't care, thats their problem. I have no problems with it. They can
> > run whatever they want. But I can still run a DOS program no problemo
> > in a DOS box.
> > I don't see the protest. So what? Whats the big problem with DOS? And
> > how is the ARRL endorsing DOS? If I had to bet money, I'd bet 90% of
> > the boxes at ARRL headquarters are probably running windows of some
> > type. Thats just a guess though, I have no idea really. MK
>
>
> Perhaps you didn't notice that I enclosed the word "endorsed" in quotes.
> Or, don't know why that would be done.

I still don't see how that relates to the ARRL book. What makes you
think they "endorse" any particular platform?
>

> I've used windows since the very first release. I've supported
> software products on it that also ran on unix. The difference between
> windows and a decent o.s. is tremendous.

Sure, if you have the app's to run on the "better" platform.
>
> But, windows users don't want to hear that. After all, how could they
> possibly be wrong? Doesn't everybody use windows? Can everybody be wrong?

What makes you think that? The reason most other platforms aren't as
popular is not the OS. It's the app's that are available for it. Sure,
I could run unix or linux or whatever, but none of the programs I use
are available for those platforms. Or if they are, they are so lame as
to be a joke. The app's I run dictate what OS I use, not the other way
around. I don't get emotional when it comes to computers and OS's. I
use whatever app's are best, and whatever OS it takes to run them.
>
> Perhaps if ms ever conjured up an original thought I wouldn't have
> the attitude that they are a ball and chain around the neck of
> innovation and progress.

But what does this have to do with the ARRL book? I still don't know
what it is that makes you think ARRL "endorse" DOS, or MS for that
matter."

MK

687. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-11 23:32:43 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301111532.3b22fe40@posting.google.com>
Source record: 127459

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<t0n02v4lfklu462kr2q4arm04ho5rsjpl8@4ax.com>...

> As for the slinky, being composed of steel, the proximity of the next
> loop of the coil is a deadly embrace - best to spread that sucker out,
> way out.

Might as well use a straight piece of copper wire if you do that..:)
I wouldn't use the slinky's for coils myself. Too flimsy to hold a
steady pitch, etc. Not to mention the poor rf conductivity of the
steel. I don't know what plating they may have...I'd probably wind
fairly normal coils with copper wire on some kind of form. PVC, or
whatever..At least that way, you know what you have as far as
inductance, and can plan your other wire lengths easier. If I had the
room, I wouldn't use coils at all. Even a "Z" dipole with the legs
bent back would be better. The "Z" dipole outperformed all the loaded
ones I tried as far as efficiency. Very little difference from a
normal dipole. The losses from using loading coils was not too large,
but was noticable if you are comparing to a full size dipole. MK

688. Re: Linear Amp Relay not Working on TS-940SAT

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 01:45:24 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E20C8B4.57F68167@cwis.net>
Source record: 127460

Chick,
Start in the 940's operating manual to find out how
to turn the relay 'on'.
'Doc

689. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 02:03:33 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avqidl$lh9$1@knossos.btinternet.com>
Source record: 127461

The difference between the radiating efficiency of a horizontal regular triangular loop and a square loop of the same circumference is for practical purposes zero.

There will be some differences in the radiating pattern in the horizontal plane.

And that's about all there is to it !

Reg, G4FGQ

690. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 02:24:12 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA461227002824ACF0284600@news.west.cox.net>
Source record: 127462

On Sat, 11 Jan 2003 18:03:33 -0800, Reg Edwards wrote
(in message <avqidl$lh9$1@knossos.btinternet.com>):

> The difference between the radiating efficiency of a horizontal regular
> triangular loop and a square loop of the same circumference is for practical
> purposes zero.
>
> There will be some differences in the radiating pattern in the horizontal
> plane.
>
> And that's about all there is to it !
> ---
> Reg, G4FGQ
>
>

Thanks Reg..

I think in the future I'll just put the damned thing
up and see what happens. <grin>

bill
KA6DVN

691. Re: Hustler 6-BTV Vertical antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 02:46:55 UTC
From: Orv Larson <Orv@Cox.Net>
Message-ID: <zG4U9.8328$hE3.615543@news1.west.cox.net>
Source record: 127463

I've had a 5-BTV up continuously since 1970. I have taken it down twice (a day each time) to clean the connections. It's still up and mounted 10 feet above ground with never more than one set of radials. Do note, however, that 75/80 Meter stinger bandwidth is only about 10KHZ. It has performed well and has been very durable in southern CA area. I an, however, really tired of the radials after all this time.

Orv
<abcincowbay@ns.sympatico.ca> wrote in message
news:3E1EC16E.6DA2E4C2@ns.sympatico.ca...
> Gid-day:
> I'm looking for comments on the durability, ease of use, and
> performance of this
> antenna before deciding to buy one. Thanks
> rgds / 73 / de VE1NB
>

692. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 09:25:00 UTC
From: VA6BEN <VnAo6sBpEaNm@rNaOc.ScPaAM>
Message-ID: <MvaU9.18750$sV3.1138509@news3.calgary.shaw.ca>
Source record: 127464

Why not just use a simple 1/2 wave vertical? 88.1 MHz makes it about a 11'1"
foot(11.1645' to be exact) piece of wire, what's cheaper than that?

Ben

"Doc" <monel@sprynet.myshorts.com> wrote in message
news:auutv3inq1@slb4.atl.mindspring.net...
> OK, I'm not even a newbe! I run a model rocket hobby club and I just
bought
> a Ramset FM25B broadcaster "thing". (I'm clueless to this stuff) I built
it
> and it works great, but I need more range. We will be using it to announce
> the flights and to warn people of possible danger. (Some of the rockets
are
> 15 feet tall and 100 pounds.) Our current PA system just doesn't cut it
any
> more.
>
> I think I need a better antenna. I've surfed for hours and see that two
> options are a "Slim Jim" and a J pole. I like what I read about a Ribbon J
> Pole made from 300 Ohm TV Cable from Radio Shack, (sounds cheap) but I
can't
> find a diagram or anything.
>
> We don't have much money left in the kitty. :-(
>
> I will be broadcasting at around 88.1 , so I will need help matching it or
> whatever.
>
>
> Can you guys help me?
>
>
> Doc
>
> --
> Drake" Doc" Damerau 79986 L2
> President NEPRA, NAR Section 614
> www.nepra.com
>
> HPR Strength of Materials Site:
> http://rocketmaterials.org
> (Remove "my shorts" to email me)
>
>

>

693. Re: L network question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 09:44:24 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <hDC+J$H4jTI+EAk1@ifwtech.co.uk>
Source record: 127465

mrheadz wrote:

>Ian,
> I think I am getting closer.Thanks for the tutorial on tuning up.
>Yours was much easier to understand than the manual. Still trying to
>get the Low and high Q theory that others have posted as an
>alternative method to get a wider bandwith, so you don't have to
>adjust the tuner every time you change the frequency with small
>changes.
>
>Maybe you can tell me if I am any closer. Tuner is a MFJ 989C.
>Knobs are as follows:
>Inductor- Max L=000
> Min L=125
>Transmitter(C1)- Max C=0
> Min C=10
>Antenna(C2)- Max C=0
> Min C=10
>Say I tune to Frequency X and get a match 1.1 with:
> L=98
> C1=2
> C2=2
>Another match with:
> L=96
> C1=4
> C2=4
>The first match would be a Higher Q than the second? The first would
>be the best. Is this what you mean by the network Q being Low?
>The second would give me a slightly wider bandwidth letting me move
>around the freq X without retuning?
>

Sorry for the delay... not due to lack of patience, but due to the first half-decent days for outdoor antenna work here since October.

Let's cut to the chase.

In your tuner, low L = high counter numbers, and low C = high dial numbers. (Even through these read backwards, let's not try to change anything, because it would mess up the instructions in the manual.) So, re-working the previous instructions...

Remember that you are aiming for the LOWEST possible L that will give an acceptable match - in other words, aim for HIGHER counter numbers.

1. Set both C1 and C2 at or near to 0 on the dial.

2. Adjust L for maximum receiver noise (this may be a very broad peak, but don't worry).

3. Transmitting low power on a clear frequency, adjust C1 and C2 for the lowest possible VSWR. (The adjustments will interact - to be sure of finding the lowest possible VSWR, change one capacitor in small steps; and for each step, sweep the other capacitor across its whole range.)

4. Crank the L to a higher counter number and repeat step 3.

5. Two possibilities here:

(a) If the VSWR minimum is lower after step 3, you're heading in the right direction. Crank the L to a higher counter number again, and keep repeating steps 3, 4 and 5a until the L counter shows the highest possible value that will give an acceptable match. You're done!

(b) If the lowest possible VSWR is higher than before, decrease the L counter to undo the last change you made, and try decreasing it just a little more. Go back to step 3, and repeat steps 3 and 4 until you can exit via step 5a.

One more once: Remember that you are aiming for the LOWEST possible L that will give an acceptable match - in other words, aim for HIGHER counter numbers.

(Warning to anybody else trying to use these instructions: remember that his L counter and C dial markings all read backwards!)

Finally,

>Another question.
>C1 and C2 as above have Max C at 0. Max C is when Capacitors are fully
>meshed. Min C at 10. Min C when capacitors are fully open. This is a
>180 degree turn of knob, from 0 to 10.
>
> 0__________10
> C1
>
>Can you use a match when C1 or C2 knobs are at the -1 or -2 (neg)
>position? Marked below as A?

Yes. If both give the same amount of overlap between the fixed and moving plates, they also give the same capacitance.

>Another words, counterclockwise from 0.
>As they are being unmeshed, is the capcitance being reduced also?

Yes. Trust your own two eyes!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

694. Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 09:59:32 UTC
From: VA6BEN <VnAo6sBpEaNm@rNaOc.ScPaAM>
Message-ID: <80bU9.18990$sV3.1142453@news3.calgary.shaw.ca>
Source record: 127466

Hi all, I was just struck by lightning today with an idea for a nice "all band" antenna. Unfortunately, there aren't a whole lot of real orginal ideas out there and I haven't heard anything about doing something similar elsewhere, so I'm wondering if there's something I'm missing. What I'm thinking is essentially a sloper for the higher HF bands (30m & up). The trick is that instead of a LC tuner in the shack, it actually physically changes the length of the antenna to resonnance with a motor and rulley system. The engineering facet of this isn't actually all that complicated, I just have to strengthen the wire somehow, like with a fibreglass or nylon line. I was actually thinking something like electric fence wire, but heavier. The catch is that this setup reqires the sloper to be a folded dipole rather than a standard one. Can anyone spot any problems with the theory from a radiation pattern / electrical point of view?

Also, is there an optimum separation distance between the 'elements'(?) of a folded dipole? It seems all the commercial ones are about a foot apart, but it doesn't seem to matter what freq. they're designed for. Either way, I can't seem to find anything at all about separation either in the ARRL Antenna book, or on the 'net.

Thanks!

Ben

695. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 12:55:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2165B8.802@ieee.org>
Source record: 127467

Richard Clark wrote:
> OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote:
>>Anyone looked at the brainteaser on page 61 of the latest
>>QEX? It has two sources, one at each end of a piece of coax.
>>When reflections cause standing waves, the voltage standing
>>wave nodes and the current standing wave nodes are 1/4 WL
>>apart. With two sources, would the voltage standing wave
>>nodes and the current standing wave nodes be at the same
>>points? If so, does an associated SWR circle exist?
>
> Does a Shaggy Dog bark?

This QEX brainteaser has caused some interesting discussions.
I have two different kinds of wattmeters. Design#1 samples
total voltage and total current at a single point. Design#2
uses a length of slotted line to sample currents only.

Design#1 and Design#2 give different values of wattmeter
readings for the brainteaser. Reg, you should love that one.

And here's a technical question: Can two same-frequency waves
traveling in the same direction in a Z0 environment with their
E fields in zero phase and their H fields 180 degrees out of
phase be considered to be coherent? Hint: if they are merged,
their E/H ratio is no longer Z0.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

696. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 13:32:43 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301120532.e2fb87f@posting.google.com>
Source record: 127468

>
> I have a full size 75m loop that is in the shape of a trapazoid, with the
> lower horizontal wire about 30-40 feet longer than the top. Top wire
> @75'bottom@15'. I have gotten good report on it from Europeans. Impedance
> is about 110 ohms, though.

You could use an appx 22 ft "1/4 wl" piece of 75 ohm coax from the
feedpoint to the regular 50 ohm line to get a better match. "series
transformer" Thats my usual fix anyway.. MK

697. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 14:02:42 UTC
From: richardharrison@webtv.net
Message-ID: <14737-3E217582-380@storefull-2316.public.lawson.webtv.net>
Source record: 127269

Ben, VA6BEN wrote:
"--is there an optimum separation distance between the "elements" of a folded dipole?"

Ben probably is asking about the distance between parallel conductors.

Arnold B. Bailey in "TV and Other Receiving Antennas" charts surge impedance correction due to separation distance as a fraction of wavelength up to 0.2 on Fig 8-21 on page 415.

The correction is small for thin conductors with small separation. So, there is likely no optimum.

The reason more information is not readily available is that the consequences of variations are usually unimportant.

Best regards, Richard Harrison, KB5WZI

698. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 14:28:23 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301120628.35692e58@posting.google.com>
Source record: 127270

"VA6BEN" <VnAo6sBpEaNm@rNaOc.ScPaAM> wrote in message
>
> Also, is there an optimum separation distance between the 'elements'(?) of a
> folded dipole? It seems all the commercial ones are about a foot apart, but
> it doesn't seem to matter what freq. they're designed for. Either way, I
> can't seem to find anything at all about separation either in the ARRL
> Antenna book, or on the 'net.
>
> Thanks!
>
> Ben

Probably not real critical. BTW, this antenna has been done before.
Don Mix did this back in the 50's, and fed it with a viking valiant.
It started out as a temporary setup, but he used it for a good while
according to the article I read once. MK

699. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 14:52:28 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <v0-dnSDCh6K7HLyjXTWcqQ@comcast.com>
Source record: 127271

That's what I am doing. But it is more like 43 feet of RG11.

Tam/WB2TT

Tam/WB2TT
"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0301120532.e2fb87f@posting.google.com...
> >
> > I have a full size 75m loop that is in the shape of a trapazoid, with
the
> > lower horizontal wire about 30-40 feet longer than the top. Top wire
> > @75'bottom@15'. I have gotten good report on it from Europeans.
Impedance
> > is about 110 ohms, though.
>
> You could use an appx 22 ft "1/4 wl" piece of 75 ohm coax from the
> feedpoint to the regular 50 ohm line to get a better match. "series
> transformer" Thats my usual fix anyway.. MK

700. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 15:24:12 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E21889C.815AF3E4@cwis.net>
Source record: 127272

Ben,
There's no real urgent reason why the spacing would
be much of a problem. The difference it would make in
the antenna's impedance sshould be fairly easy to deal
with. You're also right about there being very few new
antenna ideas, lots of variations on older ones, though.
One that comes to mind was used in aviation, a 'trailing
wire' antenna. They usually had some kind of weight on
the end to help stabilize them, and were just 'un-rolled'
from a reel till the correct length was reached. I'm
sure there are other examples...
'Doc

701. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 16:11:38 UTC
From: k1bqt@aol.com
Message-ID: <20030112111138.02053.00000351@mb-mn.aol.com>
Source record: 127328

I might try a mechanical solution using a conventional sloping dipole that spools up wire at its ends (ala yoyo-tenna)? Such a concoction would offer precise tuning over a very wide frequency range while retaining somewhat constant feed impedance and pattern shape. Only trick is to regulate the spooling rate so the feedpoint stays centered. Anyone MEs on the NG?

Rick K1BQT

702. Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 16:14:57 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301120814.5d41e6cb@posting.google.com>
Source record: 127273

I have a variable inductance for 100 uH
made of windings on a static 3 inch dia tube
with a motor driven slider, this being
in series with a small rotary driven inductor.
This is large and looks ugly when placed at
the bottom of a experimental vertical antenna.
Too cold to work outside so I have decided to
make a smaller form and thus I welcome input.
Toroids seem to be the way to go but I suppose
I will need more than one plus some relays.
Would it be better to stack ferrite toroids
and wind it in one big coil for the 50 uH
form or just have a bunch of separately wound
toroids in series? What about a series of windings
on one coil with a lump of ferrite pushed in and out,
has that been done? I suppose I could break and
grind a number of ferrites and mold with epoxy
to any shape Open to any ideas wierd
or otherwise, got any thoughts ?
Art

703. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 16:36:42 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <yv2dnTLnRqEMBLyjXTWc3g@crocker.com>
Source record: 127274

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0301120814.5d41e6cb@posting.google.com...
> I have a variable inductance for 100 uH
> made of windings on a static 3 inch dia tube
> with a motor driven slider, this being
> in series with a small rotary driven inductor.
> This is large and looks ugly when placed at
> the bottom of a experimental vertical antenna.
> Too cold to work outside so I have decided to
> make a smaller form and thus I welcome input.
> Toroids seem to be the way to go but I suppose
> I will need more than one plus some relays.
> Would it be better to stack ferrite toroids
> and wind it in one big coil for the 50 uH
> form or just have a bunch of separately wound
> toroids in series?

the stack would be better if you are using high power and may saturate the cores. the bigger cross section area would allow higher currents before saturation. smaller coils in series is probably easier to build and you could add or remove them one at a time for tuning.

>What about a series of windings
> on one coil with a lump of ferrite pushed in and out,
> has that been done?
that is how IF cans in receivers/transmitters work. a ferrite slug is turned up or down inside the coil to change inductance. try it with a ferrite rod inside a solenoid wound coil. it won't give as much inductance as a torroid but may be easier to tune.

>I suppose I could break and
> grind a number of ferrites and mold with epoxy
> to any shape Open to any ideas wierd
> or otherwise, got any thoughts ?
> Art

grinding ferrites like that will lose most of its effectiveness. torroids work well because they are a closed magnetic path where most of the flux is confined in the ferrite material. if you break it and glue it back together you can get most, but not all of the original inductance as now there is a small gap in the magnetic material. grinding them would make a whole bunch of little gaps and while it would retain some of the effect its probably not cost effective or mechanically very good.

maybe stack a bunch of torroids on a stick and move that in and out of your inductor. a large iron bolt or piece of rebar inside the coil may increase

inductance also, but may have higher losses than using ferrite.

another way to 'simulate' an inductor is to use a 1/4 wavelength piece of coax with a capacitor at the far end. use a transmitting grade capacitor if you are transmitting with the antenna.

704. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 16:51:39 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E219D1B.378B7423@cwis.net>
Source record: 127275

Art,
As for the big ugly thingy at the base of your antenna,
set a 'foam' ice chest over it to hide the 'ugly'. Set a
flower pot on top to make it 'pretty'. Make that a cactus,
the 'needles' help disipate static...
'Doc

705. HHH has improved still further

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 16:59:18 UTC
From: Harry - SM0VPO <someone@micro$oft.com>
Message-ID: <G9hU9.5891$LY2.347623@newsc.telia.net>
Source record: 127276

Hi all,

It seems that the number of projects on my homepages has been increasing
over the years, so now there is a HUGE library of electronic, radio and
antenna circuits and designs.

My homepage URL: http://w1.859.telia.com/~u85920178
Visitors ccts: http://hem.spray.se/lythall
My PDF library: http://hem.passagen.se/sm0vpo

Projects include:
LW/MW/SW AM transmitter - play oldies on antique sets
LW/MW Reflex receiver - Oroginally used germanium!
V7B FM 88-108MHz TX - 400mW with possibility to synthesize
EPROMS - Store/play analogue AF waveforms - from WAVE file
UGLY Construction - A good RF prototype method
On-Line calculators - see "RF Calculators" (+booze and Osc)
Radio Control of models - proportional circuits
Antennas suitable for balcony and restricted spaces
Loop and frame antennas
Radio path loss calulations
+ loads more.

BR from Harry

706. 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 17:09:46 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E21A15A.D5C38915@bloomer.net>
Source record: 127277

Anybody running a full wave horizontal (square) loop on 80/75M that is in the neighborhood of 15 feet above ground? I want to give it a try for "local" communications, say out to 150-200 miles. In other words, I want a high takeoff angle. Will this be a decent way to achieve this or will its proximity to the ground causes losses so high that I'd have trouble communicating to the end of the road? ;)

Also, any problems with breaking the loop at one corner and feeding directly with 50 Ohm coax?

Open to all other ideas as well!

Thanks!!!
--

Scott N0EDV
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

707. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 17:34:09 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E21A711.41274003@cwis.net>
Source record: 127278

Scott,
It ought to work just fine at about 15 feet. I think
mine is something like that and I hear what most other
people hear, local or at a distance.
The only problem with feeding the loop with 50 ohm coax
is that you will have an impedance mismatch to contend with.
You might use an electrical 1/4 wave of 75 ohm coax as an
impedance transformer then make up any additional feed line
with 50 ohm coax. That's just one way of doing it, there are
others...
'Doc

708. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 17:51:36 UTC
From: fractenna@aol.com
Message-ID: <20030112125136.23009.00000493@mb-mf.aol.com>
Source record: 127327

>I might try a mechanical solution using a conventional sloping dipole that
>spools up wire at its ends (ala yoyo-tenna)? Such a concoction would offer
>precise tuning over a very wide frequency range while retaining somewhat
>constant feed impedance and pattern shape. Only trick is to regulate the
>spooling rate so the feedpoint stays centered. Anyone MEs on the NG?
>
>Rick K1BQT
>
>

Hmmmm..

I interpreted his question as needing instantaneous bandswitching.

73,
Chip N1IR

709. Re: VX5-r

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 17:55:28 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <bKshPrssqiaQasNo6G7D9rUnupcC@4ax.com>
Source record: 127279

dplatt@radagast.org (Dave Platt) wrote:

>One significant problem with HT antennas is that they don't have a
>very good ground plane to work against. Rather than having a metal
>car body, or a tuned set of radials, they have only the metal in the
>HT case, and the operator's body (directly or capacitively coupled) to
>serve as a ground plane.

One way to get around this is to get a tiny hose clamp from the hardware store,
and clamp a radial or two, about 19" long, to the base of the rubber ducky.

Bob
k5qwg

710. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 18:23:21 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o4c32v8j2rem2331almjvvfqn25j2cvnh5@4ax.com>
Source record: 127280

On Sun, 12 Jan 2003 06:55:20 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>> Does a Shaggy Dog bark?
>
>This QEX brainteaser has caused some interesting discussions.

Hi Cecil,

That has been overwhelmingly obvious by the enormous length of this
thread already.

Does your Shaggy Dog have fleas?

73's
Richard Clark, KB7QHC

711. Re: HHH has improved still further

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 18:38:17 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E21B601.8486E02C@shaw.ca>
Source record: 127281

Harry - SM0VPO wrote:
>
> Hi all,
>
> It seems that the number of projects on my homepages has been increasing
> over the years, so now there is a HUGE library of electronic, radio and
> antenna circuits and designs.
>
> My homepage URL: http://w1.859.telia.com/~u85920178
> Visitors ccts: http://hem.spray.se/lythall
> My PDF library: http://hem.passagen.se/sm0vpo
>
Thanks Harry, I'm a frequent visitor and highly appreciative
of your pages.

Irv VE6BP

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

712. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 18:48:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5sd32voohntiv9fhkuu0vlubm4ikiglv7r@4ax.com>
Source record: 127282

On 12 Jan 2003 08:14:57 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>What about a series of windings
>on one coil with a lump of ferrite pushed in and out,
>has that been done?

Hi Art,

This method was employed to tune car radios for years.

You might take a peak at their designs to observe they moved the core
with a shaped cam. The shape of the cam allowed them to tailor the
tuning increment for both tracking, and linearizing the display scale.

You could call this method (with tongue in cheek) a magnetic
screwdriver antenna.

73's
Richard Clark, KB7QHC

713. Re: HHH has improved still further

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 19:38:35 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E21C47D.2F4A95FB@att.net>
Source record: 127284

Harry,

Yes, this is a nice site.

Why do you choose to spoil it by accusing the reader of "stealing" your work whenever navigation through the pages is attempted?

I will not be back.

73,
Gene
W4SZ

Harry - SM0VPO wrote:
>
> Hi all,
>
> It seems that the number of projects on my homepages has been increasing
> over the years, so now there is a HUGE library of electronic, radio and
> antenna circuits and designs.
>
> My homepage URL: http://w1.859.telia.com/~u85920178
> Visitors ccts: http://hem.spray.se/lythall
> My PDF library: http://hem.passagen.se/sm0vpo
>
> Projects include:
> LW/MW/SW AM transmitter - play oldies on antique sets
> LW/MW Reflex receiver - Oroginally used germanium!
> V7B FM 88-108MHz TX - 400mW with possibility to synthesize
> EPROMS - Store/play analogue AF waveforms - from WAVE file
> UGLY Construction - A good RF prototype method
> On-Line calculators - see "RF Calculators" (+booze and Osc)
> Radio Control of models - proportional circuits
> Antennas suitable for balcony and restricted spaces
> Loop and frame antennas
> Radio path loss calulations
> + loads more.
>
> BR from Harry

714. Engine Interference HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 19:53:09 UTC
From: Richard Velez <RickieV@hotmail.com>
Message-ID: <avsh0i$is3bt$1@ID-89515.news.dfncis.de>
Source record: 127285

Hi,
I'm having a problem. I installed my htx-202 in the car, and I'm getting a pop, scratching noise on the speaker of the ht. When I turn off the car, the noise goes away. Its only on the speaker and not when I'm transmitting.

Any ideas ?

Rickie / KC2KQQ

715. Re: triangle vs square loops

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 19:55:49 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <avsh85$n0g$1@slb5.atl.mindspring.net>
Source record: 127286

There is a lot of expert advise out there about antennas. And I don't claim to be a expert. But I have two loops here on HF. One is for 20m and the other is for 40m.

The twenty is a delta loop configuration, with the longest (flat part) on top. This is fed with 1/4 wave of 75 ohm line and then to a length of mini8. It is somewhat different than what you would normally see. The 'bottom' where the feed is hooked is actually the corner. And the 'top' wire is slanted at the angle. In other its standing on its corner. It works very well indeed. I have it up about 50 feet or so.

The other loop is cut for 40meters and is a triangle. I am feeding it with 450 ladderline into the Johnson Matchbox. This antenna does great on all bands.

Compaired to a dipole...much better.

Just some comments without benifit of 'scientific proof'

Dan/W4NTI

"Bill Mahaffey" <ka6dvn@cox.net> wrote in message
news:0001HW.BA44A9120018775FF0284600@news.west.cox.net...
> I am looking at putting up a loop antenna.
>
> On my property getting a 4 sided loop, while possible,
> would be difficult. A triangle would be much easier to install.
>
> The ARRL antenna handbook that I have (1982 edition)
> says that "angles that are less than 90 degrees cause serious
> cancellations of the rf energy."
>
> The question I have is how serious is "serious"?
>
> Would the station on the other end actually notice the
> difference under most conditions?
>
> I sure would like to have a warm fuzzy feeling that going
> to a lot of extra work for that "additional side" of the
> loop would actually make a noticeable difference.
>
> Thanks,
> Bill Mahaffey
> KA6DVN
>

716. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 19:56:56 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <cMjU9.58132$4j5.8692605@newssvr28.news.prodigy.com>
Source record: 127283

Art,

I tried a variable coil scheme a few months ago to tune the reflector in my computerized minibeam. It had a coil with a 4" x .5" ferrite rod that slid in and out. I was able to get a range of L of about 5:1, but the core heated uncomfortably at only 100 watts.

Another version I tried that worked much better was to make the coil a little bigger than needed and add a series variable cap to reduce the total L. It is a little more loss than a straight coil, but very easy to adjust. If you need a wide range, multiple coils can be switched...if you use a binary sequence of inductances...ie. in a ratio of 1,2,4...then a very wide range can be had with good resolution between steps and a minimum number of coils. For instance, coils of .2uh, .4uh, .8uh, and 1.6uh would give a range of .2uh to 3.0 uh with .2uh steps. This combined with a small range variable cap will give total adjustability over a wide range with minimal loss.

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0301120814.5d41e6cb@posting.google.com...
> I have a variable inductance for 100 uH
> made of windings on a static 3 inch dia tube
> with a motor driven slider, this being
> in series with a small rotary driven inductor.
> This is large and looks ugly when placed at
> the bottom of a experimental vertical antenna.
> Too cold to work outside so I have decided to
> make a smaller form and thus I welcome input.
> Toroids seem to be the way to go but I suppose
> I will need more than one plus some relays.
> Would it be better to stack ferrite toroids
> and wind it in one big coil for the 50 uH
> form or just have a bunch of separately wound
> toroids in series? What about a series of windings
> on one coil with a lump of ferrite pushed in and out,
> has that been done? I suppose I could break and
> grind a number of ferrites and mold with epoxy
> to any shape Open to any ideas wierd
> or otherwise, got any thoughts ?
> Art

717. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 20:12:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E21CC44.4030403@ieee.org>
Source record: 127287

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>This QEX brainteaser has caused some interesting discussions.
>
> That has been overwhelmingly obvious by the enormous length of this
> thread already.

The discussions were not on this newsgroup, Richard. Have you
tried the QEX brainteaser?

> Does your Shaggy Dog have fleas?

If my dog were shaggy, she would look like a Collie.
In reality, she looks like a Yellow Lab.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

718. 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 20:16:46 UTC
From: Gregi <gregi_9a6pgm@hotmail.com>
Message-ID: <avsig0$i25$1@bagan.srce.hr>
Source record: 127290

if anybody have something or plans how to build a good antenna for 144-146 MHz please send it to my mail

719. Re: Engine Interference HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 20:19:55 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E21CD97.9080406@attbi.com>
Source record: 127288

Need many more details. How is it powered? How is the antenna connected?
How is it grounded?

Please give as many details as you can think of.

Deacon Dave, W1MCE

Richard Velez wrote:
> Hi,
> I'm having a problem. I installed my htx-202 in the car, and I'm getting a
> pop, scratching noise on the speaker of the ht. When I turn off the car,
> the noise goes away. Its only on the speaker and not when I'm transmitting.
>
> Any ideas ?
>
> Rickie / KC2KQQ
>
>

720. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 20:32:11 UTC
From: VA6BEN <VnAo6sBpEaNm@rNaOc.ScPaAM>
Message-ID: <fhkU9.22570$H7.1226128@news2.calgary.shaw.ca>
Source record: 127289

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:14737-3E217582-380@storefull-2316.public.lawson.webtv.net...
> Ben, VA6BEN wrote:
> "--is there an optimum separation distance between the "elements" of a
> folded dipole?"
>
> Ben probably is asking about the distance between parallel conductors.

Yes I am, I just couldn't think of a proper name at 2am.

> Arnold B. Bailey in "TV and Other Receiving Antennas" charts surge
> impedance correction due to separation distance as a fraction of
> wavelength up to 0.2 on Fig 8-21 on page 415.
>
> The correction is small for thin conductors with small separation. So,
> there is likely no optimum.
>
> The reason more information is not readily available is that the
> consequences of variations are usually unimportant.

Well, you have no idea how much easier that makes the design. I was worried
the foot's separtation was going to be important. Now I can use an 8"
pulley, which seems to be the biggest I can find easily...

> Best regards, Richard Harrison, KB5WZI
>

721. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 20:40:06 UTC
From: VA6BEN <VnAo6sBpEaNm@rNaOc.ScPaAM>
Message-ID: <GokU9.21505$sV3.1244240@news3.calgary.shaw.ca>
Source record: 127291

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0301120628.35692e58@posting.google.com...
> "VA6BEN" <VnAo6sBpEaNm@rNaOc.ScPaAM> wrote in message
> >
> > Also, is there an optimum separation distance between the 'elements'(?)
of a
> > folded dipole? It seems all the commercial ones are about a foot apart,
but
> > it doesn't seem to matter what freq. they're designed for. Either way, I
> > can't seem to find anything at all about separation either in the ARRL
> > Antenna book, or on the 'net.
> >
> > Thanks!
> >
> > Ben
>
> Probably not real critical. BTW, this antenna has been done before.
> Don Mix did this back in the 50's, and fed it with a viking valiant.
> It started out as a temporary setup, but he used it for a good while
> according to the article I read once. MK

Thinking about this design after a good night's sleep, I think I see why not
many people have built these in a while. I looks like it might get pretty
expensive. I'll probably still do it, it can't get much more expensive than
a commercial antenna, and I get the fun of messing around with it. Thanks
for telling me about Don Mix's version. I shows me that it IS possible.

Ben

722. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 20:43:08 UTC
From: VA6BEN <VnAo6sBpEaNm@rNaOc.ScPaAM>
Message-ID: <wrkU9.22293$Yo4.1619046@news1.calgary.shaw.ca>
Source record: 127292

Now that you mention it, I should have remembered that one on the planes, I am an avionics tech after all. Guess I was so caught up with the folded dipole sloper question that I forgot the idea wasn't all that original.

Ben
"'Doc" <w5lz@cwis.net> wrote in message news:3E21889C.815AF3E4@cwis.net...
> Ben,
> There's no real urgent reason why the spacing would
> be much of a problem. The difference it would make in
> the antenna's impedance sshould be fairly easy to deal
> with. You're also right about there being very few new
> antenna ideas, lots of variations on older ones, though.
> One that comes to mind was used in aviation, a 'trailing
> wire' antenna. They usually had some kind of weight on
> the end to help stabilize them, and were just 'un-rolled'
> from a reel till the correct length was reached. I'm
> sure there are other examples...
> 'Doc

723. Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 20:48:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E21D487.6070701@ieee.org>
Source record: 127293

I've surfed the web and cannot find a schematic for a Bird slug.
Does a Bird slug sample the total voltage and the total current?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

724. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 21:10:39 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v23mefs47al5b3@corp.supernews.com>
Source record: 127294

Swish... The trolling line sings from the reel.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E21D487.6070701@ieee.org...
> I've surfed the web and cannot find a schematic for a Bird slug.
> Does a Bird slug sample the total voltage and the total current?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

725. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 21:16:14 UTC
From: gmz79@aol.comnospam
Message-ID: <20030112161614.02326.00000122@mb-mh.aol.com>
Source record: 127295

>if anybody have something or plans how to build a good antenna for 144-146
>MHz please send it to my mail
>

Do a search for copper J-pole.

Greg Z
to thine own sound be true

726. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 22:02:43 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E21E5AE.4090906@attbi.com>
Source record: 127296

My goodness Cecil!

It was along long, long time ago when I last looked at the bottom of the Bird <careful, I'm doing electronics not biology> probe. If memory serves me well it was an etched copper loop. And loops are inductive pick up devices. The probe is rotatable for forward and reverse sense.

The loop does exist at an E field boundary condition as part of the coax wall so there is a local component of the E component, but I don't think the probe is E field sensitive.

My vote, inductive not capacitive coupling, i.e. current mode device.

Now everybody will jump on and 'prove' I'm wrong!

73, Deacon Dave, W1MCE
++++++++++++++++++++++

OC_CAM's Razor wrote:
> I've surfed the web and cannot find a schematic for a Bird slug.
> Does a Bird slug sample the total voltage and the total current?

727. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 22:03:06 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e21eb3d_1@news1.prserv.net>
Source record: 127297

I guess Bird is like me, a throwback. No web presence. Find someone with a complete library of "Watts Up From Bird". In one of the early issues they discussed the design of the slugs with full details. IIRC, there are 4 parts in there. Check all of yours, usually the Teflon is loose on 1 out of 10, and you can slip it off and see the construction details.

--
Crazy George
Remove NO and SPAM from return address
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E21D487.6070701@ieee.org...
> I've surfed the web and cannot find a schematic for a Bird slug.
> Does a Bird slug sample the total voltage and the total current?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

728. Re: Stupid question for you guys

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 22:35:35 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <nZIU9.47528$wQ1.32921@fe01>
Source record: 127298

probably better to make a "Coaxial antenna" this literally a half wave dipole, center fed, or even better, a co-linier element for the top of the coaxial , but, NOTE: this would violate part 15, that you want to use (too much EiRP). but, this and several milliwatts, should cover a fair range-jim nn7k

"VA6BEN" , Ben wrote:

> Why not just use a simple 1/2 wave vertical? 88.1 MHz makes it about a 11'1"
> foot(11.1645' to be exact) piece of wire, what's cheaper than that?
>
> Ben

729. Re: Linear Amp Relay not Working on TS-940SAT

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 22:48:35 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <M9mU9.47532$wQ1.40858@fe01>
Source record: 127299

And, if the 940 is like my ft-847 (and a lot of other solid state rigs), make sure that your amp 1) DOES NOT exceed the rated CURRENT, and VOLTAGE that the rig can key, and 2) that you use a diode (for reverse voltage protection) to protect the rig from the counter EMF voltage, when your amp's relay is de-energized (Can go to upward of 100 volts!) ! If like my amp (Swan MK-6, the keying relay draws 1/2 amp in xmit- rig blows up at around .25 amp) if this the case, use an external in-between relay, to key the amp- keeps everything happier that way! Jim NN7K

"'Doc" <w5lz@cwis.net> wrote :
> Chick,
> Start in the 940's operating manual to find out how
> to turn the relay 'on'.
> 'Doc

730. Re: Engine Interference HELP!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:09:33 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <dtmU9.47549$wQ1.11248@fe01>
Source record: 127300

Not to mention- DOES THE OFFENDING NOISE GO AWAY WHEN YOU DISCONNECT THE ANTENNA ????? If it does, try grounding the hood ("bonnet"to the english), with couple-3 runs of the shield off of a piece of rg-11 u (or bigger), to the frame of the vehicle (drill holes, with sheet metal screws). The latch, and the two springs are a notorious (NON)shield/ground for noise. Also, can try resistor plugs - may have new name by now (and plug wires that are interference proof , too).
Rule #1 if the noise changes PITCH with your gas pedal, its from electrical system, if pitch stays the same, but increases in RATE- comming from your ignition system! also, you can relocate (unless already drilled hole!) the antenna to as far away from the engine as possible.
as info , jim nn7k

"Dave Shrader" <david.shrader@attbi.com> wrote in message news:3E21CD97.9080406@attbi.com...
> Need many more details. How is it powered? How is the antenna connected?
> How is it grounded?
>
> Please give as many details as you can think of.
>
> Deacon Dave, W1MCE
>
> Richard Velez wrote:
> > Hi,
> > I'm having a problem. I installed my htx-202 in the car, and I'm getting a
> > pop, scratching noise on the speaker of the ht. When I turn off the car,
> > the noise goes away. Its only on the speaker and not when I'm transmitting.
> >
> > Any ideas ?
> >
> > Rickie / KC2KQQ
> >
> >
>

731. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:18:28 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <uP996wEEffI+EAkm@ifwtech.co.uk>
Source record: 127302

OC_CAM's Razor wrote:
>I've surfed the web and cannot find a schematic for a Bird slug.
>Does a Bird slug sample the total voltage and the total current?

Yes, both. The loop samples the magnetic field in the main line, and this sampling is directional (the induced voltage reverses phase when you rotate the slug). At the same time, the loop samples the electric-field through its capacitance to the main line, and this sample is non-directional (does not reverse phase when.

The loop is dimensioned so that these two sampled voltages are equal. The diode detector measures the vector sum. In the 'forward' direction, the two samples add in phase. In the 'reverse' direction with a matched load, they are equal and opposite so the detector measures a null.

In other words, the Bird slug works on exactly the same principles as any other kind of directional bridge - resistor bridge, Bruene bridge, Monimatch (closest relative) or whatever. They all sample the main-line current directionally, and the voltage non-directionally. The bridge gains its directional properties by adding or subtracting those samples as vectors.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

732. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:21:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E21F875.2010301@ieee.org>
Source record: 127303

Dave Shrader wrote:
> My vote, inductive not capacitive coupling, i.e. current mode device.

With my linear thinking, I didn't even consider that possibility.
I reasoned that since the slug is not big enough for a linear
slotted line, it must be capacitively coupled. Thanks for reminding
me that there is more than one dimension.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

733. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:26:54 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <xJmU9.47560$wQ1.24209@fe01>
Source record: 127304

Ben, as to the effects of auto tuning a long wire, the old (GAWD, this dates me) Gibson Girl, 500 KHz xmitters for world war II folks, and used thru at least Korea used a bout 200 foot of copper wire, on a carnk out spindle- had tuning light to set the length of antenna! that was the old crank generator, yellow box! (had one once)! as to question, #2, on Folded dipoles, if you look in older vhf manuals, and even the ARRL handbook, you will find your info--
to suffice, the folded dipole, where the top element is the same DIAMETER as the bottom element DIAMETER , within certain constraints, has NO EFFECT ON IMPEDENCE, irregardless of the spaceing - a CHANGE OF the diameters, and the spaceing of the elements, however, can have MASSIVE changes in the inpedence of the element to be matched!
try some of the older arrl vhf manuals, or arrl handbooks that are pre 1980, think you will find this interesting. or if cant find, can copy chart--
email to nn7k@reno.rmci.net, think can answer your question-- jim

Ben sent:> Hi all, I was just struck by lightning today with an idea for a nice "all
> band" antenna. Unfortunately, there aren't a whole lot of real orginal ideas
> out there

> Also, is there an optimum separation distance between the 'elements'(?) of a
> folded dipole? It seems all the commercial ones are about a foot apart, but
>

734. Re: HHH has improved still further

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:27:19 UTC
From: Harry - SM0VPO <someone@micro$oft.com>
Message-ID: <rRmU9.5655$FF4.347081@newsb.telia.net>
Source record: 127305

I have also learned a lot from the responses I receive from visitors. Many thanks to you and people like you.

BR from Harry - SM0VPO

Irv Finkleman <finkirv@shaw.ca> wrote in message news:3E21B601.8486E02C@shaw.ca...
> Harry - SM0VPO wrote:
> >
> > Hi all,
> >
> > It seems that the number of projects on my homepages has been increasing
> > over the years, so now there is a HUGE library of electronic, radio and
> > antenna circuits and designs.
> >
> > My homepage URL: http://w1.859.telia.com/~u85920178
> > Visitors ccts: http://hem.spray.se/lythall
> > My PDF library: http://hem.passagen.se/sm0vpo
> >
> Thanks Harry, I'm a frequent visitor and highly appreciative
> of your pages.
>
> Irv VE6BP
>
>
> --------------------
> Visit my personal website at http://members.shaw.ca/finkirv/
> Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
> http://members.shaw.ca/finkirv5/
> --------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

735. Re: HHH has improved still further

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:27:21 UTC
From: Harry - SM0VPO <someone@micro$oft.com>
Message-ID: <tRmU9.5656$FF4.347052@newsb.telia.net>
Source record: 127306

Do you have any idea as to how many copies there are of my work on the web?
How would YOU feel if it were your work being copied? Just try to put
yourself in my place.

By the way, it is NOT an accusation, but I am in the process of changing the
text.

> Yes, this is a nice site.
>
> Why do you choose to spoil it by accusing the reader of "stealing" your
> work whenever navigation through the pages is attempted?
>
> I will not be back.

736. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:29:07 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v23ui65eeob1ee@corp.supernews.com>
Source record: 127307

I believe that a Bird slug is a miniaturized reflectometer. I l pried the top aluminum cover that is glued on, off one and looked inside. There's a small 6-32 screw holding the top on, taking the screw out lets you pull the top off the slug and I swa a small potentiometer, 25K ohm. I didn't go any further in because to remove the two screws would require unsoldering the pot and a small wire. From the manual which I haven't seen in a while, I recall a diode and a small capacitor. I'd guess the pot is used to calibrate the slug and the capaciotr provides storage for the recitified AC for the microammeter to measure. In one direction the slug measures the forward current wave and vice versa.
hank wd5jfr
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E21D487.6070701@ieee.org...
> I've surfed the web and cannot find a schematic for a Bird slug.
> Does a Bird slug sample the total voltage and the total current?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

737. Re: HH... PS

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:30:40 UTC
From: Harry - SM0VPO <someone@micro$oft.com>
Message-ID: <AUmU9.5658$FF4.346986@newsb.telia.net>
Source record: 127308

> Why do you choose to spoil it by accusing the reader of "stealing" your
> work whenever navigation through the pages is attempted?
> I will not be back.
>
> 73,

By the way, I know exactly how you feel. My own computer has many times called me "invalid" and even "corrupt"! I have, however, resisted the urge to break something, and accepted that the programmer is not happy for me to do that "something", for some reason.

Many servers (Angelfire, for example) do not allow "external linking" to files. All pictures and other files shall be accessed via an HTML file on that server. When you right-click and choose "save target to file" then it could look as if the file was downloaded from an external link. I have already had a new site on Angelfire closed down because of that.

Besides that, I am megga pissed-off with people copying MY work and putting their own name to it, even though I have had a few "out of court" cash settlements. Below are a some copies that may be on my list for legal action. Note that I do NOT give permission for anyone to copy any project for use on the web.
BR from Harry - SM0VPO

Some page links -
http://www.cros.net/dougd/thunt/vhfdf.htm VHF DF antenna
http://reverse-bias.org/icrx1.htm IC Receiver
http://coulomb.raf.is/haukur/RS/fr/calc-is.html Radio Calculators
http://media.iet.hist.no/el2/kjolefinner.htm Radio Calculators
http://rn9aql.aiq.ru/antenna.htm Colinear antenna
http://www.hard-core-dx.com/nordicdx/antenna/special/crateant.html Crate antenna
http://www.hard-core-dx.com/nordicdx/antenna/wire/dipole1.html Dipole antennas
http://www.krasnodar.online.ru/hamradio/ca.htm Radio Calculators

738. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:32:56 UTC
From: Harry - SM0VPO <someone@micro$oft.com>
Message-ID: <IWmU9.5659$FF4.347069@newsb.telia.net>
Source record: 127309

http://w1.859.telia.com/~u85920178/antennas/6dbvhf0.htm

Both gain and easy to build in an hour or so.

BR Harry

Gregi <gregi_9a6pgm@hotmail.com> wrote in message
news:avsig0$i25$1@bagan.srce.hr...
> if anybody have something or plans how to build a good antenna for 144-146
> MHz please send it to my mail
>
>

739. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:38:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E21FC82.8010403@ieee.org>
Source record: 127310

Ian White, G3SEK wrote:
> In other words, the Bird slug works on exactly the same principles as
> any other kind of directional bridge - resistor bridge, Bruene bridge,
> Monimatch (closest relative) or whatever. They all sample the main-line
> current directionally, and the voltage non-directionally.

My MFJ wattmeter samples the current at only one point and develops
a voltage from that sample. How does it differentiate between direction
of current flow and phase of current flow? If I look at that current pickup
voltage sine wave on my o'scope, how do I know which direction it is flowing?
If I swap the source and the load without reversing the MFJ wattmeter, what
will it read?

Seems to me, the forward energy will be detected as forward energy whether
it is flowing from left to right or right to left.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

740. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:46:23 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <K%mU9.47571$wQ1.45742@fe01>
Source record: 127311

As usual, ol' dad might have the info you seek- yes they do answer their mail, and try
http://www.bird-technologies.com , but suffice to say, that a bird slug is akin to a sample, as a very short loop , in a coaxial section-- measuring a current across a very small length of that section! the loop hits a calabrated diode, and since it is in a VERY SMALL SECTION, doesn't have the problems of wider sampleing units (like cb swr meters), that sample input at seperate points on vhf (relative to hf) that cause inaccuracies in readings- some of the cb swr bridges sample at points on the coax 2-3 INCHS from each other, about some 12 % of a wavelength difference! this is fine imf no swr, can give terrible inaccuracies at uhf, and at MICROWAVE, ill leave to your immagination! (kind of like a ouiji board)! it samples current (and by that, the meter movement involved is 30 microamps) hope this helps, jim nn7k
nn7k@reno.rmci.net

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E21D487.6070701@ieee.org...
> I've surfed the web and cannot find a schematic for a Bird slug.
> Does a Bird slug sample the total voltage and the total current?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

741. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-12 23:51:46 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <R4nU9.47574$wQ1.19366@fe01>
Source record: 127312

in which plane? Horizontal? vertical? skewed? diff from hoizontal to vertical is about 20 dB, or 100 th the power ! or , skewed (aka "eggbeater", has loss of 3 dB (1/2 power) from BOTH of the others! each has their own advantages! (or compareing ssb to fm, to "i dont care, satelite)!
"Gregi" <gregi_9a6pgm@hotmail.com> wrote in message news:avsig0$i25$1@bagan.srce.hr...
> if anybody have something or plans how to build a good antenna for 144-146
> MHz please send it to my mail
>
>

742. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 00:17:19 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <d9142vo3mhksbm85cbh9fsk4bj5scg9f4r@4ax.com>
Source record: 127313

On 12 Jan 2003 08:14:57 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>I have a variable inductance for 100 uH
>made of windings on a static 3 inch dia tube
>with a motor driven slider, this being
>in series with a small rotary driven inductor.
>This is large and looks ugly when placed at
>the bottom of a experimental vertical antenna.
>Too cold to work outside so I have decided to
>make a smaller form and thus I welcome input.
>Toroids seem to be the way to go but I suppose
>I will need more than one plus some relays.
>Would it be better to stack ferrite toroids
>and wind it in one big coil for the 50 uH
>form or just have a bunch of separately wound
>toroids in series? What about a series of windings
>on one coil with a lump of ferrite pushed in and out,
>has that been done? I suppose I could break and
>grind a number of ferrites and mold with epoxy
>to any shape Open to any ideas wierd
>or otherwise, got any thoughts ?
>Art

Gosh, is this anything like the PTO in my Drake R7, or is it more like
the PTO in my friend's Collins 75S/32S?

Russ

743. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 00:28:30 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <6f142vkorafgf7nsloge3cp3o67lvmh8h2@4ax.com>
Source record: 127314

On Sun, 12 Jan 2003 17:09:46 +0000, Scott <acepilot@bloomer.net>
wrote:

>Anybody running a full wave horizontal (square) loop on 80/75M that is
>in the neighborhood of 15 feet above ground? I want to give it a try
>for "local" communications, say out to 150-200 miles. In other words, I
>want a high takeoff angle. Will this be a decent way to achieve this or
>will its proximity to the ground causes losses so high that I'd have
>trouble communicating to the end of the road? ;)
>
>Also, any problems with breaking the loop at one corner and feeding
>directly with 50 Ohm coax?
>
>Open to all other ideas as well!
>
>Thanks!!!

Hi, Scott. At my temporary QTH we have a 160M horizontal square loop.
It's 530 feet long and about 128 +/- feet on a side. We (kb3irr and
I, kf4wxd) feed it with 450 ohm window line and it works pretty well.
There is a mismatch that I believe is inductive in nature resulting in
the need for some capacitance. I think that because the cubical quads
I have seen are just a square loop standing up on end and they all
seem to require a gamma match which is capacitive. Of course, I may
be talking through my hat here and if anyone cares to educate me, I'm
willing! Anyway, we match it up with a 4:1 balun in my tuner. We
haven't played with it lately because it's colder'n hell here and
there are two feet of snow under the antennas. Try it and see and let
us here know how you did.

Russ

744. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 00:30:03 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E22088B.24F4ACEE@osite.com.br>
Source record: 127369

Gregi wrote:
>
> if anybody have something or plans how to build a good antenna for 144-146
> MHz please send it to my mail

the ARRL antenna book has a 2-el cubical quad. In this
design, the elements fold over themselves in an umbrella
manner. The els are made from 18 AWG wire.
To calculate the wire lenghts (in ft):
reflector: 263.5/freq
driven: 251/freq

The driven element also takes a matching stub, made from a
3-1/2" lenght of 300 ohm twin lead with the ends shorted.
You will also need a 9-35pF variable to the center conductor
of the coax (RG-58).

Dimensions:
boom 16"
driven el. spreaders(each half): about 15"
reflector el. spreaders (ea. half): about 16"

The mechanical construction is easy, just be creative.

For further reference, go to ARRL Antenna Book, page 15-8
(18th ed.).
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

745. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 00:38:07 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avt1p5$gp3$1@slb4.atl.mindspring.net>
Source record: 127315

Cecil:

[snip]
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E21D487.6070701@ieee.org...
> I've surfed the web and cannot find a schematic for a Bird slug.
> Does a Bird slug sample the total voltage and the total current?
> --
> cheers, CAM http://www.qsl.net/w5dxp
[snip]

Yes the "loop" in the slug is coupled both magnetically and capacitively to
the line.
Thus it samples both V [capacitively] and I [magnetically] at that point in
the slug.

The sampling circuitry is arranged so that the rectified DC fed to the meter
gives an
indication of either V + RI [with the slug in the forward direction the
meter reads,
A = V + RI whic is the conventional definition of the forward "voltage
wave".] or
when the slug is reversed the current I is reversed [180 degree phase shift
if you
will] so that the meter then provides an indication of V - RI in the reverse
direction. [B = V - RI is the reflected "voltage wave".]

A = V + RI The so-called forward voltage "wave".
B = V - RI The so-called reflected voltage "wave".

Where R is the reference impedance, for most conventional instruments, R is
normally assumed to be a pure 50 Ohm resistance value.

Just why A and B are called "waves" is somewhat ambiguous since, especially
in
the steady state, they certainly do not "look" like waves. They are nothing
more or
less than simple a simple sum and difference of voltages at a point on the
line!

Basically the Bird technology is the same as the Bruene SWR sampler, just a
little
different physical construction, that's it there ain't no more.

The irony is that these devices do not even sample a standing wave, even if
one exists,
since their physical dimensions are not large enough to do so. They merely

give an
indication of the standing wave [which may or may not be present], based upon the
measurements of the voltage V and current I at a single point within the slug/line. They
will indicate a VSWR based upon an impedance mismatch even if there is no transmission
line present on which a standing wave would stand if it existed, but doesn't.

For example if a zero ohm source is connected by very very short cables, through a Bird meter
to a resistance different from 50 Ohms then the meter will indicate a "reflected wave" different
from zero and a VSWR different from unity. Even though there is not even a transmission line
present.

Heh, heh...

AFAIK... there are essentially only *two* categories of metrology techniques to make this kind of
measurement [i.e. Measure VSWR].

These are the single point V and I sampler with sums and differences and the distributed two point
V sampler.

The *first* is to measure both V and I at a single point on the line [i.e. inside the Bird "slug"]
and then calculate the sum and difference A = V + RI and B = V - RI by analog circuitry.

The VSWR is then calculated from the forward voltage wave A and the reflected voltage
wave B using sum and difference circuitry as the Bird and Bruene techniques do.

The *second* category of VSWR metrology that I know of is to arrange to sample values of
only V [Samples of I are not used.] but two or more values of V are sampled at different points
spaced along an appreciable part of a wavelength [i.e. slotted line techniques].

Within these two categories of VSWR metrology [single point V and I, and two point V] of course
there is room for thousandsof small variations in the physical methods of sampling the V and I and
for doing theanalog sums and differences.

Does anyone reading this thread know of any other categories of metrological technique for this type

of measurement? If so, I'd like to know.

Thanks,

--
Peter K1PO

746. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 01:15:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E221346.5060907@ieee.org>
Source record: 127316

Peter O. Brackett wrote:
> The *first* is to measure both V and I at a single point on the line [i.e.
> inside the Bird "slug"]
> and then calculate the sum and difference A = V + RI and B = V - RI by
> analog circuitry.

By monitoring I at a single point on the line, can the pickup tell
in which direction the current is flowing?

> Does anyone reading this thread know of any other categories of metrological
> technique for this type of measurement?

My Heathkit SWR meter uses a slotted line with two parallel conductors
as pickups. I always assumed they were picking up the H field. Are you
saying they are picking up the E field?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

747. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 01:24:29 UTC
From: mike <mike@usa.com>
Message-ID: <3E22154B.EBED7B96@usa.com>
Source record: 127317

hi,

try these links:

http://www.cebik.com/hs.html

http://www.softcom.net/users/kd6dks/quad.html

Gregi wrote:

> if anybody have something or plans how to build a good antenna for 144-146
> MHz please send it to my mail

748. FS: sma-to-bnc custom fit antenna adapter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 01:24:37 UTC
From: gulyas@earthlink.net
Message-ID: <12235960.0301121724.70dae44d@posting.google.com>
Source record: 127318
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.swap,rec.radio.scanner

Do you have a need for a high-quality SMA-to-BNC antenna adapter that
is custom made to fit and protect your H.T. or scanner radio?

Adapter allows you to:
Quickly change antennas to base, mobile or different style use.
Use the more popular and wider selection available of BNC antennas.
Prevent chassis connector wear or from coming loose due to antenna
changes.

Adapter features:
Gold plated contacts with a teflon insulator.
A low profile design with a rubber covering for a factory antenna look.
The rubber base seals to the top of the radio with no spacers needed
for moisture and dirt protection.
The base also provides an excellent support for any length of antenna
or application.
No need to remove adapter once installed to make a quick and safe
antenna change.

Sizes to fit radio models:
Yaesu: VX-5R, VX-7R, VX-1R, FT-50-R, VX-10, VX-150, VX-110,
VXA-100, VXA-120
Icom: IC-T90, IC-T8A, IC-T81A, IC-Q7A, IC-R2
Kenwood: TH-D7, TH-G71, TH-F6A, TH-F7A
Alinco: DJ-V5, DJ-X3, DJ-S40
Standard: C508A, C510A
Radio Shack: HTX-420, HTX-400, HTX-245, HTX-200
Aor: AR-16

Previewed in the May 2000 Issue of CQ Magazine, and the Nov. 2000
Issue of QST Magazine.

$11.95 + $1.50 S+H(One to unlimited)
(Check or money order only in U.S.Funds)
(Specify-radio-model)

STEPHEN G.GULYAS
706 LALOR ST.
TRENTON, N.J. 08610
U.S.A.

A photo of the adapter is available upon request.

I welcome any questions or comments at my email:
gulyas@earthlink.net

Thanks for looking at my posting.
S.G.G. KC2BHO 73's

749. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 02:53:22 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301121853.6b6b61dc@posting.google.com>
Source record: 127370

"David Robbins" <k1ttt@arrl.net> wrote in message
news:<yv2dnTLnRqEMBLyjXTWc3g@crocker.com>...
> "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> news:85ed38d.0301120814.5d41e6cb@posting.google.com...
> > I have a variable inductance for 100 uH
> > made of windings on a static 3 inch dia tube
> > with a motor driven slider, this being
> > in series with a small rotary driven inductor.
snip
>
> maybe stack a bunch of torroids on a stick and move that in and out of your
> inductor. a large iron bolt or piece of rebar inside the coil may increase
> inductance also, but may have higher losses than using ferrite.
>
snip

David
Now thats an idea tho the rebar must go ! I suppose you could go
one step furthur and put the whole thing inside a stack of larger
toroids
which should cut the number of turns down immensly. I seem to have
read somewhere that if the coils are encased in ferrite then the
antenna has a lower noise level! Don't know much about toroids so I
don't know if the noise level bit is an old wives tale but it would
appear that volume required would be low
as well as the number of turns.
Thanks for the idea, I like odd contraptions if they have a chance of
working.
Art

750. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 03:01:03 UTC
From: "Antti J. Huhtala" <ahuhtal4@welho.com>
Message-ID: <3E222BEE.64B060FB@welho.com>
Source record: 127301

OC_CAM's Razor wrote:

> I've surfed the web and cannot find a schematic for a Bird slug.
> Does a Bird slug sample the total voltage and the total current?
> --
> cheers, CAM http://www.qsl.net/w5dxp

Many moons ago Douglas A. Blakeslee, W1KLK described in QST
a "plumber's delight" type UHF-wattmeter. The article was later
published in ARRL VHF Handbook, if my memory serves correctly.
I've always believed the slug he built was very nearly a copy of the
structure used in Bird wattmeters.
The copper strip in the "heart" of the slug was located in such a way
to be sensitive to both voltage and current if I'm not mistaken.

73, Antti, OH2DT

751. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 03:16:12 UTC
From: richardharrison@webtv.net
Message-ID: <14715-3E222F7C-440@storefull-2317.public.lawson.webtv.net>
Source record: 127373

Ian, G3SEK wrote:
"In the "reverse" direction, with a matched load, they (the samples, current and voltage) are opposite so the detector measures a null."

Ian got it right, but may leave the wrong impression.

It isn`t the coax load that must be a "matched load". It`s the little sample loop in the slug which must absorb all the energy in one of its two sensitive directions to perfect its directional coupling. Energy traveling in the sample loop direction not absorbed in a proper terminating resistance is induced by the transmission line energy traveling in the desired measurement direction. It`s this desired energy which is rectified for the meter deflection.

In the Bird, the voltage and current samples are adjusted for equality.

Incident waves on a transmission line have their volts and amps in-phase. Reflected waves have their volts and amps out-of-phase as a result of reflection.

Positioned to read forward power, the equal but out-of-phase samples of the reflected wave cancel.

Positioned to read reflected power, the equal but opposite samples of the forward wave cancel.

Because, positioned to read reflected power, the polarity of one sample, but not both samples, is switched in reverse. This makes the forward samples out-of-phase, and the reflected samples in-phase.

In either slug position, the other direction of energy travel is ignored.

Best regards, Richard Harrison, KB5WZI

752. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 03:21:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2230BD.5050603@ieee.org>
Source record: 127371

OC_CAM's Razor wrote:
> Richard Clark wrote:
>> That has been overwhelmingly obvious by the enormous length of this
>> thread already.

The QEX brainteaser can be viewed close to the bottom of the page at:
http://neoamateur.org/downloads/qex/lett0103a.pdf
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

753. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 03:40:56 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E223548.A836436F@bloomer.net>
Source record: 127372

Thanks fer the reply...we're colder 'n' snot also, but zero snow, which
is very unusual for Wisconsin...maybe in the Spring I'll get that loop
up and try it out. Always been intrigued by (horizontal) loops...

Scott
N0EDV

Russ wrote:
>
> On Sun, 12 Jan 2003 17:09:46 +0000, Scott <acepilot@bloomer.net>
> wrote:
>
> >Anybody running a full wave horizontal (square) loop on 80/75M that is
> >in the neighborhood of 15 feet above ground? I want to give it a try
> >for "local" communications, say out to 150-200 miles. In other words, I
> >want a high takeoff angle. Will this be a decent way to achieve this or
> >will its proximity to the ground causes losses so high that I'd have
> >trouble communicating to the end of the road? ;)
> >
> >Also, any problems with breaking the loop at one corner and feeding
> >directly with 50 Ohm coax?
> >
> >Open to all other ideas as well!
> >
> >Thanks!!!
>
> Hi, Scott. At my temporary QTH we have a 160M horizontal square loop.
> It's 530 feet long and about 128 +/- feet on a side. We (kb3irr and
> I, kf4wxd) feed it with 450 ohm window line and it works pretty well.
> There is a mismatch that I believe is inductive in nature resulting in
> the need for some capacitance. I think that because the cubical quads
> I have seen are just a square loop standing up on end and they all
> seem to require a gamma match which is capacitive. Of course, I may
> be talking through my hat here and if anyone cares to educate me, I'm
> willing! Anyway, we match it up with a 4:1 balun in my tuner. We
> haven't played with it lately because it's colder'n hell here and
> there are two feet of snow under the antennas. Try it and see and let
> us here know how you did.
>
> Russ

--

Scott
http://corbenflyer.tripod.com

http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

754. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 04:00:19 UTC
From: richardharrison@webtv.net
Message-ID: <14715-3E2239D3-442@storefull-2317.public.lawson.webtv.net>
Source record: 127374

Art, KB9MZ wrote:
"I have a variable inductance for 100 uH made of windings on a static 3 inch dia tube with a motor driven slider---."

I think that is a good approach.

I`ve worked with many broadcast transmitters in the AM band and higher frequencies. Efficiency is often critical in broadcasting as service often approaches round the clock operation. Every watt is costly and precious. Regulation may require high efficiency. Power tends to be high and cost reductions for high electrical consumption aren`t what they used to be. I`ve worked with powers of only a few KW and with 100 KW transmitters. Some of the transmitters I`ve worked with were Collins, but none varied their inductances for tuning, matching, phasing, or loading any way but by cranking inductor contacts (often by rotating the coil if not too large) either manually or with a motor drive.

None used variometers, permeability, or reluctance tuning. I think there were good reasons to vary the effective number of turns to adjust inductance, despite modern advances.

I think you too would not be ill advised to continue varying the effective number of turns in your coil in most cases to adjust its inductance.

Best regards, Richsard Harrison, KB5WZI

755. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 04:35:07 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2241FB.3D75A441@cwis.net>
Source record: 127375

Larry,
And it's also how most 'auto-tuners' are made...
'Doc

756. Coax issues for longwires and VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 04:35:30 UTC
From: will7370@yahoo.com
Message-ID: <e88e9b5a.0301122035.93cea83@posting.google.com>
Source record: 127376

Hey guys,

Just moved into my new house and I'm trying to get my receivers set up so I can do passive monitoring again. I was wondering if it would be okay to use the cable TV coax outlet in my radio room here to feed in my longwire from outside? Rather than to have to punch a new hole in my wall, it would be more convenient if I could just hook into the existing cable line. Then once outside I would disconnect the cable at the cable TV box and barrel it into some more coax running up to my longwire. Would there be an acceptable impedence match for longwire applications using RG-6 or RG-59 TV cable (not sure which is in the wall)? My main radio (Kenwood R-2000) has both 500 and 50 ohm terminal inputs.

Of course, I'll have to punch a new hole in the wall anyway for my VHF/UHF lead (unless there's a way to feed BOTH in on the same coax line)!

Your input is highly appreciated,

Rob

757. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 05:20:21 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E224C95.2040203@ieee.org>
Source record: 127377

Richard Harrison wrote:
> In the Bird, the voltage and current samples are adjusted for equality.

Assuming those are Bird wattmeters in the QEX brainteaser, what
values of power do you think the wattmeters are displaying? There
is a left-traveling wave with the voltage and current in zero phase
and there is a right-traveling wave with the voltage and current
in zero phase.

http://neoamateur.org/downloads/qex/lett0103a.pdf
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

758. Re: Coax issues for longwires and VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 05:30:49 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E224F09.18C40979@cwis.net>
Source record: 127378

Robert,
It ought to work okay. There will be an impedance
'issue' no matter how you connect to the long wire,
depending on frequency. So, why not try it?
'Doc

759. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 07:49:06 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avtr18aei1@slb2.atl.mindspring.net>
Source record: 127379

Cecil:

[snip]
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E221346.5060907@ieee.org...
> Peter O. Brackett wrote:
> > The *first* is to measure both V and I at a single point on the line
[i.e.
> > inside the Bird "slug"]
> > and then calculate the sum and difference A = V + RI and B = V - RI by
> > analog circuitry.
>
> By monitoring I at a single point on the line, can the pickup tell
> in which direction the current is flowing?
[snip]

No!

The inexpensive [switched] types of single point (V, I) VSWR measurement
schemes do not in
"sense" the current's direction with a single reversible element, the
"meter" merely calculates the
difference V - RI by arranging to reverse the polarity of the measurement of
the voltage drop RI either
by rotating the slug [In the Bird case.] or by means of a switch to reorient
the analog calculation
circuitry. A fewer number of slightly more expensive single point (V, I)
devices actually have one V
sensor and two RI sensors operating simultaneously, here one sensor is
oriented to generate +RI and
the other sensor is oriented to generate -RI at the same time.

Most of these "radio" VSWR indicating devices are AC coupled and so have a
limited low frequency
range. In fact, in principle if they were DC coupled, they would indicate
the reflected voltage wave
B = V - RI correctly all the way down to DC.

Would you still want to call it a wave at DC? ;-)

In fact I don't know if any stand alone DC coupled VSWR devices [bridges]
are available for sale
commercially on the merchant market, but I have designed, built [And through
companies I worked for
and the millionsof products they sell.] and sold millions of such DC coupled
directional couplers. The

electric power companies uses exactly the same schemes to measure power flow in large high capacity
high voltage 60 Hz power flow measurement service to charge each other for power transfers, etc...
and it's simply based upon which direction the current is flowing, i.e. the sign of the voltage RI again.
The millions of such bridges to which I refer are in the analog front end of all two wire full
duplex modems, including the one attached to your computer as you are reading this. These modem
duplexors use reference impedances more complex than a simple R. In fact they calculate something
like B = V - ZI for the reflected wave where Z is some approximation to the [broadband] impedance
looking back into the line.

The single point (V, I) VSWR measurement devices we are discussing here are in fact merely various
forms of the well known Wheatstone bridge which was first invented and patented by George Wheatstone.
[A contemporary and competitor of Samuel F. B. Morse] over there in England way back in the mid 1800's.
Wheatstone's intent was to effect wireline telegraph system duplexing [i.e. to send telegraph messages
simultaneously in both directions on a single telegraph loop.] Of course to do duplexing, the "VSWR" sensing
bridge *has* to be DC coupled and to respond to *very* low frequencies. Again, a simple analysis
of a DC coupled Wheatstone bridge will show that the voltage across the null detecting "bridge" element
is simply B = V - RI! All modern analog two wire modems and the "digital" DSL modems contain such
duplexing bridges!

The Bird and Warren Bruene's technique for what we commonly know as HF wattmeters is merely
a circuit variation on an AC coupled Wheatsone bridge.

There's nothing new under the sun!

[snip]
> My Heathkit SWR meter uses a slotted line with two parallel conductors
> as pickups. I always assumed they were picking up the H field. Are you
> saying they are picking up the E field?
> --
> cheers, CAM http://www.qsl.net/w5dxp
[snip]

Cecil, sorry I was not complete in any of my statements above because there are actually two modes
of operation for such devices, the voltage mode and the current mode, and so there are two variations

on the basic approaches, a voltage or E field approach or a current or H field approach...

The VSWR and the ISWR [Voltage and current standing wave ratios.] are identical for a linear system
and so one may calculate either the VSWR using the "voltage waves" A = V + RI and B = V - RI or
calculate the ISWR using "current waves", A = I + V/R and B = I - V/R.

Again, heh, heh... you know my personal preference is not to call these artificial sums and differences
"waves", but then that is just semantics. The whole world calls them "waves" and so I acqueisce even
though in the case of DC there are clearly no waves present!

And so... in either the single point (V, I) sensing bridges or the multi-point V [or I] distributed line
devices either VSWR or ISWR can be measured and indicated since they are essentially equivalent
[except exactly at DC when they are one] and so such devices can use either the H or the E field i.e.
current mode operation or voltage mode operation.

Incidently the symbols A and B that I use here come from the so-called "Scattering Formalism" a
mathematical generalization and formalism that generalizes the reflection coefficient [rho] to a matrix
form [S] suitable for multi-port network applications. In that formalism, the forward and reflected
wave vectors A and B are related by the matrix relation B = SA. In the multi-port case the waves
A and B are in fact "real" vectors, the elements of which can be phasors in the case of steady state
AC analysis.

I prefer looking at reflections from the Scattering matrix viewpoint since it then "allows" one to
separately identify, for instance in the case of the two port network, both front end *and* back end
reflection coefficients which in non-reciprocal networks are not the same!

It would be nice to refer to the "front end" and "back end" reflection coefficients when talking about
the reflected waves present at a ham's HF antenna tuner would it not?

Aside:

All the above discussion relates only to what is known as transverse electromagnetic mode or TEM
transmission wherein the H and E fields are both substantially orthogonal to the direction of transmission.
TEM mode transmission mode is the only significant mode of transmission for DC, low AC, HF, VHF

and often UHF systems wherein the physical structures are very small in relation to a wavelength. When
physical structures become comensurate with the wavelength, or span numerous wavelengths, e.g. in
microwave or light wave systems then there are a plethora of other non-TEM "modes" of propagation
which may become significant and for which the single point (V, I) bridges will not work as described.

Best,
--
Peter K1PO

760. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 07:59:21 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <QmaiApCZHnI+EAgR@ifwtech.co.uk>
Source record: 127380

OC_CAM's Razor wrote:
>Ian White, G3SEK wrote:
>> In other words, the Bird slug works on exactly the same principles as
>>any other kind of directional bridge - resistor bridge, Bruene bridge,
>>Monimatch (closest relative) or whatever. They all sample the
>>main-line current directionally, and the voltage non-directionally.
>
>My MFJ wattmeter samples the current at only one point and develops
>a voltage from that sample.

That's correct - the induced current is converted into a voltage by passing it through a terminating resistor. The sensor also samples the voltage at (almost) the same point. These two samples are either added or subtracted.

In the Bird, the changeover between addition and subtraction is done by physically rotating the sensor, which reverses the phase of the current sample but doesn't change the phase of the voltage sample. In the MFJ, both added and subtracted signals are generated simultaneously within the bridge, and routed to two separate diode detectors.

>How does it differentiate between direction
>of current flow and phase of current flow?

Sorry, that's not a meaningful question.

This needs pictures. There is an explanation on my 'In Practice' web site at: www.ifwtech.co.uk/g3sek/in-prac/best-of.htm#bruene
This article is a summary of the classic article by Warren Bruene.

>If I look at that current pickup
>voltage sine wave on my o'scope, how do I know which direction it is flowing?

I don't know the schematic, but it may not have a point where you can extract the current signal on its own (at least, not without cutting tracks).

>If I swap the source and the load without reversing the MFJ wattmeter, what
>will it read?
>
Uh? Swapping the source and the load is equivalent to reversing the wattmeter. If the sensor is completely symmetrical internally (including identical diode detectors) you will get all the readings you'd expect.

>Seems to me, the forward energy will be detected as forward energy whether
>it is flowing from left to right or right to left.

Bruene's article shows very clearly how the standing waves of voltage
and current are created by the interactions between the forward and
reflected waves. I copied his diagrams because they cannot be bettered.

"Flowing energy" is not a helpful way to think about it.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

761. Antenna Rotor Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 11:41:52 UTC
From: "Sidney H. Engel" <engelsh@udel.edu>
Message-ID: <avu8m3$5o9$1@news.udel.edu>
Source record: 127381

Been having a problem with a Channel Master antenna rotor not rotating the full 360 degrees and not reproducing a setting. Any thoughts?

762. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 12:07:49 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301130407.6b01819d@posting.google.com>
Source record: 127382

Scott <acepilot@bloomer.net> wrote in message news:<3E223548.A836436F@bloomer.net>...
> Thanks fer the reply...we're colder 'n' snot also, but zero snow, which
> is very unusual for Wisconsin...maybe in the Spring I'll get that loop
> up and try it out. Always been intrigued by (horizontal) loops...
>
> Scott
> N0EDV

You can give it a try. Myself, at that low height, I think a dipole
does just as well for less work. The patterns of the low dipole and
low loop are nearly identical for all practical purposes. Some say you
have a little extra gain straight up with the loop, but I didn't
notice it too much when I tried them. Yes, you can feed with coax no
problem. If the mismatch is a problem, add 22 ft of 75 ohm coax at the
feedpoint as a series transformer. For low band use, I would prefer
the coax over a ladder line feed unless you plannned to run on all
bands. MK

763. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 12:17:43 UTC
From: richardharrison@webtv.net
Message-ID: <14715-3E22AE67-478@storefull-2317.public.lawson.webtv.net>
Source record: 127384

Ian, G3SEK wrote:
"Flowing energy is not a helpful way to think about it."

To each his own.

The Bird directional coupler is a sample loop with a matched resistance at one end and a detector at the other end. Current flowing in one direction heats the resistance. Current flowing in the other direction deflects the meter.

Best regards, Richard Harrison, KB5WZI

764. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 12:20:52 UTC
From: richardharrison@webtv.net
Message-ID: <10766-3E22AF24-453@storefull-2312.public.lawson.webtv.net>
Source record: 127386

Ian, G3SEK wrote:
"Flowing energy is not a helpful way to think about it."

To each his own.

The Bird directional coupler is a sample loop with a matched resistance at one end and a detector at the other end. Current flowing in one direction heats the resistance. Current flowing in the other direction deflects the meter.

Best regards, Richard Harrison, KB5WZI

765. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 12:22:28 UTC
From: richardharrison@webtv.net
Message-ID: <14715-3E22AF84-479@storefull-2317.public.lawson.webtv.net>
Source record: 127385

Ian, G3SEK wrote:
"Flowing energy is not a helpful way to think about it."

To each his own.

The Bird directional coupler is a sample loop with a matched resistance at one end and a detector at the other end. Current flowing in one direction heats the resistance. Current flowing in the other direction deflects the meter.

Best regards, Richard Harrison, KB5WZI

766. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 13:05:01 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <1QyU9.58254$4j5.8818616@newssvr28.news.prodigy.com>
Source record: 127383

Only as far as the inductance switching works, Doc, in fact that's where I got the idea.

But adding the series C is something that I have not seen before. The effective inductance of a series LC network can be easily adjusted by the variable C by making the L slightly larger than needed, and using the series C to back off the inductive reactance. If you have enough steps of L...then only a slight amount of extra L need be used, and a small range of C, since you only need the "analog" variability for "fine tuning" between digital steps. I have found this simple solution to be a cheaper, reliable alternative to a rotary inductor, and has no more loss if done right.

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"'Doc" <w5lz@cwis.net> wrote in message news:3E2241FB.3D75A441@cwis.net...
>
>
> Larry,
> And it's also how most 'auto-tuners' are made...
> 'Doc

767. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 13:46:45 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <xsNKyEEFNsI+EAUC@ifwtech.co.uk>
Source record: 127400

Richard Harrison wrote:
>Ian, G3SEK wrote:
>"Flowing energy is not a helpful way to think about it."
>
>To each his own.
>
Explanations based on forward and reflected waves of current and voltage are simple, clear and convincing. Go look at Bruene's article, or the summary on my web site.

In contrast, attempts to do the same thing using forward and reflected waves of power have produced... what? A succession of highly polarized debates, each one of which has eventually sputtered out in failure of either side to convince the other. Not a helpful way to think about it, at all.

>The Bird directional coupler is a sample loop with a matched resistance
>at one end and a detector at the other end. Current flowing in one
>direction heats the resistance. Current flowing in the other direction
>deflects the meter.
>
And that is supposed to explain something? You cannot be serious...

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

768. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 13:52:34 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E22C4A2.D91EA02D@cwis.net>
Source record: 127387

Mark,
Why 22 feet?
'Doc

769. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 14:06:06 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <iJzU9.108990$hK4.8865237@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127388

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E1F7786.6010905@ieee.org...
> Anyone looked at the brainteaser on page 61 of the latest
> QEX? It has two sources, one at each end of a piece of coax.
> When reflections cause standing waves, the voltage standing
> wave nodes and the current standing wave nodes are 1/4 WL
> apart. With two sources, would the voltage standing wave
> nodes and the current standing wave nodes be at the same
> points? If so, does an associated SWR circle exist?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>

Hi Cecil,

In each case, there is a standing wave on the line as a direct function of the forward and rearward waves on the line. The voltage standing wave ratio is still the ratio of maximum voltage magnitude to minimum voltage magnitude. The standing wave nodes, Vmax and Vmin, are 0.25 WL apart. For the given examples, the standing wave ratio is 3:1

If you have mathcad, I can send you the solution I worked up, complete with a graph of the standing wave. Otherwise, I can send the mathcad file embedded into a word document.

Steve VE9SRB

770. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 14:28:03 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0301130628.3207ab9b@posting.google.com>
Source record: 127389

Scott,

Look at this article (you may need to be an ARRL member to open it,
try it) :
http://www.arrl.org/members-only/tis/info/pdf/8511020.pdf

Also, scroll back on rec.amatuer.radio.antennas to my Dec.16th post
under the header, "Skywire Loop Antenna" and also to Dec.19th under
the header, "Follow up to Dec. 8th post about "Loop Skywire & ect."

I suggest you try the horizontal loop, mine works great!

Rich K2CPE

Scott <acepilot@bloomer.net> wrote in message news:<3E21A15A.D5C38915@bloomer.net>...
> Anybody running a full wave horizontal (square) loop on 80/75M that is
> in the neighborhood of 15 feet above ground? I want to give it a try
> for "local" communications, say out to 150-200 miles. In other words, I
> want a high takeoff angle. Will this be a decent way to achieve this or
> will its proximity to the ground causes losses so high that I'd have
> trouble communicating to the end of the road? ;)
>
> Also, any problems with breaking the loop at one corner and feeding
> directly with 50 Ohm coax?
>
> Open to all other ideas as well!
>
> Thanks!!!

771. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 14:33:02 UTC
From: jder8745@aol.com
Message-ID: <20030113093302.15395.00000562@mb-fs.aol.com>
Source record: 127390

Omnidirectional?

Balanced or unbalanced feed?

Horizontal or vertical?

772. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 14:35:26 UTC
From: richardharrison@webtv.net
Message-ID: <10768-3E22CEAE-48@storefull-2312.public.lawson.webtv.net>
Source record: 127391

Mark Keith wrote:
"--add 22 ft of 75 ohm coax at the feedpoint as a series transformer."

22 ft in coax with a VF of 0.66 is about 1/8-wave at 80 m. If I recall, 1/8-wave of line is a reactance equal to Zo. If a Q-section is desired to mediate between a high loop impedance and 50 ohms, maybe twice the length of 75-ohm coax would be helpful.

Best regards, Richard Harrison, KB5WZI

773. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 14:52:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E22D2A4.7060509@ieee.org>
Source record: 127392

Peter O. Brackett wrote:
> Would you still want to call it a wave at DC? ;-)

No, and I wouldn't call it an AC wave without the Z0 of a transmission line being present. An AC voltmeter will indicate AC voltage when only DC voltage is present. One has to understand the boundary conditions associated with the measuring instrument one is using.

> It would be nice to refer to the "front end" and "back end" reflection
> coefficients when talking about
> the reflected waves present at a ham's HF antenna tuner would it not?

I refer to actual physical reflection coefficients caused by actual physical impedance discontinuities Vs virtual reflection coefficients caused by a virtual impedance calculated from a V/I ratio. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

774. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 14:59:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E22D445.8010504@ieee.org>
Source record: 127393

Ian White, G3SEK wrote:
> OC_CAM's Razor wrote:
>> How does it differentiate between direction
>> of current flow and phase of current flow?
>
> Sorry, that's not a meaningful question.

It's a meaningful question when applied to the QEX brainteaser at:
http://neoamateur.org/downloads/qex/lett0103a.pdf
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

775. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 15:06:12 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <06l52vsi8obmo106vth9onk973lgv9t6q3@4ax.com>
Source record: 127394

On Sun, 12 Jan 2003 19:17:19 -0500, Russ <carlzomer@hotmail.com>
wrote:

|On 12 Jan 2003 08:14:57 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
|wrote:
|
|>I have a variable inductance for 100 uH
|>made of windings on a static 3 inch dia tube
|>with a motor driven slider, this being
|>in series with a small rotary driven inductor.
|>This is large and looks ugly when placed at
|>the bottom of a experimental vertical antenna.
|>Too cold to work outside so I have decided to
|>make a smaller form and thus I welcome input.
|>Toroids seem to be the way to go but I suppose
|>I will need more than one plus some relays.
|>Would it be better to stack ferrite toroids
|>and wind it in one big coil for the 50 uH
|>form or just have a bunch of separately wound
|>toroids in series? What about a series of windings
|>on one coil with a lump of ferrite pushed in and out,
|>has that been done? I suppose I could break and
|>grind a number of ferrites and mold with epoxy
|>to any shape Open to any ideas wierd
|>or otherwise, got any thoughts ?
|>Art
|
|Gosh, is this anything like the PTO in my Drake R7, or is it more like
|the PTO in my friend's Collins 75S/32S?

Not exactly. The Collins and Drake thingies use powered iron slugs :)

I never was inside a Drake vfo but the Collins types used an ingenious
adjustable track that advanced or retarded the conversion of rotation
to linear motion. Combined with a variable pitch winding of the coil,
the result was a very nearly linear frequency v. turns characteristic.

Wes N7WS

776. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 15:16:00 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <lgl52vgn1pk0e575gtktoip60qonkimh99@4ax.com>
Source record: 127395

On Sun, 12 Jan 2003 22:00:19 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

|
|None used variometers, permeability, or reluctance tuning. I think there
|were good reasons to vary the effective number of turns to adjust
|inductance, despite modern advances.

The 2 megawatt station NAA used a variometer to adjust the base
loading of the antenna(s). A small (relatively speaking, the coils
were several stories high) winding had DC supplied in step with the
FSK to retune the antenna between mark and space.

BTW, the coils were wound with Litz wire that was better than an inch
in diameter.

On a different matter, a friend of mine got a patent on a method of
tuning toroidal inductors using a magnet on a rotating shaft.

Wes N7WS

777. Re: Coax issues for longwires and VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 15:21:49 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <2tUiPu6m3IR2+dxiTl7zdk6u4TG4@4ax.com>
Source record: 127396

will7370@yahoo.com (Robert Williams) wrote:

>Hey guys,
>
>Just moved into my new house and I'm trying to get my receivers set up
>so I can do passive monitoring again. I was wondering if it would be
>okay to use the cable TV coax outlet in my radio room here to feed in
>my longwire from outside? Rather than to have to punch a new hole in
>my wall, it would be more convenient if I could just hook into the
>existing cable line. Then once outside I would disconnect the cable
>at the cable TV box and barrel it into some more coax running up to my
>longwire. Would there be an acceptable impedence match for longwire
>applications using RG-6 or RG-59 TV cable (not sure which is in the
>wall)? My main radio (Kenwood R-2000) has both 500 and 50 ohm
>terminal inputs.

If you go to the 50 ohm socket on the back of your radio, and I'm guessing it is an so-239 socket, you'll need to look for an adaptor, or just rig a cable that has a tv coax connector at one end, a pl-259 connector at the other. Radio Shack has all kinds of adaptors and connectors, and may be able to help you there.

I'm also guessing the high-impedance terminal on your radio just takes bare wire, so that should be easier to hook up to.

You might try both antenna inputs, to see which gives you the loudest signal.

Bob
k5qwg

>
>Of course, I'll have to punch a new hole in the wall anyway for my
>VHF/UHF lead (unless there's a way to feed BOTH in on the same coax
>line)!
>
>Your input is highly appreciated,
>
>Rob

778. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 15:35:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E22DCC6.4010100@ieee.org>
Source record: 127397

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> In each case, there is a standing wave on the line as a direct function of
> the forward and rearward waves on the line. The voltage standing wave ratio
> is still the ratio of maximum voltage magnitude to minimum voltage
> magnitude. The standing wave nodes, Vmax and Vmin, are 0.25 WL apart. For
> the given examples, the standing wave ratio is 3:1

Let's simplify the example by making the impedance of both sources
equal to R so there would be no reflections. There would still be
standing waves due to superposition of the two source waves. However,
unlike a normal ham system, the voltage standing wave and the current
standing wave would be in phase, i.e. their ratio would be a constant Z0=R.
How can you draw an SWR circle on the Smith Chart when the ratio of standing
wave voltage to standing wave current is fixed at Z0=R? Peter's V + RI
forward power value detected by the wattmeter will depend upon where
the wattmeter is located along the transmission line. At a node, the
total voltage will be zero and the total current will be zero so the
V + RI wattmeter will indicate zero watts at that point. For the sake
of the people who haven't seen the QEX brainteaser, here's the diagram
for this particular simplified experiment.

141.4V/50 ohm/Source A----1WL 50 ohm coax-----141.4V/50 ohm/Source B

In this simplified version with no reflections:
All the power delivered by source A is dissipated in source B.
All the power delivered by source B is dissipated in source A.
What will a directional wattmeter read along the coax?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

779. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 15:47:34 UTC
From: richardharrison@webtv.net
Message-ID: <10766-3E22DF96-488@storefull-2312.public.lawson.webtv.net>
Source record: 127399

Wes, N7WS wrote:
"The 2 megawatt station NAA used a variometer to adjust the base loading of the antenna(s)."

Yes. I recall the LF, BC-191 and 375-E surplus low-frequency tuning units from WW-2 with variometers. That`s why I said at BC band and higher frequencies. I`ve also installed aircraft beacons on the lower frequencies and am familiar with these techniques.

Best regards, Richard Harrison, KB5WZI

780. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 16:00:01 UTC
From: Gregi <gregi_9a6pgm@hotmail.com>
Message-ID: <avunq2$3fo$1@bagan.srce.hr>
Source record: 127398

it's not important what tipe. it would be good if it is yagi. but it can be any type. i just want to see which one is the best to build and have good characteristics. sorry about my bad English.

"Gregi" <gregi_9a6pgm@hotmail.com> wrote in message news:avsig0$i25$1@bagan.srce.hr...
> if anybody have something or plans how to build a good antenna for 144-146
> MHz please send it to my mail
>
>

781. Re: VX5-r

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 17:33:15 UTC
From: mb <matthew.tammy@verizon.net>
Message-ID: <vLCU9.18706$%V.6920@nwrddc02.gnilink.net>
Source record: 127401

I use a PRYME RD-98 antenna. It is a dualband that is VERY flexible (could tie in a knot if you want) and has substantial gain over the stock antenna. The only drawback is that it is about 12" long.

Matt
KB3EGW
"Youngblood" <youngbloodnospam@msn.com> wrote in message news:ex2UaaxtCHA.2116@cpimsnntpa03...
> Any success on replacement antennas for the Yaesu VX5-r?
>
> --
> We come. We go. And in between
> we try to understand.
>
> Rod Steiger
>
>

782. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 17:36:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nat52v8sc16c0m48oj6bkbejqdlia3m0tg@4ax.com>
Source record: 127402

On Mon, 13 Jan 2003 09:35:34 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>In this simplified version with no reflections:
>All the power delivered by source A is dissipated in source B.
>All the power delivered by source B is dissipated in source A.
>What will a directional wattmeter read along the coax?

Hi Cecil,

Let's simplify this and consider a quart of water, a package of
Kool-Aid and a cup of sugar. I add the sugar and the contents of the
package to the water and I observe I have a quart of Kool-Aid now.
Where did the missing cup go? Why isn't this observing the law of
conservation of volume?

Why is 1 quart + 1 cup = 1 quart?
If you gave me $20 in bills and $5 in change and I gave you back $20
in change, would that satisfy you that the conservation of volume had
been observed?

I would solve this problem for you, but I have editors breathing down
my neck not to reveal the solution on the WWW because it will cost
them sales of Grit and make cuts into their circulation.

73's
Richard Clark, KB7QHC

783. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:05:01 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <hdDU9.109368$hK4.8887597@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127403

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E22DCC6.4010100@ieee.org...
> VE9SRB wrote:
> > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> > In each case, there is a standing wave on the line as a direct function
of
> > the forward and rearward waves on the line. The voltage standing wave
ratio
> > is still the ratio of maximum voltage magnitude to minimum voltage
> > magnitude. The standing wave nodes, Vmax and Vmin, are 0.25 WL apart.
For
> > the given examples, the standing wave ratio is 3:1
>
> Let's simplify the example by making the impedance of both sources
> equal to R so there would be no reflections. There would still be
> standing waves due to superposition of the two source waves. However,
> unlike a normal ham system, the voltage standing wave and the current
> standing wave would be in phase, i.e. their ratio would be a constant Z0=R
> How can you draw an SWR circle on the Smith Chart when the ratio of
standing
> wave voltage to standing wave current is fixed at Z0=R?
>Peter's V + RI
> forward power value detected by the wattmeter will depend upon where
> the wattmeter is located along the transmission line. At a node, the
> total voltage will be zero and the total current will be zero so the
> V + RI wattmeter will indicate zero watts at that point.

When both source impedances are equal to Zo, there is a voltage standing
wave and a current standing wave. Both the VSWR and the ISWR on the line
are infinite.

Please bare with me a bit but I do not think that the ratio of total voltage
to total current will be equal to the Zo of the line. Additionally, I do
not think that the total voltage and total current will be zero at the same
time anywhere on this line. I think we reached different results in this
regard because of the way we calculate total current on the line.

Total voltage anywhere on the line is Vforward + Vrearward. Total current
anywhere on the line is Iforward - Irearward, satisfying Kirchoff's current
law for equal, in-phase currents traveling in opposite directions. I
suspect that you are determining the total current from Iforward +
Irearward, which, in this specific example is not correct. [Itotal =
Iforward + Irearward is only valid in a single source transmission line
analysis where the current reflection coefficient is presumed to be the
negative of the voltage reflection coefficient. If you want to use Iforward

+ Irearward in this example, you would have to set the current of one generator to be 180 degs out of phase wrt the other generator to account for the opposite direction of current travel.]

Considering your example set up below: At each end of the line, and at the mid-point of the line, Vtotal is equal to 141.4 V and Itotal is equal to 0 A. The ratio of Vtotal/Itotal will be infinite and the total impedance will look like an open circuit.

At 0.25 WL and 0.75 WL on the line, Vtotal is equal to 0 V and |Itotal| is equal to 2.828 A. The ratio of Vtotal/Itotal will be 0 and the total impedance will look like a short circuit.

>For the sake
> of the people who haven't seen the QEX brainteaser, here's the diagram
> for this particular simplified experiment.
>
> 141.4V/50 ohm/Source A----1WL 50 ohm coax-----141.4V/50 ohm/Source B
>

In the QEX brainteaser, all variables were expressed as letters with no specific numbers tied to them. Initial power = P, line impedance = R, source impedance A = R, and source impedance B = 3R or R/3. Putting numbers to these variables is fine but not necessary to answer your questions below.

> In this simplified version with no reflections:
> All the power delivered by source A is dissipated in source B.
> All the power delivered by source B is dissipated in source A.

This is correct.

> What will a directional wattmeter read along the coax?

IF, and here's the big IF, the directional wattmeter can correctly sample/determine forward voltage and current and rearward voltage and current, it should read the forward power and rearward power correctly. With your example numbers above, the wattmeter would read 100 W in each direction.

What is more interesting, and is probably more related to the other point that you were trying to make above, is determining the total or net power at any point on the line. This will vary as a function of position along the line but it has little or no physical meaning. Everywhere on the line, the total forward and rearward power will be 100 W. However, the total net or what we typically call delivered power, will vary between -200 W and 200 W depending on where (and how?) you try to measure it.

At positions of the voltage nodes (0.25 WL and 0.75 WL) and positions of the current nodes (0 WL, 0.5 WL and 1.0 WL), the total or net power will be 0 W, as expected.

In between the nodes (0.125 WL, 0.375 WL, 0.625 WL, 0.875 WL), the total or net power will be +200 W or -200 W. In my opinion, these values of total or net power have absoluely no physical meaning.

An observer anywhere on the line would see a forward power of 100 W and a rearward power of 100 W. He would also see a VSWR and an ISWR of infinitey and think this was all fine.

Steve VE9SRB

784. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:13:55 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301131013.282ae082@posting.google.com>
Source record: 127404

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<14715-3E2239D3-442@storefull-2317.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "I have a variable inductance for 100 uH made of windings on a static 3
> inch dia tube with a motor driven slider---."
>
> I think that is a good approach.
>
> I`ve worked with many broadcast transmitters in the AM band and higher
> frequencies. Efficiency is often critical in broadcasting as service
snipuctance, despite modern advances.
>
> I think you too would not be ill advised to continue varying the
> effective number of turns in your coil in most cases to adjust its
> inductance.
>
> Best regards, Richsard Harrison, KB5WZI

Richard
The choice of using a slider was not done just on a whim.
I have little experience with the top bands but I am aware that
the big boys have separate antennas for listening in low noise
conditions.
During my work years it was so surprising to me that experienced
people
blamed device contacts when battery fed meters signified an open.
Since it is known that silver contacts that do not have a sliding or
scraping
action can show as 'open' for d.c.voltages less than 28 volts it
seemed pointless to me to rely on any rolling action when listening to
low level frequencies.
Regards
Art

785. Dipole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:16:38 UTC
From: "Dave (W4WLC)" <kaw1999@bellsouth.net>
Message-ID: <P7DU9.10238$WT3.8301@news.bellsouth.net>
Source record: 127405

I have several choices on putting up a dipole for 80 -10.

1. I can put up 140 ft running East-West with center at about 40 ft and the ends at 15-20 ft fed with ladder line to a tuner.

2. I could bend one leg to the Southwest direction.

3. I could put a 100 ft running Southwest to Northeast to dipole with center at around 40 ft and ends at 15-20 ft, also fed with ladder line to tuner.

What would be my best bet for good all around coverage.

Thanks,
Dave
W4WLC

786. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:20:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E230362.5030205@ieee.org>
Source record: 127407

Ian White, G3SEK wrote:
> Richard Harrison wrote:
>> The Bird directional coupler is a sample loop with a matched resistance
>> at one end and a detector at the other end. Current flowing in one
>> direction heats the resistance. Current flowing in the other direction
>> deflects the meter.
>>
> And that is supposed to explain something? You cannot be serious...

It's supposed to explain what the Bird wattmeter measures which
may or may not be what is happening in reality.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

787. 70CM Antenna:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:20:38 UTC
From: jackinariz@webtv.net
Message-ID: <19089-3E230376-499@storefull-2137.public.lawson.webtv.net>
Source record: 127324

Anyone out there know of an easy to make homebrew 70CM
Antenna?......Thanks..
Jack D.

788. the Butternut HF9V - tuning..?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:21:26 UTC
From: tore stabell kulo <stabern@chello.no>
Message-ID: <nsDU9.526$GR4.1558@amstwist00>
Source record: 127406

Hi!
I bought, assembled and put up the HF9V, a monster. It is now on top of a flat 5 store apartment building, and on a 15ft/4.5 m high mast on top of that.
I bought their resonant radial kit as well.
Now the resonant freq is FAR to high on many bands, on 10/15/20 up to a Megahertz or more.
I will try to compress coil and so on tonight, but does anybody have experiences with this monster?

Regards,
Tore Stabell Kulo,
LA7FKA

789. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:23:21 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E230419.9030800@ieee.org>
Source record: 127319

Richard Clark wrote:
> Let's simplify this and consider a quart of water, a package of
> Kool-Aid and a cup of sugar. I add the sugar and the contents of the
> package to the water and I observe I have a quart of Kool-Aid now.
> Where did the missing cup go? Why isn't this observing the law of
> conservation of volume?

Actually, your experimental result is not true. Adding sugar to a quart
of water results in more than a quart of water. You should have chosen
salt which bonds as ions in the same volume of water.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

790. Re: QEX Brainteaser - Correction

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:34:13 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <FEDU9.40476$p_6.3474080@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127320

"VE9SRB" <srbest@att.net> wrote in message
news:hdDU9.109368$hK4.8887597@bgtnsc05-news.ops.worldnet.att.net...

CORRECTION TO THE FOLLOWING STATEMENTS

After I sent this and sat back and thought about it, I realized that the V, I and P in this problem should look exacly like those in a problem with a single source and a 1 WL line terminated by an open circuit. The following statements were pretty stupid. Computers do exactly what you tell them to ...

>
> In between the nodes (0.125 WL, 0.375 WL, 0.625 WL, 0.875 WL), the total
or
> net power will be +200 W or -200 W. In my opinion, these values of total
or
> net power have absoluely no physical meaning.
>

The above statements are wrong. The total or net power everywhere on the line is 0 W.

Steve VE9SRB

791. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:37:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pn062vcjdp8ih8lrval94fjcfllto83fdo@4ax.com>
Source record: 127321

On Mon, 13 Jan 2003 18:05:01 GMT, "VE9SRB" <srbest@att.net> wrote:

> satisfying Kirchoff's current
>law for equal, in-phase currents traveling in opposite directions.

Hi Steve,

I don't believe Kirchhoff's laws are applicable to situations where
the components (or mesh) exceeds a substantial fraction of a
wavelength. The his law may work at a point (where Kirchhoff mandates
that the current entering a point must equal the current exiting a
point - or the sum of the two is 0), but not across a vast (in terms
of wavelength) distance.

>What is more interesting, and is probably more related to the other point
>that you were trying to make above, is determining the total or net power at
>any point on the line. This will vary as a function of position along the
>line but it has little or no physical meaning. Everywhere on the line, the
>total forward and rearward power will be 100 W. However, the total net or
>what we typically call delivered power, will vary between -200 W and 200 W
>depending on where (and how?) you try to measure it.
>
The solution is rather more simple (and hardly includes negative
power). It is found in the senior science of Optics where we consider
the whole interference pattern that yields an average along the points
of interference, with peak sums of 4 times the intensity (voltage)
alternating with trough sums of 0 times the intensity (voltage).
Optics teaches us:
I = 2 * I1 * (1 + cos(phi2 - phi1 - delta))
where
I: the resultant intensity (at a point) of the
interference of two sources
I1 = I2: initial intensity of both (equal) sources
phi1: phase angle of source1
phi2: phase angle of source2
delta: phase separation of source1 and source2
The COMPLETE solution is found over the interval of ONE WAVELENGTH of
interference (by varying phi1, phi2, delta, or any two or three in
combination as appropriate to conform to both the problem at hand, and
to satisfy the boundary conditions).

73's
Richard Clark, KB7QHC

792. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:40:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <34262vsllIavjgjtsg0impmptmg8f0v5kv@4ax.com>
Source record: 127322

On 13 Jan 2003 10:13:55 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Since it is known that silver contacts that do not have a sliding or
>scraping
>action can show as 'open' for d.c.voltages less than 28 volts it
>seemed pointless to me to rely on any rolling action when listening to
>low level frequencies.
>Regards
>Art

Hi Art,

This is a problem of ALL contacts in that their faces may develop an
insulating layer that requires a minimum voltage to "puncture."

73's
Richard Clark, KB7QHC

793. Re: the Butternut HF9V - tuning..?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 18:46:10 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E23091F.6000407@attbi.com>
Source record: 127323

Why not readjust the lengths of the various components? It's much easier
than 'compressing' the coils!

tore stabell kulo wrote:
> Hi!
> I bought, assembled and put up the HF9V, a monster. It is now on top of a
> flat 5 store apartment building, and on a 15ft/4.5 m high mast on top of
> that.
> I bought their resonant radial kit as well.
> Now the resonant freq is FAR to high on many bands, on 10/15/20 up to a
> Megahertz or more.
> I will try to compress coil and so on tonight, but does anybody have
> experiences with this monster?
>
> Regards,
> Tore Stabell Kulo,
> LA7FKA
>
>
>

794. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 19:11:14 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <mbEU9.40501$p_6.3478901@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127330

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:pn062vcjdp8ih8lrval94fjcfllto83fdo@4ax.com...
> On Mon, 13 Jan 2003 18:05:01 GMT, "VE9SRB" <srbest@att.net> wrote:
>
> > satisfying Kirchoff's current
> >law for equal, in-phase currents traveling in opposite directions.
>
> Hi Steve,
>
> I don't believe Kirchhoff's laws are applicable to situations where
> the components (or mesh) exceeds a substantial fraction of a
> wavelength. The his law may work at a point (where Kirchhoff mandates
> that the current entering a point must equal the current exiting a
> point - or the sum of the two is 0), but not across a vast (in terms
> of wavelength) distance.
>

Hi Richard,

I was referring to a single point on the line where Iforward and Irearward
are equal and in-phase. The total or net current at any point on the line
is equal to Iforward - Irearward. If Iforward = 1 A and Irearward = 1 A,
then the total or net current at that point must be 0 A, not 2 A.

> >What is more interesting, and is probably more related to the other point
> >that you were trying to make above, is determining the total or net power
at
> >any point on the line. This will vary as a function of position along
the
> >line but it has little or no physical meaning. Everywhere on the line,
the
> >total forward and rearward power will be 100 W. However, the total net
or
> >what we typically call delivered power, will vary between -200 W and 200
W
> >depending on where (and how?) you try to measure it.
> >
> The solution is rather more simple (and hardly includes negative
> power).

I agree.

These statements that I made above were also quite stupid. I was using
Mathcad and wrote Ptotal as |V| |I| Cos [Arg (V - I)] rather than as |V| |I|
Cos [Arg(V) - Arg(I)]. I merrily (and incorrectly) interpreted the results
and posted without thinking about them too much. After I thought about it a

bit, I realized that the posted numbers and statements could not possible be right and then found my error, hence the correction post. A case of having too many things going on at once and trying to work too quickly.

>It is found in the senior science of Optics where we consider
> the whole interference pattern that yields an average along the points
> of interference, with peak sums of 4 times the intensity (voltage)
> alternating with trough sums of 0 times the intensity (voltage).

In the TEM wave interference problem in a transmission line, with two voltages of equal amplitude and of varying phase, the total voltage would varying between 0 and 2 times the individual values. Perhaps you mean "intensity" as being equivalent to "power"?

Steve VE9SRB

795. Re: the Butternut HF9V - tuning..?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 19:15:29 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <lfEU9.72676$kY3.3153046@twister.southeast.rr.com>
Source record: 127336

I don't know, I found compressing the coils was a lot faster and easier, especially on the hard to reach ones. I only needed to squeeze them a matter of a fraction of an inch or so to make a difference.

It was well worth the effort too. I love mine.

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org

"Dave Shrader" <david.shrader@attbi.com> wrote in message news:3E23091F.6000407@attbi.com...
> Why not readjust the lengths of the various components? It's much easier
> than 'compressing' the coils!
>
> tore stabell kulo wrote:
> > Hi!
> > I bought, assembled and put up the HF9V, a monster. It is now on top of
a
> > flat 5 store apartment building, and on a 15ft/4.5 m high mast on top of
> > that.
> > I bought their resonant radial kit as well.
> > Now the resonant freq is FAR to high on many bands, on 10/15/20 up to a
> > Megahertz or more.
> > I will try to compress coil and so on tonight, but does anybody have
> > experiences with this monster?
> >
> > Regards,
> > Tore Stabell Kulo,
> > LA7FKA
> >
> >
> >
>

796. Re: 70CM Antenna:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 19:16:30 UTC
From: derswede@aol.comspam.com
Message-ID: <20030113141630.01876.00000365@mb-mq.aol.com>
Source record: 127331

>Anyone out there know of an easy to make homebrew 70CM
>Antenna?......Thanks..
>Jack D.

Do a quick Google.com search for "quagi" and take a look at the results.
Decent gain antenna, easy matching. One hit was

http://members.aol.com/k5oe/quagi.htm

which is an easy to build unit. Nice and directional. If you need omni, do a
search for "texas potato masher" which is a good omni design.

A

797. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 19:18:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <tb462v0dq5ddijl4nu00v8fof7279jt74v@4ax.com>
Source record: 127332

On Mon, 13 Jan 2003 12:23:21 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Let's simplify this and consider a quart of water, a package of
>> Kool-Aid and a cup of sugar. I add the sugar and the contents of the
>> package to the water and I observe I have a quart of Kool-Aid now.
>> Where did the missing cup go? Why isn't this observing the law of
>> conservation of volume?
>
>Actually, your experimental result is not true. Adding sugar to a quart
>of water results in more than a quart of water. You should have chosen
>salt which bonds as ions in the same volume of water.

Hi Cecil,

So you are telling me that 1 quart + 1 cup = 1 quart?

What about the conservation of volume, do you disagree with that law
then?

73's
Richard Clark, KB7QHC

798. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 19:25:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5h462v0emas1le8rgaii87l3n9u92birfu@4ax.com>
Source record: 127333

On Mon, 13 Jan 2003 19:11:14 GMT, "VE9SRB" <srbest@att.net> wrote:

>>It is found in the senior science of Optics where we consider
>> the whole interference pattern that yields an average along the points
>> of interference, with peak sums of 4 times the intensity (voltage)
>> alternating with trough sums of 0 times the intensity (voltage).
>
>In the TEM wave interference problem in a transmission line, with two
>voltages of equal amplitude and of varying phase, the total voltage would
>varying between 0 and 2 times the individual values. Perhaps you mean
>"intensity" as being equivalent to "power"?
>
>Steve VE9SRB

Hi Steve,

No.

Distinguish between a partial solution (found at a point) and the
total solution (solved over an interval of one wavelength).

The math:
>> I = 2 * I1 * (1 + cos(phi2 - phi1 - delta))
speaks for itself.

73's
Richard Clark, KB7QHC

799. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 19:32:33 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <lvEU9.40514$p_6.3480768@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127337

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:5h462v0emas1le8rgaii87l3n9u92birfu@4ax.com...
> On Mon, 13 Jan 2003 19:11:14 GMT, "VE9SRB" <srbest@att.net> wrote:
>
> >>It is found in the senior science of Optics where we consider
> >> the whole interference pattern that yields an average along the points
> >> of interference, with peak sums of 4 times the intensity (voltage)
> >> alternating with trough sums of 0 times the intensity (voltage).
> > >
> > >In the TEM wave interference problem in a transmission line, with two
> > >voltages of equal amplitude and of varying phase, the total voltage would
> > >varying between 0 and 2 times the individual values. Perhaps you mean
> > >"intensity" as being equivalent to "power"?
> > >
> > >Steve VE9SRB
> >
> > Hi Steve,
> >
> > No.
> >
> > Distinguish between a partial solution (found at a point) and the
> > total solution (solved over an interval of one wavelength).
> >
> > The math:
> > >> I = 2 * I1 * (1 + cos(phi2 - phi1 - delta))
> > speaks for itself.
> >
> > 73's
> > Richard Clark, KB7QHC

Richard,

I apologize, but I'm not sure what you are getting at in relation to the QEX transmission line problem.

In the QEX brainteaser, modified such that both sources have an impedance equal to Zo, assume that each source drives the line with a voltage equal to V. The maximum voltage on the line will be 2V (at points 0 WL, 0.5 WL and 1 WL) and the minimum voltage on the line will be 0 V (at points 0.25 WL and 0.75 WL). Nowhere on the line will the voltage be equal to 4V.

Steve VE9SRB

800. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 19:50:02 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <KLEU9.58301$4j5.8869427@newssvr28.news.prodigy.com>
Source record: 127325

That's the main reason I switched from a roller inductor to my switched coil/series C arrangement. I was using a very nice Collins roller inductor, but was still getting occasional flaky contact even though it was all silver plated...and a little backlash, too, when tuning remotely with a stepper.

Variable caps are far better mechanically than roller inductors.
--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message news:85ed38d.0301131013.282ae082@posting.google.com...
> richardharrison@webtv.net (Richard Harrison) wrote in message news:<14715-3E2239D3-442@storefull-2317.public.lawson.webtv.net>...
> > Art, KB9MZ wrote:
> > "I have a variable inductance for 100 uH made of windings on a static 3
> > inch dia tube with a motor driven slider---."
> >
> > I think that is a good approach.
> >
> > I`ve worked with many broadcast transmitters in the AM band and higher
> > frequencies. Efficiency is often critical in broadcasting as service
> snipuctance, despite modern advances.
> >
> > I think you too would not be ill advised to continue varying the
> > effective number of turns in your coil in most cases to adjust its
> > inductance.
> >
> > Best regards, Richsard Harrison, KB5WZI
>
> Richard
> The choice of using a slider was not done just on a whim.
> I have little experience with the top bands but I am aware that
> the big boys have separate antennas for listening in low noise
> conditions.
> During my work years it was so surprising to me that experienced
> people
> blamed device contacts when battery fed meters signified an open.
> Since it is known that silver contacts that do not have a sliding or
> scraping
> action can show as 'open' for d.c.voltages less than 28 volts it
> seemed pointless to me to rely on any rolling action when listening to
> low level frequencies.
> Regards

> Art

801. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 20:14:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E231E20.3FA5625E@uci.edu>
Source record: 127348

OC_CAM's Razor wrote:
>
> Richard Clark wrote:
> > <Cecil.A.Moore@ieee.org> wrote:
> >>Actually, your experimental result is not true. Adding sugar to a quart
> >>of water results in more than a quart of water. You should have chosen
> >>salt which bonds as ions in the same volume of water.
> >
> > So you are telling me that 1 quart + 1 cup = 1 quart?
>
> I would guess that one cup of salt will not saturate one
> quart of water but I could be wrong. Any chemists out there?
> --
> cheers, CAM http://www.qsl.net/w5dxp

They both dissolve to some extent - increasing the density of the solution to that extent, without increasing the volume. How much of it dissolves will naturally depend on the temperature of the water. But salt is less dense than sugar (Na and Cl as opposed to lots of C's and H's), so the undissolved salt will displace less water than undissolved sugar. Even though there may be more than a quart of solution, there's still only a quart of "water" in the mix. ;-)

ac6xg

802. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 20:16:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E231EAA.4030008@ieee.org>
Source record: 127338

VE9SRB wrote:
> Please bare with me a bit but I do not think that the ratio of total voltage
> to total current will be equal to the Zo of the line.

Steve, the best I can do is to promise to bear with you. You are
definitely the wrong sex for me to want to bare anything with you. :-)

> Total voltage anywhere on the line is Vforward + Vrearward. Total current
> anywhere on the line is Iforward - Irearward,

Reflected current carries a minus sign so the total current is
Iforward - (-Irearward) = Iforward + I rearward??? Or have I
been seduced by a shortcut?

> satisfying Kirchoff's current
> law for equal, in-phase currents traveling in opposite directions. I
> suspect that you are determining the total current from Iforward +
> Irearward, which, in this specific example is not correct.

Yep, that was what I was doing. I was dealing with phasors (vectors)
instead of Kirchhoff's laws. So reflected current is not really 180
degrees out of phase with reflected voltage? The minus sign only
indicates the direction of current travel?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

803. Re: Feedback Request: SteppIR 3 el. Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 20:22:57 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <BeFU9.58304$4j5.8873052@newssvr28.news.prodigy.com>
Source record: 127334

As it turns out, best F/B is around 17, and best gain on 10 meters according
to their literature.
--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Fractenna" <fractenna@aol.com> wrote in message
news:20030108085341.01997.00000081@mb-fx.aol.com...
> Because the element separations are fixed, this limits the overall
performance
> in terms of gain and F/B when looking at all 6 bands. I would, however,
tend to
> think it works very well on 15 and 20, equivalent to a 3 el monobander. I
would
> suspect the gain and F/B for the other bands are not as high.
>
> I have seen the antenna and mechanically it is very impressive, so I doubt
> weather is an issue.
>
> 73,
> Chip N1IR
>

804. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 20:24:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E232076.9020103@ieee.org>
Source record: 127339

Richard Clark wrote:
> The solution is rather more simple (and hardly includes negative
> power). It is found in the senior science of Optics where we consider
> the whole interference pattern that yields an average along the points
> of interference, with peak sums of 4 times the intensity (voltage)
> alternating with trough sums of 0 times the intensity (voltage).
> Optics teaches us:
> I = 2 * I1 * (1 + cos(phi2 - phi1 - delta))
> where
> I: the resultant intensity (at a point) of the
> interference of two sources
> I1 = I2: initial intensity of both (equal) sources
> phi1: phase angle of source1
> phi2: phase angle of source2
> delta: phase separation of source1 and source2
> The COMPLETE solution is found over the interval of ONE WAVELENGTH of
> interference (by varying phi1, phi2, delta, or any two or three in
> combination as appropriate to conform to both the problem at hand, and
> to satisfy the boundary conditions).

In other words, over one wavelength of interference, constructive
interference cannot be sustained without a equal magnitude of destructive
interference thus satisfying the conservation of energy principle.
I wonder why we can have constructive interference in a transmission
line without any accompanying destructive interference? What, besides
frequency, makes RF so different from light?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

805. Re: the Butternut HF9V - tuning..?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 20:30:00 UTC
From: abcincowbay@ns.sympatico.ca
Message-ID: <3E2321D1.BC06C936@ns.sympatico.ca>
Source record: 127340

Hello:
Adjust the length for 10 M first, then adjust
the wire length for 15 M. 6 M and 17 M were a waste
of time. So, don't worry to much about those. 20 M
was high across the band.. but less than 2:1, and works
well.
Adjusting the coil for 30 affects 40 and 20. 80
is quite narrow, but works well.
I found the time required to adjust the coils was
well spent, and not to long (a couple of hours the first
time)
I've had mine up since last summer, and so far, am
quite impressed at how it is surviving, and working under
winter conditions at the sea shore.
Have a good one
rgds / VE1NB

tore stabell kulo wrote:

> Hi!
> I bought, assembled and put up the HF9V, a monster. It is now on top of a
> flat 5 store apartment building, and on a 15ft/4.5 m high mast on top of
> that.
> I bought their resonant radial kit as well.
> Now the resonant freq is FAR to high on many bands, on 10/15/20 up to a
> Megahertz or more.
> I will try to compress coil and so on tonight, but does anybody have
> experiences with this monster?
>
> Regards,
> Tore Stabell Kulo,
> LA7FKA

806. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 20:31:46 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E232232.8050900@ieee.org>
Source record: 127341

Richard Clark wrote:
> <Cecil.A.Moore@ieee.org> wrote:
>>Actually, your experimental result is not true. Adding sugar to a quart
>>of water results in more than a quart of water. You should have chosen
>>salt which bonds as ions in the same volume of water.
>
> So you are telling me that 1 quart + 1 cup = 1 quart?

I would guess that one cup of salt will not saturate one
quart of water but I could be wrong. Any chemists out there?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

807. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 20:37:16 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E23237C.2000701@ieee.org>
Source record: 127342

AA wrote:
> (Who knows Heisenburg's principle and who ALSO has a sense of humor. Cicero
> was right, BTW.)

Apparently God does as he rolls dice in the dark. Anyone who thinks
God doesn't have a sense of humor should read Mark Twain's, "Letters
From Earth".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

808. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 20:49:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <up962v4rps5duh2ip6pcikdil2djik2rrd@4ax.com>
Source record: 127343

On Mon, 13 Jan 2003 14:24:22 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

> What, besides
>frequency, makes RF so different from light?

Nothing.

809. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 20:51:44 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jr962vsg12afku0r9egemdqvgi6rmmrvld@4ax.com>
Source record: 127344

On Mon, 13 Jan 2003 14:31:46 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Actually, your experimental result is not true. Adding sugar to a quart
>>>of water results in more than a quart of water. You should have chosen
>>>salt which bonds as ions in the same volume of water.
>>
>> So you are telling me that 1 quart + 1 cup = 1 quart?
>
>I would guess that one cup of salt will not saturate one
>quart of water but I could be wrong. Any chemists out there?

Hi Cecil,

And I would suppose that if you gave me $20 in bills and $5 in change,
and I returned $20 in change, you would be happy.

73's
Richard Clark, KB7QHC

810. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 21:01:39 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E232976.936FE771@att.net>
Source record: 127345

Richard,

Sorry, your equation for intensity is correct, but the connection
between intensity and voltage is not.

Intensity is the square of the field variable, which is generally known
as amplitude in optics. Intensity is the analog to power, not voltage,
in RF cases.

73,
Gene
W4SZ

Richard Clark wrote:
>
> On Mon, 13 Jan 2003 19:11:14 GMT, "VE9SRB" <srbest@att.net> wrote:
>
> >>It is found in the senior science of Optics where we consider
> >> the whole interference pattern that yields an average along the points
> >> of interference, with peak sums of 4 times the intensity (voltage)
> >> alternating with trough sums of 0 times the intensity (voltage).
> > >
> > >In the TEM wave interference problem in a transmission line, with two
> > >voltages of equal amplitude and of varying phase, the total voltage would
> > >varying between 0 and 2 times the individual values. Perhaps you mean
> > >"intensity" as being equivalent to "power"?
> > >
> > >Steve VE9SRB
> >
> > Hi Steve,
> >
> > No.
> >
> > Distinguish between a partial solution (found at a point) and the
> > total solution (solved over an interval of one wavelength).
> >
> > The math:
> > >> I = 2 * I1 * (1 + cos(phi2 - phi1 - delta))
> > speaks for itself.
> >
> > 73's
> > Richard Clark, KB7QHC

811. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 21:11:56 UTC
From: richardharrison@webtv.net
Message-ID: <14871-3E232B9C-641@storefull-2311.public.lawson.webtv.net>
Source record: 127352

Ian, G3SEK wrote:
"And that is supposed to explain something?"

Maybe Ian is missing the necessary prerequisites.

Best regards, Richard Harrison, KB5WZI

812. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 21:12:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <07a62v4vts6p8hrvcb3rugujeof0gpausf@4ax.com>
Source record: 127346

On Mon, 13 Jan 2003 19:32:33 GMT, "VE9SRB" <srbest@att.net> wrote:

>
>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>news:5h462v0emas1le8rgaii87l3n9u92birfu@4ax.com...
>> On Mon, 13 Jan 2003 19:11:14 GMT, "VE9SRB" <srbest@att.net> wrote:
>>
>> >>It is found in the senior science of Optics where we consider
>> >> the whole interference pattern that yields an average along the points
>> >> of interference, with peak sums of 4 times the intensity (voltage)
>> >> alternating with trough sums of 0 times the intensity (voltage).
>> >
>> >In the TEM wave interference problem in a transmission line, with two
>> >voltages of equal amplitude and of varying phase, the total voltage would
>> >varying between 0 and 2 times the individual values. Perhaps you mean
>> >"intensity" as being equivalent to "power"?
>> >
>> >Steve VE9SRB
>>
>> Hi Steve,
>>
>> No.
>>
>> Distinguish between a partial solution (found at a point) and the
>> total solution (solved over an interval of one wavelength).
>>
>> The math:
>> >> I = 2 * I1 * (1 + cos(phi2 - phi1 - delta))
>> speaks for itself.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Richard,
>
>I apologize, but I'm not sure what you are getting at in relation to the QEX
>transmission line problem.
>
>In the QEX brainteaser, modified such that both sources have an impedance
>equal to Zo, assume that each source drives the line with a voltage equal to
>V. The maximum voltage on the line will be 2V (at points 0 WL, 0.5 WL and 1
>WL) and the minimum voltage on the line will be 0 V (at points 0.25 WL and
>0.75 WL). Nowhere on the line will the voltage be equal to 4V.
>

>Steve VE9SRB
>
Hi Steve,

The Optics solution is complete and covers all the vagaries you and
Cecil may wish to introduce.

Phi1 = Phi2 = 0ï¿½ (if I am to read the problem correctly, and if I am
wrong, then that is an issue with these poorly stated examples - not
uncommon here);
Delta = 360ï¿½ (if I am to read the problem correctly, and if I am
wrong, then that is an issue with these poorly stated examples - not
uncommon here)
I1 = I2 = 1V (if I am to read the problem correctly, and if I am
wrong, then that is an issue with these poorly stated examples - not
uncommon here)
I = 2 * I1 * (1 + cos(phi2 - phi1 - delta))
I0 = 2 *1V * (1 + cos(0- 0- 0))
I0 = 4V
I90 = 2 * I1 * (1 + cos(0- 0- 90))
I90 = 2V
I180 = 2 * I1 * (1 + cos(0- 0- 180))
I180 = 0V
I270 = 2 * I1 * (1 + cos(0- 0- 270))
I270 = 2V
I360 = 2 *1V * (1 + cos(0- 0- 360))
I360 = 4V

73's
Richard Clark, KB7QHC

813. Re: Feedback Request: SteppIR 3 el. Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 21:18:38 UTC
From: fractenna@aol.com
Message-ID: <20030113161838.01912.00000649@mb-cu.aol.com>
Source record: 127347

>
>As it turns out, best F/B is around 17, and best gain on 10 meters according
>to their literature.
>--
>73,
>Larry N8LP
>www.telepostinc.com/n8lp.html
>
>
>"Fractenna" <fractenna@aol.com> wrote in message
>news:20030108085341.01997.00000081@mb-fx.aol.com...
>> Because the element separations are fixed, this limits the overall
>performance
>> in terms of gain and F/B when looking at all 6 bands. I would, however,
>tend to
>> think it works very well on 15 and 20, equivalent to a 3 el monobander. I
>would
>> suspect the gain and F/B for the other bands are not as high.
>>
>> I have seen the antenna and mechanically it is very impressive, so I doubt
>> weather is an issue.
>>
>> 73,
>> Chip N1IR
>>

Hmmm...

Then they went for minimum spacing. What happens on 12M and 15M?

73,
Chip N1IR

814. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 21:30:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E232FF9.9050301@ieee.org>
Source record: 127349

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>What, besides frequency, makes RF so different from light?
>
> Nothing.

Well then, how can Dr. Best assert that constructive interference
can exist in a transmission line without a corresponding destructive
interference? Here are some quotes from Dr. Best:

Dr. Best sez:
"If you want to see an example where we have a 75w wave and an 8.33w wave
superimposing to create a 133.33 w wave where there is NO corresponding
destructive interference or "power cancellation" take a look at this
example:"

"The total forward power increases as a direct result of the vector
superposition of forward voltage and current. This DOES NOT require a
corresponding destructive interference process (reduction of power
elsewhere) to balance the law of conservation of power ..."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

815. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 21:36:22 UTC
From: k9sqg@aol.com
Message-ID: <20030113163622.18629.00000450@mb-cm.aol.com>
Source record: 127350

Scott,

That type of antenna should work fine for your intended purposes. Worst case would be about 3 db of loss due to the ground. You'll have plenty of radiation upward and it should work out well out to 400-500 miles. It will work better on the higher bands.

73s,

Evan

816. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 21:38:58 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2331F2.5000009@ieee.org>
Source record: 127351

Richard Clark wrote:
> And I would suppose that if you gave me $20 in bills and $5 in change,
> and I returned $20 in change, you would be happy.

Three guys checked into a hotel. They gave the bellboy $10 each for
the rooms. (OK, OK, so it's an old joke.) The bellboy gave the $30 to
the night clerk. The night clerk said three rooms to the same group
is only $25. So he gave $5 back to the bellboy to give back to the
three guys. The bellboy gave $1 each back to the three guys and kept
$2 as a tip. That made the three guys each pay $9 for each room.

3 rooms times $9 each is $27. Add the $2 that the bellboy kept for
a tip and you get a total of $29. Where did the other $1 go? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

817. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 21:46:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E233398.4020908@ieee.org>
Source record: 127353

Jim Kelley wrote:
> They both dissolve to some extent - increasing the density of the
> solution to that extent, without increasing the volume. How much of it
> dissolves will naturally depend on the temperature of the water. But
> salt is less dense than sugar (Na and Cl as opposed to lots of C's and
> H's), so the undissolved salt will displace less water than undissolved
> sugar. Even though there may be more than a quart of solution, there's
> still only a quart of "water" in the mix. ;-)

Hmmmmmm, if I remember correctly from chemistry 50 years ago, salt
ionizes in water and thus takes up *zero* additional volume.
That is, of course, up to saturation where no additional ionization
is possible. What? (I have no idea what that "What?" means but Peter
does it so it must be cool. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

818. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:25:33 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <avvech$c1i$1@slb6.atl.mindspring.net>
Source record: 127354

Cecil:

[snip]
> I refer to actual physical reflection coefficients caused by actual
> physical impedance discontinuities Vs virtual reflection coefficients
> caused by a virtual impedance calculated from a V/I ratio. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
[snip]

I just remembered yet a third type of VSWR monitor, do you remember the old twin-lamp device. The "twin-lamp" used to be featured in older ARRL Handbooks, it was meant to be used on 300 Ohm ribbon line, it was comprised of a strip of 300 Ohm twinlead with a couple of #47 incandescant pilot bulbs on each end.

This is a variation on the the slotted line which uses basically two samples of a standing wave to estimate the VSWR, the "twin-lamp" uses a distributed sampling technique and senses the waves over a continuous length of line.

In fact the theory of operation of these distributed VSWR sensing devices is very closely related to the methods of evaluating cross-talk between long telephone transmission lines. The telephone/telegraph cross-talk problem is conventionally measured at two places, with respect to the "hostile" and "friendly" sources, the near end and the far end, and the two cross talk measurements are referred to as NEXT for near end cross talk and FEXT for far end cross talk.

It seems intuitive and it can be shown by analysis that the cross talk energy is stronger the nearer the victim line is to the source on the hostile line. i.e. two lines interfering with each other while running side by side induce a "direction" dependent cross-talk, in that one can sense the location [i.e. near end, or far end] of the interfering hostile source and hence the direction of the interfering wave on the line. This cross-talk coupling phenomena can be used to estimate VSWR by placing a sampling line along side an energized line and measuing cross-talk levels induced into a "sampling"

line at points along the line.

It's interesting that all of these distributed VSWR metrologies, i.e. the slotted line,
the twin-lamp, parallel sampling lines, etc... are all very frequency dependent, and
need a means of adjusting readings for their extreme frequency dependence and
consequent inaccruacies, while the single point (V, I) bridge devices are generally
only mildly frequency dependent and consequently more accurate, *even though*
the latter single point devices do not directly measure a wave but rather infer the
wave values from the sum and difference of V and RI measured at a single point!

--
Peter K1PO
more accurate

819. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:27:12 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <43HU9.109675$hK4.8911714@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127355

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E232FF9.9050301@ieee.org...
> Richard Clark wrote:
>
> > <Cecil.A.Moore@ieee.org> wrote:
> >>What, besides frequency, makes RF so different from light?
> >
> > Nothing.
>
> Well then, how can Dr. Best assert that constructive interference
> can exist in a transmission line without a corresponding destructive
> interference? Here are some quotes from Dr. Best:
>
> Dr. Best sez:
> "If you want to see an example where we have a 75w wave and an 8.33w wave
> superimposing to create a 133.33 w wave where there is NO corresponding
> destructive interference or "power cancellation" take a look at this
> example:"
>
> "The total forward power increases as a direct result of the vector
> superposition of forward voltage and current. This DOES NOT require a
> corresponding destructive interference process (reduction of power
> elsewhere) to balance the law of conservation of power ..."
> --
> cheers, CAM http://www.qsl.net/w5dxp

Its amazing how every conversation turns into this. Have fun.

Steve

820. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:28:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <eue62vgc17farcoult4nsv9cfaqdv35i3p@4ax.com>
Source record: 127356

On Mon, 13 Jan 2003 15:30:33 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>What, besides frequency, makes RF so different from light?
>>
>> Nothing.
>
>Well then, how can Dr. Best assert that ...

Hi Cecil,

How can Cecil fail to deny that $20 in bills and $5 in change has no material difference in volume from $20 in change?

How can 1 quart + 1 cup = 1 quart? Do you reject the law of conservation of volume?

Why is it that I get the impression you are purposely avoiding the issue? What we are engaged in here is the pursuit of TRUTH. ;-)

73's
Richard Clark, KB7QHC

821. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:29:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E233DE5.30405@ieee.org>
Source record: 127357

Richard Clark wrote:
> How can 1 quart + 1 cup = 1 quart? Do you reject the law of
> conservation of volume?
>
> Why is it that I get the impression you are purposely avoiding the
> issue? What we are engaged in here is the pursuit of TRUTH. ;-)

I am aware of a conservation of energy principle. I am not aware of
a conservation of volume principle. Can you quote the IEEE specification
number for that principle?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

822. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:32:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2td62vorqan91rb5l258svs676p5ucb210@4ax.com>
Source record: 127358

On Mon, 13 Jan 2003 21:01:39 GMT, Gene Fuller <W4SZzzzzz@att.net>
wrote:

>Richard,
>
>Sorry, your equation for intensity is correct, but the connection
>between intensity and voltage is not.
>
>Intensity is the square of the field variable, which is generally known
>as amplitude in optics. Intensity is the analog to power, not voltage,
>in RF cases.
>
>73,
>Gene
>W4SZ
>

Hi Gene,

Per my source, "Optics," Miles V. Klein:
"...we shall use the generic term "intensity," I, instead
of the more correct, and awkward "flux density,"
"radiation incidence," or "irradiance,"

"Radiant Incidence" is expressed in terms of watts/mï¿½

The term mï¿½ relates to the method to detect or load the power. Small
surface area detectors do not encompass as much power as do solar
panels for instance. For electrical loads, that is simply expressed
in terms of the Ohm and for any given power for a constant load, we
observe a voltage developed as a consequence of the current flow from
the power source.

As Gene offers to my miscue on the math above, the volts follow a root
relationship to the powers.

73's
Richard Clark, KB7QHC

823. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:34:23 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <P9HU9.109686$hK4.8912291@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127359

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E232076.9020103@ieee.org...
> In other words, over one wavelength of interference, constructive
> interference cannot be sustained without a equal magnitude of destructive
> interference thus satisfying the conservation of energy principle.
> I wonder why we can have constructive interference in a transmission
> line without any accompanying destructive interference? What, besides
> frequency, makes RF so different from light?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>

Cecil,

When two very narrow pencil beam EM waves are pointed orthogonal to one another such that they intersect at a point in space where they are of equal amplitude and 180 degrees out of phase and a complete cancellation or destructive interference occurs, you claim that a simultaneous constructive interference must occur somewhere else in space and that the energy in the destructive interference process must go to the point of constructive interference to satisfy the law of conservation of energy.

Please explain in physical terms, how the traveling energy in the two RF waves jumps through space to this point of constructive interference. Also, please explain how, if the energy in the two waves jumps to a point of constructive interference, it is also able to travel along its way past the point of destructive interference.

Thanks,

Steve VE9SRB

824. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:38:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2sf62v0llmh5ot2pnhmtrnm533fehbc0u0@4ax.com>
Source record: 127360

On Mon, 13 Jan 2003 21:12:26 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>Hi Steve,
>
>The Optics solution is complete and covers all the vagaries you and
>Cecil may wish to introduce.
>
>Phi1 = Phi2 = 0ï¿½ (if I am to read the problem correctly, and if I am
>wrong, then that is an issue with these poorly stated examples - not
>uncommon here);
>Delta = 360ï¿½ (if I am to read the problem correctly, and if I am
>wrong, then that is an issue with these poorly stated examples - not
>uncommon here)
>I1 = I2 = 1V (if I am to read the problem correctly, and if I am
>wrong, then that is an issue with these poorly stated examples - not
>uncommon here)
>I = 2 * I1 * (1 + cos(phi2 - phi1 - delta))
>I0 = 2 *1V * (1 + cos(0- 0- 0))
>I0 = 4V
>I90 = 2 * I1 * (1 + cos(0- 0- 90))
>I90 = 2V
>I180 = 2 * I1 * (1 + cos(0- 0- 180))
>I180 = 0V
>I270 = 2 * I1 * (1 + cos(0- 0- 270))
>I270 = 2V
>I360 = 2 *1V * (1 + cos(0- 0- 360))
>I360 = 4V
>
>73's
>Richard Clark, KB7QHC

Hi Steve,

You were right a couple of posts back in trying to unknot my scarf
from the axle. Gene, W4SZ, put it in terms I could understand.

This is the consequence of trying to force an argument that already
stood well alone. The point I clouded was that interference problems
are not isolated to a point (except, of course, if you stand at that
point and load the radiation; but that is only one of many
"solutions").

73's
Richard Clark, KB7QHC

825. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:40:23 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <rfHU9.109692$hK4.8912349@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127361

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E231EAA.4030008@ieee.org...
> VE9SRB wrote:
> > Please bare with me a bit but I do not think that the ratio of total
voltage
> > to total current will be equal to the Zo of the line.
>
> Steve, the best I can do is to promise to bear with you. You are
> definitely the wrong sex for me to want to bare anything with you. :-)
>
> > Total voltage anywhere on the line is Vforward + Vrearward. Total
current
> > anywhere on the line is Iforward - Irearward,
>
> Reflected current carries a minus sign so the total current is
> Iforward - (-Irearward) = Iforward + I rearward??? Or have I
> been seduced by a shortcut?
>
> > satisfying Kirchoff's current
> > law for equal, in-phase currents traveling in opposite directions. I
> > suspect that you are determining the total current from Iforward +
> > Irearward, which, in this specific example is not correct.
>
> Yep, that was what I was doing. I was dealing with phasors (vectors)
> instead of Kirchhoff's laws. So reflected current is not really 180
> degrees out of phase with reflected voltage? The minus sign only
> indicates the direction of current travel?
> --
> cheers, CAM http://www.qsl.net/w5dxp

In the example you created there is no reflected current. There were two
in-phase sources of equal voltage and current. At the midpoint in the line,
the equal, in-phase currents are traveling in opposite direction. The total
current at the midpoint of the line is I1 - I2 = 0 Amps. If you want to
write that as I1 + (-I2) thats fine.

The real point however, is that when the total voltage is 0 in the line, the
total current is not 0 as you stated.

Steve VE9SRB

826. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:45:28 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <ckHU9.109698$hK4.8912753@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127362

"VE9SRB" <srbest@att.net> wrote in message
news:43HU9.109675$hK4.8911714@bgtnsc05-news.ops.worldnet.att.net...
>
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E232FF9.9050301@ieee.org...
> > Richard Clark wrote:
> >
> > > <Cecil.A.Moore@ieee.org> wrote:
> > >>What, besides frequency, makes RF so different from light?
> > >
> > > Nothing.
> >
> > Well then, how can Dr. Best assert that constructive interference
> > can exist in a transmission line without a corresponding destructive
> > interference? Here are some quotes from Dr. Best:
> >
> > Dr. Best sez:
> > "If you want to see an example where we have a 75w wave and an 8.33w
wave
> > superimposing to create a 133.33 w wave where there is NO corresponding
> > destructive interference or "power cancellation" take a look at this
> > example:"
> >
> > "The total forward power increases as a direct result of the vector
> > superposition of forward voltage and current. This DOES NOT require a
> > corresponding destructive interference process (reduction of power
> > elsewhere) to balance the law of conservation of power ..."
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
>

Cecil,

Instead of taking my quotes out of context, why don't you present the full example that these quotes are associated with. In that example the forward power increases but there is not a corresponding decrease in power (or destructive interference) anywhere else in the system.

Steve VE9SRB

827. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:54:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2343C0.7070606@ieee.org>
Source record: 127363

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
>>Well then, how can Dr. Best assert that constructive interference
>>can exist in a transmission line without a corresponding destructive
>>interference? Here are some quotes from Dr. Best:
>>
>>Dr. Best sez:
>>"If you want to see an example where we have a 75w wave and an 8.33w wave
>>superimposing to create a 133.33 w wave where there is NO corresponding
>>destructive interference or "power cancellation" take a look at this
>>example:"
>>
>>"The total forward power increases as a direct result of the vector
>>superposition of forward voltage and current. This DOES NOT require a
>>corresponding destructive interference process (reduction of power
>>elsewhere) to balance the law of conservation of power ..."
>
> Its amazing how every conversation turns into this. Have fun.

Not amazing at all, Steve. You have failed, thus far, to demonstrate
constructive interference in the complete absence of destructive
interference. Until you can demonstrate your something-from-nothing
assertions about energy, this subject will keep rearing it's ugly head.
Seems every time this subject comes up, you get too busy to discuss it.

Are you afraid of the fact that wave cancellation at an impedance
discontinuity can cause 100% re-reflection of the remaining reflected
energy which would render false about a dozen of your assertions in
your QEX article? Maybe if you refuse to discuss it, nobody will notice?

Constructive interference requires more energy than is immediately
available from the two superimposed waves. Where does that extra required
energy come from if not from destructive interference? It's explained
on my web page which you haven't bothered to address or deny.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

828. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:56:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E234431.1040708@ieee.org>
Source record: 127365

Jim Kelley wrote:
> Salt is Na+ and Cl-. It's already ionized, so to speak.

Nope, it's not, Jim, not until it encounters H2O.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

829. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:58:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8ah62vg89tqnslpcqgt88srtvvc8kkepmu@4ax.com>
Source record: 127364

On Mon, 13 Jan 2003 16:29:57 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> How can 1 quart + 1 cup = 1 quart? Do you reject the law of
>> conservation of volume?
>>
>> Why is it that I get the impression you are purposely avoiding the
>> issue? What we are engaged in here is the pursuit of TRUTH. ;-)
>
>I am aware of a conservation of energy principle. I am not aware of
>a conservation of volume principle. Can you quote the IEEE specification
>number for that principle?

Egads, is that the only font of wisdom?

73's
Richard Clark, KB7QHC

830. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 22:59:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9dh62vg0bshrja3rlc6ml2vqvigt6vco2m@4ax.com>
Source record: 127366

On Mon, 13 Jan 2003 16:29:57 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> How can 1 quart + 1 cup = 1 quart? Do you reject the law of
>> conservation of volume?
>>
>> Why is it that I get the impression you are purposely avoiding the
>> issue? What we are engaged in here is the pursuit of TRUTH. ;-)
>
>I am aware of a conservation of energy principle. I am not aware of
>a conservation of volume principle. Can you quote the IEEE specification
>number for that principle?

Hi Cecil,

Consult the works of Piaget.

73's
Richard Clark, KB7QHC

831. Re: Dipole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:19:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <avvhh6$4lq$1@knossos.btinternet.com>
Source record: 127367

> I have several choices on putting up a dipole for 80 -10.
>
> 1. I can put up 140 ft running East-West with center at about 40 ft and
the
> ends at 15-20 ft fed with ladder line to a tuner.
>
> 2. I could bend one leg to the Southwest direction.
>
> 3. I could put a 100 ft running Southwest to Northeast to dipole with
> center at around 40 ft and ends at 15-20 ft, also fed with ladder line to
> tuner.
>
> What would be my best bet for good all around coverage.

==========

You do not give your geographical coordinates or your preferred compass directions. But that doesn't matter very much because, in practice, you will not notice a significant difference between any of your options.

Just erect a dipole, a little bent or not, even sloping if you must, as high above ground as you can, of no particular resonant frequency and start calling CQ.

The important thing is ladder-line, better still an open-wire line, of no particular length or impedance, with a choke balun and tuner at the transmitter end. Don't skimp on wire diameter anywhere,

But if you do that you will miss all the fun of experimenting and working your tedious way through all the other inefficient coil and trap loaded or folded, coax-constructed alternatives before ultimately arriving at the same step-by-step conclusion.

Now go ahead and prove me wrong. Good hunting!

Reg, G4FGQ

832. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:25:14 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E234ADA.7060106@ieee.org>
Source record: 127368

VE9SRB wrote:
> When two very narrow pencil beam EM waves are pointed orthogonal to one
> another such that they intersect at a point in space where they are of equal
> amplitude and 180 degrees out of phase and a complete cancellation or
> destructive interference occurs, you claim that a simultaneous constructive
> interference must occur somewhere else in space and that the energy in the
> destructive interference process must go to the point of constructive
> interference to satisfy the law of conservation of energy.

Of course. Have you ever witnessed optical constructive interference beyond
the available energy without an equal destructive interference occurring somewhere
else? Do you really think that the super bright rings in the interference pattern
can occur without any dark rings? Can you actually get 200W out of a 100W light
bulb without increasing the voltage and current? Can you actually get 20 dBi
isotropic gain out of an antenna?

> Please explain in physical terms, how the traveling energy in the two RF
> waves jumps through space to this point of constructive interference. Also,
> please explain how, if the energy in the two waves jumps to a point of
> constructive interference, it is also able to travel along its way past the
> point of destructive interference.

If there is not an impedance discontinuity (medium change) each light wave
continues on without being changed by its environment. Where the E&H fields
add, constructive interference results. Where the E&H fields subtract,
destructive interference results. You simply cannot increase the brightness
(intensity of illumination) at one point beyond the sum of the available energy
components without decreasing the brightness at another point. If you can
demonstrate constructive interference of light where the brightness is brighter
than the average energy available without a corresponding region where the
brightness is less bright than the average energy available, please do so. But
your assertion that you can do it is not good enough. We require a demonstration.

You can indeed get 133.33W of brightness out of two waves of 75W and 8.33W, but
not without getting some darkness somewhere else. You can indeed get 20dBi gain
out of an antenna but not without reducing gain in some other direction.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

833. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:27:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E234B78.2040205@ieee.org>
Source record: 127221

VE9SRB wrote:
> The real point however, is that when the total voltage is 0 in the line, the
> total current is not 0 as you stated.

It shows that I am not accustomed to dealing with two-source systems
as it is completely unlike the average ham installation.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

834. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:27:58 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <jaj62vsn3cktr6kgb2ndph9k48836smbvf@4ax.com>
Source record: 127220

On 09 Jan 2003 16:43:52 GMT, derswede@aol.comspam.com (AA) wrote:

>>> But this is not an open invitation to personal attacks and
>characterizations.
>
>I'm sorry....did someone move the Usegroup? Or have I been TimeWarped to some
>other dimension?
>
>Don't want comments and have no sense of humor? Don't post here.
>
>A
>
>(Who knows Heisenburg's principle and who ALSO has a sense of humor. Cicero
>was right, BTW.)

"Carthage must be destroyed?"

835. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:37:28 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E234DB8.6040409@ieee.org>
Source record: 127222

VE9SRB wrote:
> Instead of taking my quotes out of context, why don't you present the full
> example that these quotes are associated with. In that example the forward
> power increases but there is not a corresponding decrease in power (or
> destructive interference) anywhere else in the system.

Please repeat that example, Steve. If you can truly demonstrate an
increase in forward power beyond the available source energy, you
will have invented perpetual motion.

Obviously, two 100W waves can combine into one 200W wave. But you claim
to be able to combine those two 100W waves into a 400W wave without any
corresponding destructive interference. However, you have yet to demonstrate
exactly how that magic feat is accomplished.

Referencing your magazine article, I have demonstrated that for every bit
of constructive interference between your V1+V2=Vfwd2, there is an equal
magnitude of destructive interference between V3+V4=Vref1. Mother Nature
will not allow it to be any other way.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

836. Re: Dipole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:40:23 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E234E66.695D227B@cwis.net>
Source record: 127223

Dave,
Any of them will work just fine, and I doubt
if you would see a lot of difference between any
of them.
'Doc

837. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:42:45 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <V9IU9.109778$hK4.8918306@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127224

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E234ADA.7060106@ieee.org...
> VE9SRB wrote:
> > When two very narrow pencil beam EM waves are pointed orthogonal to one
> > another such that they intersect at a point in space where they are of
equal
> > amplitude and 180 degrees out of phase and a complete cancellation or
> > destructive interference occurs, you claim that a simultaneous
constructive
> > interference must occur somewhere else in space and that the energy in
the
> > destructive interference process must go to the point of constructive
> > interference to satisfy the law of conservation of energy.
>

You didn't answer the question I asked. You responded with a different
discussion on light interference. Answer the exact question I asked.

Steve VE9SRB

838. Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:44:02 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <2qj62vcthdr6814f2q2cldh3o5f79lvlea@4ax.com>
Source record: 127225
Cross-posted to: rec.radio.amateur.antenna,alt.usenet.kooks

fractenna@aol.com (Fractenna) wrote in message
news:<20030111083837.29663.00000727@mb-cv.aol.com>...
> >To wit:
> >
> >http://www.opsyhopsy.com/MiscJunk/who_is_nc.htm
> >>
> > >
>
> Information:
>
> 3 year statute of limitation for civil suit for libel in Commonwealth of
> Massachusetts;
>
> 3 year statute of limitation for copyright infringement
>
> Exposure very very high.
>
> Downside very very low.
>
> Best Wishes,
>
> Nathan Cohen, Ph.D.

Are you encouraged because you intimidated Bill Meachum? What's your success rate there, about 0.01%?. The rest know you are a buffoon, a reputation you have assiduously cultivated for years.

839. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:44:40 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <lcj62v0374qse6hkrbm1cdgqrtvq5rk1bm@4ax.com>
Source record: 127226

On Mon, 13 Jan 2003 13:11:25 -0800, Jim Kelley <jwkelley@uci.edu>
wrote:

>> > salt is less dense than sugar (Na and Cl as opposed to lots of C's and
>> > H's), so the undissolved salt will displace less water than undissolved
>> > sugar. Even though there may be more than a quart of solution, there's
>> > still only a quart of "water" in the mix. ;-)
>
>> Hmmmmmm, if I remember correctly from chemistry 50 years ago, salt
>> *ionizes* in water and thus takes up *zero* additional volume.
>
>That must have been before Irving Langmuir got the Nobel for discovering
>covalent bonding. ;-)
>
>Salt is Na+ and Cl-. It's already ionized, so to speak.
>
>Dissolved substances fill space between molecules of solvent.
>
>73, ac6xg

Where's the covalent bonding there?

840. Re: Antenna Rotor Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:45:13 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E234F89.E15F57B8@cwis.net>
Source record: 127227

Sidney,
My first thought is that that sounds typical for
an overloaded rotor that's driven with a rubber wheel.
My second thought is that you need a larger rotor.
'Doc

841. Delete this post, Doc

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:49:09 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <mek62v86t519g634b4rq7veqgn8ancivdh@4ax.com>
Source record: 127228

The following material, authored by Nathan Cohen, has been extracted
from usenet:
==========

Open door, receive summons, go to court, disappear from the internet.
Is that your fate this year Mr. R____? That looks what your goal is.
As for me, five years of your harrassment is five years too much. Pass
that on to your pals too.

Nathan Cohen

I have been asked by many, including G_______, for more HF designs. I
am heartened by the positive response, and when I have some time in
the late Spring I will oblige. Note that I am also about half way
through another paper for 73 Magazine on just that topic. Also, keep
in mind that I do not respond to technical questions on fractal
antennas on this NG due to slander, harassment, and death threats
received inthe past. I do, when I have time, respond on the fractal
antenna reflector on onelist.com.

73 to All,

Chip N1IR

"It has been brought to my attention that an illegal and bogus use of
my screenname has been employed here to falsely represent a public
message as being written and sent by me. Under recommendation of my
attorney, I am taking this sole opportunity to make public notice
regarding this: This is a public notification that any and all claimed
USENET messages after January 5, 2001, that bear the signature of Chip
N1IR, Nathan Cohen, or chipn1ir@aol.com, are false and bogus.
Fractenna@aol.com continues to be used by several individuals
including myself. This is a legal and long standing use by those
affiliated with Fractal Antenna Systems,Inc. However, I do not use
this screenname on USENET. I do not participate in USENET. I
understand that Phil, N1ZKT, is doing so and he is welcome under the
premise so given. Under the recommendation of my attorney, I have not
been involved in any USENET activities since 5 January 2001, so that
action against certain individuals may proceed. My superiors at my
home institution have been apprised of the situation in January. I
have not participated in USENET since the January date. Nor do I
intend to. Below is the bogus post. It is not an AOL post.It appears
to be a routed post through looksmart. That individual must have used
either bogus routing or obtained an account which emulates an AOL
screenname.It is not me or anyone I know of. I wish my friends well on
USENET and remind then that I may be reached by e-mail for friendly

chats, or through the various moderated antenna lists on yahoogroups.

Nathan 'Chip' Cohen

N1IR

617-489-6952 "

Mr. P.O. B_______--

There is "no problem with Chip". This is a public notice that you are to stop all such harassing public posts. This is also to inform you that you are requested to discontinue any contact with me whatsoever, starting now.

Nathan Cohen, Ph.D.

Again, you blame an inane behavior of someone olse upon ME. That is a uniquely bizarre protocol found in this NG. I didn't start this thread and certainly have made NO comments which fall in your category. Bill A_____ is your man. As for Phil, I am NOT Phil. If you are upset with him then address him directly. He can handle himself. You would at least expect Bill, a retired person, to have the time to find the answer to such an obvious question, before attempting to publicly humiliate someone trying to earn a living, and better himself. Especially when that someone is here to help others as enjoyment; a meaningful diversion from otherthings more tangible and burdensome. Life is tough guys; no need to make it tougher than needed. It's a very disturbing attribute found on this NG.

Nathan Cohen, Ph.D.

N1IR

Under advice from my attorney, I will not react to your new comments. Your continued statements place you in the situation discussed off line. It is up to you to seek out an attoprney's counsel on the matter. I remind you that statements such as "alleged PhD", and so on are deliberate efforts to publicly libel. I will repeat a general statement: Malicious libel is NOT acceptable. It can--AND WILL-- lead to litigation. FYI Mr. O'N___ and I are NOT presently, or planning for, litigation against each other. We resolved our differences reasonably. Furthermore, I have publicly asked for the matter to be dropped. Your continued, unwelcome statements go against my wishes.

Nathan Cohen, Ph.D.

I am passing this onto this newsgroup as at least two offendors use this forum to get traffic to websites which have the copyright violations.

---

16 August 2001

Fractal Antenna Systems,Inc. has received and is reviewing requests fo
permission to use one or many of its copyrighted graphics, pictures,
and/or files subject to its recent 15 August 2001 deadline and
guidelines. As of this date those who who have not requested
permission to use said copyright materials as per above are considered
intentional violators. The firm has initiated efforts to demand
removal of said material(s). If said material(s) is(are) not removed
immediately upon notice then the firm will seek legal means to stop
the violators and recover treble damages; cost of legal fees; and
court expenses as applicable, among other costs accrued. Any questions
should be sent from representative counsel by registered mail to:

ATTN: COPYRIGHT VIOLATIONS
Fractal Antenna Systems,Inc.
2 Ledgewood Place
Belmont MA 02478"

Thanks and 73

Phil

de N1ZKT

QST--

Messages about patents on antennas have been a common and accepted
topic of discussion on this newsgroup. I have forwarded the following
relative to this. " Fractal Antenna Systems, Inc., is seeking any
extant evidence of infringement of its patents on fractal element
technology. The firm designs and sells antennas based on fractal
patterns, especially fractal elements. It holds an exclusive set of US
patents on said designs and has many other U.S. and foreign pending
patents. The firm seeks possible information on evidence of
infringement of its patented technology. It has actively sought out
such evidence and has taken successful actions to stop said
infringement. The firm is offering $1000 reward(s) to those who can
present compelling evidence of products in the US market which
incorporate its technology from unauthorized OEM's. If such evidence
is found and presented, the first case of an example by a specific
unathorized OEM will result in said reward to the individual
presenting that example. Such individual will be asked to provide an
affidavit and additional materials as requested by the firm's counsel.
Please send any additional queries in writing to:

ATTN: Infringement
Corporate Headquarters
Fractal Antenna Systems, Inc.
2 Ledgwood Place
Belmont MA 02478"

Thought I'd pass this on.

73

Phil

de N1ZKT

Mr. M_______--

Our attorney did indeed provide that advice; understands and advised me on fair use; defined for me when a quote is fair use and not fair use. My statement then, as now, is based on his counsel. If your incorrect statements lure others into illegal activities, then you are on public record as being informed that you run the risks associated with them. I note a huge number of times you have been profoundly incorrect--always veering on the side of the unlikely; the illegal; the deceptive. The most absurd one to date was your assessment (during my friendly phone conversation) that the 10M fractal quad Yagi was a fake--because you couldn't see the wire in the photos (everyone else can), and radio shack ground wire couldn't be bent to hold a shape. According top you, any attempt to do this would produce a drooping mess in minutes. Yet the antenna exists, is well used, and has been up for 13 months. Furthermore it has survived an F1 tornado; various ice storms; and the pinching-velcro effect of pesky oaks (when being raised/lowered). This antenna is a survivor, is what is stated, and should be an inspiration for hams to try it and experiment. If that disagrees with you then too bad. The 10M FQY can be seen on the ham page of :

http://www.fractenna.com

The world is not a big conspiracy meant to test your gullibility Mr. M_______. If it was, I sure wouldn't want to be around it.

Chip N1IR

Sir:

You continue, even in this response, to make accusations with intent to slander and defame. For example: "...chance to prove that for once in your life, you are telling the truth." Your assertion that I have spent a lifetime of lies is extraordinary . And of course absurd in its prevarication. It is also one of many statements you have made which are false, but have been publicly made with--intent-- to slander and or defame me.

I want you to review this and other posts with your daughter. If, indeed, she is an attorney, and represents you, IS NAMED 'D___' as you say, I want you to have her call me at :

617-489-8824.

I will then arrange a meeting in Boston between my counsel and her with the intent of an out of court settlement dealing with your

trespasses. This will be the last contact I will publicly have with you, whether you are

'L_____' or actually someone else.

Nathan 'Chip' Cohen N1IR

Again, your comments do not seem to indicate a knowledge of lawsuit law. Mine is rudimentary but under the advice of counsel. If yours was under legal counsel, it certainly would not suggest that the party you claim to be suing, had so prejudiced his case that legal representation was not possible. That is exactly what you have just said--twice. Your insinuation is that the party you are suing should not be represented by the legal system. One must further remember that you have clearly stated that your intent for said suit is to bring financial ruin upon me; not as a settlement against alleged grievance, but purely to destroy me financually. In other words, that was ALWAYS your intent, and any 'grievance' is just a ruse for that plan. I presume this will now be run past a judge.

Cordially,

NC

Again,I must apologize to my colleagues for the harassment by an individual on this NG. My attorney had advised me to publicly request that he stop any form of contact with me, which I did. Yet, in the last few weeks, he has taken every single thread in which I have posted-- and addressed me personally, and always either/or portraying my statements inaccurately, so as to make me look foolish and mocked, and/or personally attacking me with abuse. There is, at this moment, nothing I can do about it. The case I have made will take time to bring to the judge's attention and , by definition, invokes the legal system in another state. I do feel that the case for harassment is overwhelming at this point, and I will now bring the problem to the attention of his ISP. My comments regarding this thread are accurate , and in particular, represent the present experience of colleagues who are professionals at cell tower siting and installation, especially in urban areas. I am obligated to defer to their greater knowledge in this area, which I have done. I would like to make one question clear, however. If, as this individual claims, I have made foolish and incompetent statements 3 years ago on cell tower heights, then why has he not re-posted the thread? Again, I am sorry that every time I get involved in a discussion I am mocked and abused, but please understand that I have done all I can to discourage this behavior, and suggest that you personally ask this individual to end his harassment.

Thank you.

73,

Chip N1IR

It would appear that you believe that the only acceptable solution is for me to not have the right to enjoy myself in this public forum, and that I am responsible for said abuse--by others. Thus you are holding me responsible for the actions of others, and removing my right of free speech, and my own reasonable and honest contributions to this group. Is that the gist of it? If so, can you think of any compelling reason why such an attitude should not extend to every segment of my life? In other words, would you say that I should not talk; write; or express any human action, because in doing so there are those who will counter with abuse--even though I have not done so? What, exactly, is your objective sir?

Nathan Cohen, Ph.D.

I can see that Mr. R____ is under substantial pressure. But I am a reasonable person. IF MR.R____ **STOPS** his CONSTANT PERSONAL ATTACKS AGAINST ME then I will not press charges and I will drop my suit. I couldn't care LESS what R____ discusses--usually inaccurately--in technical discussion. I couldn't care LESS what you say about fractal antenna, or genetic algorithms, or the length of a side of an antenna. Why SHOULD I care? BUT THE HARASSMENT MUST STOP. IT MUST STOP. You have NO RIGHT to put my family through a constant and unabated HELL promulgated on a PUBLIC and GLOBAL SCALE.. YOU HAVE NO RIGHT to make my family uncomfortable when I try to talk to hams. YOU HAVE NO RIGHT to spread malicious and intentionally wrong information about Fractal Antenna Systems, Inc (do you remember when you claimed that the company had been dropped from incoporation last year? Do you have any idea what that did? I lost 4 new accounts because of that LIE!!) DID YOU HAVE ANY RIGHT to trouble my SICK and DYING father with your nonsense? You bet he read this NG! A week before he died, how do you think he felt with your little conversation with R___?? Doesn't a dying man deserve some peace?? EVERYONE IS SICK of your HARASSMENT! You are the key to stopping it. That much is clear. IF YOU STOP YOUR PERSONAL ATTACKS this will instantly be a differentNG. R___ is right: he is worried about some serious issue coming to a head. That is correct. EITHER you STOP. Now. OR the NG continues the way it is; gets worse AND I press charges and complete my civil lawsuit.No bluff T__. Act sane and do the right thing.

Nathan Cohen, Ph.D.

Thank you for your comments B___t. There is nothing in the above post--which you either misunderstand or misquote-- which says that this individual named 'L____' has threatened me. To date, I have not seen any comments from 'L____' which I feel indicate intent to harm. I have made it very clear what 'L____' has done. You, yourself, can freely discover this by doing a power search on dejanews under the keywords fractenna and L____. This will reveal a long-term harassment by 'L____' for which I neither provoked nor encouraged such response. His behavior of late has pushed the issue over the edge. I will take whatever legal measures exist to assure that the harassment and threats, posed by handful of individuals (against me) do not continue.

That includes, but is not limited to, lawsuits if and when that decision is made. It should be noted that a grotesque assertion that I, myself, intend others harm or harassment are unfounded, and inaccurate. I would just like these individuals to stop their chronic behavior and I have no interest in devoting any time thinking about them--beyond the time it takes to get them to stop-- through legal means. Matters of litigation, or resolutions outside of court, are not issues for which your opinion can have much relevance to me.
It would be instructive to note the lack of posts (involving me) from some individuals in the last few days. It is probably a good speculation that these lack of posts (involving me) will continue to be absent. That will make for a far more instructive, sane, and useful NG. I presume, you, as I, look forward to that.

Best 73,

Chip N1IR

I assure you that I am not a pseudoscientist. If you would like a nice summary of my scientific work, in context, may I suggest seeing the piece in July 1999 Scientific American. At present, C_____ R____, W8__, is in the process of being sued by me. This has nothing to do with science or objective or subjective critique. It has to do with his harassment and libel and personal attacks. Litigation has been my option of last resort; it is only his obsession with libelous statements--for example, even today he asks' how many lives I have ruined as a professor'-- which has led to this. Mr. R____ has a checkered past . For example, his harassment of R___ M_______ is well-known to the ham community. There are other things he has done which will come to light. I hope this clarifies the issue for you.

With Best Regards,

Chip N1IR

It really is a jaded, mixed up, perverted world you guys see. I must admit, that in your company, I DO feel like an oddball-- a special kind of 'mental illness' where people are starightforward; friendly;helpful; and don't attempt to make personal attacks.
Sort of like Erewhon I guess.. Any more Friday Night Specials? I'd like to play magic tR___s with my son:-)

73,

Chip N1IR

Hey there R___

Why is it that when you make follow ups on my posts you send it to Chip? Don't you GET IT? MY moxxon info came for Cebik's web page. If YOU have something else up that's 0.75 by 1 quad sizes then that's a LOT bigger than the 0.57 by 0.63 quad sizes of the 10M FQY. Your moxxon wouldn't even turn in Chip's tower and it would hit two trees

in the process. I don't know what makes you think you can come off throwing pot shots and pretending you know what you're saying here and on other posts directed at Chip me, fractals, and so on. The demonstrated FACT is that your moxxon won't work in this form factor and people can't put it up with the same restrictions as the 10M FQY. Apples and ornages. APPLES and ORANGES. But you want us to think that the apple is the orange and the orange works better. Wrong. Just to blow your mind though Chip came up with a fractalized VK2BDQ square almost 4 YEARS ago and it just sits in the notebook until he feels like letting people know. It's pretty and damn small too. Considering the harassment you've put on here along with your ilk is it no surprise that Chip is in no hurry to let lots of new ham designs get public attention any time soon? I mean to use Chip's words, "does their lunacy go as the arithmetic sum of new designs presented or to the power of new designs presented?" Right now it looks like a power. You've wanted and got your own worldwide forum OM. You really have thousands of people all over the world reading and some indeed buy into your 'mystique of doubt' just because someone who they've heard of says it.. Well you are very wrong and they should be irate at you for misleading them. I hope you e-mail box is full of their responses. Look at how you've embarrassed yourself. This in one of many many chapters. Like not understanding what an error bar means and accusing Chip of cooking numbers, your alleged 'Chip entrapping interneters sting', your idiotic characterisations of me as Chip's "cabin boy" and "boy toy". There are many many more. Your abuse of freedom of speech is just inexcusable especially when you target someone with Chip's knowledge base helpfulness and integrity.

Phil

de N1ZKT

Thanks for your comments R___. Its important to protect intellectual property. Mr. R____'s post was not fair use. If he had asked and secured permission, and identified the source and permission given, then there would have been no problem. If the cost of such IP protection is loss of cusT__ers, then that is the price that any IP dominated company must pay. In fact, in the last three weeks there have been dramatic numbers of queries and web site hits, which tend to belie your impression. I myself have had to cancel my vacation, and as you might notice, spend relativelyy little time on the NG, with posts that are almost always under a minute to post. Lost a lot of sleep, but its envigorating. I am really enjoying myself with my work! It's exhausting but fun; one of the benefits is I meet some great people who I can help-- and learn from too. I can't say Mr. R____'s path down the black hole of malicious harassment has been a business booster, but the statistics certainly show a time correlation. Perhaps, if Mr. R____ wants things to 'go bad', he should just stop:-> Good luck with your antenna needs. Well, back to work!

73

Chip N1IR

T__--

I have NEVER used vulgarity. I would like to be be VERY CLEAR on the following: Any effort on your part--or anyone else's-- to harass me will be met by legal action. I have advised my associate dean of the harassment that my private posts have been subjected to and I am happy to advice university counsel of actions being taken by me, privately, to stop this abuse. Efforts taken to get me fired--which obviously is your intent Mr. R____-- will be met with full documentation--including the 'tanyaa' episode. If such action is taken on your part it will be made explicitly public on this newsgroup as an indication of your abusive efforts. Furthermore, I will summarize your actions and abuse for your employer in kind. In any case, I am most happy not to use profane language as I have yet to do so. Thus your request is extremely easily met. My requst is simple. STOP THE ABUSE

Chip

I am obligated to point out that a lawsuit is being prepared against Mr. S_____ and that I am under recommendation from my attorney not to respond to his posts. That lawsuit falls under the context of slander and libel. One need only briefly look at his posts (using dejanews) to get a sense of the harassment and accusatory defamation. In Proc ACES 1999, I had a paper presenting numerical simulations to show the role of self similarity and origin symmetry in frequency independence. I have, indeed, tested many antennas to this effect in the last few years. This was not done anechoically. My readily available resources for scientific investigation are, as I said, modest. It will be noted that this was done--and the post was presented here--for purposes of science. If a set of conditions is demonstrated in Maxwell's equations then they correspond to a property of nature. Thus the issue is iron-clad. Nonetheless, it is indeed valuable to do anechoic measurements, and I wish this were possible from this end. A vast body of new frequency independent designs arise from the new revising of Rumsey's Principle as Hohlfeld and Cohen invoke. Of course, only a fraction of given geometric forms have relevance to a specific application. Indeed, the log-periodic structures have been quite rich in applications. The point is that they will built upon as a body of design options, not supplanted.

With Best Regards,

Chip N1IR

Under advice from my attorney, I will not react to your new comments. Your continued statements place you in the situation discussed off line. It is up to you to seek out an attoprney's counsel on the matter. I remind you that statements such as "alleged PhD", and so on are deliberate efforts to publicly libel.I will repeat a general statement: Malicious libel is NOT acceptable. It can--AND WILL-- lead to litigation. FYI Mr. O?N___ and I are NOT presently, or planning

for, litigation against each other. We resolved our differences reasonably. Furthermore, I have publicly asked for the matter to be dropped. Your continued, unwelcome statements go against my wishes.

Nathan Cohen, Ph.D.

Mr. S_____:

This week I will be writing to the Director of the Los Alamos National Laboratory (Dr. John Browne), and the two senators from New Mexico detailing the harassment and libel which you have inveighed against me. These include deliberate and malicious efforts to attempt to get me terminated from my academic position, and false misinformation regarding whether I 'deserve' to have the title Ph.D. , as well as false accusations that you are the inevntor of fractal antenna technology.These will also detail the assertions you have made stating that I am mentally ill. I will describe this inappropriate behavior with the intent to ask the question why someone with such a malicious and destructive focus against an individual should be in the responsible position of being involved with nuclear detonation development.I have very serious concerns for my personal safety and that of the country if you can make false assertions freely while holding a position with severe and serious responsibility.

Nathan Cohen, Ph.D.

Mr. S_____ has posted an accurate copy of an e-mail I sent him. Mr. S_____ is a a developmental engineer/scientist at the detonation branch ofLos Alamos National Laboratory. He is involved with nuclear detonations, a high security clearance position.The wheels turn.

73

Chip N1IR

842. Cushcraft R8 opinions?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:51:18 UTC
From: "Jackie L." <buzzygirl@REMOVE.attbi.com>
Message-ID: <VhIU9.670377$P31.499750@rwcrnsc53>
Source record: 127229

Hello,

I'm a new General licensee and I am going to be purchasing an IC-718 in the near future (later this week). As I do not have the right yard conditions for a dipole (the trees I'd use are all too close to power lines) or an understanding landlord (NO BEAMS whatsoever on the roof), looks like I'm relegated to buying a vertical.

I'm considering buying a Cushcraft R8. I plan to check out DX on 40 meters and higher (not 80 or 160 right now). I'll be concentrating on CW and SSB. What do you more-experienced hams think of this antenna for this purpose? Any pros and cons? Good experiences or not so good?

Thanks in advance, and 73 to you,
--
Jackie
KC0ODY/AG

843. Luck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:51:50 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <0mk62vk3lo4kdur7c87lbq0r9e1p4jqe7m@4ax.com>
Source record: 127230

fractenna@aol.com (Fractenna) wrote in message
news:<20030111095644.01948.00000280@mb-mn.aol.com>...
> >>...that's how it is.<
> >
> >No luck, either, eh? Oh well. Hi to Mary.
> >
> >Rick K1BQT
>
> Well Rick, I think we're both seasoned enough in age to know that folks make
> their own luck. And THAT'S how it is:-)
>
> Thanks for your well wishes.
>
> 73,
> Chip N1IR

Especially if they inherit money, hey?

844. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-13 23:53:59 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <rkIU9.109785$hK4.8919771@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127231

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E2343C0.7070606@ieee.org...
>
> Not amazing at all, Steve. You have failed, thus far, to demonstrate
> constructive interference in the complete absence of destructive
> interference. Until you can demonstrate your something-from-nothing
> assertions about energy, this subject will keep rearing it's ugly head.
> Seems every time this subject comes up, you get too busy to discuss it.
>

Its not that at all. Its just that the discussion (what a poor term that is to describe our conversations) is a complete waste of time. Generally, the discussion goes like this:

Cecil Says: "Dr. Best sez you can have constructive interference without destructive interference. He's wrong and has invented new energy math."

Steve says: "Here's an example ...."

Cecil says: "Don't want to discuss your example, only mine with the Zo match. See, Dr. Best won't answer my question, how can 75 W + 8.33 W = 133.33 W? He's invented perpetual motion."

Steve says: "Lets look at the voltage superposition of two forward waves ..."

Cecil says: "Your voltage superposition works but my power superposition still needs the destructive interference term. Your voltage superposition math may look fine but its really wrong."

Steve says: "Lets look at an example where destructive interference and constructive interference do not occur simultaneously. Consider this transmission line example ... Consider two narrow pencil beam EM waves ..."

Cecil says: "Let's talk about my example of light interference instead.."

Steve says (to himself): "Why do I bother?"

Cecil says: "You get too busy to discuss this. You must be afraid."

Discussion ends for two months.

Steve and Cecil talk about something else.

Cecil Says: "Dr. Best sez you can have constructive interference without destructive interference. He's wrong and has invented new energy math."

Sorry that may have been a very biased summary. Putting aside all attempts at making light of this for a moment:

Cecil, we disagree on a few points regarding the relationship between the constructive and destructive interference process occurring in a transmission line. So what? Who in God's name really cares anymore?

I have stated my opinion with supporting examples and math. You have stated your opinion with supporting examples and math. We disagree. It does not bother me that we disagree. I can function and get through the day knowing that you disagree with me. I can talk to you about other issues knowing you disagree with me on the destructive interference issue. I don't feel compelled to convince you that you're wrong. Let it go. I know you think I'm wrong and I can live with that.

Let's talk about something else.

Did you get the answer to the QEX brainteaser yet?

Steve VE9SRB

I state my opinion, you state yours. You ask a question or post an example, I discuss it and give you an answer. You don't like my answer and then take my statements out of

> Are you afraid of the fact that wave cancellation at an impedance
> discontinuity can cause 100% re-reflection of the remaining reflected
> energy which would render false about a dozen of your assertions in
> your QEX article? Maybe if you refuse to discuss it, nobody will notice?
>
> Constructive interference requires more energy than is immediately
> available from the two superimposed waves. Where does that extra required
> energy come from if not from destructive interference? It's explained
> on my web page which you haven't bothered to address or deny.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>

845. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 00:25:46 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v26m2l1qc0g049@corp.supernews.com>
Source record: 127232

William Ewald wrote:

>
> Are you encouraged because you intimidated Bill Meachum? What's your
> success rate there, about 0.01%?. The rest know you are a buffoon, a
> reputation you have assiduously cultivated for years.

Intimidated?
I learned long ago to keep my distance to avoid winos, thugs and other riff-raff on the street.
Same applies to the internet.
Too many crazy people out there who have nothing real in their life to do rather than build up their ego by threatening people and the internet is just the place for people of that character.
I suppose you could characterize that as intimidation but I call it avoiding someone else's wacko personal ego problems.
Of course I'm not speaking of anyone in particular :-)

-BM

846. Re: Cushcraft R8 opinions?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 00:27:41 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E23597D.B3344485@cwis.net>
Source record: 127235

Jackie,
Before you lay out the money for that R-7, why not give
a dipole a try. Even with the trees being near power lines
I think you might be suprised how well they do. If you
get the R-7 (or any other vertical antenna) later, then you
too can say, "Why did I ever do that?"...
'Doc

847. Re: Delete this post, Doc

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 00:30:57 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E235A41.C3E2A4EB@cwis.net>
Source record: 127236

William,
If you meant this "'Doc", then I can't delete it.
I didn't post it...
'Doc

848. Re: Two Sets And one Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 00:44:07 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E235D3C.2DCFDED9@shaw.ca>
Source record: 127237

Robert11 wrote:
>
> Hi,
>
> Will be using one of two scanners at a time. (30 MHz to 2 GHz)
> Have only one aerial, a Discone in the attic.
>
> I guess an antenna switch makes the most sense, but was wondering about
> other approaches also. So, let me ask:
>
> a. Does the switch make the most practical sense?
> Again, only one radio in use at a time.
>
> b. What about couplers? (freq range of 30 MHz to about 2 GHz)
>
> c. what about "just" feeding the signal all the time to both inputs? One
> set would be Off, as i mentioned
>
> I guess I should also ask how any of the above might change if the second
> set "accidentally or otherwise," is also on.
>
> What are the differences in the sets aerial input impedance for a set being
> on or off?
>
> Much thanks,
> Bob

If it was me, I'd try a couple of signals at different frequencies
using the same antenna connected to one, then the other receiver.
If you didn't notice any degradation, try a Tee. You might be
able to save the cost of a switch, and then you could use them both
at the same time which might be nice.

There shouldn't be any need to have one turned off while using the
other. If you were transmitting, then things would be different.
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

849. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 00:46:43 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E235DF3.43C43A05@bloomer.net>
Source record: 127238

What method do you feed it with?

Scott
N0EDV

"rich a." wrote:
>
> Scott,
>
> Look at this article (you may need to be an ARRL member to open it,
> try it) :
> http://www.arrl.org/members-only/tis/info/pdf/8511020.pdf
>
> Also, scroll back on rec.amatuer.radio.antennas to my Dec.16th post
> under the header, "Skywire Loop Antenna" and also to Dec.19th under
> the header, "Follow up to Dec. 8th post about "Loop Skywire & ect."
>
> I suggest you try the horizontal loop, mine works great!
>
> Rich K2CPE
>
> Scott <acepilot@bloomer.net> wrote in message news:<3E21A15A.D5C38915@bloomer.net>...
> > Anybody running a full wave horizontal (square) loop on 80/75M that is
> > in the neighborhood of 15 feet above ground? I want to give it a try
> > for "local" communications, say out to 150-200 miles. In other words, I
> > want a high takeoff angle. Will this be a decent way to achieve this or
> > will its proximity to the ground causes losses so high that I'd have
> > trouble communicating to the end of the road? ;)
> >
> > Also, any problems with breaking the loop at one corner and feeding
> > directly with 50 Ohm coax?
> >
> > Open to all other ideas as well!
> >
> > Thanks!!!

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

850. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 00:52:22 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E235F46.966A4689@uci.edu>
Source record: 127246

OC_CAM's Razor wrote:
>
> Jim Kelley wrote:
> > Salt is Na+ and Cl-. It's already ionized, so to speak.
>
> Nope, it's not, Jim, not until it encounters H2O.

I finally get it, you're just joking again. Because everyone knows you can't ionize something just by watering it. Salt simply dissociates into its constituent ions in water. Langmuir tells us that they're already ionized Na+ and Cl-. We're not ionizing salt - we're simply breaking its covalent bonds. Different thing altogether. Na plus shares Cl minus' extra electron. Salt even vaporizes in the ionic state. All you'd have to do prove it is calculate how much energy is required to ionize Na and Cl by multiplying the ionization potential for each element by Plancks constant (5.12 volts for Sodium, 12.952 volts for Chlorine) and it would be obvious. It would then be impossible to explain how tap water could provide that much energy to them and still explain how dissolving salt in water is the exothermic process that it is.

On the other hand you can _oxidize_ some things by putting them in water. In fact, Na oxidizes rather impressively that way! :-)

You'll always be older and smarter than me, Cecil. Especially, older. ;-)

73 de ac6xg

851. Re: Dipole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 00:53:20 UTC
From: "Dave (W4WLC)" <kaw1999@bellsouth.net>
Message-ID: <26JU9.14459$Jm2.12162@news.bellsouth.net>
Source record: 127239

Thanks for the comments, I live in Lynn Haven, FL, the panhandle of Florida.
Wanted to try working Europe....

Dave
W4WLC

"'Doc" <w5lz@cwis.net> wrote in message news:3E234E66.695D227B@cwis.net...
> Dave,
> Any of them will work just fine, and I doubt
> if you would see a lot of difference between any
> of them.
> 'Doc

852. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 01:30:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E23681B.1030007@ieee.org>
Source record: 127240

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E234ADA.7060106@ieee.org...
>
>>VE9SRB wrote:
>>
>>>When two very narrow pencil beam EM waves are pointed orthogonal to one
>>>another such that they intersect at a point in space where they are of
>>> equal
>>>amplitude and 180 degrees out of phase and a complete cancellation or
>>>destructive interference occurs, you claim that a simultaneous
>>> constructive
>>>interference must occur somewhere else in space and that the energy in
>>> the
>>>destructive interference process must go to the point of constructive
>>>interference to satisfy the law of conservation of energy.
>>
> You didn't answer the question I asked. You responded with a different
> discussion on light interference. Answer the exact question I asked.

I already answered that question in another posting. Here it is again:
According to your QEX article, orthogonal waves cannot cause either
destructive or constructive interference since they are 90 degrees apart.
So I challenge you to make some measurements that prove that you have
indeed caused any wave cancellation at all between two orthogonal waves in
your above thought experiment.

Thus I don't really understand the question. If the E field is weakened, the
H field is strengthened and vice versa such that the total energy remains
constant. You cannot cancel both the E fields and the H fields without
a medium discontinuity in which case you get reflections. You seem to be
asserting that you have invented non-glare empty space - no need for a
thin film.

You can prove your point by setting up an actual light experiment where the
bright interference bands are not accompanied by dark interference bands.

You seem to be saying that energy can be destroyed through destructive
interference? Hint: If it is, as you say, not there and also not
destroyed, where did it go?

There are certainly cases of constructive interference without a corresponding
destructive interference in which case the source supplies the extra energy. But
in all of our examples, the source power is constant. That limits the energy
available to the system. No matter what you do to the light from Alpha Centauri
you are not going to achieve an instantaneous power increase.

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

853. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 01:32:05 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v26q4s3kfo458b@corp.supernews.com>
Source record: 127241

Anyone care to elaborate on how and why the twin lamp refelectometer works?
tnx
hank wd5jfr
"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:avvech$c1i$1@slb6.atl.mindspring.net...
> Cecil:
>
> [snip]
> > I refer to actual physical reflection coefficients caused by actual
> > physical impedance discontinuities Vs virtual reflection coefficients
> > caused by a virtual impedance calculated from a V/I ratio. :-)
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
> [snip]
>
> I just remembered yet a third type of VSWR monitor, do you remember
> the old twin-lamp device. The "twin-lamp" used to be featured in older
> ARRL Handbooks, it was meant to be used on 300 Ohm ribbon
> line, it was comprised of a strip of 300 Ohm twinlead with a couple of #47
> incandescant pilot bulbs on each end.
>
> This is a variation on the the slotted line which uses basically two
samples
> of
> a standing wave to estimate the VSWR, the "twin-lamp" uses a distributed
> sampling technique and senses the waves over a continuous length of line.
>
> In fact the theory of operation of these distributed VSWR sensing devices
is
> very
> closely related to the methods of evaluating cross-talk between long
> telephone
> transmission lines. The telephone/telegraph cross-talk problem is
> conventionally
> measured at two places, with respect to the "hostile" and "friendly"
> sources, the near
> end and the far end, and the two cross talk measurements are referred to
as
> NEXT
> for near end cross talk and FEXT for far end cross talk.
>
> It seems intuitive and it can be shown by analysis that the cross talk
> energy is stronger
> the nearer the victim line is to the source on the hostile line. i.e. two

> lines interfering
> with each other while running side by side induce a "direction" dependent
> cross-talk,
> in that one can sense the location [i.e. near end, or far end] of the
> interfering hostile
> source and hence the direction of the interfering wave on the line. This
> cross-talk
> coupling phenomena can be used to estimate VSWR by placing a sampling
line
> along side an energized line and measuing cross-talk levels induced into a
> "sampling"
> line at points along the line.
>
> It's interesting that all of these distributed VSWR metrologies, i.e. the
> slotted line,
> the twin-lamp, parallel sampling lines, etc... are all very frequency
> dependent, and
> need a means of adjusting readings for their extreme frequency dependence
> and
> consequent inaccruacies, while the single point (V, I) bridge devices are
> generally
> only mildly frequency dependent and consequently more accurate, *even
> though*
> the latter single point devices do not directly measure a wave but rather
> infer the
> wave values from the sum and difference of V and RI measured at a single
> point!
>
> --
> Peter K1PO
> more accurate
>
>
>
>

854. Re: Delete this post, Doc

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 01:42:33 UTC
From: Herbert Khaury <Herbert@tiptoe.tp>
Message-ID: <iGidnW-ucbY1976jXTWcqg@comcast.com>
Source record: 127242

Wow. "Inveighed". Now that's a word you don't hear very often down at the local pub.

Almost makes wading through the man's rants worth the effort.

"William Ewald" <wgewald@att.net> wrote in message news:mek62v86t519g634b4rq7veqgn8ancivdh@4ax.com...
> The following material, authored by Nathan Cohen, has been extracted
> from usenet:
>
> ==
> ========
>
> Open door, receive summons, go to court, disappear from the internet.
> Is that your fate this year Mr. R____? That looks what your goal is.
> As for me, five years of your harrassment is five years too much. Pass
> that on to your pals too.
>
> Nathan Cohen
>
>
>
> I have been asked by many, including G_______, for more HF designs. I
> am heartened by the positive response, and when I have some time in
> the late Spring I will oblige. Note that I am also about half way
> through another paper for 73 Magazine on just that topic. Also, keep
> in mind that I do not respond to technical questions on fractal
> antennas on this NG due to slander, harassment, and death threats
> received inthe past. I do, when I have time, respond on the fractal
> antenna reflector on onelist.com.
>
> 73 to All,
>
> Chip N1IR
>
>
>
>
>
>
>
>
> "It has been brought to my attention that an illegal and bogus use of
> my screenname has been employed here to falsely represent a public
> message as being written and sent by me. Under recommendation of my
> attorney, I am taking this sole opportunity to make public notice

> regarding this: This is a public notification that any and all claimed
> USENET messages after January 5, 2001, that bear the signature of Chip
> N1IR, Nathan Cohen, or chipn1ir@aol.com, are false and bogus.
> Fractenna@aol.com continues to be used by several individuals
> including myself. This is a legal and long standing use by those
> affiliated with Fractal Antenna Systems,Inc. However, I do not use
> this screenname on USENET. I do not participate in USENET. I
> understand that Phil, N1ZKT, is doing so and he is welcome under the
> premise so given. Under the recommendation of my attorney, I have not
> been involved in any USENET activities since 5 January 2001, so that
> action against certain individuals may proceed. My superiors at my
> home institution have been apprised of the situation in January. I
> have not participated in USENET since the January date. Nor do I
> intend to. Below is the bogus post. It is not an AOL post.It appears
> to be a routed post through looksmart. That individual must have used
> either bogus routing or obtained an account which emulates an AOL
> screenname.It is not me or anyone I know of. I wish my friends well on
> USENET and remind then that I may be reached by e-mail for friendly
> chats, or through the various moderated antenna lists on yahoogroups.
>
> Nathan 'Chip' Cohen
>
> N1IR
>
> 617-489-6952 "
>
>
>
> Mr. P.O. B_______--
>
> There is "no problem with Chip". This is a public notice that you are
> to stop all such harassing public posts. This is also to inform you
> that you are requested to discontinue any contact with me whatsoever,
> starting now.
>
> Nathan Cohen, Ph.D.
>
> Again, you blame an inane behavior of someone olse upon ME. That is a
> uniquely bizarre protocol found in this NG. I didn't start this thread
> and certainly have made NO comments which fall in your category.
> Bill A_____ is your man. As for Phil, I am NOT Phil. If you are upset
> with him then address him directly. He can handle himself. You would
> at least expect Bill, a retired person, to have the time to find the
> answer to such an obvious question, before attempting to publicly
> humiliate someone trying to earn a living, and better himself.
> Especially when that someone is here to help others as enjoyment; a
> meaningful diversion from otherthings more tangible and burdensome.
> Life is tough guys; no need to make it tougher than needed. It's a
> very disturbing attribute found on this NG.
>

> Nathan Cohen, Ph.D.
>
> N1IR
>
>
>
>
>
> Under advice from my attorney, I will not react to your new comments.
> Your continued statements place you in the situation discussed off
> line. It is up to you to seek out an attoprney's counsel on the
> matter. I remind you that statements such as "alleged PhD", and so on
> are deliberate efforts to publicly libel. I will repeat a general
> statement: Malicious libel is NOT acceptable. It can--AND WILL-- lead
> to litigation. FYI Mr. O'N___ and I are NOT presently, or planning
> for, litigation against each other. We resolved our differences
> reasonably. Furthermore, I have publicly asked for the matter to be
> dropped. Your continued, unwelcome statements go against my wishes.
>
> Nathan Cohen, Ph.D.
>
>
>
>
> I am passing this onto this newsgroup as at least two offendors use
> this forum to get traffic to websites which have the copyright
> violations.
>
> --
>
> 16 August 2001
>
> Fractal Antenna Systems,Inc. has received and is reviewing requests fo
> permission to use one or many of its copyrighted graphics, pictures,
> and/or files subject to its recent 15 August 2001 deadline and
> guidelines. As of this date those who who have not requested
> permission to use said copyright materials as per above are considered
> intentional violators. The firm has initiated efforts to demand
> removal of said material(s). If said material(s) is(are) not removed
> immediately upon notice then the firm will seek legal means to stop
> the violators and recover treble damages; cost of legal fees; and
> court expenses as applicable, among other costs accrued. Any questions
> should be sent from representative counsel by registered mail to:
>
> ATTN: COPYRIGHT VIOLATIONS
> Fractal Antenna Systems,Inc.
> 2 Ledgewood Place
> Belmont MA 02478"
>
> --

>
> ------
>
> Thanks and 73
>
> Phil
>
> de N1ZKT
>
> QST--
>
> Messages about patents on antennas have been a common and accepted
> topic of discussion on this newsgroup. I have forwarded the following
> relative to this. " Fractal Antenna Systems, Inc., is seeking any
> extant evidence of infringement of its patents on fractal element
> technology. The firm designs and sells antennas based on fractal
> patterns, especially fractal elements. It holds an exclusive set of US
> patents on said designs and has many other U.S. and foreign pending
> patents. The firm seeks possible information on evidence of
> infringement of its patented technology. It has actively sought out
> such evidence and has taken successful actions to stop said
> infringement. The firm is offering $1000 reward(s) to those who can
> present compelling evidence of products in the US market which
> incorporate its technology from unauthorized OEM's. If such evidence
> is found and presented, the first case of an example by a specific
> unathorized OEM will result in said reward to the individual
> presenting that example. Such individual will be asked to provide an
> affidavit and additional materials as requested by the firm's counsel.
> Please send any additional queries in writing to:
>
> ATTN: Infringement
> Corporate Headquarters
> Fractal Antenna Systems, Inc.
> 2 Ledgwood Place
> Belmont MA 02478"
>
> Thought I'd pass this on.
>
> 73
>
> Phil
>
> de N1ZKT
>
>
>
> Mr. M_______--
>
> Our attorney did indeed provide that advice; understands and advised
> me on fair use; defined for me when a quote is fair use and not fair

> use. My statement then, as now, is based on his counsel. If your
> incorrect statements lure others into illegal activities, then you are
> on public record as being informed that you run the risks associated
> with them. I note a huge number of times you have been profoundly
> incorrect--always veering on the side of the unlikely; the illegal;
> the deceptive. The most absurd one to date was your assessment (during
> my friendly phone conversation) that the 10M fractal quad Yagi was a
> fake--because you couldn't see the wire in the photos (everyone else
> can), and radio shack ground wire couldn't be bent to hold a shape.
> According top you, any attempt to do this would produce a drooping
> mess in minutes. Yet the antenna exists, is well used, and has been up
> for 13 months. Furthermore it has survived an F1 tornado; various ice
> storms; and the pinching-velcro effect of pesky oaks (when being
> raised/lowered). This antenna is a survivor, is what is stated, and
> should be an inspiration for hams to try it and experiment. If that
> disagrees with you then too bad. The 10M FQY can be seen on the ham
> page of :
>
> http://www.fractenna.com
>
> The world is not a big conspiracy meant to test your gullibility Mr.
> M_______. If it was, I sure wouldn't want to be around it.
>
> Chip N1IR
>
>
>
> Sir:
>
> You continue, even in this response, to make accusations with intent
> to slander and defame. For example: "...chance to prove that for once
> in your life, you are telling the truth." Your assertion that I have
> spent a lifetime of lies is extraordinary . And of course absurd in
> its prevarication. It is also one of many statements you have made
> which are false, but have been publicly made with--intent-- to slander
> and or defame me.
>
> I want you to review this and other posts with your daughter. If,
> indeed, she is an attorney, and represents you, IS NAMED 'D___' as you
> say, I want you to have her call me at :
>
> 617-489-8824.
>
> I will then arrange a meeting in Boston between my counsel and her
> with the intent of an out of court settlement dealing with your
> trespasses. This will be the last contact I will publicly have with
> you, whether you are
>
> 'L_____' or actually someone else.
>

> Nathan 'Chip' Cohen N1IR
>
>
>
>
>
> Again, your comments do not seem to indicate a knowledge of lawsuit
> law. Mine is rudimentary but under the advice of counsel. If yours was
> under legal counsel, it certainly would not suggest that the party you
> claim to be suing, had so prejudiced his case that legal
> representation was not possible. That is exactly what you have just
> said--twice. Your insinuation is that the party you are suing should
> not be represented by the legal system. One must further remember that
> you have clearly stated that your intent for said suit is to bring
> financial ruin upon me; not as a settlement against alleged grievance,
> but purely to destroy me financually. In other words, that was ALWAYS
> your intent, and any 'grievance' is just a ruse for that plan. I
> presume this will now be run past a judge.
>
> Cordially,
>
> NC
>
>
>
> Again,I must apologize to my colleagues for the harassment by an
> individual on this NG. My attorney had advised me to publicly request
> that he stop any form of contact with me, which I did. Yet, in the
> last few weeks, he has taken every single thread in which I have
> posted-- and addressed me personally, and always either/or portraying
> my statements inaccurately, so as to make me look foolish and mocked,
> and/or personally attacking me with abuse. There is, at this moment,
> nothing I can do about it. The case I have made will take time to
> bring to the judge's attention and , by definition, invokes the legal
> system in another state. I do feel that the case for harassment is
> overwhelming at this point, and I will now bring the problem to the
> attention of his ISP. My comments regarding this thread are accurate ,
> and in particular, represent the present experience of colleagues who
> are professionals at cell tower siting and installation, especially in
> urban areas. I am obligated to defer to their greater knowledge in
> this area, which I have done. I would like to make one question clear,
> however. If, as this individual claims, I have made foolish and
> incompetent statements 3 years ago on cell tower heights, then why has
> he not re-posted the thread? Again, I am sorry that every time I get
> involved in a discussion I am mocked and abused, but please understand
> that I have done all I can to discourage this behavior, and suggest
> that you personally ask this individual to end his harassment.
>
> Thank you.
>

> 73,
>
> Chip N1IR
>
>
>
>
>
> It would appear that you believe that the only acceptable solution is
> for me to not have the right to enjoy myself in this public forum, and
> that I am responsible for said abuse--by others. Thus you are holding
> me responsible for the actions of others, and removing my right of
> free speech, and my own reasonable and honest contributions to this
> group. Is that the gist of it? If so, can you think of any compelling
> reason why such an attitude should not extend to every segment of my
> life? In other words, would you say that I should not talk; write; or
> express any human action, because in doing so there are those who will
> counter with abuse--even though I have not done so? What, exactly, is
> your objective sir?
>
> Nathan Cohen, Ph.D.
>
>
>
> I can see that Mr. R____ is under substantial pressure. But I am a
> reasonable person. IF MR.R____ **STOPS** his CONSTANT PERSONAL ATTACKS
> AGAINST ME then I will not press charges and I will drop my suit. I
> couldn't care LESS what R____ discusses--usually inaccurately--in
> technical discussion. I couldn't care LESS what you say about fractal
> antenna, or genetic algorithms, or the length of a side of an antenna.
> Why SHOULD I care? BUT THE HARASSMENT MUST STOP. IT MUST STOP. You
> have NO RIGHT to put my family through a constant and unabated HELL
> promulgated on a PUBLIC and GLOBAL SCALE.. YOU HAVE NO RIGHT to make
> my family uncomfortable when I try to talk to hams. YOU HAVE NO RIGHT
> to spread malicious and intentionally wrong information about Fractal
> Antenna Systems, Inc (do you remember when you claimed that the
> company had been dropped from incoporation last year? Do you have any
> idea what that did? I lost 4 new accounts because of that LIE!!) DID
> YOU HAVE ANY RIGHT to trouble my SICK and DYING father with your
> nonsense? You bet he read this NG! A week before he died, how do you
> think he felt with your little conversation with R___?? Doesn't a
> dying man deserve some peace?? EVERYONE IS SICK of your HARASSMENT!
> You are the key to stopping it. That much is clear. IF YOU STOP YOUR
> PERSONAL ATTACKS this will instantly be a differentNG. R___ is right:
> he is worried about some serious issue coming to a head. That is
> correct. EITHER you STOP. Now. OR the NG continues the way it is; gets
> worse AND I press charges and complete my civil lawsuit.No bluff T__.
> Act sane and do the right thing.
>
> Nathan Cohen, Ph.D.

>
>
>
> Thank you for your comments B___t. There is nothing in the above
> post--which you either misunderstand or misquote-- which says that
> this individual named 'L____' has threatened me. To date, I have not
> seen any comments from 'L____' which I feel indicate intent to harm.
> I have made it very clear what 'L____' has done. You, yourself, can
> freely discover this by doing a power search on dejanews under the
> keywords fractenna and L____. This will reveal a long-term harassment
> by 'L____' for which I neither provoked nor encouraged such response.
> His behavior of late has pushed the issue over the edge. I will take
> whatever legal measures exist to assure that the harassment and
> threats, posed by handful of individuals (against me) do not continue.
> That includes, but is not limited to, lawsuits if and when that
> decision is made. It should be noted that a grotesque assertion that
> I, myself, intend others harm or harassment are unfounded, and
> inaccurate. I would just like these individuals to stop their chronic
> behavior and I have no interest in devoting any time thinking about
> them--beyond the time it takes to get them to stop-- through legal
> means. Matters of litigation, or resolutions outside of court, are not
> issues for which your opinion can have much relevance to me.
> It would be instructive to note the lack of posts (involving me) from
> some individuals in the last few days. It is probably a good
> speculation that these lack of posts (involving me) will continue to
> be absent. That will make for a far more instructive, sane, and useful
> NG. I presume, you, as I, look forward to that.
>
> Best 73,
>
> Chip N1IR
>
>
>
> I assure you that I am not a pseudoscientist. If you would like a nice
> summary of my scientific work, in context, may I suggest seeing the
> piece in July 1999 Scientific American. At present, C______ R____,
> W8__, is in the process of being sued by me. This has nothing to do
> with science or objective or subjective critique. It has to do with
> his harassment and libel and personal attacks. Litigation has been my
> option of last resort; it is only his obsession with libelous
> statements--for example, even today he asks' how many lives I have
> ruined as a professor'-- which has led to this. Mr. R____ has a
> checkered past . For example, his harassment of R___ M_______
> is well-known to the ham community. There are other things he has done
> which will come to light. I hope this clarifies the issue for you.
>
> With Best Regards,
>
> Chip N1IR

>
>
>
> It really is a jaded, mixed up, perverted world you guys see. I must
> admit, that in your company, I DO feel like an oddball-- a special
> kind of 'mental illness' where people are starightforward;
> friendly;helpful; and don't attempt to make personal attacks.
> Sort of like Erewhon I guess.. Any more Friday Night Specials? I'd
> like to play magic tR___s with my son:-)
>
> 73,
>
> Chip N1IR
>
> Hey there R___
>
> Why is it that when you make follow ups on my posts you send it to
> Chip? Don't you GET IT? MY moxxon info came for Cebik's web page. If
> YOU have something else up that's 0.75 by 1 quad sizes then that's a
> LOT bigger than the 0.57 by 0.63 quad sizes of the 10M FQY. Your
> moxxon wouldn't even turn in Chip's tower and it would hit two trees
> in the process. I don't know what makes you think you can come off
> throwing pot shots and pretending you know what you're saying here and
> on other posts directed at Chip me, fractals, and so on. The
> demonstrated FACT is that your moxxon won't work in this form factor
> and people can't put it up with the same restrictions as the 10M FQY.
> Apples and ornages. APPLES and ORANGES. But you want us to think that
> the apple is the orange and the orange works better. Wrong. Just to
> blow your mind though Chip came up with a fractalized VK2BDQ square
> almost 4 YEARS ago and it just sits in the notebook until he feels
> like letting people know. It's pretty and damn small too. Considering
> the harassment you've put on here along with your ilk is it no
> surprise that Chip is in no hurry to let lots of new ham designs get
> public attention any time soon? I mean to use Chip's words, "does
> their lunacy go as the arithmetic sum of new designs presented or to
> the power of new designs presented?" Right now it looks like a power.
> You've wanted and got your own worldwide forum OM. You really have
> thousands of people all over the world reading and some indeed buy
> into your 'mystique of doubt' just because someone who they've heard
> of says it.. Well you are very wrong and they should be irate at you
> for misleading them. I hope you e-mail box is full of their responses.
> Look at how you've embarrassed yourself. This in one of many many
> chapters. Like not understanding what an error bar means and accusing
> Chip of cooking numbers, your alleged 'Chip entrapping interneters
> sting', your idiotic characterisations of me as Chip's "cabin boy" and
> "boy toy". There are many many more. Your abuse of freedom of speech
> is just inexcusable especially when you target someone with Chip's
> knowledge base helpfulness and integrity.
>
>

>
> Phil
>
> de N1ZKT
>
>
>
>
>
> Thanks for your comments R___. Its important to protect intellectual
> property. Mr. R____'s post was not fair use. If he had asked and
> secured permission, and identified the source and permission given,
> then there would have been no problem. If the cost of such IP
> protection is loss of cusT__ers, then that is the price that any IP
> dominated company must pay. In fact, in the last three weeks there
> have been dramatic numbers of queries and web site hits, which tend to
> belie your impression. I myself have had to cancel my vacation, and as
> you might notice, spend relativelyy little time on the NG, with posts
> that are almost always under a minute to post. Lost a lot of sleep,
> but its envigorating. I am really enjoying myself with my work! It's
> exhausting but fun; one of the benefits is I meet some great people
> who I can help-- and learn from too. I can't say Mr. R____'s path down
> the black hole of malicious harassment has been a business booster,
> but the statistics certainly show a time correlation. Perhaps, if Mr.
> R____ wants things to 'go bad', he should just stop:-> Good luck with
> your antenna needs. Well, back to work!
>
>
>
> 73
>
> Chip N1IR
>
>
>
> T__--
>
> I have NEVER used vulgarity. I would like to be be VERY CLEAR on the
> following: Any effort on your part--or anyone else's-- to harass me
> will be met by legal action. I have advised my associate dean of the
> harassment that my private posts have been subjected to and I am happy
> to advice university counsel of actions being taken by me, privately,
> to stop this abuse. Efforts taken to get me fired--which obviously is
> your intent Mr. R____-- will be met with full documentation--including
> the 'tanyaa' episode. If such action is taken on your part it will be
> made explicitly public on this newsgroup as an indication of your
> abusive efforts. Furthermore, I will summarize your actions and abuse
> for your employer in kind. In any case, I am most happy not to use
> profane language as I have yet to do so. Thus your request is
> extremely easily met. My requst is simple. STOP THE ABUSE

>
> Chip
>
>
>
> I am obligated to point out that a lawsuit is being prepared against
> Mr. S_____ and that I am under recommendation from my attorney not to
> respond to his posts. That lawsuit falls under the context of slander
> and libel. One need only briefly look at his posts (using dejanews) to
> get a sense of the harassment and accusatory defamation. In Proc ACES
> 1999, I had a paper presenting numerical simulations to show the role
> of self similarity and origin symmetry in frequency independence. I
> have, indeed, tested many antennas to this effect in the last few
> years. This was not done anechoically. My readily available resources
> for scientific investigation are, as I said, modest. It will be noted
> that this was done--and the post was presented here--for purposes of
> science. If a set of conditions is demonstrated in Maxwell's equations
> then they correspond to a property of nature. Thus the issue is iron-
> clad. Nonetheless, it is indeed valuable to do anechoic measurements,
> and I wish this were possible from this end. A vast body of new
> frequency independent designs arise from the new revising of Rumsey's
> Principle as Hohlfeld and Cohen invoke. Of course, only a fraction of
> given geometric forms have relevance to a specific application.
> Indeed, the log-periodic structures have been quite rich in
> applications. The point is that they will built upon as a body of
> design options, not supplanted.
>
> With Best Regards,
>
> Chip N1IR
>
>
>
> Under advice from my attorney, I will not react to your new comments.
> Your continued statements place you in the situation discussed off
> line. It is up to you to seek out an attoprney's counsel on the
> matter. I remind you that statements such as "alleged PhD", and so on
> are deliberate efforts to publicly libel.I will repeat a general
> statement: Malicious libel is NOT acceptable. It can--AND WILL-- lead
> to litigation. FYI Mr. O?N___ and I are NOT presently, or planning
> for, litigation against each other. We resolved our differences
> reasonably. Furthermore, I have publicly asked for the matter to be
> dropped. Your continued, unwelcome statements go against my wishes.
>
> Nathan Cohen, Ph.D.
>
>
>
> Mr. S_____:
>

> This week I will be writing to the Director of the Los Alamos National
> Laboratory (Dr. John Browne), and the two senators from New Mexico
> detailing the harassment and libel which you have inveighed against
> me. These include deliberate and malicious efforts to attempt to get
> me terminated from my academic position, and false misinformation
> regarding whether I 'deserve' to have the title Ph.D. , as well as
> false accusations that you are the inevntor of fractal antenna
> technology.These will also detail the assertions you have made
> stating that I am mentally ill. I will describe this inappropriate
> behavior with the intent to ask the question why someone with such a
> malicious and destructive focus against an individual should be in
> the responsible position of being involved with nuclear detonation
> development.I have very serious concerns for my personal safety and
> that of the country if you can make false assertions freely while
> holding a position with severe and serious responsibility.
>
> Nathan Cohen, Ph.D.
>
>
>
>
> Mr. S_____ has posted an accurate copy of an e-mail I sent him. Mr.
> S_____ is a a developmental engineer/scientist at the detonation
> branch ofLos Alamos National Laboratory. He is involved with nuclear
> detonations, a high security clearance position.The wheels turn.
>
> 73
>
> Chip N1IR
>

855. Re: Delete this post, Doc

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 01:50:32 UTC
From: Herbert Khaury <Herbert@tiptoe.tp>
Message-ID: <yoWcnQDXrYoa8b6jXTWc2Q@comcast.com>
Source record: 127243

Equally vociferous and eloquent dissertations are extant at the following respository of Yale University:

http://joyce.eng.yale.edu/~bt/school/report.cgi/uranus.htm

There are so many you must refresh the page several times to completely understand their position on these matters.

856. MA-40 US Tower Manual NEEDED

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 01:52:05 UTC
From: GLEN JENKINS <wb4ktf@pipeline.com>
Message-ID: <avvqfv$2h8$1@slb3.atl.mindspring.net>
Source record: 127244

I bought a used US Tower MA-40 with Tilt over unit and bottom rotor assembly. Does anyone have a manual/instructions for these that you can share? WB4KTF, wb4ktf@pipeline.com 73s and thanks, Glen

857. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 01:52:59 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E236D7B.4040403@ieee.org>
Source record: 127245

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> Its not that at all. Its just that the discussion (what a poor term that is
> to describe our conversations) is a complete waste of time.

As demonstrated perfectly by the rest of your posting. When you
run out of technical arguments, you revert to fibbing about what
I have said in the past and attempt to divert the issues.

Why are you afraid to discuss simple examples that everyone has a
chance to understand? For instance:

http://www.qsl.net/w5dxp/fig4.gif

is a non-matched example I'm perfectly willing to discuss. Are you?
Will a double-dog-dare work?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

858. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 02:41:02 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v26u5uk8c4fs6e@corp.supernews.com>
Source record: 127247

It was lost when the bellboy reflected on his good fortune?

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E2331F2.5000009@ieee.org...
> Richard Clark wrote:
> > And I would suppose that if you gave me $20 in bills and $5 in change,
> > and I returned $20 in change, you would be happy.
>
> Three guys checked into a hotel. They gave the bellboy $10 each for
> the rooms. (OK, OK, so it's an old joke.) The bellboy gave the $30 to
> the night clerk. The night clerk said three rooms to the same group
> is only $25. So he gave $5 back to the bellboy to give back to the
> three guys. The bellboy gave $1 each back to the three guys and kept
> $2 as a tip. That made the three guys each pay $9 for each room.
>
> 3 rooms times $9 each is $27. Add the $2 that the bellboy kept for
> a tip and you get a total of $29. Where did the other $1 go? :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

859. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 02:48:33 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <5UKU9.40986$p_6.3526582@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127248

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E23681B.1030007@ieee.org...
> VE9SRB wrote:
> > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> > news:3E234ADA.7060106@ieee.org...
> >
> >>VE9SRB wrote:
> >>
> >>>When two very narrow pencil beam EM waves are pointed orthogonal to one
> >>>another such that they intersect at a point in space where they are of
> >>> equal
> >>>amplitude and 180 degrees out of phase and a complete cancellation or
> >>>destructive interference occurs, you claim that a simultaneous
> >>> constructive
> >>>interference must occur somewhere else in space and that the energy in
> >>> the
> >>>destructive interference process must go to the point of constructive
> >>>interference to satisfy the law of conservation of energy.
> >>
> > You didn't answer the question I asked. You responded with a different
> > discussion on light interference. Answer the exact question I asked.
>
> I already answered that question in another posting. Here it is again:
> According to your QEX article, orthogonal waves cannot cause either
> destructive or constructive interference since they are 90 degrees apart.

That's not at all what I said in my QEX article. This is one of the main
reasons why its difficult to have a reasonable discussion with you. You
continually misinterpret, misstate and misrepresent my statements.

Space orthogonally in the two intersecting waves is much different than two
waves being 90 degs out of phase electrically.

In the QEX article, I said that when two superimposing voltages are 90 degs
out of phase, the total power associated with the resulting voltage will be
equal to the sum of the powers associated with the individual voltages. I
would suggest you read the article again.

Two orthogonal waves intersecting in space can be 180 degs out of phase
electrically and destructive interference can occur.

> So I challenge you to make some measurements that prove that you have
> indeed caused any wave cancellation at all between two orthogonal waves in
> your above thought experiment.
>

If you believe that when two orthognal EM waves intersect, its not possible for destructive interference to occur, then I suggest you brush up on the principles of mutlipath interference. Then explain to us how energy at a destructive interference point magically jumps through space to point of constructive interference and yet is still able to continue on its way past the destructive interference point.

When you answer these questions directly, without going off on a tangent, I will take you more seriously and discuss this further.

Steve VE9SRB

860. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 02:53:01 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v26usi4gkmvg43@corp.supernews.com>
Source record: 127249

Retired? I don't believe that is the proper term. In my opinion your
statement is pure bovine excrement.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Fractenna" <fractenna@aol.com> wrote in message
news:20030110172438.18019.00001079@mb-mv.aol.com...
> >
> >>Professor of mechanical engineering<
> >
> >Is that the same as part-time associate professor attached to the Metro
> >extension school?
> >
> >Rick K1BQT
> >
>
> Dunno Rick. I was full time for 13 years before I retired, and mech eng
> professors are ENG profs, not MET profs:-)
>
> So, obviously you are not asking about me.
>
> Hope you had a pleasant new year. Nice to hear from you. Hope your new
year's
> rez was to keep to the facts.
>
> 73,
> Chip N1IR

861. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 02:54:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E237BD4.6000205@ieee.org>
Source record: 127250

Jim Kelley wrote:
> OC_CAM's Razor wrote:
>
>>Jim Kelley wrote:
>>
>>>Salt is Na+ and Cl-. It's already ionized, so to speak.
>>
>>Nope, it's not, Jim, not until it encounters H2O.
>
> I finally get it, you're just joking again. Because everyone knows you
> can't ionize something just by watering it.

Well, if you're right, I learned something. I didn't realize
that solid salt was ionized. Where's my high school chemistry
book when I need it? From the web:

To illustrate water's ability to break down other substances, consider the simple example of putting a small amount of
table salt in a glass of tap water. With dry salt (NaCl) the attraction between the electropositive sodium (Na+) and
electronegative chlorine (Cl-) atoms of salt is very strong until it is placed in water. After salt is placed in water,
the attraction of the electronegative oxygen of the water molecule for the positively charged sodium ions, and the
similar attraction of the electropositive hydrogen ends of the water molecule for the negatively charged chloride ions,
are greater than the mutual attraction between the outnumbered Na+ and Cl- ions. In water the ionic bonds of the sodium
chloride molecule are broken easily because of the competitive action of the numerous water molecules.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

862. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 03:00:07 UTC
From: Bill Aycock <baycock@hiwaay.net>
Message-ID: <3E237D37.8090208@hiwaay.net>
Source record: 127251

How would you recognize a fact? like the fact that he wrote METRO, not MET.
Bill

> Hope you had a pleasant new year. Nice to hear from you. Hope your new year's
> rez was to keep to the facts.
>
> 73,
> Chip N1IR

863. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 03:03:24 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <06LU9.41009$p_6.3529254@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127252

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E236D7B.4040403@ieee.org...
> VE9SRB wrote:
> > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> > Its not that at all. Its just that the discussion (what a poor term
that is
> > to describe our conversations) is a complete waste of time.
>
> As demonstrated perfectly by the rest of your posting. When you
> run out of technical arguments, you revert to fibbing about what
> I have said in the past and attempt to divert the issues.
>

Divert what issues? We can't focus on any single topic or concept for more
than two postings without one of us going off on a tangent. I just think
the whole thing is a joke at this point.

> Why are you afraid to discuss simple examples that everyone has a
> chance to understand? For instance:
>
> http://www.qsl.net/w5dxp/fig4.gif
>

The example of the 1/4 WL transformer is discussed in my QEX article for
anyone interested. You disagree with me, so what's the point in discussing
it again and again with you. I know exactly where we are going to end up.

The point of my post was to illustrate that all we do is go back and forth,
back and forth ......

There's no point to this Cecil. You will always disagree with me. Anytime
I try to post another perspective on the problem, you twist it around to
suit your perspective. You can't even quote my QEX article properly.

> is a non-matched example I'm perfectly willing to discuss. Are you?
> Will a double-dog-dare work?
> --

We've tried this too many times. I'm no longer interested. Like I said in
the other post, explain how traveling energy can jump magically through
space from a point of destructive interference to a point of constructive
interference and *still* be able to travel in the same direction beyond the
point of destructive interference and I'll discuss this issue with you
seriously.

Take care.

Steve VE9SRB

864. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 03:31:29 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <dwLU9.1568$%W2.395996@news20.bellglobal.com>
Source record: 127253

> Supposedly, <snip>
> Or maybe not...
> www.ipcreators.org/congress/104cong/articles104/katona1.htm
> (!!!)
> Pre-canned google search on "submarine patents":
> www.google.com/search?q=%22submarine+patents%22

"Fractenna"
> I thought the publication disclosures were set up to be
> compatible with other patent countries.

So "...it's turtles all the way down..."(*), is it ? *An obtuse Carl Sagan reference - if you don't get it, forget about it.

> Do you have a citation which <that> supports your statement?

No, I just made it up, invented the term "submarine patents" three days ago, and then hacked into Google so that it would show 1,120 hits on that exact phrase.

865. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 03:51:07 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <DOLU9.1577$%W2.401820@news20.bellglobal.com>
Source record: 127254

"Fractenna"
> The word is "superior" performance.

Rhetorical question: Hey Chip, did you ever write the following words
regarding traceable calibration of antenna performance ?

> But frankly, I don't care about what
> you call 'traceable' methodology.

Just curious... :-)

By the way, a virus showed up in my e-mail inbox. This hasn't happened
since the last time that Chip got mad (madder?). Amazing coincidence.
Norton nuked the virus in about 2 seconds flat. Sending me a virus laden
e-mail is like pissing into the wind Gnat. Grow up.

866. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 03:58:00 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <4VLU9.1581$%W2.403544@news20.bellglobal.com>
Source record: 127255

"Fractenna"
> No Arie; It is not "freely" available. There is a patent
> in the US for the process you want folks to use. It is
> someone else's property.

Unlikely. Most patents are WAY more narrow in their claims than the public posturing. If Chip wants to dispute this assertion, then he can provide a pointer to the patent in question and we shall see.

867. Re: Couple 0' questions...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 04:08:08 UTC
From: VA6BEN <VnAo6sBpEaNm@rNaOc.ScPaAM>
Message-ID: <I2MU9.32994$sV3.1819237@news3.calgary.shaw.ca>
Source record: 127256

First off, thanks everyone who responded to my questions.

Sorry if I wasn't too clear when I was asking the question, but I was actually mostly wondering about the wire spacing of the folded dipole. That has been answered in a resounding NO.

The other thing I was wondering was more if there were any major problems, from a radiation pattern / matching point of view, I hadn't spotted with a folded dipole as a sloper in general, and a crank-in/out one to tune frequency specifically. The engineering of the antenna I have mostly solved. I still have a few issues, but I just need to play around a bit more and I should be able to beat those.

My design is a combination of three different types of ideas - sloper, folded dipole, and a wind-up long-wire. I haven't seen them put together or even heard of them (until yesterday, and that one was done almost 50 years ago), so I was a little worried that there was something fundamentally wrong with the idea. Turns out that what kept people from building more of them, from what I can tell, is the complexity of actually putting all the parts together. To make matters worse, I intend to motor drive it, so that I don't have to go outside and hand-crank it every time I need to tune. I honestly don't know what gave people the idea I wanted it to autotune, I just wanted to be able to tune it. If it works well, I may add that feature, but I don't want to bite off too much at a time.

That said, I was just wanting to bounce some more ideas around. I'm using a 45' tree for my tower, as I'm renting the house I'm in and my landlord won't even let me put a hole in the wall for coax let alone put a steel tower up. Besides, that's an awful lot of money to leave behind when I move to somewhere that's actually good for radio. I know that I need a 'backplane' for the sloper theory to work, and I've got that covered, but I just recently discovered that in order for the calculations to work, I need some sort of capacitance(read beam) at the top of the tower. Seeing as I was only going to go down to 30m, I still have lots of room for a full length folded dipole, so I don't need the loading. I was wondering what not using that capacitance would do to the radiation pattern or if I'd have to figure out some way to throw some in.

The other thing I was wondering (hoping I'm wrong) was what if the feedpoint shifts to one end or the other? I think most likely it would result in all sorts of craziness as to radiation pattern, a dramatic impedence, and just general badness.

Any input on these?

Ben

868. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 04:08:48 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E238D50.4030401@ieee.org>
Source record: 127257

VE9SRB wrote:
> In the QEX article, I said that when two superimposing voltages are 90 degs
> out of phase, the total power associated with the resulting voltage will be
> equal to the sum of the powers associated with the individual voltages. I
> would suggest you read the article again.

Steve, if I remember correctly, on this very newsgroup, you have used "orthogonal" to mean waves that are 90 degrees out of phase. When Walter Maxwell said that the square root of the sum of the squares of the voltages equals the total voltage, you said - only if they are orthogonal to each other. I'm sure your statement can be found in the r.r.a.a archives.

> If you believe that when two orthognal EM waves intersect, its not possible
> for destructive interference to occur, then I suggest you brush up on the
> principles of mutlipath interference.

Whoops, it's a diversion to try to change your statement in mid-thread. You said "wave cancellation" would occur, not just a degree of destructive interference but 100% total destructive interference. For that to occur, the E fields must be aligned 180 degrees out of phase and the H fields must be aligned 180 degrees out of phase. If the two EM waves are orthogonal, they are intersecting at right angles, right? In each wave, the E field is orthogonal to the H field. I can see how the E fields could completely cancel *OR* the H fields could completely cancel but for the life of me, I cannot figure out how both E&H fields can 100% cancel at the same time. Like I said, I challenge you to set up an experiment, measure it, and prove it. I do not think it can be proven even on paper. Seems to me, if you 100% cancel the E field, the two H fields will be at right angles to each other. Looks like it's time for another one of your magic tricks.

If a source output power is fixed, every event of destructive interference will be accompanied by an equal magnitude event of constructive interference. That's what the conservation of energy principle is all about. That the location of the constructive interference is unknown is irrelevant.

You cannot have a multipath destructive interference without having constructive interference somewhere else. To do so would violate the conservation of energy principle. If the energy at one point is reduced, the energy at another point must increase because the total energy is constant. Just because we don't know the location of the complementary interference doesn't mean it doesn't exist.

> When you answer these questions directly, without going off on a tangent, I
> will take you more seriously and discuss this further.

Seems to me you cannot seriously discuss the technical issues as long as
you only pay lip service to the conservation of energy principle.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

869. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 04:21:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E239056.5010608@ieee.org>
Source record: 127258

VE9SRB wrote:
> We've tried this too many times. I'm no longer interested.

Again you tuck tail and run. The truth will win, Steve, with
or without you.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

870. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 04:36:17 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <_sMU9.1592$%W2.414460@news20.bellglobal.com>
Source record: 127259

OT

"OC_CAM's Razor"
> Where did the other $1 go? :-)

The camel has it...

A man dies and leaves behind 17 camels and 3 sons. His will directs that half the camels go to the first son, a third to the second son, and a ninth to the third son. The lawyer gets confused by the math (17 is a problematic numerator), so he decides to add one of his own old and lame camels to make the math easier (18 being simpler to deal with). The first son now gets 9 camels, the second son gets 6 camels and the third son gets 2 camels - that makes 17 camels altogether and one left over. So the lawyer happily takes back one camel - the best camel of course.

871. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 04:42:03 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <nyMU9.1596$%W2.416086@news20.bellglobal.com>
Source record: 127261

<Cecil.A.Moore@ieee.org> wrote:
> What, besides frequency, makes
> RF so different from light?

"Richard Clark"
> Nothing.

It's a wonderful world. :-)

872. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 04:43:10 UTC
From: "Curt M. Breneman" <brenec@rpi.edu>
Message-ID: <3E23955D.11876E29@rpi.edu>
Source record: 127260

You asked for a chemist, and now you've got one...

If you wanted to make one quart of a solution containing one cup of sugar, you'd need to add the cup of sugar first, and then add water and stir until you have the desired volume - in this case, one quart of solution. If you added a full cup of sugar to a full quart of water, you'd get something different that one quart - in this case, somewhat more volume but not very much more. Different solutes (salts or soluble organics) can cause different volume effects when dissolved in solvents - the effect varies with the type of molecule being dissolved. Sugars are polyhydroxylated compounds that interact well with water - that's why they are so soluble. On a similar note, there are different types of effects seen within the salt family - there are polar kosmotrope salts and polar chaotrope salts. The former gathers water molecules around the component ions (and increases the structure of the water), and the latter disrupts water structure.

Too much information? Oh well.

Curt M. Breneman
Professor of Chemistry, RPI
KC2EBP

OC_CAM's Razor wrote:

> Richard Clark wrote:
> > <Cecil.A.Moore@ieee.org> wrote:
> >>Actually, your experimental result is not true. Adding sugar to a quart
> >>of water results in more than a quart of water. You should have chosen
> >>salt which bonds as ions in the same volume of water.
> >
> > So you are telling me that 1 quart + 1 cup = 1 quart?
>
> I would guess that one cup of salt will not saturate one
> quart of water but I could be wrong. Any chemists out there?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

873. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 04:46:39 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <HCMU9.1598$%W2.417246@news20.bellglobal.com>
Source record: 127262

"OC_CAM's Razor"
> I am aware of a conservation of energy principle.
> I am not aware of a conservation of volume principle.
> Can you quote the IEEE specification number for
> that principle?

It's in the same book as the Conservation of Power Principle...

:-)

874. Re: Delete this post, Doc

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 06:24:43 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E23AD14.44E66BD7@shaw.ca>
Source record: 127263

Herbert Khaury wrote:
>
> Equally vociferous and eloquent dissertations are extant at the following
> respository of Yale University:
>
> http://joyce.eng.yale.edu/~bt/school/report.cgi/uranus.htm
>
> There are so many you must refresh the page several times to completely
> understand their position on these matters.

I'm not exactly sure, but was that a fractal website that hit me? :-)
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

875. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 07:18:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4ce72vg2u6qk9jt8bouq7u7hjo16akkvgj@4ax.com>
Source record: 127264

On Mon, 13 Jan 2003 23:43:10 -0500, "Curt M. Breneman"
<brenec@rpi.edu> wrote:

>You asked for a chemist, and now you've got one...
>
>If you wanted to make one quart of a solution containing one cup of sugar,
>you'd need to add the cup of sugar first, and then add water and stir until
>you have the desired volume - in this case, one quart of solution. If you
>added a full cup of sugar to a full quart of water, you'd get something
>different that one quart - in this case, somewhat more volume but not very
>much more. Different solutes (salts or soluble organics) can cause different
>volume effects when dissolved in solvents - the effect varies with the type
>of molecule being dissolved. Sugars are polyhydroxylated compounds that
>interact well with water - that's why they are so soluble. On a similar
>note, there are different types of effects seen within the salt family -
>there are polar kosmotrope salts and polar chaotrope salts. The former
>gathers water molecules around the component ions (and increases the
>structure of the water), and the latter disrupts water structure.
>
>Too much information? Oh well.
>
>Curt M. Breneman
>Professor of Chemistry, RPI
>KC2EBP
>
Hi Curt,

Polyhydroxylated - sounds like it's straight out of Madison Avenue for
a new detergent.

According to Scientific American (cover article and all), Sugars stand
to be the new frontier for drug development.

Anyway, yours was an interesting entry.

73's
Richard Clark, KB7QHC

876. Re: 70CM Antenna:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 09:41:08 UTC
From: aokd5fxt@aol.com
Message-ID: <20030114044108.06965.00000821@mb-cj.aol.com>
Source record: 127265

Jack, there is a nice little article in QST this month on a homebrew antenna.
Let me know if you are interested in it and cannot get it.

Bill

877. Combining Antenna Modeling with Propagation Predictions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 10:17:50 UTC
From: ac6la@arrl.net
Message-ID: <960228f1.0301140217.135d7609@posting.google.com>
Source record: 127266

[Commercial announcement] MultiNEC Version 2.0 is now available.
With this release you can see not only the traditional source
impedance and radiation pattern for your antenna but also the expected
propagation results. MultiNEC now includes a built-in interface to
the VOACAP program that can be used to produce area coverage maps
and/or time and distance point-to-point plots.

In keeping with the "multi-run" character of MultiNEC you can
automatically generate a series of maps or plots covering any
parameter that affects propagation. This includes changes to the
frequency, power level, beam heading, month, time of day, or sunspot
number as well as changes to the antenna geometry itself. After all
the maps or plots in a set have been generated they can be played back
as an animation.

You can use existing EZNEC, NEC, Antenna Model (Teri Software), ELNEC,
MMANA, AO, or Nec/Wires format models. MultiNEC can import all these
formats or you can build your antenna model from scratch. To
experiment with propagation predictions you can also use several
built-in antennas such as generic dipoles, Yagis, or verticals.

MultiNEC Version 2 is not free but the cost is quite reasonable. I
hope you will forgive my slight transgression in making this
commercial announcement here. For complete details including several
sample animations and a full-function, no-time-limit download please
see www.qsl.net/ac6la/. MultiNEC requires Excel 97 or later.

Dan AC6LA

878. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 10:29:44 UTC
From: fractenna@aol.com
Message-ID: <20030114052944.02022.00000218@mb-df.aol.com>
Source record: 127267

>> Do you have a citation which <that> supports your statement?
>
>No, I just made it up, invented the term "submarine patents" three days ago,
>and then hacked into Google so that it would show 1,120 hits on that exact
>phrase.
>

I wasn't debated the phrase, I was looking for evidence of a basis for your statement. I assume you cannot find one, based upon this response.

73,
Chip N1IR

879. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 10:37:41 UTC
From: fractenna@aol.com
Message-ID: <20030114053741.02022.00000219@mb-df.aol.com>
Source record: 127268

>"Fractenna"
>> No Arie; It is not "freely" available. There is a patent
>> in the US for the process you want folks to use. It is
>> someone else's property.
>
>Unlikely. Most patents are WAY more narrow in their claims than the public
>posturing. If Chip wants to dispute this assertion, then he can provide a
>pointer to the patent in question and we shall see.
>

I was happy to oblige. I included it on my first posting on this topic on 7 January, 2003.

I have no more to add, other than it's a shame that others do not speak out against this illegal access(at least in the United States). It sets a very bad tone for ham radio in my opinion.

73,
Chip N1IR

880. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 11:02:18 UTC
From: fractenna@aol.com
Message-ID: <20030114060218.18776.00000518@mb-cq.aol.com>
Source record: 127169

>Are you encouraged because you intimidated Bill Meachum?

I have given Mr. Meachum an opportunity to settle, which did not expose him to the severe financial issues of litigation and trial. As I stated, I have found his defamatory statements injurious.

The matter is concluded to my satisfaction.

I do not feel that it is to my benefit to settle future and outstanding issues without prior filing of a civil complaint(s). Furthermore, in previous cases where cease and desist letters have been sent, and the injurious behavior has continued, complaints will be filed if the party does not voluntarily resolve by the end of January, 2003.

I have no further comments on this matter.

Best to all,
Nathan Cohen
aka Chip N1IR

881. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 11:14:53 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0301140314.7963f399@posting.google.com>
Source record: 127170

> "Fractenna"
> > No Arie; It is not "freely" available. There is a patent
> > in the US for the process you want folks to use. It is
> > someone else's property.
>
> "J. Harvey"
> Unlikely. Most patents are WAY more narrow in their claims than the public
> posturing. If Chip wants to dispute this assertion, then he can provide a
> pointer to the patent in question and we shall see.

I agree, I am also not convinced.

What about the YGO3 freeware (which led me to the idea using these
principles for all types of antennas) and commercial Supernec. Both
use similar genetic-algorithms for optimization. If there were patents
on this I don't think these packages would have 'survived'.

Arie.

882. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 11:24:53 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301140324.36ee0d06@posting.google.com>
Source record: 127171

'Doc <w5lz@cwis.net> wrote in message news:<3E22C4A2.D91EA02D@cwis.net>...
> Mark,
> Why 22 feet?
> 'Doc

ooops...Yea, better double that. I had 40m on the brain from reading
the other guys post with the 40m version. MK

883. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 12:23:05 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <JiTU9.41582$p_6.3576198@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127172

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E239056.5010608@ieee.org...
> VE9SRB wrote:
> > We've tried this too many times. I'm no longer interested.
>
> Again you tuck tail and run.

Not at all. Your posts and responses establish a pattern of discussion where I'm the only participant required to answer questions or provide support for a stated position. Why should I get sucked into this scenario any longer?

You seem to be begging me to continue this discussion. Here's what I'll do. I will respond to one of your other posts with a direct question that I would like you to answer without any diversion to another example. I'll provide a very brief analysis of your web page example with a direct question that you must answer in simple terms with no rhetoric or diversions. I'll provide a very brief example supporting my position with a direct question that you must answer in simple terms with no rhetoric or diversions.

If you can respond to my next post without any diversions or rhetoric, I'll continue. Otherwise its over.

Steve VE9SRB

884. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 12:44:52 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <1DTU9.2810$357.471080@news20.bellglobal.com>
Source record: 127173

"Fractenna"
> I wasn't debated the phrase, I was looking for evidence
> of a basis for your statement. I assume you cannot find
> one, based upon this response.

My gawd you're thick.

The phrase ("submarine patents") is the name of a problem. Publication of patent applications is an apparent solution to the problem.

My statement was prefaced with the word "Supposedly, ...". I provided a specific link ("Or maybe not...") to a page that refutes the link, and a general link (Google) to 1,120 other pages that probably more-or-less exhaust the publicly-available information on the subject.

Your debating techniques resemble that of a six year old.

885. Re: Cushcraft R8 opinions?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 12:51:24 UTC
From: Bjorn Henrik Vangstein <no.sp@m.no>
Message-ID: <5KTU9.13471$Rc7.209688@news2.e.nsc.no>
Source record: 127174

Hello Jackie,

I have a similar situation at my QTH, a vertical on the roof is my only outdoor antenna option. I wanted a multiband antenna which covered as many bands as possible. After some investigations I put my money in the Curshcraft R8. I have now used the antenna since august 2002. I have in earlier years in other QTHs used dipoles and a 3 element beam.

The R8 consist of one main radiator with two traps (covering 7, 10, 14 and 18 MHz) with four parallell radiators (covering 21, 24, 28 and 50 MHz respectively). Additional impedance matching is done with two capacitice crosses in the top section and a match box at the feed point.

An important argument for this choise was the grounding system (counterpoise), the antenna don't need a extensive radial system buried in the garden or spreaded out on the roof.

My experiences are very good, actually better than I hoped. I spent some evenings (totally 4-5 hours) assembling the antenna. The manual was flawless, a lot of illustrations and no ambiguities. The hardware is solid and overall well designed mechanically. I was a little bit worried that the construction was too top heavy (two traps in the top section), but the antenna easily survived the winds we had late fall and winter.

I mounted the antenna on a wooden roof on a 5 cm diameter steel tube, about 15 meters over the ground (1,5 meter over the roof) with no guys. I definitively needed help from a friend in this step!
I was very accurate when I assembled the thing and that payed off. I had a good match - well within the spesifications - on all bands and I did not have to take it down for adjustments -except for the 18 MHz band where the antenna gives me 1,6:1 flat over the band.

I have worked a lot of DX with it on all bands except 6 meters (which I don't work) and the conclusion is: This antenna radiates better than a dipole.

A negative side I have to mention is that a vertical pics up more manmade noise than a horisontal antenna. That might be an important aspect if you live in noisy environment. This fenomenon is most dominant on 7 MHz.

Pros:
Easy to assemble
Easy to locate (no ground radials)
Low profile appearance (neighbour friendly)
Good DX performance compered to a dipole
Mechanically very solid and professional construction
Plug and play I: No adjustment iterations needed (in my case at least)

Plug and play II: Resonant on 8 bands - no tuning needed (but you have to
choose CW or SSB on 7 and 50 MHz)

Cons:
Expensive
Pics up more noise compared to a horisontal antenna
To raise the antenna is no solo project - help is needed
I miss the 80 meter...

Good luck and 73 de LA5MDA, Henrik
Oslo

"Jackie L." <buzzygirl@REMOVE.attbi.com> skrev i melding
news:VhIU9.670377$P31.499750@rwcrnsc53...
> Hello,
>
> I'm a new General licensee and I am going to be purchasing an IC-718 in
the
> near future (later this week). As I do not have the right yard conditions
> for a dipole (the trees I'd use are all too close to power lines) or an
> understanding landlord (NO BEAMS whatsoever on the roof), looks like I'm
> relegated to buying a vertical.
>
> I'm considering buying a Cushcraft R8. I plan to check out DX on 40 meters
> and higher (not 80 or 160 right now). I'll be concentrating on CW and SSB.
> What do you more-experienced hams think of this antenna for this purpose?
> Any pros and cons? Good experiences or not so good?
>
> Thanks in advance, and 73 to you,
> --
> Jackie
> KC0ODY/AG
>
>
>

886. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 12:57:54 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E240952.4040602@ieee.org>
Source record: 127175

OC_CAM's Razor wrote:
> VE9SRB wrote:
>> We've tried this too many times. I'm no longer interested.
>
> Again you tuck tail and run. The truth will win, Steve, with
> or without you.

I apologize for the outburst of anger. It's really frustrating
when someone refuses to look at a simple example step by step.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

887. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 13:00:32 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2409F0.2070602@ieee.org>
Source record: 127176

J. Harvey wrote:
> "OC_CAM's Razor"
>>I am aware of a conservation of energy principle.
>>I am not aware of a conservation of volume principle.
>>Can you quote the IEEE specification number for
>>that principle?
>
> It's in the same book as the Conservation of Power Principle... :-)

Nope, it isn't. Johnson doesn't say a thing about any
conservation of volume principle. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

888. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 13:15:56 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <a4UU9.2823$357.473713@news20.bellglobal.com>
Source record: 127178

<<Excuse the OT nonsence, but people need to know...>>

"Fractenna"
> ...which did not expose him to the severe
> financial issues of litigation and trial.

I have seen copies of several of your threatening 'legal' (sic, *and sick*
!!) letters through off-line communications and Internet postings. Heck,
I've got two myself !!

One typical example:
www.opsyhopsy.com/MiscJunk/who_is_nc.htm

All such junk mail (and e-mail) that I have seen was written by yourself and
I have *never* seen one that was an actual 'Lawyer's Letter'.

I saw one such communication where you had Cc'ed a lawyer, and upon further
investigation (and correcting the typo's in the law firm's name) I
discovered that the law firm that you had Cc'ed were a bunch of patent (IP)
lawyers. Nice patent lawyers I'm sure, but patent lawyers just the same.
Doesn't exactly send the right message... :-)

I've suggested in the past, and I'll remind you again, you should sign-up
for Pre-Paid Legal service where (for a small monthly fee) you can have
unlimited genuine 'Lawyer's Letters' prepared. That would be a huge step up
in your credibility (as would almost any change in behaviour). Can you
afford the "severe financial issues" of paying $25-odd per month for a
subscription to a Pre-Paid Legal service ? No ?

By the way, did you ever experience a 'career change' because you used a
large organization's computer systems to send out such theatening e-mails
and Internet postings ? Did your (previous) employer take exception to such
behaviour ? I'm just asking and I don't know myself. It is just a
question...

889. Q: IE3D design problem!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 13:20:29 UTC
From: Jake1@luukku.com
Message-ID: <9964007c.0301140520.13575b7@posting.google.com>
Source record: 127177

Hello all!

I'd appriciate if anyone on this planet could answer
to my questions below:

1. What is the Zc - variable?
2. Why isn't the Zc -variable value changed in the
pattern simulation part: PatternView->Edit->Pattern properties??

BR,
VK

! Please reply to: xnt68@hotmail.com !

890. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 13:20:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E240EB4.4080302@ieee.org>
Source record: 127179

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E239056.5010608@ieee.org...
>
>>VE9SRB wrote:
>>
>>>We've tried this too many times. I'm no longer interested.
>>
>>Again you tuck tail and run.
>
> Not at all.

I apologize for the outburst of anger. It's frustrating because
you refuse to discuss any simple example. You always want a ten
source, twenty transmission line, thirty load example.

> Your posts and responses establish a pattern of discussion
> where I'm the only participant required to answer questions or provide
> support for a stated position. Why should I get sucked into this scenario
> any longer?

Because you are the only one who disagrees with me?

> You seem to be begging me to continue this discussion. Here's what I'll do.
> I will respond to one of your other posts with a direct question that I
> would like you to answer without any diversion to another example. I'll
> provide a very brief analysis of your web page example with a direct
> question that you must answer in simple terms with no rhetoric or
> diversions. I'll provide a very brief example supporting my position with a
> direct question that you must answer in simple terms with no rhetoric or
> diversions.

I'll agree, but allow me some humor.

From Webster's: "rhetoric - 1: The art of speaking or writing effectively"

Hmmmmm, no effecting writing allowed. Does barring me for writing
effectively help your cause? Sorry, I just cannot agree to ineffective
writing.

I already know the question. It will be a variation of: "Have you stopped
beating your wife?" As an example of your previous questions: "Please use
your method to analyze a complicated example without using voltage superposition."
I never claimed to be able to analyze a complicated example without using
voltage superposition, Steve. Voltage superposition is not what is wrong with
your analysis. Ignorance of wave cancellation being able to cause reflections
at an impedance discontinuity within a transmission line is what is wrong with

your analysis.

> If you can respond to my next post without any diversions or rhetoric, I'll
> continue. Otherwise its over.

I will respond in good faith to what you are saying. But at every opportunity,
I will divert your postings away from falsehoods toward the truth using
effective writing, i.e. rhetoric, as Webster's defines it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

891. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 13:28:48 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <dgUU9.2829$357.474685@news20.bellglobal.com>
Source record: 127180

> Chip....can provide a pointer to the
> patent in question and we shall see.

"Fractenna"
> I was happy to oblige. I included it on my first posting
> on this topic on 7 January 2003.

Where ? I don't see see any such link on this thread. Would someone please help me find this posting that Chip claims that he made ? Thanks.

I'd like to track down this (mythical ?) patent and post a link to it on this newsgroup so that Aire can compare it to his work and either laugh out loud or make a few trivial changes in his implementation to work around the patent (if required).

892. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 13:52:10 UTC
From: derswede@aol.comspam.com
Message-ID: <20030114085210.02766.00001103@mb-ch.aol.com>
Source record: 127181

>>(Who knows Heisenburg's principle and who ALSO has a sense of humor. Cicero
>>was right, BTW.)
>
>"Carthage must be destroyed?"

"When you have no basis for an argument, abuse the plaintiff."
- Cicero

<<grin>>

Heck, Willie had it right, too!

"The first thing we do, let's kill all the lawyers" (Dick the Butcher to Jack Cade in Henry VI, Part 2 (1592) act 4, sc. 2.ï¿½ - Shakespeare's misquoted implication that lawyers stand in the way of tyranny.)
- W. Shakespeare (1564-1616),

A

893. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 14:01:55 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301140601.77820559@posting.google.com>
Source record: 127182

fractenna@aol.com (Fractenna) wrote in message
news:<20030108071706.29733.00000500@mb-cv.aol.com>...
> >Concerning the patents, I don't think so, because the information I
> >used is all freely available on the Internet and not just related to
> >antenna optimization. If you wish I could give you all the links where
> >I found the documents I used as background for creating the routines.
> >
> >Arie.
> >
>
> No Arie;
>
> It is not "freely" available. There is a patent in the US for the process you
> want folks to use. It is someone else's property.
>
> This acknowledges that you are now so informed.
>
> 73,
> Chip N1IR

Chip
That is not a nice thing to say as it causes needless worry.
If you have specific knoweledge to back up what you say then you
should disclose it, otherwise remain silent on the matter.
Personaly I am unaware of any commercial intent by Arie other
than provide assistance to other hams, for this I applaud him.
Regards
Art

894. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 14:57:35 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <zzVU9.41761$p_6.3588263@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127183

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E238D50.4030401@ieee.org...

> You cannot have a multipath destructive interference without having
> constructive interference somewhere else. To do so would violate the
> conservation of energy principle. If the energy at one point is
> reduced, the energy at another point must increase because the total
> energy is constant. Just because we don't know the location of the
> complementary interference doesn't mean it doesn't exist.
>

Cecil,

Here's the post I promised, complete with step by step considerations.

1. You have not yet directly answered the following questions.

You have stated numerous times that destructive or constructive interference cannot occur without a corresponding amount of constructive or destructive interference, respectively, occurring at the same time. You have also stated that the energy involved in the destructive interference process is the exact energy involved in the constructive interference process.

Let's assume that we have destructive multipath interference occurring at point A in space. Let's assume that we have the corresponding constructive multipath interference occurring at point B in space.

How does the energy in the destructive multipath interference at point A know where the constructive multipath interference at point B occurs?

How does the energy in the destructive multipath interference at point A jump through space to join in the constructive interference process occurring at point B in space?

If the total energy in the waves associated with the destructive interference process at point A jumps through space to the constructive interference process at point B, how is it able to also continue along its original path beyond the point of destructive interference? How does it get back to point A, so that it continues along its original path?

2. Your web page example - Fig 4.

The only issues that I will address are the composition of the steady state rearward wave in the 50 ohm transmission line and the steady state forward wave in the transformer section.

2A. Forward wave in the transformer section:

This steady state wave can be separated into its two principle wave components: the initial forward wave delivered to the transformer section and the steady state re-reflected forward wave developed at the junction.

Initial forward wave: 103.526 V. If considered to exist independently in the line it would have an associated power of 123.757 W.

Re-reflected wave: -6.935 V. If considered to exist independently in the line it would have an associated power of 0.555 W

The resulting total forward wave in the transformer section is found through superposition as follows:

Vforward = 103.526 V + (-6.935 V) = 96.591 V, having an associated forward power of 107.73 W.

Superposition provided the correct solution. Here's the first question for you. This process of superposition represented a process of destructive interference in that the resulting total forward power in the line is less than the algebraic sum of the two individual forward powers (if considered to exist separately). You claim that the total forward power in the destructive interference process is dependent on the power involved in a constructive interference process occurring somewhere else - i.e. the power in the destructive interference process goes to the constructive interference process. If this is true, how is it that I can correctly determine the total forward power using only the superposition of the two individual forward waves without having any knowledge of the constructive interference process?

2B. Rearward wave in the 50 ohm line.

This steady state wave can be separated into its two principle wave components: the initial reflected wave created at the junction and the steady state rearward wave delivered to the 50 ohm line as a result of the multiple wave reflections occurring in the transformer section.

Initial reflected wave: 21.878 V. If considered to exist independently in the line it would have an associated power of 9.57 W.

Rearward wave to due the reflection process occurring in the transformer section: 18.947 V. If considered to exist independently in the line it would have an associated power of 7.18 W

The resulting total rearward wave in the 50 ohm line is found through superposition as follows:

Vrearward = 21.878 V + 18.947 V = 40.825 V, having an associated rearward power of 33.33 W.

Superposition provided the correct solution. This process of superposition represented a process of constructive interference in that the resulting total rearward power in the line is greater than the algebraic sum of the two individual rearward powers. You claim that the total rearward power in the constructive interference process is dependent on the power involved in the destructive interference process occurring in the transformer section.

If this is true, how is it that I can correctly determine the total rearward power using only the superposition of the two individual rearward waves without any knowledge of the power involved in the destructive interference process? If the power "lost" in the destructive interference process is a dependent variable for the determination of the power in the constructive interference process, why don't I need it in my calculations?

All of the wave reflections (and reversals of power) at the transmission line junction have been accounted for in the superposition analysis. Please describe the physical mechanism causing the reversal of power involved in the destructive interference process. Please don't simply tell us that destructive interference causes a reversal of direction. Please explain specifically how the power reverses direction.

Since a total impedance match does not occur at the junction, a complete or total cancellation of power does not occur in the destructive interference process. The resulting forward wave in the transformer section is comprised of the individual forward waves. To maintain the total level of voltage and current traveling in the forward direction, the individual forward voltages and currents must remain traveling in the forward direction. They must be there for the forward wave to maintain its total value. Please describe for us how the individual forward voltages and currents remain traveling in the forward direction but some of their energy reverses direction. How does the energy reverse direction if the voltage and current do not?

3. An example where constructive interference occurs but destructive interference does not.

Here's a simple example:

141.42 V - 25 ohm source impedance ----- 1 wl 50 ohm line ------ 25 ohm load.

At t = 0, the initial forward voltage in the 25 ohm source impedance is 47.14 V, with an associated power of 88.89 W. The initial forward voltage in the 50 ohm line is 94.28 V, with an associated forward power of 177.78 W.

Let's follow the forward voltage in the line. The forward voltage of 94.28 V arrives at the 25 ohm load. The reflection coefficient is -0.33. The reflected voltage is -31.43 V. The reflected voltage arrives at the source, also having a reflection coefficient of -0.33. The re-reflected voltage is +10.48 V. The total forward voltage increases to 104.76 V and the total forward power increases to 219.49 W.

At the source the total voltage developed in the rearward direction is equal to the sum of the reflected voltage plus the re-reflected voltage. The total rearward voltage delivered to the source impedance is -20.95 V. The total voltage developed in the source impedance is 68.09 V (47.14 - (-20.95)) and the total power in the source impedance increases to 185.45 W.

Constructive interference occurs in both the forward direction in the transmission line and in the source impedance. There is no destructive interference at the junction between the source and transmission line.

In the steady state, the total forward power in the line is 225 W and the total power in the source impedance is 200 W. Both increase over their initial values, in direct contradiction to your statements regarding constructive and destructive interference.

Steve VE9SRB

895. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 15:44:11 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <hvb82v47vrvce05vqjaacrm5sglul3j7q8@4ax.com>
Source record: 127184

On 14 Jan 2003 10:37:41 GMT, fractenna@aol.com (Fractenna) wrote:

[snip]

|I was happy to oblige. I included it on my first posting on this topic on 7
|January, 2003.

Chip,

Could you please re-post your comment. Google can't seem to find it.

896. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 16:01:26 UTC
From: fractenna@aol.com
Message-ID: <20030114110126.02144.00000308@mb-mu.aol.com>
Source record: 127185

>On 14 Jan 2003 10:37:41 GMT, fractenna@aol.com (Fractenna) wrote:
>
>[snip]
>
>|I was happy to oblige. I included it on my first posting on this topic on 7
>|January, 2003.
>
>Chip,
>
>Could you please re-post your comment. Google can't seem to find it.
>

Wes--

You don't need Google. Just list the posts for the thread. It is the second
post. 7 Jan 2003.

73,
Chip N1IR

897. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 16:06:35 UTC
From: fractenna@aol.com
Message-ID: <20030114110635.02144.00000309@mb-mu.aol.com>
Source record: 127186

>By the way, did you ever experience a 'career change' because you used a
>large organization's computer systems to send out such theatening e-mails
>and Internet postings ?

No.

Did your (previous) employer take exception to such
>behaviour ?

No. Follws from the above answer.

I'm just asking and I don't know myself. It is just a
>question...

Happy to inform. Again, you don't see the issue: no downside.

73,
Chip N1IR

898. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 16:08:07 UTC
From: fractenna@aol.com
Message-ID: <20030114110807.02144.00000311@mb-mu.aol.com>
Source record: 127187

>"Fractenna"
>> I wasn't debated the phrase, I was looking for evidence
>> of a basis for your statement. I assume you cannot find
>> one, based upon this response.
>
>My gawd you're thick.
>
>The phrase ("submarine patents") is the name of a problem. Publication of
>patent applications is an apparent solution to the problem.
>
>My statement was prefaced with the word "Supposedly, ...". I provided a
>specific link ("Or maybe not...") to a page that refutes the link, and a
>general link (Google) to 1,120 other pages that probably more-or-less
>exhaust the publicly-available information on the subject.
>
>Your debating techniques resemble that of a six year old.
>

I would like some evidence for the basis of this accusation that such
'submarine patents' ever existed. Surely you can provide a useful link.

Many thanks,

73,
Chip N1IR

899. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 16:10:21 UTC
From: fractenna@aol.com
Message-ID: <20030114111021.02144.00000312@mb-mu.aol.com>
Source record: 127188

>I agree, I am also not convinced.
>
>What about the YGO3 freeware (which led me to the idea using these
>principles for all types of antennas) and commercial Supernec. Both
>use similar genetic-algorithms for optimization. If there were patents
>on this I don't think these packages would have 'survived'.
>
>Arie.
>

It is not for me to convince.

Again, as a disinterested party, I am informing you of your apparent patent infringement on a US patent.

73,
Chip N1IR

900. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 16:11:53 UTC
From: fractenna@aol.com
Message-ID: <20030114111153.02144.00000313@mb-mu.aol.com>
Source record: 127189

>> No Arie;
>>
>> It is not "freely" available. There is a patent in the US for the process
>you
>> want folks to use. It is someone else's property.
>>
>> This acknowledges that you are now so informed.
>>
>> 73,
>> Chip N1IR
>
>
>Chip
> That is not a nice thing to say as it causes needless worry.
>If you have specific knoweledge to back up what you say then you
>should disclose it, otherwise remain silent on the matter.
>Personaly I am unaware of any commercial intent by Arie other
>than provide assistance to other hams, for this I applaud him.
>Regards
>Art
>

I appreciate your opinion. I stand by my statement as being factually accurate
and relevant.

73,
Chip N1IR

901. Re: Dipole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 16:22:42 UTC
From: richardharrison@webtv.net
Message-ID: <14716-3E243952-273@storefull-2317.public.lawson.webtv.net>
Source record: 127192

Dave, W4WLC wrote:
"I have several choices putting up a dipole for 80-10."
"1. I could put up a 140 ft running East-West with the center at about 40 ft and the ends at 15-20 ft , fed with ladder line to a tuner."

Go for it.

That aims at the Canary Islands and Morocco to the East and at Midway Island to the West, but just barely, because there is hardly any aiming. Dave would have about a 1/2-wave at 80m. The antenna is almost an Omni. Sorry, I see I read Dave`s statement wrong. A low East-West dipole is slightly directional broadside, favoring the North and South.

Fig 3 on page 6-3 of the 19th edition of the ARRL Antenna Book shows the pattern of Dave`s antenna at 80 m is almost omnidirectional for the inverted V version. Most 80-m radiation will be at high angles because the antenna is low. Not-so-distant contacts can be expected in the evening hours.

Fig 39 on page 8-35 of the ARRL Antenna Book shows that Dave might expect a db or so gain broadside to this antenna at double the frequency (40 m).

Fig 6 (dashed lines) on page 7-4 of the ARRL Antenna Book shows that Dave might expect nearly omnidirectional, high angle, radiation from this antenna at 20 m.

Fig 7 (dashed lines) on page 7-4 of the ARRL Antenna Book shows that Dave might expect omni coverage as at 20 m, also on 10 m, but the height of his antenna in wavelengths has risen to the point that it provides some very low angle radiation. Dave might really be able to make distant contacts when the band opens. But that might also be done with a walkie talkie when the 10-m band opens.

Best regards, Richard Harrison, KB5WZI

902. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 16:33:43 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <HZWU9.41860$p_6.3595942@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127190

Cecil,

Another point that should be addressed regarding your Fig 4 example.

The individual forward and rearward power components can be separated as follows:

< < 9.57 W *Junction* 123.757 W >>
<< 7.18 W 0.555 W >>

It is important for everyone to note that with only these scalar power values, you cannot determine the steady state solution. Apply the law of conservation of power to determine the steady state solution - you can't at this point.

In order for you to determine either the resulting total forward or total rearward power, you must first use superposition of voltage and current exactly as I do. It is only *after* you apply superposition that you can use your destructive and constructive interference power math.

I simply use superposition in both directions to solve for the steady state solution. The problem is solved at this point. All of the necessary information to solve the problem is contained within the superposition process. Your power analysis can only begin after the steady state solution is known. Superposition gives the correct steady state result in either direction *independent* of what happens in the other direction.

Your power math is simply an expression of the fact that the total power entering the junction must equal the total power leaving the junction. We both agree on this. In these examples, the processes of constructive and destructive interference balance exactly because of the boundary condition at the junction. We both agree on this.

Where we disagree is in what the balancing of power at the junction implies. In my opinion, it does not establish a requirement that the "lost power" in the destructive interference process must somehow reverse direction. If the power in the constructive interference process was determined as a direct function of the reversal of "lost power" in the destructive interference process, superposition would not work as it does - it would require information from the destructive interference process (the lost power) to determine the result of the constructive interference process.

This is why I hesitate to keep discussing these examples. This is why I always want to move away from these examples and discuss one where the boundary conditions are different.

Steve VE9SRB

903. Grounding HTX-202 to Car ? HELP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 16:39:59 UTC
From: Rickie <rickiev@hotmail.com>
Message-ID: <b01e9i$jq65c$1@ID-89515.news.dfncis.de>
Source record: 127191

How will I go about grounding a Radio Shack HTX-202 Handheld. I'm using it as my mobile and getting scratch noise through the speaker but not when I transmit. Was told that I need to ground it to the car, but don't know how to ground it.. Thanks..

Rickie / KC2KQQ

904. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 17:15:37 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <RAXU9.6016$0E.539525@news20.bellglobal.com>
Source record: 127193

"Fractenna"
> I would like some evidence for the basis of this accusation
> that such 'submarine patents' ever existed. Surely you can
> provide a useful link.

My gawd you're amazingly thick.

The phrase ("submarine patents") is the name of a problem. Publication of patent applications is an apparent solution to the problem.

My statement was prefaced with the word "Supposedly, ...". I provided a specific link ("Or maybe not...") to a page that refutes the connection, and a general link (Google) to 1,120 other pages that probably more-or-less exhaust the publicly-available information on the subject.

Your debating techniques resemble that of a six year old.

905. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 17:18:24 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <rDXU9.6017$0E.540075@news20.bellglobal.com>
Source record: 127194

"Fractenna"
> Again, you don't see the issue: no downside.

To the endless issuing of threatening 'legal' (sic, sick) e-mails ? Why,
that could get one fired - I mean "asked to retire" from some organizations.

906. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 17:22:00 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <PGXU9.6019$0E.540224@news20.bellglobal.com>
Source record: 127195

"Fractenna"
> You don't need Google. Just list the posts for the thread.
> It is the second post. 7 Jan 2003.

Gnat, please just type in the freaking Patent Number or cut-and-paste your previous missing post. Or is this one of your twisted jokes ?

I'll do a full USPTO search for it later if I have time.

907. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 17:28:21 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <b5i82v8vb9g8qrumtpm0mrfso212shce6m@4ax.com>
Source record: 127196

On 14 Jan 2003 16:01:26 GMT, fractenna@aol.com (Fractenna) wrote:

|>On 14 Jan 2003 10:37:41 GMT, fractenna@aol.com (Fractenna) wrote:
|>
|>[snip]
|>
|>|I was happy to oblige. I included it on my first posting on this topic on 7
|>|January, 2003.
|>
|>Chip,
|>
|>Could you please re-post your comment. Google can't seem to find it.
|>
|
|Wes--
|
|You don't need Google. Just list the posts for the thread. It is the second
|post. 7 Jan 2003.

Nope, not on my newsreader. Be happy to send you a screen shot if you
like. But it would be easier if you just repeated your remarks.

Wes

908. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 17:54:34 UTC
From: fractenna@aol.com
Message-ID: <20030114125434.02012.00000639@mb-fi.aol.com>
Source record: 127197

Hi Wes,

5719794--the patent again.

73,
Chip N1IR

909. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 17:57:33 UTC
From: fractenna@aol.com
Message-ID: <20030114125733.02012.00000640@mb-fi.aol.com>
Source record: 127198

>"Fractenna"
>> Again, you don't see the issue: no downside.
>
>To the endless issuing of threatening 'legal' (sic, sick) e-mails ? Why,
>that could get one fired - I mean "asked to retire" from some organizations.
>

I wouldn't know. My contract at Boston University had just been renewed when I announced my retirement.

73,
Chip N1IR

910. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 18:26:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bpi82vs00hhn41d6m54b0aipsv7a9dlp6l@4ax.com>
Source record: 127199

On Mon, 13 Jan 2003 22:34:23 GMT, "VE9SRB" <srbest@att.net> wrote:

>
>When two very narrow pencil beam EM waves are pointed orthogonal to one
>another such that they intersect at a point in space where they are of equal
>amplitude and 180 degrees out of phase and a complete cancellation or
>destructive interference occurs, you claim that a simultaneous constructive
>interference must occur somewhere else in space and that the energy in the
>destructive interference process must go to the point of constructive
>interference to satisfy the law of conservation of energy.
>

Hi Steve,

The concept of two beams intersecting at a point is only that,
conceptual not actual. What you call a point is by rights, the area
or volume of load that detects both beam's presence. That area or
volume is small perhaps, but certainly finite. Being finite and
having frequency demands that those beams must be at most one half
wavelength wide (actually slightly less to satisfy Nyquist; I presume
this is what you mean by "narrow" for rhetorical purposes) to achieve
this specificity of solution. Problem is that nature cannot sustain
such a beam as the discontinuities at the edges guarantee spatial
products galore. Barring that, I hope your beam model is not
constructed of Solitons.

This takes us to the matter of constructive/destructive. There is no
such interaction without the load/detector. This is something of a
Zen joke harkening to "if a tree falls..." A very small detector can
sample the interference fringe and find any value of powers as a
function of the two sources that varies between 0 and 4 times one
source (for equal sources). You have often moved your
detector-of-argument to ride the crest of one fringe element to reveal
that 4 fold increase from two unity sources. That is a single
solution to a problem that is larger than a point. If you find one
solution, you need only move your detector-of-argument slightly to
find a new and equally valid solution. For those who lose their
composure over conservation, they can swing the detector 360ï¿½ and
integrate.

73's
Richard Clark, KB7QHC

911. Re: Grounding HTX-202 to Car ? HELP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 18:41:03 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2459BF.FE71263C@cwis.net>
Source record: 127200

Rickie,
Try aligator-clipping a ground wire from teh base of the
SMA antenna connector to the vehicle ground.
'Doc

912. Re: Grounding HTX-202 to Car ? HELP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 18:43:16 UTC
From: Bob <mr_ruzzo@hotmail.com>
Message-ID: <Xns93038B9149C8Fmrruzzohotmailcom@130.133.1.4>
Source record: 127201

"Rickie" <rickiev@hotmail.com> wrote in
news:b01e9i$jq65c$1@ID-89515.news.dfncis.de:

> How will I go about grounding a Radio Shack HTX-202 Handheld. I'm
> using it as my mobile and getting scratch noise through the speaker
> but not when I transmit. Was told that I need to ground it to the
> car, but don't know how to ground it.. Thanks..
>
> Rickie / KC2KQQ
>
>
>
>

Hello there.....I have been using handhelds while mobile for years and never heared of having to ground them! That is probably not the problem. HT is a self-contained unit and doesnt need any further grounding. You should have radio looked at by repairman. Or there is something else not quite right.

913. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 18:43:21 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E245A49.9A5F8CB9@cwis.net>
Source record: 127202

Sounds like they gave you an 'easy - out'...
'Doc

914. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 18:43:41 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <xTYU9.42011$p_6.3605387@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127203

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:bpi82vs00hhn41d6m54b0aipsv7a9dlp6l@4ax.com...
> On Mon, 13 Jan 2003 22:34:23 GMT, "VE9SRB" <srbest@att.net> wrote:
>
> >
> >When two very narrow pencil beam EM waves are pointed orthogonal to one
> >another such that they intersect at a point in space where they are of
equal
> >amplitude and 180 degrees out of phase and a complete cancellation or
> >destructive interference occurs, you claim that a simultaneous
constructive
> >interference must occur somewhere else in space and that the energy in
the
> >destructive interference process must go to the point of constructive
> >interference to satisfy the law of conservation of energy.
> >
>
> Hi Steve,
>
> The concept of two beams intersecting at a point is only that,
> conceptual not actual. What you call a point is by rights, the area
> or volume of load that detects both beam's presence. That area or
> volume is small perhaps, but certainly finite.

I agree. The question was posed from the persepctive that the volume of beam intersection was very small and that the phase does not very significantly over the volume.

>Being finite and
> having frequency demands that those beams must be at most one half
> wavelength wide (actually slightly less to satisfy Nyquist; I presume
> this is what you mean by "narrow" for rhetorical purposes) to achieve
> this specificity of solution. Problem is that nature cannot sustain
> such a beam as the discontinuities at the edges guarantee spatial
> products galore. Barring that, I hope your beam model is not
> constructed of Solitons.
>
> This takes us to the matter of constructive/destructive. There is no
> such interaction without the load/detector. This is something of a
> Zen joke harkening to "if a tree falls..." A very small detector can
> sample the interference fringe and find any value of powers as a
> function of the two sources that varies between 0 and 4 times one
> source (for equal sources).

That's correct, as a function of phase delta varying from 180 to 0 degrees.

>
You have often moved your
> detector-of-argument to ride the crest of one fringe element to reveal
> that 4 fold increase from two unity sources. That is a single
> solution to a problem that is larger than a point. If you find one
> solution, you need only move your detector-of-argument slightly to
> find a new and equally valid solution. For those who lose their
> composure over conservation, they can swing the detector 360° and
> integrate.
>
> 73's
> Richard Clark, KB7QHC

Steve VE9SRB

915. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 18:45:42 UTC
From: Bob <mr_ruzzo@hotmail.com>
Message-ID: <Xns93038BFAE4777mrruzzohotmailcom@130.133.1.4>
Source record: 127204

"Gregi" <gregi_9a6pgm@hotmail.com> wrote in
news:avsig0$i25$1@bagan.srce.hr:

> if anybody have something or plans how to build a good antenna for
> 144-146 MHz please send it to my mail
>
>
>

There are so many construction articles for 2 meter antennas all over the
place. Just look in back issues of the old ham mags and scoure the web for
construction articles and things like that...very simple....

916. Re: Grounding HTX-202 to Car ? HELP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 19:01:55 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E245E8C.7CE20D44@shaw.ca>
Source record: 127205

Rickie wrote:
>
> How will I go about grounding a Radio Shack HTX-202 Handheld. I'm using it
> as my mobile and getting scratch noise through the speaker but not when I
> transmit. Was told that I need to ground it to the car, but don't know how
> to ground it.. Thanks..
>
> Rickie / KC2KQQ

I'll bet you don't have your squelch on, or if it's on, not
turned high enough.
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

917. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 19:28:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2464C7.10404@ieee.org>
Source record: 127206

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> You have stated numerous times that destructive or constructive interference
> cannot occur without a corresponding amount of constructive or destructive
> interference, respectively, occurring at the same time.

If the source power is constant and is not the immediate source of the
constructive interference energy. In your later example, the source is
the immediate source of the constructive interference energy. That's not
what this discussion is about. This discussion is about an impedance
discontinuity within a transmission line fed by a constant power source.
Please don't try to change the subject.

> You have also
> stated that the energy involved in the destructive interference process is
> the exact energy involved in the constructive interference process.

If the source power is constant and is not the immediate source of the
constructive interference energy. Please be clear on that point.

> Let's assume that we have destructive multipath interference occurring at
> point A in space. Let's assume that we have the corresponding constructive
> multipath interference occurring at point B in space.
>
> How does the energy in the destructive multipath interference at point A
> know where the constructive multipath interference at point B occurs?

The energy doesn't "know" anything. Does the destructive interference at
a null in an antenna pattern know where the constructive interference is?
Do the dark rings in an optical interference pattern know where the bright
rings are located? EM interference is an effect. It has a set of causes
that obey the laws of physics. Energy is not conscious (at least to the
best of my knowledge :-)

> How does the energy in the destructive multipath interference at point A
> jump through space to join in the constructive interference process
> occurring at point B in space?

It doesn't jump through space. If it is changing, it phases in and out.
If it phases in at one location, it phases out at another location. Have
you never moved your 2m antenna a few inches to get better reception?
Have you never moved around inside your house to get a better signal
on your cellphone? Have you never seen an airplane cause bright and
dark interference lines across your TV?

> If the total energy in the waves associated with the destructive
> interference process at point A jumps through space to the constructive

> interference process at point B,

Let's say the passive director on your Yagi is tunable. You are tuning
for maximum gain in one direction. How does the energy behind the antenna
know to jump to the front of the antenna? Don't you see what a silly
question you have asked?

> how is it able to also continue along its
> original path beyond the point of destructive interference? How does it get
> back to point A, so that it continues along its original path?

How is light involved in dark ring/bright ring interference patterns able
to continue along its original path beyond the area of interference?
In whatever way light does that, RF does it the same way.

> 2. Your web page example - Fig 4.

available for viewing at: http://www.qsl.net/w5dxp/fig4.gif

> The only issues that I will address are the composition of the steady state
> rearward wave in the 50 ohm transmission line and the steady state forward
> wave in the transformer section.
>
> 2A. Forward wave in the transformer section:
>
> This steady state wave can be separated into its two principle wave
> components: the initial forward wave delivered to the transformer section
> and the steady state re-reflected forward wave developed at the junction.
>
> Initial forward wave: 103.526 V. If considered to exist independently in
> the line it would have an associated power of 123.757 W.

We agree. Corresponding to your QEX article, we can call that P1 and V1.

> Re-reflected wave: -6.935 V. If considered to exist independently in the
> line it would have an associated power of 0.555 W

We agree. Corresponding to your QEX article, we can call that P2 and V2.

> The resulting total forward wave in the transformer section is found through
> superposition as follows:
>
> Vforward = 103.526 V + (-6.935 V) = 96.591 V, having an associated forward
> power of 107.73 W.

We agree. Note that there is destructive interference, by definition, since
Pfwd2 < P1 + P2. We have reduced the energy level at that point from
124.312W to 107.73W, a reduction of 16.58 watts which is destructive
interference energy. The phase angle between phasors V1 and V2 is 180
degrees. Therefore, we have destructive interference, by definition.

> Superposition provided the correct solution.

I agree. You are a superposition expert. Remember, this argument started
almost two years ago when you posted your energy equation:

75W + 8.33W = 133.33W

I don't think you used superposition to develop that equation.

> Here's the first question for
> you. This process of superposition represented a process of destructive
> interference in that the resulting total forward power in the line is less
> than the algebraic sum of the two individual forward powers (if considered
> to exist separately). You claim that the total forward power in the
> destructive interference process is dependent on the power involved in a
> constructive interference process occurring somewhere else - i.e. the power
> in the destructive interference process goes to the constructive
> interference process. If this is true, how is it that I can correctly
> determine the total forward power using only the superposition of the two
> individual forward waves without having any knowledge of the constructive
> interference process?

Because your voltage superposition is correct, there is lots of redundancy
built into an impedance discontinuity in a transmission line, and the power(s)
obey(s) the laws of physics, the power will be V^2/Z0. It doesn't matter if
you are ignorant of the destructive/constructive interference process. If you
follow the laws of physics, you do not have to know about the interference to
obtain the correct answers. You already knew the correct answers and you would
not have published them if they were incorrect. It is your incorrect conclusions
about reality based on those correct answers that are in question.

> 2B. Rearward wave in the 50 ohm line.
>
> This steady state wave can be separated into its two principle wave
> components: the initial reflected wave created at the junction and the
> steady state rearward wave delivered to the 50 ohm line as a result of the
> multiple wave reflections occurring in the transformer section.
>
> Initial reflected wave: 21.878 V. If considered to exist independently in
> the line it would have an associated power of 9.57 W.

You neglected this part of the analysis in your QEX article. Let's define
that 9.57W as P3 and that 21.878V as V3.

> Rearward wave to due the reflection process occurring in the transformer
> section: 18.947 V. If considered to exist independently in the line it
> would have an associated power of 7.18 W

Let's define that 7.18W as P4 and that 18.947V as V4.

> The resulting total rearward wave in the 50 ohm line is found through
> superposition as follows:
>
> Vrearward = 21.878 V + 18.947 V = 40.825 V, having an associated rearward
> power of 33.33 W.

There is obviously constructive interference since P3+P4 < Pref2. Let's
see how much. P3+P4=16.75W. 33.33W-16.75W = 16.58W of constructive interference.
What do you know? The constructive interference on the source side of the
impedance discontinuity exactly equals the destructive interference on the
load side of the impedance discontinuity just as predicted by the conservation
of energy principle. Good thing, too - it's not nice to fool Mother Nature.

> Superposition provided the correct solution. This process of superposition
> represented a process of constructive interference in that the resulting
> total rearward power in the line is greater than the algebraic sum of the
> two individual rearward powers.

Well, I'm glad to hear (see) you admit that fact.

> You claim that the total rearward power in
> the constructive interference process is dependent on the power involved in
> the destructive interference process occurring in the transformer section.
> If this is true, how is it that I can correctly determine the total rearward
> power using only the superposition of the two individual rearward waves
> without any knowledge of the power involved in the destructive interference
> process?

Because knowing the voltage and Z0 allows you to correctly calculate the
power(s).

> If the power "lost" in the destructive interference process is a
> dependent variable for the determination of the power in the constructive
> interference process, why don't I need it in my calculations?

This is the key question. The answer is that the impedance discontinuity
is perfectly symmetrical. Both of the source waves, Pfwd1 and Pref2, are
subjected to the same magnitude of reflection coefficient, i.e. there is
redundancy built into the situation. Here are the pertinent energy equations:

Pfwd1 = Pfwd1(1-Rho^2) + Pfwd1(Rho^2) = P1 + P3

Pref2 = Pref2(Rho^2) + Pref2(1-Rho^2) = P2 + P4

P1/P3 = P4/P2 = (1-Rho^2)/Rho^2

P1*P2 = P3*P4

The phase angle between V3 and V4 is 180 degrees minus the phase angle
between V1 and V2.

So V1+V2 = Vfor2 and V3+V4 = Vref1

There's your redundancy. You don't need to use P3 and P4 to calculate
the final results.

> All of the wave reflections (and reversals of power) at the transmission
> line junction have been accounted for in the superposition analysis. Please
> describe the physical mechanism causing the reversal of power involved in
> the destructive interference process.

Steve, please go back, pull out your college textbook, and review destructive and constructive interference. When the phase angle between two added voltage phasors is less than 90 degrees, there is constructive interference, by definition. When the phase angle between two added voltage phasors is greater than 90 degrees, there is destructive interference, by definition. What you may be missing is that given the phase angle between V1 and V2, the phase angle between V3 and V4 will be 180 degrees minus the phase angle between V1 and V2. Thus constructive interference between V1 and V2 results in destructive interference between V3 and V4. Also, vice versa.

> Please don't simply tell us that
> destructive interference causes a reversal of direction. Please explain
> specifically how the power reverses direction.

You speak of wave cancellation in your QEX article. Wave cancellation *IS* destructive interference. The energy components in your "rearward traveling waves 1 and 2" are P3 and P4. We know that, in a matched system, P3+P4 doesn't flow toward the source. We know that P3+P4 doesn't disappear from the universe. We know that P3+P4 doesn't stand still and accumulate. So where can P3+P4 go? By the process of elimination, it has only one place to go - back toward the load. We know that happens because, in a matched system, none of the energy flows back toward the source.

> Since a total impedance match does not occur at the junction, a complete or
> total cancellation of power does not occur in the destructive interference
> process.

That is true of unmatched systems. Has anyone ever said otherwise?

> The resulting forward wave in the transformer section is comprised
> of the individual forward waves. To maintain the total level of voltage and
> current traveling in the forward direction, the individual forward voltages
> and currents must remain traveling in the forward direction. They must be
> there for the forward wave to maintain its total value. Please describe for
> us how the individual forward voltages and currents remain traveling in the
> forward direction but some of their energy reverses direction. How does the
> energy reverse direction if the voltage and current do not?

In the example above, the Pfwd2 wave is forced to give up some of its energy. Mother Nature will simply not allow all the energy in waves P1 and P2 to combine into wave Pfwd2. The excess energy is rejected as reflection energy traveling in the opposite direction. It's a good thing that happens because Mother Nature will not allow the Pref1 wave to materialize given only the energy in waves P3 and P4. P1+P2=Pfwd2 needs to give up 16.58W and P3+P4=Pref1 needs to acquire 16.58W. Thus we have 16.58W of destructive interference on the source side and 16.58W of constructive interference on the load side.

This is true of all impedance discontinuities within a transmission line. If destructive interference occurs on either side of the discontinuity, an equal magnitude of constructive interference will occur on the other side of the impedance discontinuity.

> 3. An example where constructive interference occurs but destructive
> interference does not.

>
> Here's a simple example:
>
> 141.42 V - 25 ohm source impedance ----- 1 wl 50 ohm line ------ 25 ohm
> load.

That is a diversion from what we are discussing. We are discussing an impedance discontinuity in the middle of a transmission line, not at the source terminals. What happens on the source side of the impedance discontinuity is hidden inside the source. Since I assume we are not trying to hide anything, please modify your example to the following configuration:

141.42V------25 ohm coax------x-----1WL 50 ohm coax----25 ohm load
25 ohms

The source still "sees" the same thing. The 25 ohm to 50 ohm impedance discontinuity occurs at point 'x'. Now analyze that one, Steve, and tell me whether you can have constructive interference on the load side of 'x' without destructive interference on the source side.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

918. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 19:28:33 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E2464E1.FE2361A6@uci.edu>
Source record: 127207

OC_CAM's Razor wrote:
>
> J. Harvey wrote:
> > "OC_CAM's Razor"
> >>I am aware of a conservation of energy principle.
> >>I am not aware of a conservation of volume principle.
> >>Can you quote the IEEE specification number for
> >>that principle?
> >
> > It's in the same book as the Conservation of Power Principle... :-)

> Nope, it isn't. Johnson doesn't say a thing about any
> conservation of volume principle. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp

They passed a conservation of volume law in Avalon, Catalina Island.
They said our band was too loud last summer. I claimed that the ideal
gas law takes precidence and that volume is not conserved. ;-)

ac6xg

919. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 19:43:11 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <jLZU9.110955$hK4.9021913@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127208

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E2464C7.10404@ieee.org...

Cecil,

Thanks for the response. It might be a day or two but I'll get back to you.
Got to finish up a few things at this end.

Steve VE9SRB

920. Re: Very interesting Patent Application

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 19:50:42 UTC
From: herveus@radix.net
Message-ID: <b01pmi$l62$1@news1.radix.net>
Source record: 127209

Howdy!

In article <20030110094337.02797.00001074@mb-ch.aol.com>,
Fractenna <fractenna@aol.com> wrote:
>10 January, 2003
>
>To Whom it may Concern:
>
>William Meachum made the following public statements:
>
>>Peter O. Brackett wrote:
>>
>>> God help the poor overworked USPTO examiners!
>>>
>>> Hertz must be turning over in his grave.
>>>
>>> --
>>> Peter K1PO
>>
>>Better still, lets hope Heinrich has/had a sense of humour and can enjoy
>>this whole hoax in the way that "Snake Oil" Chip has so professionally
>>devised.
>>A year from now Chipper (a new age mix of Dr. Brinkly and Reverend Ike)
>>will be lording over us because he has PATENTED his schmoozle.
>>Har!
>>
>>-WX4A
>>
>
>In a private correspondence, William Meachum, aka WX4A, of Vieques Island,
>Puerto Rico, and Charlotte,NC, has been requested to retract these defamatory
>statements.
>
>They are demonstrably false and injurious.
>
Oh? "Injurious"? By what theory do you arrive at this conclusion?
How are they "defamatory"?

If your reputation is so fragile as to be damaged by these statements,
you have bigger problems. Or are you inclined to press frivolous
lawsuits to try to shut people up?

yours,
Michael

--
Michael and MJ Houghton | Herveus d'Ormonde and Megan O'Donnelly
herveus@radix.net | White Wolf and the Phoenix
Bowie, MD, USA | Tablet and Inkle bands, and other stuff
| http://www.radix.net/~herveus/

921. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 20:06:34 UTC
From: "Wolfgang K. Meister" <no.mail@please.com>
Message-ID: <rrq82vc2abf69pg0icd8agkufgrqicj03v@4ax.com>
Source record: 127210

>Doktor Fraudtenna, please just give the patent number,
>or I will think that you are a liar.

Mr. Frantenna is is so fractal is his mind that he does not realize
that he posted the answer in a different thread (OK, can happen)

It is: 5719794 - they describe a genetic algorithm. Neverteheless,
Arie did a good job with his 4nec2.

BTW, my kids did chew on their pencil, even if I told them not to do
so. Unfortunately in Europe we do not have institions like the US Pat
Office. Our patent office goes a little bit more in details, no chance
here.

'Prior art' of the pencils have been different. I am considering to
claim a patent for this chewed up pencil in the US. Maybe Mr. Chip can
advise me. I watched this news group for a while. He is contributing a
lot of entertainment. Can't believe he is serious.

73's
Wolfgang

922. Re: Cushcraft R8 opinions?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 21:02:37 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E247AED.192D2579@uci.edu>
Source record: 127211

I just put one up. It survived the 100+ MPH windstorm we had 3 days later. I can hear on it, plenty of 20 over signals on the bands when they're open. And people seem to hear me - just running barefoot so far. The Butternut I had was broader on 40, so if you can put some radial wires in the ground you might be better off that way. But so far, the antenna has performed just as advertised. I am getting a bit of RF in the shack however. Don't know if my coax choke is helping at this point. The antenna is better than the Butternut on 17 meters. It goes together in an afternoon. I only deviated from the instructions in that I installed the counterpoise after I mounted it on the pole so I wouldn't poke myself or my helper with them. Otherwise, it pretty much tunes up according to the tables (something Butternut should try to improve). I was really cussing the Nylock nuts on the U-bolts though. Turning four of them up an inch and a half, with a crescent wrench 30 degrees at a time, while keeping a 30 foot pole straight up in the air is truely cussworthy. I was used to the kind you can cinch-up quickly by hand. Tip: adjust the u-bolt nuts most of the way while you're sitting in the comfort of your chair on the ground. And use a ratcheting end wrench (I found mine the next day). The antenna is definitely a vast improvement over the R7000. More like a robust and less finicky R7.

73, ac6xg

"Jackie L." wrote:
>
> Hello,
>
> I'm a new General licensee and I am going to be purchasing an IC-718 in the
> near future (later this week). As I do not have the right yard conditions
> for a dipole (the trees I'd use are all too close to power lines) or an
> understanding landlord (NO BEAMS whatsoever on the roof), looks like I'm
> relegated to buying a vertical.
>
> I'm considering buying a Cushcraft R8. I plan to check out DX on 40 meters
> and higher (not 80 or 160 right now). I'll be concentrating on CW and SSB.
> What do you more-experienced hams think of this antenna for this purpose?
> Any pros and cons? Good experiences or not so good?
>
> Thanks in advance, and 73 to you,
> --
> Jackie
> KC0ODY/AG

923. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 21:18:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E247EB4.4010803@ieee.org>
Source record: 127212

VE9SRB wrote:
> It is important for everyone to note that with only these scalar power
> values, you cannot determine the steady state solution. Apply the law of
> conservation of power to determine the steady state solution - you can't at
> this point.

Steve, I am getting sick and tired of this diversion. I am *NOT* presenting an alternate method of transmission line analysis. Your transmission line superposition analysis is par excellence and cannot, to the best of my knowledge, be improved upon. It is identical to my own transmission line analysis. For about the 20th time, there is absolutely nothing wrong with the *technical* part of your analysis. It is your metaphysical conclusions about reality in Part 3 of your QEX article that are being questioned. Those conclusions bear absolutely no relationship to your technical analysis or, IMO, to reality.

> In order for you to determine either the resulting total forward or total
> rearward power, you must first use superposition of voltage and current
> exactly as I do.

Of course, that is *EXACTLY* what I do and I have *NEVER* said otherwise. You and I do the identical superposition analysis and achieve the identical results. You know that and I know that. After that, we reach different conclusions about reality. Pray tell, what does the following statement have to do with your or my *technical* analysis?

From your QEX article: "The misconception is that a total re-reflection of the reflected power occurs at a match point as a result of an impedance matching being established there."

Does the superposition principle include that statement? Of course not!!! The problem is that in attempting to discredit Walter Maxwell no matter what the cost, you have sacrificed your technical expertise and discredited yourself. That's a shame because you have so much to offer, probably a lot more than I do.

> I simply use superposition in both directions to solve for the steady state
> solution. The problem is solved at this point. All of the necessary
> information to solve the problem is contained within the superposition
> process. Your power analysis can only begin after the steady state solution
> is known.

I resent your implication that I have ever said otherwise. If you think I ever said otherwise, you have read something into my comments that wasn't there. I apologize if my statements were not clear. You and I use identical methods for analyzing systems. It is your conclusions after the analysis is

complete that I am questioning.

> Your power math is simply an expression of the fact that the total power
> entering the junction must equal the total power leaving the junction. We
> both agree on this. In these examples, the processes of constructive and
> destructive interference balance exactly because of the boundary condition
> at the junction. We both agree on this.

What we don't agree on is the conservation of energy of the most fleeting
and minute amounts of energy. Steve, all energy must be conserved, not
just total steady-state energy components. The energy in each electron
or photon must be conserved. The energy in transient responses must be
conserved. You only pay lip service to the conservation of energy principle.
Your 75W + 8.33W = 133.33W equation proves that you do not really believe
in it. Whoever first stated the conservation of energy principle turns over
in his grave every time you assert that equation. (Your energy equations raise
my blood pressure enough to send me to my grave so I could be the one turning
over in the immediate future.)

> Where we disagree is in what the balancing of power at the junction implies.
> In my opinion, it does not establish a requirement that the "lost power" in
> the destructive interference process must somehow reverse direction.

Yes, you have made that abundantly clear and, IMO, you are wrong. A transmission
line is essentially a one dimensional environment. If energy is not flowing
in one direction, it has to be flowing in the only other direction available.
You are apparently basing your argument upon a second dimension that exists
virtually in a one dimensional environment but you have yet to allow us a glimpse
of that second dimension. When are you ever going to introduce your black hole
or whatever it is? Are you going to write a new book called, "Flatland II"?

> If the
> power in the constructive interference process was determined as a direct
> function of the reversal of "lost power" in the destructive interference
> process, superposition would not work as it does - it would require
> information from the destructive interference process (the lost power) to
> determine the result of the constructive interference process.

Absolutely false because of the redundancy involved. You have been seduced
by that redundancy and you are certainly not alone. Most of the RF engineers
that I know have been seduced, in one way or another, by the steady-state
model. You have a lot of company.

> This is why I hesitate to keep discussing these examples. This is why I
> always want to move away from these examples and discuss one where the
> boundary conditions are different.

Of course, that's human nature, Steve. When you cannot win the present
argument, introduce a more complicated example that your opponent cannot
possibly understand. Even if he is right, he will appear to be a Dunce
simply because of his ignorance of the new and different conditions.

Your plea is like the Hispanic candidate for governor of Texas. He
demanded to debate the incumbent governor but only in Spanish.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

924. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 21:40:43 UTC
From: Gregi <gregi_9a6pgm@hotmail.com>
Message-ID: <b0204t$2ih$1@bagan.srce.hr>
Source record: 127215

i know that it's very simple but what i ment was: if somebody had a good construction plan for a good antenna which gives good performance for small sum of money.not to small of course
"Gregi" <gregi_9a6pgm@hotmail.com> wrote in message news:avsig0$i25$1@bagan.srce.hr...
> if anybody have something or plans how to build a good antenna for 144-146
> MHz please send it to my mail
>
>

925. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 21:41:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2483FD.3000905@ieee.org>
Source record: 127213

VE9SRB wrote:
> Cecil, Thanks for the response. It might be a day or two but I'll
> get back to you. Got to finish up a few things at this end.

This is all I have ever asked for, Steve. I translate your posting as:
"You have given me a tough nut to crack." :-) Good luck, and no hard
feelings. I only learn something valuable when I am proven wrong.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

926. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 21:44:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0a192vcrfm0cm4grqcjm71o6rshjrsnhbm@4ax.com>
Source record: 127214

On Tue, 14 Jan 2003 15:18:44 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

> Whoever first stated the conservation of energy principle turns over
>in his grave every time you assert that equation.

Hi Cecil,

As if you haven't given that corpse a roll or two of your own.... ;-)

73's
Richard Clark, KB7QHC

927. Re: 80M Horizontal Loop at 15 feet?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 21:47:00 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <b020te$b61$1@reader08.wxs.nl>
Source record: 127216

look at this site,

it got a lot of photo's on a loop.
even close up at the condensor
http://node13aef.a2000.nl/fotos/ham/nieuws/hamnieuws.htm

Marco

928. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 21:49:22 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <b020tf$b61$2@reader08.wxs.nl>
Source record: 127217

birdfree ??

929. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 21:54:41 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E248721.9070900@ieee.org>
Source record: 127218

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Whoever first stated the conservation of energy principle turns over
>>in his grave every time you assert that equation.
>
> As if you haven't given that corpse a roll or two of your own.... ;-)

Hey, I resent that. If I could only have talked to Newton, I could have
taught him how to surf an electromagnetic wave using a surfboard made
of quarks. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

930. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 22:24:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E248E24.8020501@ieee.org>
Source record: 127119

VE9SRB wrote:
> Thanks for the response. It might be a day or two but I'll get back to you.
> Got to finish up a few things at this end.

BTW Steve, thanks very much for reminding me of the sign reversal for
TEM currents traveling against the grain. Do you know of any way to
get a source to output its current 180 degrees out of phase with its
voltage? Would that be negative resistance? Is there no way to get
voltage and current in phase flowing right to left? :-) (For the
uninitiated: That's Math Model Humor)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

931. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 22:44:54 UTC
From: tdonaly@aol.com
Message-ID: <20030114174454.02190.00000228@mb-fk.aol.com>
Source record: 127121

Cecil wrote,
> ...I only learn something valuable when I am proven wrong.
>--
>cheers, CAM http://www.qsl.net/w5dxp

When did that ever happen?
73,
Tom Donaly, KA6RUH

932. Looking for an unusual J-Pole design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 22:45:28 UTC
From: Grant Cunningham <kd7jnw@arrl.net>
Message-ID: <kd7jnw-7579E4.14452814012003@netnews.attbi.com>
Source record: 127122

I lost a URL for an unsual 2m J-Pole variant made of copper pipe. The different part was that the the stub was made out of a larger diameter copper pipe, into which the longer element was inserted (suitably insulated, of course.) The design made it a bit easier to store and transport than a traditional J-Pole, and probably more rugged as well. Anyone seen this?

--
-=[grant]=- KD7JNW

"Where there are no men, strive to be a man" -- Hillel
==
"A human being should be able to change a diaper, plan an invasion, butcher an animal, conn a ship, design a building, write a sonnet, balance accounts, build a wall, set a bone, comfort the dying, take orders, give orders, cooperate, act alone, solve equations, analyze a new problem, pitch manure, program a computer, cook a tasty meal, fight efficiently, die gallantly. Specialization is for insects." -- Heinlein
==
"If everyone is thinking alike, then somebody isn't thinking" -- Patton

933. Re: Dipole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 22:45:38 UTC
From: "Dave (W4WLC)" <kaw1999@bellsouth.net>
Message-ID: <kk0V9.19522$Jm2.5006@news.bellsouth.net>
Source record: 127120

Thanks

Dave
W4WLC
Lynn Haven, FL

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:14716-3E243952-273@storefull-2317.public.lawson.webtv.net...
> Dave, W4WLC wrote:
> "I have several choices putting up a dipole for 80-10."
> "1. I could put up a 140 ft running East-West with the center at about
> 40 ft and the ends at 15-20 ft , fed with ladder line to a tuner."
>
> Go for it.
>
> That aims at the Canary Islands and Morocco to the East and at Midway
> Island to the West, but just barely, because there is hardly any aiming.
> Dave would have about a 1/2-wave at 80m. The antenna is almost an Omni.
> Sorry, I see I read Dave`s statement wrong. A low East-West dipole is
> slightly directional broadside, favoring the North and South.
>
> Fig 3 on page 6-3 of the 19th edition of the ARRL Antenna Book shows the
> pattern of Dave`s antenna at 80 m is almost omnidirectional for the
> inverted V version. Most 80-m radiation will be at high angles because
> the antenna is low. Not-so-distant contacts can be expected in the
> evening hours.
>
> Fig 39 on page 8-35 of the ARRL Antenna Book shows that Dave might
> expect a db or so gain broadside to this antenna at double the frequency
> (40 m).
>
> Fig 6 (dashed lines) on page 7-4 of the ARRL Antenna Book shows that
> Dave might expect nearly omnidirectional, high angle, radiation from
> this antenna at 20 m.
>
> Fig 7 (dashed lines) on page 7-4 of the ARRL Antenna Book shows that
> Dave might expect omni coverage as at 20 m, also on 10 m, but the height
> of his antenna in wavelengths has risen to the point that it provides
> some very low angle radiation. Dave might really be able to make distant
> contacts when the band opens. But that might also be done with a walkie
> talkie when the 10-m band opens.
>
> Best regards, Richard Harrison, KB5WZI
>

934. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 23:10:08 UTC
From: k3bu@aol.com
Message-ID: <20030114181008.10348.00001248@mb-ba.aol.com>
Source record: 127123

```
>
>I appreciate your opinion. I stand by my statement as being factually
>accurate
>and relevant.
>
>73,
>Chip N1IR
>
>
>
>

Yea, (relevant) Bull-Sheet!
```

935. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-14 23:22:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E249BBC.3090900@ieee.org>
Source record: 127124

Tdonaly wrote:
> Cecil wrote,
>>...I only learn something valuable when I am proven wrong.

> When did that ever happen?

Yesterday! I assumed that source voltage and current were in phase
no matter where the source was located. Steve reminded me that
sources on the right have their voltages and currents 180 degrees
out of phase. So if I view my transmission line system from the West,
the voltage and current are in phase. If I view my transmission line
system from the East, the voltage and current are 180 degrees out of
phase. I kid you not. That's what Kirchhoff said.

Seriously, I forgot that in-phase currents flowing in opposite
directions need to have opposite signs. In my mind (or lack thereof)
that is a huge mistake. Steve reminded me of my mistake. As a result,
I haven't been able to look myself in the mirror all day long.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

936. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 00:22:11 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E24A696.9060303@attbi.com>
Source record: 127125

The old canard:

He made a mistake once! That was when he thought he had made a mistake!!"

;-)

W1MCE

Tdonaly wrote:
> Cecil wrote,
>
>>...I only learn something valuable when I am proven wrong.
>>--
>>cheers, CAM http://www.qsl.net/w5dxp
>
>
> When did that ever happen?
> 73,
> Tom Donaly, KA6RUH
>
>

937. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 00:48:19 UTC
From: fractenna@aol.com
Message-ID: <20030114194819.23021.00000474@mb-mf.aol.com>
Source record: 127126

>Hello,
>
>For those still interested, I just released the latest 5.1 version for
>4nec2 on www.qsl.net/wb6tpu/swindex.html
>
>Besides the traditional hill-climbing optimzer now also a flexible
>genetic-algorithm based optimizer is available.
>
>Due to some questions from this group I also made the following
>changes:
>
>- It is now possible to optimize over a range/band of frequencies.
>- More general approach for generating nec-2 output data.
>- More consistent display of gain-, F/B and F/R data.
>- Pre version 4.3 support for raw nec-2 input data re-enabled.
>
>Arie.
>

Dear Arie,

I quote, from the relevant patent, a claim which your process seems to replicate. Furthermore, the distribution has a U.S. address, and no restriction or distinction is made between experimentation versus other uses. Thus the evidence appears overwhelming that you are offering, without authorization, the process protected by this patent in the United States. U.S. patent law calls such offers infringement.

I would be interested in your discussion as to why this does not constitute patent infringement, and why folks here in the U.S. should feel free to download your program. So far, all I have seen is a defense of "others are doing it".

With Best Wishes,
Chip N1IR

A claim from patent 5719794:

"1. A process to synthesize a design of an antenna element in three dimensions using a computer, said process comprising the steps of:

loading a general purpose computer with a genetic algorithm model and an electromagnetic code, said genetic algorithm model being a preselected set of permutations of alternative geometric configuration possibilities for a wire antenna element within a three-dimensional volume and wherein said electromagnetic code is a correlation model that correlates antenna element

prospectives from genetic antenna configurations;

specifying to said general purpose computer a desired set of electromagnetic antenna element properties;

directing said general purpose computer to identify a final set of wire antenna element designs from the set of wire antenna element prospectives by testing the preselected set of permutations proposed by the genetic algorithm using in three dimensions the electromagnetic code; and

selecting a wire antenna element design from the final set of wire antenna element designs."

938. Re: Looking for an unusual J-Pole design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 01:23:53 UTC
From: richardharrison@webtv.net
Message-ID: <2842-3E24B829-778@storefull-2315.public.lawson.webtv.net>
Source record: 127130

Grant, KD7JNW wrote:
"Anyone seen this?"

Search on "Cactus J-Pole". I got 15 hits and most were relevant.

Best regards, Richard Harrison, KB5WZI

939. wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 01:29:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E24B98B.80801@ieee.org>
Source record: 127127

There's an interesting outcome to the QEX brainteaser. If two phase-locked sources are used to generate two separate forward waves of 100W and 50W, for instance, in a piece of 50 ohm coax, a wattmeter may read 291 watts of forward power even though only 150W of power is delivered to the load. This is because of the existence of two completely separate waves.

However, if the 100W is single source forward power and the 50W is re-reflected power from a matched point on the transmission line, the wattmeter will read the same 291 watts but in this case, 291 watts will be delivered to the load.

Is there a word to describe the difference in the two above configurations? Can we say the two waves in the first paragraph are not perfectly coherent?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

940. big dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 01:41:36 UTC
From: Lloyd Guyot <lguyot@chartermi.net>
Message-ID: <v29f2ermb7sc52@corp.supernews.com>
Source record: 127128

Just for fun I am erecting a coax center fed U shaped dipole 1000' long (500' each leg) suspended in trees aprox. 60' high. The ends are aprox 300' apart. What type of performance should I expect? Is a 1:1 or 4:1 balun required? Thanks for educating this beginning antenna enthusiast.

941. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 01:48:39 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E24BDA2.2020200@attbi.com>
Source record: 127129

Arie, I just finished reading the patent [5719794] description. I'm a retired engineer [EE] and retired Program Chief Engineer/Program Manager and not a patent lawyer.

You are using the same terms and descriptions that are included in the patent. Based simply on terms that are not defined, an allegation of infringement could be justified. However, an actual infringement is a legal judgment.

I recommend at a minimum that a good definition of terms including 'genetic', 'hill climbing', 'optimizer' be prepared and compared to the patent. Patenting a 'process' may be open to a challenge of achieving the same result using a different 'process'. So, solid detailed technical definition of terms is mandatory to avoid problems.

The referenced patent covers using a generic EM code, example NEC, and a random processing model [genetic] in an converging iterative sequence to achieve a performance defined/specified antenna design.

As hard as it may be to accept, Chip has a solid point.

Deacon Dave, W1MCE
++++++++++++++++++
Fractenna wrote:
>>Hello,
>>
>>For those still interested, I just released the latest 5.1 version for
>>4nec2 on www.qsl.net/wb6tpu/swindex.html
>>
>>Besides the traditional hill-climbing optimzer now also a flexible
>>genetic-algorithm based optimizer is available.
>>
>>Due to some questions from this group I also made the following
>>changes:
>>
>>- It is now possible to optimize over a range/band of frequencies.
>>- More general approach for generating nec-2 output data.
>>- More consistent display of gain-, F/B and F/R data.
>>- Pre version 4.3 support for raw nec-2 input data re-enabled.
>>
>>Arie.
>>
>
>
> Dear Arie,
>

> I quote, from the relevant patent, a claim which your process seems to
> replicate. Furthermore, the distribution has a U.S. address, and no restriction
> or distinction is made between experimentation versus other uses. Thus the
> evidence appears overwhelming that you are offering, without authorization, the
> process protected by this patent in the United States. U.S. patent law calls
> such offers infringement.
>
> I would be interested in your discussion as to why this does not constitute
> patent infringement, and why folks here in the U.S. should feel free to
> download your program. So far, all I have seen is a defense of "others are
> doing it".
>
> With Best Wishes,
> Chip N1IR
>
> A claim from patent 5719794:
>
> "1. A process to synthesize a design of an antenna element in three dimensions
> using a computer, said process comprising the steps of:
>
> loading a general purpose computer with a genetic algorithm model and an
> electromagnetic code, said genetic algorithm model being a preselected set of
> permutations of alternative geometric configuration possibilities for a wire
> antenna element within a three-dimensional volume and wherein said
> electromagnetic code is a correlation model that correlates antenna element
> prospectives from genetic antenna configurations;
>
> specifying to said general purpose computer a desired set of electromagnetic
> antenna element properties;
>
> directing said general purpose computer to identify a final set of wire antenna
> element designs from the set of wire antenna element prospectives by testing
> the preselected set of permutations proposed by the genetic algorithm using in
> three dimensions the electromagnetic code; and
>
> selecting a wire antenna element design from the final set of wire antenna
> element designs."

942. Antenna design on TEARA.org

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 01:48:44 UTC
From: Tweek <tweek@2vulcans.net>
Message-ID: <3E24BDFC.F6D5DA7@2vulcans.net>
Source record: 127132

Have a look at the antenna design section of our club website at
www.TEARA.org .
Select [Knowledge Quest] in the menu, then [Yagi Design]. We've been
working with this free program for several years, and have added many
examples to add to your program and work from. You can download
everything from there.

73,
Dave WB4IUY

943. Re: big dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 01:49:58 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E24BE46.CD4CA5F1@cwis.net>
Source record: 127131

Lloyd,
For what frequency, or is it 'all-band'? I
don't think either the 1:1 or 4:1 balun is going
to help much one way or the other, the input
impedance will be all over the place.
'Doc

944. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 01:55:02 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Wb3V9.42453$p_6.3643277@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127133

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E247EB4.4010803@ieee.org...
> VE9SRB wrote:
> > It is important for everyone to note that with only these scalar power
> > values, you cannot determine the steady state solution. Apply the law
of
> > conservation of power to determine the steady state solution - you can't
at
> > this point.
>
> Steve, I am getting sick and tired of this diversion. I am *NOT*
presenting
> an alternate method of transmission line analysis.

I didn't mean to imply that you were. Sorry if my statements came across the wrong way. I did not intend to imply anything about what you have said or have not said. I was only trying to make the point that superposition comes first in the analysis.

In any event, I'll probably respond in detail sometime tomorrow. There is a 1/15/03 paper submission deadline for the AP Symposium that I'm trying to meet. And yes, you did give me a tough nut to crack.

Steve VE9SRB

945. Re: big dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 01:58:11 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E24BFDE.8030400@attbi.com>
Source record: 127134

First your losses in coax at higher frequencies will be significant.
Open wire transmission line and a tuner will yield less losses.

Second, long wires provide a complex pattern of nulls and gains. So, you
should do well in some directions and poorly in other directions.

Give it a try. Personal preference on Balun would be a high power 4:1.
The loads at your antenna feed point [VSWR] will vary all over the place
and will most likely have high reactive components at some frequencies
and a high power balun doesn't get so severely stressed at odd loads.

Deacon Dave, W1MCE

Lloyd Guyot wrote:
> Just for fun I am erecting a coax center fed U shaped dipole 1000' long
> (500' each leg) suspended in trees aprox. 60' high. The ends are aprox 300'
> apart. What type of performance should I expect? Is a 1:1 or 4:1 balun
> required? Thanks for educating this beginning antenna enthusiast.
>
>
>

946. FA Center-Loaded Telescoping Whip Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 02:13:30 UTC
From: Erik Chait <erik.chait@worldnet.att.net>
Message-ID: <et3V9.111398$hK4.9058711@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127135

For anyone interested, I am selling my scanner antenna's whip antenna. Here is the link:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=296&item=3000800378&rd=1
Thanks for your interest,
Erik

947. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 02:15:29 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v29h20p2605g8d@corp.supernews.com>
Source record: 127136

Art, you have a better shot of getting the info from Miss Cleo that the
cryptic bullcrap from the New England area.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0301140601.77820559@posting.google.com...
> fractenna@aol.com (Fractenna) wrote in message
news:<20030108071706.29733.00000500@mb-cv.aol.com>...
> > >Concerning the patents, I don't think so, because the information I
> > >used is all freely available on the Internet and not just related to
> > >antenna optimization. If you wish I could give you all the links where
> > >I found the documents I used as background for creating the routines.
> > >
> > >Arie.
> > >
> >
> > No Arie;
> >
> > It is not "freely" available. There is a patent in the US for the
process you
> > want folks to use. It is someone else's property.
> >
> > This acknowledges that you are now so informed.
> >
> > 73,
> > Chip N1IR
>
>
> Chip
> That is not a nice thing to say as it causes needless worry.
> If you have specific knoweledge to back up what you say then you
> should disclose it, otherwise remain silent on the matter.
> Personaly I am unaware of any commercial intent by Arie other
> than provide assistance to other hams, for this I applaud him.
> Regards
> Art

948. Re: big dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 02:16:17 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <jclkPkOBljurkGU1xm3KBX45Hhtx@4ax.com>
Source record: 127137

"Lloyd Guyot" <lguyot@chartermi.net> wrote:

>Just for fun I am erecting a coax center fed U shaped dipole 1000' long
>(500' each leg) suspended in trees aprox. 60' high. The ends are aprox 300'
>apart. What type of performance should I expect? Is a 1:1 or 4:1 balun
>required? Thanks for educating this beginning antenna enthusiast.
>
>

You'll have a very low 1/2-wave dipole for about 468 Khz :-)

Bob
k5qwg

949. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 02:28:28 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v29hqbm83de989@corp.supernews.com>
Source record: 127138

Remind me to e-mail your supercilious ass on 1 February 2003. In my opinion
you are the sorriest piece of dog deification to ever type on a keyboard.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Fractenna" <fractenna@aol.com> wrote in message
news:20030114060218.18776.00000518@mb-cq.aol.com...
> >Are you encouraged because you intimidated Bill Meachum?
>
> I have given Mr. Meachum an opportunity to settle, which did not expose
him to
> the severe financial issues of litigation and trial. As I stated, I have
found
> his defamatory statements injurious.
>
> The matter is concluded to my satisfaction.
>
> I do not feel that it is to my benefit to settle future and outstanding
issues
> without prior filing of a civil complaint(s). Furthermore, in previous
cases
> where cease and desist letters have been sent, and the injurious behavior
has
> continued, complaints will be filed if the party does not voluntarily
resolve
> by the end of January, 2003.
>
> I have no further comments on this matter.
>
> Best to all,
> Nathan Cohen
> aka Chip N1IR

950. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 02:42:32 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E24CA43.8000902@attbi.com>
Source record: 127139

Cecil et al;

We all know that perpetual motion machines don't exist!! I cannot deliver 291 watts from a 100 watt source!! Therefore there is an error in the analysis or model; or slight of hand is occurring.

If the coax is 50 ohm and the load is 50 ohm then we can eliminate the coax and replace it with a 50 ohm resistor across the 'parallel coherent' sources. If I model the two sources as Norton equivalent circuits with a 0.02 siemen admittance and solve the resulting equations I get source #1 delivering 100 watts, source #2 delivering 50 watts and the load receiving 31 watts. There are two sources [1.4 A and 1 A] and 3 50 ohm resistors all in parallel.

The two sources act as mutual loads on each other. This eliminates the perpetual motion problem.

Deacon Dave, W1MCE

PS: I'll now duck and read the responses for a while.
++++++++++++++++

OC_CAM's Razor wrote:
> There's an interesting outcome to the QEX brainteaser. If two phase-locked
> sources are used to generate two separate forward waves of 100W and 50W,
> for
> instance, in a piece of 50 ohm coax, a wattmeter may read 291 watts of
> forward power even though only 150W of power is delivered to the load.
> This is because of the existence of two completely separate waves.
>
> However, if the 100W is single source forward power and the 50W is re-
> reflected power from a matched point on the transmission line, the
> wattmeter will read the same 291 watts but in this case, 291 watts will
> be delivered to the load.
>
> Is there a word to describe the difference in the two above configurations?
> Can we say the two waves in the first paragraph are not perfectly coherent?

951. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 02:43:01 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <MU3V9.3155$%W2.577687@news20.bellglobal.com>
Source record: 127140

The Chipster sorted through the AOL dog droppings
to find his partially-digested homework:

> Claim 1 from patent 5719794:
>
> "...and
>
> selecting a wire antenna element design from the final
> set of wire antenna element designs."

Simply program the algorithm to explicitly calculate N iterations, but then
have it explicitly select the best result from iteration N-1 (i.e.. not
"from the final set"). This detail needs to be explicit in the source code,
but it can be hidden behind the GUI so that, from external appearances,
there is absolutely no impact.

Regards,

J. Harvey
Patent Bypassing Services
Ottawa

PS: I like the US Air Force. Seriously.

952. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 02:51:16 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <0V3V9.50166$wQ1.35631@fe01>
Source record: 127141

Works with twin-lead- the twin lead is in a "figure 8 " formation (1/2 turn) , with a lamp on each side of the figure 8 - forms a directional coupler (inductive) - when coupled this way , currents in a balanced line, when sampled, , cause a current to flow in the OPPOSITE direction that power is fed from ! the way it worked, was that the lamp on your TRANSMITTER side of the sampling section would light, the lamp on the antenna side , at 1;1 match, would be EXTINGUISHED! the higher the swr, the more the lamp on the antenna side would illuminate, the other one staying lit about the same. has a problem , tho at higher freqs, as both sections not sampleing the SAME sections , relative to a wavelength. also, see "Leacher (wires, or lines)" these were lamp driven frequency measuring devices, and quite accurate for their time, kinda like "line stretchers" (adjustable line length devices), for microwaves . if remember correctly, used #43 lamps for indicators, as info, jim nn7k nn7k@reno.rmci.net

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v26q4s3kfo458b@corp.supernews.com...
> Anyone care to elaborate on how and why the twin lamp refelectometer
works?
> tnx
> hank wd5jfr
> "Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
> news:avvech$c1i$1@slb6.atl.mindspring.net...
> > Cecil:
> >
> > [snip]
> > > I refer to actual physical reflection coefficients caused by actual
> > > physical impedance discontinuities Vs virtual reflection coefficients
> > > caused by a virtual impedance calculated from a V/I ratio. :-)
> > > --
> > > cheers, CAM http://www.qsl.net/w5dxp
> > [snip]
> >
> > I just remembered yet a third type of VSWR monitor, do you remember
> > the old twin-lamp device. The "twin-lamp" used to be featured in older
> > ARRL Handbooks, it was meant to be used on 300 Ohm ribbon
> > line, it was comprised of a strip of 300 Ohm twinlead with a couple of
#47
> > incandescant pilot bulbs on each end.
> >
> > This is a variation on the the slotted line which uses basically two
> samples
> > of
> > a standing wave to estimate the VSWR, the "twin-lamp" uses a distributed

> > sampling technique and senses the waves over a continuous length of
line.
> >
> > In fact the theory of operation of these distributed VSWR sensing
devices
> is
> > very
> > closely related to the methods of evaluating cross-talk between long
> > telephone
> > transmission lines. The telephone/telegraph cross-talk problem is
> > conventionally
> > measured at two places, with respect to the "hostile" and "friendly"
> > sources, the near
> > end and the far end, and the two cross talk measurements are referred to
> as
> > NEXT
> > for near end cross talk and FEXT for far end cross talk.
> >
> > It seems intuitive and it can be shown by analysis that the cross talk
> > energy is stronger
> > the nearer the victim line is to the source on the hostile line. i.e.
two
> > lines interfering
> > with each other while running side by side induce a "direction"
dependent
> > cross-talk,
> > in that one can sense the location [i.e. near end, or far end] of the
> > interfering hostile
> > source and hence the direction of the interfering wave on the line.
This
> > cross-talk
> > coupling phenomena can be used to estimate VSWR by placing a sampling
> line
> > along side an energized line and measuing cross-talk levels induced into
a
> > "sampling"
> > line at points along the line.
> >
> > It's interesting that all of these distributed VSWR metrologies, i.e.
the
> > slotted line,
> > the twin-lamp, parallel sampling lines, etc... are all very frequency
> > dependent, and
> > need a means of adjusting readings for their extreme frequency
dependence
> > and
> > consequent inaccruacies, while the single point (V, I) bridge devices
are
> > generally
> > only mildly frequency dependent and consequently more accurate, *even

> > though*
> > the latter single point devices do not directly measure a wave but
rather
> > infer the
> > wave values from the sum and difference of V and RI measured at a single
> > point!
> >
> > --
> > Peter K1PO
> > more accurate
> >
> >
> >
> >
>
>

953. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 03:35:00 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <s7l92v81ounkvbj5f94uql98cige9isc6o@4ax.com>
Source record: 127142

On Tue, 07 Jan 2003 22:14:59 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>You are correct, 3 kv or 5kv are nice design parameters but at the KW+
>level they might exhibit stress failure. If you are not planning a KW
>class station then a 3 kv design would be great.
>
>Many traps in Yagi or multiband dipole antennas designed for 1.5 KW fail
>after some usage. It's not a 100% certainty that failure will occur but
>it happens often enough to be a problem. The typical failure mode is
>arcing or burning the dielectric in the capacitor. Failures in the
>inductor, very infrequent, are generally caused by foreign objects [bugs].
>
>The design is based on a maximum value of POWER AND VSWR. If the antenna
>is used at a frequency just outside the VSWR maximum the voltages
>increase and failure results. I lost a 20 meter trap in a quality
>antenna tuned for the 20 m CW DX window [14.025 MHz] while operating on
>the Maritime net on 14.3 MHz at a VSWR of just over 2:1.

Just another data point.
I run the legal limit and have almost since first being licensed back
in 1961.

Although getting out to the point where the SWR is 3:1 and greater,
most likely ends up in a distorted pattern, I have never lost a trap
when operating at; say the bottom end of the CW band when the beam is
tuned for the center of the phone band, or the other way around.

I have lost one balun when I accidentally tuned up on the wrong
antenna while using a line tuner. The ferrite cores shattered.

When I put up the new tower, I installed a used TH-5 until I can get
the antenna I want. Prior to the TH-5 I had used a Cushcraft ATB-34
for something like 20 years. On many an occasion the thing was
subjected to an SWR of over 3:1. The only problem I ever had was the
screws coming loose at the feed point. (The elements mount in phenolic
cylinders and the connection is made my tightening 1/4 - 20 screws
down tight against the element through the phenolic)

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>Many high power DX operators use antennas with no traps simply to avoid
>this potential <pun intended> problem. [Monoband Long Johns].
>

>I have switched over to an 8 element Log Periodic for 20, 17, 15, 12 and
>10 meters <no traps>.
>
>BTW I run 800 to 1000 watts.
>
>Deacon Dave, W1MCE
>Manager, Strategic Product Design, Electronic, retired
>Textron Systems.
>Art Unwin KB9MZ wrote:
>> Very good. So using either 3 Kv or 5 Kv as the factor for either a
>> capacitor or an inductor is not a guarantee against failure, arcing
>> e.t.c.
>> for the amateur experimentor.
>> Thanks for your input
>> Art
>>
>>
>>
>> it appeRSSDave Shrader <david.shrader@attbi.com> wrote in message
news:<3E19BCCB.2070800@attbi.com>...
>>
>>>It can be virtually any credible voltage based on VSWR and series
>>>reactance in the antenna system.
>>>
>>>Example: A series tuned circuit is driven by 1 VRMS into a resistor of 1
>>>ohm in series with a capacitor of -j100 ohms in series with an inductor
>>>of j100 ohms. The two reactances cancel each other and the circuit is
>>>resonant. However #1, the voltage across the inductor is 100 VRMS.
>>>However #2, the voltage across the capacitor is 100 VRMS. However #3,
>>>the voltage across the resistor is 1 VRMS. Hmmm ... ?
>>>
>>>In your question, assuming a 50 ohm resistive load at the antenna , and
>>>1500 watts output the feedpoint voltage is a little over 273 VRMS. That
>>>is the minimum voltage. In a typical antenna system, e.g. Yagi, it will
>>>develop several thousands of volts at traps etc. End effect can approach
>>>5000 VRMS or higher.
>>>
>>>Deacon Dave, W1MCE
>>>
>>>Art Unwin KB9MZ wrote:
>>>
>>>>Maybe a lame brain question but, what is the maximum voltage
>>>>that is impressed on a amateur antenna when using a amplifier
>>>>with a 3Kv plate voltage? This disregards 'end effect' voltages
>>>> but would include the use of stubs and lumped constants e.t.c
>>>>and would include the like of over modulated and other signal use.
>>>>Thanks
>>>>Art
>>>

954. open letter to an internet would be bully

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 03:59:14 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v29n4i6qbfod42@corp.supernews.com>
Source record: 127143

Open letter to Chip N1IR, Nathan Cohen Ph.D. et al.

I have watched for the last number of years you playing the
Internet bully on the news groups. I have watched as
You have attempted to squelch the speech of others
With your treats of lawsuits, letters to employers, And
endless childish practices such as contacting internet
providers.

I am calling you out Mr. Bully, I think you are
pond scum that normal people should never
Have to deal with.

You have threatened me before with hollow threats
And I doubt that you are anything but a bag of wind.

This is your opportunity to prove me wrong,
Bring on your lawyers and your Mommy. Be
Aware I have collected your rants ever since
Your first threats several years ago and look forward
To presenting them to a jury of your peers.

You may have you attorneys serve me at the address below.
Be advised that no correspondence with me will be considered
confidential and will be posted on a new internet site I will create as well
as all applicable newsgroups.

Govern yourself accordingly

Fred Hambrecht Sr. W4JLE
2029 Stone Marten Dr.
Beaufort, SC 29902

955. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 04:02:55 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E24DD6F.8070000@ieee.org>
Source record: 127145

Dave Shrader wrote:
> We all know that perpetual motion machines don't exist!!

>> There's an interesting outcome to the QEX brainteaser. If two
>> phase-locked
>> sources are used to generate two separate forward waves of 100W and
>> 50W, for
>> instance, in a piece of 50 ohm coax, a wattmeter may read 291 watts of
>> forward power even though only 150W of power is delivered to the load.

Sorry, I meant to say 150W of power is incident upon the load.

>> However, if the 100W is single source forward power and the 50W is re-
>> reflected power from a matched point on the transmission line, the
>> wattmeter will read the same 291 watts but in this case, 291 watts will
>> be delivered to the load.

Sorry, I meant to say 291W of power is incident upon the load.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

956. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 04:03:39 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E24DD9B.F8191D0D@cwis.net>
Source record: 127144

Fred,
"Dog deification"? As in 'Cerbius'? You're going
to have to apologize to the next dog you see, Fred.
'Doc

957. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 04:13:48 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <n65V9.50423$wQ1.24690@fe01>
Source record: 127146

Been YEARS since seen this- actually, the twin lead is NOT rolled 1/2 turn, it is SHORTED , at midpoint, with lamps at each far end. As to how it works, is correct, and is identical to how modern swr bridges work, except the sample lines go to ground at opposite ends of the swr bridge, then at the far ends , feed diodes, and then, go to a meter movement, instead of lamps, and the section is UNBALANCED. This early type of twinlead bridge was taped, glued, however , parallel to the feedline being tested. This has to go back to early 1950's, not in the 1941 handbook, tho leacher wires are-
jim

<Jimnn7k@reno.rmci.net> wrote in message news:0V3V9.50166$wQ1.35631@fe01...
> Works with twin-lead- the twin lead is in a "figure 8 " formation (1/2 turn)
> , with a lamp on each side of the figure 8 - forms a directional coupler
> (inductive) - when coupled this way , currents in a balanced line, when
> sampled, , cause a current to flow in the OPPOSITE direction that power is
> fed from ! the way it worked, was that the lamp on your TRANSMITTER side of
> the sampling section would light, the lamp on the antenna side , at 1;1
> match, would be EXTINGUISHED! the higher the swr, the more the lamp on the
> antenna side would illuminate, the other one staying lit about the same.
> has a problem , tho at higher freqs, as both sections not sampleing the SAME
> sections , relative to a wavelength. also, see "Leacher (wires, or lines)"
> these were lamp driven frequency measuring devices, and quite accurate for
> their time, kinda like "line stretchers" (adjustable line length devices),
> for microwaves . if remember correctly, used #43 lamps for indicators, as
> info, jim nn7k nn7k@reno.rmci.net

958. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 04:24:02 UTC
From: Ken Jones <KJones@Netrax.net.INVALID>
Message-ID: <tl5V9.50487$wQ1.9437@fe01>
Source record: 127147

Ahh, yes. Something comes to mind about molar and molal solutions...but not much.
And anyway, it's a quart liquid measure and a cup dry measure and who knows what that adds up to.

"Curt M. Breneman" <brenec@rpi.edu> wrote in message news:3E23955D.11876E29@rpi.edu...
> You asked for a chemist, and now you've got one...

959. Re: Bird Wattmeter Slug Schematic?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 04:30:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E24E3FA.5040700@ieee.org>
Source record: 127148

Jimnn7k@reno.rmci.net wrote:
> Been YEARS since seen this- actually, the twin lead is NOT rolled 1/2 turn,
> it is SHORTED , at midpoint, with lamps at each far end. As to how it works,
> is correct, and is identical to how modern swr bridges work, except the
> sample lines go to ground at opposite ends of the swr bridge, then at the
> far ends , feed diodes, and then, go to a meter movement, instead of lamps,
> and the section is UNBALANCED. This early type of twinlead bridge was
> taped, glued, however , parallel to the feedline being tested. This has to
> go back to early 1950's, not in the 1941 handbook, tho leacher wires are-
> jim

Here's a fixed font schematic from the 1957 ARRL Handbook:

```
-----------------------+-----------------------------
|
+------------bulb--+--bulb------------+
| |
+-------------------------------------+

-----------------------------------------------------
```

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

960. Re: big dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 04:40:20 UTC
From: Doug <doug@ycsi.net>
Message-ID: <b02onkpur0@63.90.193.170>
Source record: 127149

For years, I've used an inverted vee that was resonant at
1.8 mhz, fed with open wire line. Truth is, that at some
freqs, the feed point impedence is wild, around 4k ohms in
the 75 mtr band. So, used a 9:1 balun from FMI (10kw) and
about 100 feet of HB 450 ohm line to feed it with a linear
transition at the top of the pole to connect to the legs.
Couldnt use stock window line as the high impedence nodes
on the line would arc over, so used .109 copper steel and
steatites giving me about 2.5 in spacing.

Works really well, if you dont mind running the tuner and
finding the sweet spot for each freq of interest. Try the
balun and 450 ohm line and see how well it works....it might
suprise you.

Also, remembering that there's no substitute for wire in
the air, it recieves when nothing else will do.

Have fun

Doug, K7YD

Lloyd Guyot wrote:
> Just for fun I am erecting a coax center fed U shaped dipole 1000' long
> (500' each leg) suspended in trees aprox. 60' high. The ends are aprox 300'
> apart. What type of performance should I expect? Is a 1:1 or 4:1 balun
> required? Thanks for educating this beginning antenna enthusiast.
>
>
>

961. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 04:57:03 UTC
From: k3bu@aol.com
Message-ID: <20030114235703.02273.00000399@mb-bd.aol.com>
Source record: 127150

Dave W1MCE writes:
>
>Arie, I just finished reading the patent [5719794] description. I'm a
>retired engineer [EE] and retired Program Chief Engineer/Program Manager
>and not a patent lawyer.
>
>You are using the same terms and descriptions that are included in the
>patent. Based simply on terms that are not defined, an allegation of
>infringement could be justified. However, an actual infringement is a
>legal judgment.
>
>I recommend at a minimum that a good definition of terms including
>'genetic', 'hill climbing', 'optimizer' be prepared and compared to the
>patent. Patenting a 'process' may be open to a challenge of achieving
>the same result using a different 'process'. So, solid detailed
>technical definition of terms is mandatory to avoid problems.
>
>The referenced patent covers using a generic EM code, example NEC, and a
>random processing model [genetic] in an converging iterative sequence to
>achieve a performance defined/specified antenna design.
>
>As hard as it may be to accept, Chip has a solid point.
>
>Deacon Dave, W1MCE
>++++++++++++++++++
>Fractenna wrote:
>>>Hello,
>>>
>>>For those still interested, I just released the latest 5.1 version for
>>>4nec2 on www.qsl.net/wb6tpu/swindex.html
>>>
>>>Besides the traditional hill-climbing optimzer now also a flexible
>>>genetic-algorithm based optimizer is available.
>>>
>>>Due to some questions from this group I also made the following
>>>changes:
>>>
>>>- It is now possible to optimize over a range/band of frequencies.
>>>- More general approach for generating nec-2 output data.
>>>- More consistent display of gain-, F/B and F/R data.
>>>- Pre version 4.3 support for raw nec-2 input data re-enabled.
>>>
>>>Arie.
>>>

>>
>>
>> Dear Arie,
>>
>> I quote, from the relevant patent, a claim which your process seems to
>> replicate. Furthermore, the distribution has a U.S. address, and no
>restriction
>> or distinction is made between experimentation versus other uses. Thus the
>> evidence appears overwhelming that you are offering, without authorization,
>the
>> process protected by this patent in the United States. U.S. patent law
>calls
>> such offers infringement.
>>
>> I would be interested in your discussion as to why this does not constitute
>> patent infringement, and why folks here in the U.S. should feel free to
>> download your program. So far, all I have seen is a defense of "others are
>> doing it".
>>
>> With Best Wishes,
>> Chip N1IR
>>
>> A claim from patent 5719794:
>>
>> "1. A process to synthesize a design of an antenna element in three
>dimensions
>> using a computer, said process comprising the steps of:
>>
>> loading a general purpose computer with a genetic algorithm model and an
>> electromagnetic code, said genetic algorithm model being a preselected set
>of
>> permutations of alternative geometric configuration possibilities for a
>wire
>> antenna element within a three-dimensional volume and wherein said
>> electromagnetic code is a correlation model that correlates antenna element
>> prospectives from genetic antenna configurations;
>>
>> specifying to said general purpose computer a desired set of
>electromagnetic
>> antenna element properties;
>>
>> directing said general purpose computer to identify a final set of wire
>antenna
>> element designs from the set of wire antenna element prospectives by
>testing
>> the preselected set of permutations proposed by the genetic algorithm using
>in
>> three dimensions the electromagnetic code; and
>>
>> selecting a wire antenna element design from the final set of wire antenna

>> element designs."
>
>

BU: If you read description of Genetic Al Gore rithm (:-):

Summary
Genetic algorithms are excellent for quickly finding an approximate global maximum or minimum value. They exploit the domain space with mutation and exploit good results with selection and crossover. You can observe both of these behaviors by watching how the agents seem to randomly sample points and cluster around the best Y values. The two major problems with creating genetic algorithms are in converting a problem domain into genes (bit patterns) and creating an effective evaluation function. For many problems the answers will be obvious, but for many others it is non-trivial. Experience and creativity are both needed to solve these issues.

BU: They have been around 1960ies.

BU: And when you read whole 5719794 patent description then you would find the following:

...
When the high speed digital computer became available it was then possible to analyze more complex wire structures and also to optimize wire antennas using computer aided design technologies. Computer aided design systems are commonly used to modify a variety of prototype models to optimize performance parameters. Unfortunately, such systems rely on an initial design prototype which is modified rather than created by the computer. For the most part the general shape of the wire antenna is still predetermined and only the individual wires that constitute that particular configuration are optimized.
...
The use of GAs is distinct from the limited computer aided design approach in that the computer itself will both create and modify an antenna configuration to satisfy the user requirements.
...
It is an object of the present invention to provide a computerized process for the design of antennas with optimized performance characteristics.
It is another object of the present invention to eliminate the requirements of human-developed prototype models in computer-designed antennas.
...
This new process will revolutionize the design procedure for antennas. The electromagnetic properties of most antennas that have been used in the past are well known. Currently an antenna designer will select a type of antenna that has properties close to his needs and then optimize that particular antenna.
...
The process we have invented evolved from two technologies. First, the power of today's fast computers makes it possible to simulate antenna structures very quickly and with a good deal of accuracy. Second, the advent of genetic algorithms has made automated optimization of very difficult problems possible. This new process should replace the conventional inductive design procedure that has been used.

Our new approach allows the computer free reign to design and synthesize an antenna structure with little human intervention, save for the cost function which defines the desired antenna properties and the constraints, for example, the size of the structure.
...
We are only aware of one case in which a genetic algorithm has been used in the design of an antenna, Bahr, et al. In this design the shape of the antenna and the number of impedance loads are initially specified; the genetic algorithm determines only the optimal values of the impedances and the locations on the monopole in which they are inserted. In our process we would not specify a monopole configuration; we would simply allow the algorithm to determine the optimal shape of the antenna as well as the other optimal parameters.
...
A surprising feature of this process is that the type of antenna that resulted is completely counter-intuitive--we can say with some confidence that no human antenna designer would analytically arrive at this configuration to try to achieve hemispherical coverage of a right-hand circularly-polarized electromagnetic wave. The theory behind its success at performing this function is not at all obvious; its theory of operation is a very difficult problem to solve, let alone design and optimize. Therefore, an advantage of this method that is very attractive is that it will try solutions that humans would never think of, and, most of the time, those counter-intuitive solutions will be better than those produced by a human designer. The crooked wire antenna out-performs antennas that have been in use up to this time, (oh -oh Freaktal infringement? BU) even antennas costing much more to fabricate. Yet, people have been designing antennas for many years and have not come up with anything that evenresembles this antenna in appearance or operation.

End of quotes.

In my opinion they are not claiming universal application of GA to antenna optimization, actually, they "dump" on classical approach - you design the antenna and plug it into computer for improvement. They claim "unhuman" approach by throwing bunch of design parameters and let the baby roll and come out with far out design that we can't even think of.

Patent office has something about applying math formulas or alrgorithms and being patentable. I don't see specific code or procedure being patented, just blanked assertion to apply GA to antenna design.

GA is not new (there are different ways and algorithms), antenna NEC program is not new, using computer optimization for antenna design is not new, patent is owned by the government.

So far what I gather from 4NEC2 is not claiming to design antennas from scratch, but improving on the old optimization technics, applying (some) GA algorithm to the classical design process. I don;t see any conflict with said patent. Far from "fre rein" described in the patent. Grabing quote and saying that you can't use GA for antenna optimization smells with Freaktal scare crap mumbo jumbo.

As far as Chipsters patent application, I question how can he include publicly previously published material as HIS invention? VE9SRB, KB7QHC are you there?

73 Yuri, K3BU

962. 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 05:17:29 UTC
From: uthrashit@hotmail.con
Message-ID: <3e24ebbb.9694560@news.state.ak.us>
Source record: 127151

I've reciently been considering ripping down my home built G5RV and building a new antenna called the 40 Meter Zepp. You can find additional information about this particuar zip by going to www.qrpworld.com/40_meter_zepp_antenna.htm

I do have a few questions regarding the information in the article. First off, the author states that the 450 Ohm Ladder Line length is not critical. I wonder about that. When using Ladder Line, Isn't the feedline is actually part of the antenna and shouldn't it be taken into consideration? I would think there are several feed line lengths that would work well for this antenna and others that should be avoided. For those of you who may have an antenna modeling program, could someone model this thing and see what feel line lengths would give the best results? It would be nice to see what the gain and pattern would be for the 80-10 meter bands.

I'd really like to use it for 80-10 Meters. Has anyone ever tried this antenna? Results?

963. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 06:24:26 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E24FE9A.D03D5EE7@cwis.net>
Source record: 127152

Norm,
Ought to work well on 40 meters and above, not so well on 80 meters. If you want to cover 80m, why not just put up a 1/2 wave for that band, or even longer if possible?
Ladder-line, open wire feed lines, etc., are not part of the antenna. Some lengths do work 'better' than others and those 'lengths' will depend on how and where the antenna is erected. As a good starting point, use enough ladder line to reach the antenna, then go from there.
'Doc

964. Re: QEX Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 08:28:01 UTC
From: Mike <2murphy@tuartcollege.wa.edu.au>
Message-ID: <3e251c9e$0$6263@echo-01.iinet.net.au>
Source record: 127153

Subtract the $2 the bellboy kept as a tip and you get the $25 the night
clerk ended up with.
There is no reason to ADD the $2 to the $27.
Good one Cecil
Mike
VK6KRO

> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E2331F2.5000009@ieee.org...
> > Richard Clark wrote:
> > > And I would suppose that if you gave me $20 in bills and $5 in change,
> > > and I returned $20 in change, you would be happy.
> >
> > Three guys checked into a hotel. They gave the bellboy $10 each for
> > the rooms. (OK, OK, so it's an old joke.) The bellboy gave the $30 to
> > the night clerk. The night clerk said three rooms to the same group
> > is only $25. So he gave $5 back to the bellboy to give back to the
> > three guys. The bellboy gave $1 each back to the three guys and kept
> > $2 as a tip. That made the three guys each pay $9 for each room.
> >
> > 3 rooms times $9 each is $27. Add the $2 that the bellboy kept for
> > a tip and you get a total of $29. Where did the other $1 go? :-)
> > --
> > cheers, CAM http://www.qsl.net/w5dxp

965. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 08:38:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9v2a2vgkfbpo4l25d44kb6pnkv4kbhl443@4ax.com>
Source record: 127154

On 15 Jan 2003 04:57:03 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

>As far as Chipsters patent application, I question how can he include publicly
>previously published material as HIS invention? VE9SRB, KB7QHC are you there?
>
>73 Yuri, K3BU

Yo!

I have NEVER received one jot of claims, demands, offers, propositions, NOR missives from lawyers, jurists, authorities, street crossing guards or heroes from the office of Homeland Scrutiny. Would I be over specific to embellish this with to say "not one atom of physical correspondence?" (some electrons were disturbed, but they are always that way)

Who would want to put me up in front of judge to reveal the gaps between undisclosed prior art and recent patent applications? ;-)

But enough of that, what a yawn.

Not to impugn Arie's contribution, but genetic algorithms are an academic pastiche that has failed miserably in the cruel real world of the marketplace. I have noticed the author of the patent in question has also pursued further avenues into neural networks and their utility in designing antennas. Another snooze in the park. If anyone here wants a neural net design I can summon up at least half a dozen of mine that are 15 years old. The learning curve (literal in this field) is as steep as the slopes of Kilamanjaro. I love it when the novitiates approach these subjects all doe-eyed and repeating the dogmas about their mysterious influences with the arcana.

To some folks here, this may sound like 21st Century futurama - or 16th Century mysticism. The quality of results from the effort expended reveals most of these applications barely exhibit the sophistication of an undergrad laboratory exercise. These topics lost their fizz in the late 80's when their commercial prospects approached the bloat of the dot.com bubble; with the consequent collapse.

Basically, GA and Neural networks are the intellectual equivalent of a B&W antenna. Works? Yeh.... Matches everywhere as specified? um - yeh, that too.... How about Quality? I suppose given the "watershed" publication came out in 95-96, we should be inundated by their example by now - if they could rummage up a dB difference. [it would be a case of stating the "bleeding obvious" to add that a similar fate befell fractals for their failure to arrive.]

Quality? We have had EXACTLY ONE design proposal offered for GA improvement; and we have had EXACTLY NONE returned in six months. The name goes on before the quality goes in (to invert an advertising homily).

However Arie, please note that this is not to diminish your work. I have a copy of it here, but have yet to run it through the hoops in this regard. As a gesture, I offer here a means for you to finesse this threat made against you. Replace the GA with the ONLY successful application to emerge from the AI field.

:-) So as to contribute to the greater body of the Public Domain:
:-) Fuzzy Logic allows for far more flexibility in the expression
:-) of parameters, their relationship and your goals.
I will leave it to the student to observe the correlations between the two (GA/Fuzzy) and fill in the application specific details. As for the general application of Fuzzy Logic (in place of GA), history has demonstrated this field outstrips the results of all others (GA, Neural Nets, Kohonen Layers, Knowledge Domains et. alli.).

You, or anyone here, may contact me for details.

73's
Richard Clark, KB7QHC

966. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 08:46:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <s38a2vspkv116ls24itdivhqi89o9rgh7r@4ax.com>
Source record: 127155

On Tue, 14 Jan 2003 19:29:47 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Can we say the two waves in the first paragraph are not perfectly coherent?

resist... the... urge... Cohehehеherent? ;-)

73's
Richard Clark, KB7QHC

967. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 10:01:28 UTC
From: fractenna@aol.com
Message-ID: <20030115050128.02057.00000223@mb-df.aol.com>
Source record: 127156

>However Arie, please note that this is not to diminish your work. I
>have a copy of it here, but have yet to run it through the hoops in
>this regard.

Thus the unauthorized download of the process protected by US patent 5,719,794 has clearly been done into the United States, from a distribution point located in the United States, from an unauthorized source in the Netherlands.

The infringement thus appears realized and willful.

I often wonder if the folks who devised this newsgroup speculated that some participants would use the NG in this and other unsettling ways.

Ham radio has been very good at policing itself, for the most part. It is my humble and sincere opinion that the vast majority of non-offenders here would do well to pressure the stopping of the unsavory practices and unsettling tone we have seen in great detail in the last week. It's clear who that small majority is.

That is my opinion, which I am happy to modify if any new facts come to light.

73,
Chip N1IR

968. Re: open letter to an internet would be bully

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 10:34:45 UTC
From: fractenna@aol.com
Message-ID: <20030115053445.14016.00000612@mb-cr.aol.com>
Source record: 127157

>You may have you attorneys serve me at the address below.
>Be advised that no correspondence with me will be considered
>confidential and will be posted on a new internet site I will create as well
>as all applicable newsgroups.
>
>Govern yourself accordingly
>
>Fred Hambrecht Sr. W4JLE
>2029 Stone Marten Dr.
>Beaufort, SC 29902
>

Dear Mr. Hambrecht,

I have no intention nor see any point in having counsel have any correspondence with you. I have stated quite clearly what my intentions are, and how they will be implemented, and how one may proceed with settlement. If that is unclear to you it would appear to be in your best interest to consult your attorney for clarification.

Thank you for corroborating your new residence.

With Best Wishes,

Nathan Cohen,
aka Chip N1IR

969. Re: open letter to an internet would be bully

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 11:04:15 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2ag1hlkh30v90@corp.supernews.com>
Source record: 127158

Wah Wah Wah....
What a pathetic excuse for a human being. I have never hid from your little threats, ergo I wanted to be sure you had the correct address. If you need a phone number or my shoe size I will be glad to provide that as well.

You may buffalo some folks on here, but you have bit off more than you can chew if you think I am backing down from your stupid threats. Get it on big boy, I await your retribution

Need I point out where you can stuff your settlements?

"Fractenna" <fractenna@aol.com> wrote in message
news:20030115053445.14016.00000612@mb-cr.aol.com...
>
>
> Dear Mr. Hambrecht,
>
> I have no intention nor see any point in having counsel have any
correspondence
> with you. I have stated quite clearly what my intentions are, and how they
will
> be implemented, and how one may proceed with settlement. If that is
unclear to
> you it would appear to be in your best interest to consult your attorney
for
> clarification.
>
> Thank you for corroborating your new residence.
>
> With Best Wishes,
>
> Nathan Cohen,
> aka Chip N1IR

970. Re: Grounding HTX-202 to Car ? HELP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 11:14:05 UTC
From: Rickie / KC2KQQ <rickiev@hotmail.com>
Message-ID: <b03fid$l31sb$1@ID-89515.news.dfncis.de>
Source record: 127159

Yeah, I had the squelch on, when someone transmit, I hear scratch popping noise through the speaker of the HT, but when I'm outside the car, its clear and nice. Only happen when I'm inside the car.

Rickie

"Irv Finkleman" <finkirv@shaw.ca> wrote in message news:3E245E8C.7CE20D44@shaw.ca...
> Rickie wrote:
> >
> > How will I go about grounding a Radio Shack HTX-202 Handheld. I'm using it
> > as my mobile and getting scratch noise through the speaker but not when I
> > transmit. Was told that I need to ground it to the car, but don't know how
> > to ground it.. Thanks..
> >
> > Rickie / KC2KQQ
>
> I'll bet you don't have your squelch on, or if it's on, not
> turned high enough.
> --
> Diagnosed Type II Diabetes March 5 2001
> Beating it with diet and exercise!
> 297/215/210 (to be revised lower)
> 58"/43"(!)/44" (already lower too!)
> --------------------
> Visit my personal website at http://members.shaw.ca/finkirv/
> Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
> http://members.shaw.ca/finkirv5/
> --------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

971. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 11:20:13 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2agve5nu2qeae@corp.supernews.com>
Source record: 127160

A search of this newsgroup will show that posts from the Fractenna sight lamented the fact that people on this newsgroup caused him to lose his job at the school.

Phil was crying for several days because of it. I leave you to your own conclusions.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Fractenna" <fractenna@aol.com> wrote in message
news:20030114110635.02144.00000309@mb-mu.aol.com...
> >By the way, did you ever experience a 'career change' because you used a
> >large organization's computer systems to send out such theatening e-mails
> >and Internet postings ?
>
>
> No.
>
> Did your (previous) employer take exception to such
> >behaviour ?
>
>
> No. Follws from the above answer.
>
> I'm just asking and I don't know myself. It is just a
> >question...
>
> Happy to inform. Again, you don't see the issue: no downside.
>
> 73,
> Chip N1IR
>
>

972. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 11:31:40 UTC
From: Bruce <abcincowbay@ns.sympatico.ca>
Message-ID: <3E25469C.D6F5E1A4@ns.sympatico.ca>
Source record: 127161

Hello Norm:
I have a double extended zepp, cut for 40, up about
35 feet, hung as an inverted vee.
It works very well, 80 m to 10 m. I have modified
it a wee bit, after reading an article in the ARRL Antenna
Compendium volume 2, titled 'the suburban multibander'
This article explains what lengths to use for the wire
leg, and feeline (450 ohm ladder line).
I have each leg of my antenna cut to 89 feet, and the
length of the feedline to 80 feet. This antenna, on dry days,
requires no tuner to work the bottom ends of 80, 40; top ends of 20 and
15, mid area of 10 m.
The tuner is required when rain, snow, or ice 'detune'
the resonant lengths of feedline and wire.
With this antenna, I do get an improved performance over
half wave dipoles, and G5RV's.. though it is either on par,
or less effective for dx than vertical. Great antenna for
local work as well.
So, good luck, and hope you try one
rgds / Bruce / VE1NB

973. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 11:35:18 UTC
From: Peter <peterlmiles@hotmail.com>
Message-ID: <3e254776$0$5701$afc38c87@news.optusnet.com.au>
Source record: 127162

See my web page for the antenna that I have built.

http://members.optushome.com.au/vk3ysf/main.htm

Cheers

"Gregi" <gregi_9a6pgm@hotmail.com> wrote in message
news:avsig0$i25$1@bagan.srce.hr...
> if anybody have something or plans how to build a good antenna for 144-146
> MHz please send it to my mail
>
>

974. Re: Cushcraft R8 opinions?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 12:23:54 UTC
From: K4SQR@juno.com
Message-ID: <7c8be5b4.0301150423.1ecfbe89@posting.google.com>
Source record: 127163

Jackie;

Congratulations and welcome to Amateur Radio. After 31 years, I still
feel it is a great hobby.
I urge you to read the archives of TowerTalk at www.contesting.com and
click on Tower Talk. Search for Cushcraft R7-R7000 & customer support.
Also please
visit www.bencher.com click on Amateur Antennas and read Cushcrafts
letter of non-support to their dealers.(not supplying parts for those
models listed, which were new in past 4-5 years!)
And last but not least, order the vertical report from
www.championradio.com befor buying any $300.-$400. vertical.

Butternut models do not use traps, and require radials, which is
typical of 1/4w radiators.
Hy-Gain AV models do not use traps and are end loadeded type (as is
R8)with counterpoise system.

Good luck es 73,
Jim, K4SQR

"Jackie L." <buzzygirl@REMOVE.attbi.com> wrote in message
news:<VhIU9.670377$P31.499750@rwcrnsc53>...
> Hello,
>
> I'm a new General licensee and I am going to be purchasing an IC-718 in the
> near future (later this week). As I do not have the right yard conditions
> for a dipole (the trees I'd use are all too close to power lines) or an
> understanding landlord (NO BEAMS whatsoever on the roof), looks like I'm
> relegated to buying a vertical.
>
> I'm considering buying a Cushcraft R8. I plan to check out DX on 40 meters
> and higher (not 80 or 160 right now). I'll be concentrating on CW and SSB.
> What do you more-experienced hams think of this antenna for this purpose?
> Any pros and cons? Good experiences or not so good?
>
> Thanks in advance, and 73 to you,

975. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 12:45:26 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <HJcV9.6632$0E.696234@news20.bellglobal.com>
Source record: 127164

"Fractenna"
> ...would do well to pressure the stopping of the
> unsavory practices and unsettling tone we have
> seen in great detail in the last week.

Many regulars on this newsgroup have been vainly trying to get you to stop your unsavory practices and unsetlling tones for years. It is a lost cause. All that can be done is to periodically mock the most foolish of your postings to ensure that others are not stiffled by your Gnat-like, squeaky voiced, hollow threats.

Now, where was that 4nec2 website... ? ;-)

976. Re: open letter to an internet would be bully

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 12:49:18 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <iNcV9.6633$0E.696607@news20.bellglobal.com>
Source record: 127165

"Fred Hambrecht Sr."
> Need I point out where you can stuff your settlements?

Go Fred go. Fred for president.

By the way, if it evers comes to that point, I'm sure you would have many people appearing from the woodwork willing to provide evidence supporting your side of the story.

977. Quad diamond or squared ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 13:13:39 UTC
From: zig2 <zigouille@free.fr>
Message-ID: <3e255c36$0$27712$626a54ce@news.free.fr>
Source record: 127166

Good morning,

Can you explain me really differences in performances enters the diamond
version
and squared of a cubical quad (3 elements monoband 28 Mhz) ?

Thank you

GG

978. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 13:28:57 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0301150528.63370e3b@posting.google.com>
Source record: 127167

"Yuri Blanarovich"
> So far what I gather from 4NEC2 is not claiming to design antennas from
> scratch, but improving on the old optimization technics, applying (some) GA
> algorithm to the classical design process.

Yes, you are correct.

"from the patent":
> We are only aware of one case in which a genetic algorithm has been used in
> the design of an antenna, Bahr, et al

Do a google search and you will find a lot more.
(You will need a PostScript viewer to view most of these documents.)

"J. Harvey"
> Simply program the algorithm to explicitly calculate N iterations, but then
> have it explicitly select the best result from iteration N-1 (i.e.. not
> "from the final set"). This detail needs to be explicit in the source code,
> but it can be hidden behind the GUI so that, from external appearances,
> there is absolutely no impact.

Thanks for the suggestion. I'll do that.
You are right it wil have no impact on the solution.

Arie.

p.s.

More people who would like to get rid of 4nec2 ? Please let me know. I
certainly have no commercial intentions, so it's easy for me to remove
this from the web.

It's a pitty I am not commercial, because I think all this would be
great advertisement, and all for free...

979. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 13:31:17 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <FodV9.111934$hK4.9110839@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127168

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E24B98B.80801@ieee.org...

> There's an interesting outcome to the QEX brainteaser.

The correct solution to the brainteaser is as follows:

1) Power reading from A to B: P
Power reading from B to A: 2.25 P

2) Power reading from A to B: P
Power reading from B to A: 0.25 P

If we make P = 100 W and R = 50 ohms we get

1) Power reading from A to B: 100 W
Power reading from B to A: 225 W

2) Power reading from A to B: 100 W
Power reading from B to A: 25 W

For 1) above, the following power is dissipated in each source:

Source A: 25 W
Source B: 75 W

The wattmeter readings in 1) might lead one to believe that a net power of 125 W is delivered to the Source A impedance, or that the power dissipation difference between Source A and B is 125 W.

The wattmeter readings fool us in terms of power delievery to each source impedance when 2 sources (and reflections) are present. Recognize that a wattmeter in the transmission line only tells us the total scalar power traveling towards source A and the total scalar power traveling towards source B. Nothing more, nothing less.

The wattmeter readings do not provide any information regarding the phase of the waves, they do not tell us anything about how waves combine in the source or the net power delivery to each source.
The power delivery in each source is simply a function of the superposition of voltages and currents in each source. Superposition theory tells us that power superposition does not work.

One of the points of the brainteaser exercise was to demonstrate that scalar power readings from a wattmeter reading don't provide any insight into how waves combine. Superposition of voltages and currents tell the correct story of wave combination and the resulting power in the source impedance. Scalar power readings do not.

In the simple case of a single source and a single load, the difference in forward and rearward power readings in a transmission line will tell us the net power delivered to the load. Even this is only true if the Zo of the line is a pure resistance. If the Zo of the line is complex, the wattmeter readings are useless in terms of providing an indication of power delivery to the load.

The above conditions do not violate the law of conservation of power or energy. All that the law of conservation of power requires is that the total power delivered to the system be equal to the total power dissipated by the system. Adding up dissipated power in multiple loads to determine total power dissipation in a system is a lot different concept than trying to superimpose mulitple scalar powers in a single load.

Steve VE9SRB

980. Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 13:31:37 UTC
From: andy swiffin <a.l.swiffin@dundee.ac.uk>
Message-ID: <3e256399@news1.tay.ac.uk>
Source record: 127019

Hi,

I'm fairly new to the mysteries of balun design so forgive me if this is obvious.

I want to make a balun to match 50ohm coax to a 12.5 ohm balanced load. Can I just make a standard toroidal voltage balun (4:1) wired the other way round or do I have to do something clever?

Cheers
Andy
GM8OEG

981. Ringo Ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 13:56:55 UTC
From: Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de>
Message-ID: <3E2568A7.CCBA0889@pc0312a.rz.unibw-muenchen.de>
Source record: 127020

What is the theory behind this antenna ?

982. Re: open letter to an internet would be bully

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 13:58:18 UTC
From: fractenna@aol.com
Message-ID: <20030115085818.04849.00000002@mb-cg.aol.com>
Source record: 127021

>ellglobal.com>
>
>"Fred Hambrecht Sr."
>> Need I point out where you can stuff your settlements?
>
>Go Fred go. Fred for president.
>
>By the way, if it evers comes to that point, I'm sure you would have many
>people appearing from the woodwork willing to provide evidence supporting
>your side of the story.
>

I think that would be very useful. Why not have them tell their side of the story now, publicly? I reiterate that they should stick to facts.

73,
Chip N1IR

983. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 13:59:30 UTC
From: fractenna@aol.com
Message-ID: <20030115085930.04849.00000003@mb-cg.aol.com>
Source record: 127022

>A search of this newsgroup will show that posts from the Fractenna sight
>lamented the fact that people on this newsgroup caused him to lose his job
>at the school.
>

That is not correct. Please cite or retract.

73,
Chip N1IR

984. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 14:03:47 UTC
From: fractenna@aol.com
Message-ID: <20030115090347.04849.00000004@mb-cg.aol.com>
Source record: 127023

>"Yuri Blanarovich"
>> So far what I gather from 4NEC2 is not claiming to design antennas from
>> scratch, but improving on the old optimization technics, applying (some) GA
>> algorithm to the classical design process.
>
>Yes, you are correct.
>
>"from the patent":
>> We are only aware of one case in which a genetic algorithm has been used in
>
>> the design of an antenna, Bahr, et al
>
>Do a google search and you will find a lot more.
>(You will need a PostScript viewer to view most of these documents.)
>
>"J. Harvey"
>> Simply program the algorithm to explicitly calculate N iterations, but then
>> have it explicitly select the best result from iteration N-1 (i.e.. not
>> "from the final set"). This detail needs to be explicit in the source
>code,
>> but it can be hidden behind the GUI so that, from external appearances,
>> there is absolutely no impact.
>
>Thanks for the suggestion. I'll do that.
>You are right it wil have no impact on the solution.
>
>Arie.
>

Nor the infringement. See: Festo Corp. v. ShoketsuKinzoku Kogyo Kabushiki Co. Ltd. et al., Supreme Court decision, May, 2003.

73,
Chip N1IR

985. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 14:22:12 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2arkkio7gsf59@corp.supernews.com>
Source record: 127024

As you are so fond of telling others, it is not my job to do the research for you. If you feel that this is not correct, may I suggest that you include it in your latest threats to sue..

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Fractenna" <fractenna@aol.com> wrote in message
news:20030115085930.04849.00000003@mb-cg.aol.com...
> >A search of this newsgroup will show that posts from the Fractenna sight
> >lamented the fact that people on this newsgroup caused him to lose his
job
> >at the school.
> >
>
> That is not correct. Please cite or retract.
>
> 73,
> Chip N1IR

986. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 14:22:47 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b03qrp$lhhmh$1@ID-175933.news.dfncis.de>
Source record: 127025

Measuring the heat generated in a resistive termination always will lead directly to the total RMS power dissipated there, regardless of the number/phases/frequencies/waveshapes of the RF sources applied.

Any "wattmeter" reading depending on probed samples of EM fields is subject (and likely) to have more error.

RF

> One of the points of the brainteaser exercise was to demonstrate that scalar
> power readings from a wattmeter reading don't provide any insight into how
> waves combine. Superposition of voltages and currents tell the correct
> story of wave combination and the resulting power in the source impedance.
> Scalar power readings do not.
>
> In the simple case of a single source and a single load, the difference in
> forward and rearward power readings in a transmission line will tell us the
> net power delivered to the load. Even this is only true if the Zo of the
> line is a pure resistance. If the Zo of the line is complex, the wattmeter
> readings are useless in terms of providing an indication of power delivery
> to the load.

987. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 14:30:59 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2as52f973t3f8@corp.supernews.com>
Source record: 127026

And for the rest of the group I include the following from the musty dusty archives for your amusement:

"Fractenna" <fractenna@aol.com> wrote in message
news:20001028091202.01754.00000925@ng-cd1.aol.com...
> Congratulations you turkeys. You've taken someone whose done something positive
> and through jeaolusy and hatred changed his life. You are to be pitied.
>
> Nathan Cohen has his position terminated on 1 Nov.
>
> Now there must be assumed massive legal problems for those who have defamed
> and injured this person. I don't think you have any idea what kind of villany
> you have done. But I bet you will find out.
>
> Phil
> de N1ZKT
>

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Fred Hambrecht Sr." <w4jle@charter.net> wrote in message
news:v2arkkio7gsf59@corp.supernews.com...
> As you are so fond of telling others, it is not my job to do the research
> for you. If you feel that this is not correct, may I suggest that you
> include it in your latest threats to sue..
>
> --
> For Admiral Poindexter's folks:
> Bomb, anthrax, attack, acid, hijack, skyjack
> sniper, plutonium, nuclear, Big Mac, jihad
> Democrats, terror, Howdy Doody, Oprah
>
> "Those that sacrifice freedom for security deserve neither"
>
>
> "Fractenna" <fractenna@aol.com> wrote in message

> news:20030115085930.04849.00000003@mb-cg.aol.com...
> > >A search of this newsgroup will show that posts from the Fractenna
sight
> > >lamented the fact that people on this newsgroup caused him to lose his
> job
> > >at the school.
> > >
> >
> > That is not correct. Please cite or retract.
> >
> > 73,
> > Chip N1IR
>
>

988. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 14:31:49 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <pheV9.43121$p_6.3711163@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127027

"Fractenna" <fractenna@aol.com> wrote in message
news:20030115090347.04849.00000004@mb-cg.aol.com...
>

Chip,

Hope things are well.

Patent 5719794 is Altshuler's and Linden's.

A lot of other people people do GA antenna design, the SUPERNEC guys (they charge $$), Mittra, UCLA, even FAS.

Do you think they are infringing, or how do they get around it?

Steve

989. Re: Quad diamond or squared ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 14:34:23 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E257163.80807@tampabay.rr.com>
Source record: 127028

well i believe that the differnce is polarization if its feed in the
corner diamond shaped its horizontal and if its feed on the side or
square shaped its vertical
all depends what band your wanting the quad for and what mode
generally FM mode is vertical and sideband is horizontal

zig2 wrote:
> Good morning,
>
> Can you explain me really differences in performances enters the diamond
> version
> and squared of a cubical quad (3 elements monoband 28 Mhz) ?
>
> Thank you
>
> GG
>
>

990. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 14:52:09 UTC
From: fractenna@aol.com
Message-ID: <20030115095209.04883.00000001@mb-cg.aol.com>
Source record: 127029

>
>"Fractenna" <fractenna@aol.com> wrote in message
>news:20030115090347.04849.00000004@mb-cg.aol.com...
>>
>
>Chip,
>
>Hope things are well.
>
>Patent 5719794 is Altshuler's and Linden's.
>
>A lot of other people people do GA antenna design, the SUPERNEC guys (they
>charge $$), Mittra, UCLA, even FAS.
>
>Do you think they are infringing, or how do they get around it?
>
>Steve
>

I can't speak for others.

There is no question that our process here is not prior art, as defined by
5719794. We were, and are, very careful to not infringe.

Thanks for asking though.

73,
Chip N1IR

991. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 14:54:47 UTC
From: fractenna@aol.com
Message-ID: <20030115095447.04883.00000002@mb-cg.aol.com>
Source record: 127030

>> Nathan Cohen has his position terminated on 1 Nov.
>>

Heheheh! That's the CEO position! That was two CEO's ago:-) I've got a great CEO here now, and I sure don't want that job again:-)

Get your facts right Fred. This has nothing to do with an "school" job.

73,
Chip N1IR

992. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:12:39 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2auj73b8ip461@corp.supernews.com>
Source record: 127031

I can post a few more that will show that your incorrect in your
understanding of the facts. Let me know if you feel it is necessary.

I will make you a deal, knock off all the suing crap on the newsgroups and I
will leave you alone.

If you persist, I intend to inform every new member of the group, that you
attempt to bully, what a joke you are. The choice is yours..

I take no pleasure in kicking sand back in a bully's face, but neither will
I allow it to be kicked in mine.

Bullys will not be tolerated.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Fractenna" <fractenna@aol.com> wrote in message
news:20030115095447.04883.00000002@mb-cg.aol.com...
> >> Nathan Cohen has his position terminated on 1 Nov.
> >>
>
> Heheheh! That's the CEO position! That was two CEO's ago:-) I've got a
great
> CEO here now, and I sure don't want that job again:-)
>
> Get your facts right Fred. This has nothing to do with an "school" job.
>
> 73,
> Chip N1IR

993. Re: Quad diamond or squared ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:14:16 UTC
From: k3bu@aol.com
Message-ID: <20030115101416.04918.00000001@mb-cg.aol.com>
Source record: 127032

>
>Can you explain me really differences in performances enters the diamond
>version
>and squared of a cubical quad (3 elements monoband 28 Mhz) ?
>
>Thank you
>
>GG
>
>
>

Electrically, there is not much difference if any.
Mechanically, you can use diamond shape to advantage by having top spreader strong, basically supporting rest of the symmetrical structure with sloping wires helping water to run off before it freezes.

Yuri, K3BU

994. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:27:31 UTC
From: k3bu@aol.com
Message-ID: <20030115102731.04918.00000002@mb-cg.aol.com>
Source record: 127033

>
>More people who would like to get rid of 4nec2 ? Please let me know. I
>certainly have no commercial intentions, so it's easy for me to remove
>this from the web.
>
>It's a pitty I am not commercial, because I think all this would be
>great advertisement, and all for free...
>

Hi Arie,
No way, keep it up! We are trying to get rid of idiot on this NG, you stay here Arie, we welcome and value your unselfish contribution to what we discuss and do here. Unfortunately there are some pathetic individuals who spoil it for others, but we will shine the light on them.
You are seeing just beginning of another chapter of his crap (that's polite for shit :-), wait when he brings Phil out of closet and all the other personalities that posses him.

Keep it up and ignore the chirping!

Yuri

995. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:33:03 UTC
From: fractenna@aol.com
Message-ID: <20030115103303.14490.00000003@mb-fc.aol.com>
Source record: 127034

>
>I can post a few more that will show that your incorrect in your
>understanding of the facts. Let me know if you feel it is necessary.
>
>I will make you a deal, knock off all the suing crap on the newsgroups and I
>will leave you alone.
>
>If you persist, I intend to inform every new member of the group, that you
>attempt to bully, what a joke you are. The choice is yours..
>
>I take no pleasure in kicking sand back in a bully's face, but neither will
>I allow it to be kicked in mine.
>
>Bullys will not be tolerated.
>
>--
>For Admiral Poindexter's folks:
>Bomb, anthrax, attack, acid, hijack, skyjack
>sniper, plutonium, nuclear, Big Mac, jihad
>Democrats, terror, Howdy Doody, Oprah
>
> "Those that sacrifice freedom for security deserve neither"
>
>
>"Fractenna" <fractenna@aol.com> wrote in message
>news:20030115095447.04883.00000002@mb-cg.aol.com...
>> >> Nathan Cohen has his position terminated on 1 Nov.
>> >>
>>
>> Heheheh! That's the CEO position! That was two CEO's ago:-) I've got a
>great
>> CEO here now, and I sure don't want that job again:-)
>>
>> Get your facts right Fred. This has nothing to do with an "school" job.
>>
>> 73,
>> Chip N1IR
>

I cannot be responsible for your behavior and most certainly have not, and am not, encouraging it.

I have been clear on the matter of defamation and have proffered a remedy by January 30, 2003.

73,
Chip N1IR

996. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:33:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E257F5F.5070005@ieee.org>
Source record: 127035

Norm wrote:
> I've reciently been considering ripping down my home built G5RV and
> building a new antenna called the 40 Meter Zepp. You can find
> additional information about this particuar zip by going to
> www.qrpworld.com/40_meter_zepp_antenna.htm

Technically, an Extended Double Zepp is a single band antenna. If it is used on other bands, it is no longer an EDZ. The EDZ is simply two 5/8WL monopoles configured as a dipole of about 1.25WL length. Anything that is 1.25WL long, is a single band antenna. If I remember right, a 0.2WL matching section of 450 ohm ladder-line will match the antenna pretty well on its intended single band frequency.

> I do have a few questions regarding the information in the article.
> First off, the author states that the 450 Ohm Ladder Line length is
> not critical. I wonder about that. When using Ladder Line, Isn't the
> feedline is actually part of the antenna and shouldn't it be taken
> into consideration? I would think there are several feed line lengths
> that would work well for this antenna and others that should be
> avoided. For those of you who may have an antenna modeling program,
> could someone model this thing and see what feel line lengths would
> give the best results? It would be nice to see what the gain and
> pattern would be for the 80-10 meter bands.

The free demo version of EZNEC available from http://www.eznec.com would probably answer your questions. Reg Edwards also has free software at http://www.g4fgq.com that will probably answer a lot of your questions.

> I'd really like to use it for 80-10 Meters. Has anyone ever tried
> this antenna? Results?

It is a lot like my no-tuner 130 ft. dipole that I describe on my web page. There's a BASIC program there that will tell you the optimum lengths of feedline for that length of dipole. Here are the results of running that BASIC program for a 178ft dipole fed with 450 ohm ladder-line. Optimum lengths of feedline per band are:

3.8 MHz - 75 ft, 7.2 MHz - 79 ft, 10.125 MHz - 67 ft,
14.2 MHz - 52 ft or 83 ft, 18.14 MHz - 77 ft, 21.3 MHz - 72 ft,
24.95 MHz - 64 ft or 82 ft, 28.4 MHz - 66 ft or 82 ft.

Note that where two lengths are given, they are 1/2WL different in length.

You can see that one length might work pretty well on a number of bands but there is no one length that is optimum for all bands.

Build you a ladder-line length selector like the one on my web
page and you probably won't need a tuner on most bands.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

997. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:36:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25800F.4020006@ieee.org>
Source record: 127036

'Doc wrote:
> Norm, Ought to work well on 40 meters and above, not so
> well on 80 meters.

Doc, A 40m EDZ is 5/8WL long on 80m. There's absolutely
nothing wrong with that length. It will work just fine
on 80m and even exhibit a bit of gain over a 1/2WL dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

998. Re: Looking for an unusual J-Pole design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:39:36 UTC
From: Grant Cunningham <kd7jnw@arrl.net>
Message-ID: <kd7jnw-334F70.07393515012003@netnews.attbi.com>
Source record: 127037

In article <2842-3E24B829-778@storefull-2315.public.lawson.webtv.net>,
richardharrison@webtv.net (Richard Harrison) wrote:

> Search on "Cactus J-Pole". I got 15 hits and most were relevant.
>
> Best regards, Richard Harrison, KB5WZI

Thanks, but the Copper Cactus doesn't fit the description I gave. For
those who are interested, someone was able to provide me with the
correct URL:

http://www.antennex.com/hws/ws1002/sperrtof.pdf

It's called a "Sperrtof", sometimes known as a "Sleeve Dipole" or
"Sleeve J-Pole." Off to the workshop!

--
-=[grant]=- KD7JNW

"Where there are no men, strive to be a man" -- Hillel
==
"A human being should be able to change a diaper, plan an invasion, butcher an animal, conn
a ship, design a building, write a sonnet, balance accounts, build a wall, set a bone,
comfort the dying, take orders, give orders, cooperate, act alone, solve equations, analyze
a new problem, pitch manure, program a computer, cook a tasty meal, fight efficiently, die
gallantly. Specialization is for insects." -- Heinlein
==
"If everyone is thinking alike, then somebody isn't thinking" -- Patton

999. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:40:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2580F6.5000704@ieee.org>
Source record: 127038

Richard Clark wrote:
> On Tue, 14 Jan 2003 19:29:47 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
>>Can we say the two waves in the first paragraph are not perfectly coherent?
>
> resist... the... urge... Cohehehеherent? ;-)

Help me out here, Richard. My vocabulary is sadly lacking.
What words are needed to describe two waves of the same
frequency and phase existing independently within a
transmission line Vs two waves of the same frequency and
phase that merge into a single integrated wave?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1000. Re: open letter to an internet would be bully

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:42:42 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E25811D.1010905@attbi.com>
Source record: 127039

Gentlemen, Is it time to call this quits?

Baiting and attacking are not in the common interest of radio, amateur radio.

Deacon Dave, W1MCE

Fred Hambrecht Sr. wrote:
> Open letter to Chip N1IR, Nathan Cohen Ph.D. et al.
>
> I have watched for the last number of years you playing the
> Internet bully on the news groups. I have watched as
> You have attempted to squelch the speech of others
> With your treats of lawsuits, letters to employers, And
> endless childish practices such as contacting internet
> providers.
>
> I am calling you out Mr. Bully, I think you are
> pond scum that normal people should never
> Have to deal with.
>
> You have threatened me before with hollow threats
> And I doubt that you are anything but a bag of wind.
>
> This is your opportunity to prove me wrong,
> Bring on your lawyers and your Mommy. Be
> Aware I have collected your rants ever since
> Your first threats several years ago and look forward
> To presenting them to a jury of your peers.
>
> You may have you attorneys serve me at the address below.
> Be advised that no correspondence with me will be considered
> confidential and will be posted on a new internet site I will create as well
> as all applicable newsgroups.
>
> Govern yourself accordingly
>
> Fred Hambrecht Sr. W4JLE
> 2029 Stone Marten Dr.
> Beaufort, SC 29902
>
>

1001. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:45:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E258203.5090509@ieee.org>
Source record: 127041

Bruce wrote:
> I have each leg of my antenna cut to 89 feet, and the
> length of the feedline to 80 feet.

Hi Bruce, see my posting on this subject. That is a good
choice of a compromise feedline length.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1002. Re: Grounding HTX-202 to Car ? HELP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:45:08 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <v2b0g0o959k4bd@corp.supernews.com>
Source record: 127040

"Rickie / KC2KQQ" <rickiev@hotmail.com> wrote in message
news:b03fid$l31sb$1@ID-89515.news.dfncis.de...
> Yeah, I had the squelch on, when someone transmit, I hear scratch popping
> noise through the speaker of the HT, but when I'm outside the car, its
clear
> and nice. Only happen when I'm inside the car.
>
> Rickie
>
With the car running I assume. Try it without the engine running and see if
the noise
goes away. If it does it could be a problem with your generator (whining
noise) or
with the ignition system (popping frying noise) I'd look for a bad plug or
plug wire first.

--
'73' From KB9TMP
"The secret of life is honesty and fair dealing,
if you can fake that, you've got it made."
-Groucho Marx

1003. Re: Ringo Ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 15:56:01 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E25843C.80709@attbi.com>
Source record: 127042

I believe it is two 5/8 wavelengths end fed collinear. The hairpin
provides phase matching and does not contribute to the radiation.

Deacon Dave, W1MCE

Claude Frantz wrote:
> What is the theory behind this antenna ?

1004. Re: Quad diamond or squared ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 16:00:51 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <yy2dnTqaJvU1GLijXTWc2Q@comcast.com>
Source record: 127043

"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030115101416.04918.00000001@mb-cg.aol.com...
> >
> >Can you explain me really differences in performances enters the diamond
> >version
> >and squared of a cubical quad (3 elements monoband 28 Mhz) ?
> >
> >Thank you
> >
> >GG
> >
> >
> >
>
> Electrically, there is not much difference if any.
> Mechanically, you can use diamond shape to advantage by having top
spreader
> strong, basically supporting rest of the symmetrical structure with
sloping
> wires helping water to run off before it freezes.
>
> Yuri, K3BU

Also, the lower spreader will serve as a support for the feedline. However, with the boom at the same height, the bottom of a diamond will be closer to ground and any tower guy wires.

Tam/WB2TT

1005. Re: Grounding HTX-202 to Car ? HELP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 16:08:53 UTC
From: Rickie / KC2KQQ <rickiev@hotmail.com>
Message-ID: <b040r5$la5ii$1@ID-89515.news.dfncis.de>
Source record: 127044

Thanks! I will look at the spark plugs and wire first..

Rickie / KC2KQQ

> > Yeah, I had the squelch on, when someone transmit, I hear scratch
popping
> > noise through the speaker of the HT, but when I'm outside the car, its
> clear and nice. Only happen when I'm inside the car.
> >
> > Rickie
> >

> With the car running I assume. Try it without the engine running and see
if
> the noise
> goes away. If it does it could be a problem with your generator (whining
> noise) or
> with the ignition system (popping frying noise) I'd look for a bad plug or
> plug wire first.

1006. Antenna Cable Good ?!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 16:10:09 UTC
From: Rickie / KC2KQQ <rickiev@hotmail.com>
Message-ID: <b040ti$l84ks$1@ID-89515.news.dfncis.de>
Source record: 127045

I will be installing a j-pole on the roof. Which cable would be best to run down the building ? It would be about a 3 to 4 floor drop.

Rickie / KC2KQQ

1007. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 16:19:46 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E258A22.9060605@ieee.org>
Source record: 127046

VE9SRB wrote:
> The wattmeter readings fool us in terms of power delievery to each source
> impedance when 2 sources (and reflections) are present. Recognize that a
> wattmeter in the transmission line only tells us the total scalar power
> traveling towards source A and the total scalar power traveling towards
> source B. Nothing more, nothing less.

Your solution must be right. That's what I got after correcting the phase
of the left-traveling source current. Thanks for that tip.

Are there any words to describe two waves of the same frequency and phase
traveling in the same transmission line Vs two waves merging into a single
integrated wave? My vocabulary is drawing a blank on that differentiation.
In both cases, the waves superpose/interfere/add-vectorially but in one
case the superposed waves carry more energy than in the other case. What
are the words to differentiate between those two different conditions?

> All that the law of conservation of power requires is that the
> total power delivered to the system be equal to the total power dissipated
> by the system.

That's your lip service story and you're sticking to it. That is ***NOT***
all that is required by the conservation of energy principle, Steve. The
conservation of energy principle requires that ***ALL*** energy must be conserved,
not just total steady-state energy. The energy in each electron and photon must
be conserved. Energy simply cannot disappear from your "wave cancellation
of rearward-traveling waves 1 and 2" and magically reappear later just when
you need it to satisfy the energy requirements of your superposing.

The energy is there all the time contained in the interference process. Wave
cancellation squeezes the energy balloon on one side of the match point so the
energy balloon expands an equal amount on the other side. Energy migrates from
one side of the impedance discontinuity to the other as destructive interference
occurs on one side and an equal magnitude of constructive interference occurs on
the other side. That's the laws of physics in action.

In your QEX article, if you had only treated the left hand side of the
match point with the same respect and rigor with which you treated the
right side, your article would have been the defining par excellence
publication on the subject. When you neglected the left hand side of
the match point, you lost touch with reality, made a lot of false
statements, and now you are forced to try to rationalize your falsehoods.

Your position is impossible to defend. If ***ZERO*** reflected power
reaches the source in a system with reflections, it is impossible to
prove that reflected energy has gone anywhere except back toward the

load. There is simply no other place for it to go.

If the energy in your "rearward-traveling waves 1 and 2" doesn't continue traveling rearward, where does it go? Sideways? Into a black hole? Stands still? Get real!
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1008. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 16:23:32 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2b2o5uofr9b9@corp.supernews.com>
Source record: 127047

I notice you did not challenge me to provide more messages that shows you are incorrect in your facts. Simply took your standard cowardly way out with the lawsuit threats.

Your ultimatums and phony dates phase me not in the least. As I stated before, if you feel you need to sue get it on!

By the way would you care to guess how many times you have used the words sue and attorney since your appearance on the internet?

"Fractenna" <fractenna@aol.com> wrote in message
news:20030115103303.14490.00000003@mb-fc.aol.com...
> >
> >I can post a few more that will show that your incorrect in your
> >understanding of the facts. Let me know if you feel it is necessary.
> >
> >I will make you a deal, knock off all the suing crap on the newsgroups
and I
> >will leave you alone.
> >
> >If you persist, I intend to inform every new member of the group, that
you
> >attempt to bully, what a joke you are. The choice is yours..
> >
> >I take no pleasure in kicking sand back in a bully's face, but neither
will
> >I allow it to be kicked in mine.
> >
> >Bullys will not be tolerated.
> >
> >--
> >For Admiral Poindexter's folks:
> >Bomb, anthrax, attack, acid, hijack, skyjack
> >sniper, plutonium, nuclear, Big Mac, jihad
> >Democrats, terror, Howdy Doody, Oprah
> >
> > "Those that sacrifice freedom for security deserve neither"
> >
> >
> >"Fractenna" <fractenna@aol.com> wrote in message
> >news:20030115095447.04883.00000002@mb-cg.aol.com...
> >> >> Nathan Cohen has his position terminated on 1 Nov.
> >> >>
> >>
> >> Heheheh! That's the CEO position! That was two CEO's ago:-) I've got a

> >great
> >> CEO here now, and I sure don't want that job again:-)
> >>
> >> Get your facts right Fred. This has nothing to do with an "school" job.
> >>
> >> 73,
> >> Chip N1IR
> >
>
> I cannot be responsible for your behavior and most certainly have not, and
am
> not, encouraging it.
>
> I have been clear on the matter of defamation and have proffered a remedy
by
> January 30, 2003.
>
> 73,
> Chip N1IR

1009. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 16:23:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E258B07.3000601@ieee.org>
Source record: 127048

Richard Fry wrote:
> Measuring the heat generated in a resistive termination always will lead
> directly to the total RMS power dissipated there, regardless of the
> number/phases/frequencies/waveshapes of the RF sources applied.

My point was that there is a difference between two waves traveling
in the same transmission line and two waves merging into a single
integrated wave. What are the words used to differentiate between
those two events?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1010. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 16:53:22 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <6mgV9.112161$hK4.9128610@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127049

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E258A22.9060605@ieee.org...
> VE9SRB wrote:
>
> That's your lip service story and you're sticking to it. That is ***NOT***
> all that is required by the conservation of energy principle, Steve. The
> conservation of energy principle requires that ***ALL*** energy must be
conserved,
> not just total steady-state energy. The energy in each electron and photon
must
> be conserved. Energy simply cannot disappear from your "wave cancellation
> of rearward-traveling waves 1 and 2" and magically reappear later just
when
> you need it to satisfy the energy requirements of your superposing.
>
> The energy is there all the time contained in the interference process.
Wave
> cancellation squeezes the energy balloon on one side of the match point so
the
> energy balloon expands an equal amount on the other side. Energy migrates
from
> one side of the impedance discontinuity to the other as destructive
interference
> occurs on one side and an equal magnitude of constructive interference
occurs on
> the other side. That's the laws of physics in action.
>
> In your QEX article, if you had only treated the left hand side of the
> match point with the same respect and rigor with which you treated the
> right side, your article would have been the defining par excellence
> publication on the subject. When you neglected the left hand side of
> the match point, you lost touch with reality, made a lot of false
> statements, and now you are forced to try to rationalize your falsehoods.
>
> Your position is impossible to defend. If ***ZERO*** reflected power
> reaches the source in a system with reflections, it is impossible to
> prove that reflected energy has gone anywhere except back toward the
> load. There is simply no other place for it to go.
>
> If the energy in your "rearward-traveling waves 1 and 2" doesn't continue
> traveling rearward, where does it go? Sideways? Into a black hole? Stands
> still? Get real!
> --

Cecil,

Good to see you back in usual form. This thread has nothing to do with the QEX article or the other transmission line examples we've been discussing - the boundary conditions are different. If you're going to keep this ranting up, I won't even bother to respond to your other posts. Everytime I make a statement you go off on this tangent.

The law of conservation of power requires that the total power delivered to the system be equal to the total power dissipated in the system. It does not apply in the way you would like it to in the superposition of multiple powers in a single load.

In the QEX brainteaser, superposition of voltage and current is the only way to arrive at the correct soultion. Using individual scalar powers to determine the forward or rearward power in the line does not work. Using the scalar power readings of the wattmeters to determine power dissipation in the sources does not work. Power superposition simply does not work.

Steve VE9SRB

1011. Re: big dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 17:27:30 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <X4ucnR_62_9lBLijXTWcow@comcast.com>
Source record: 127050

Lloyd,

This sounds like an interesting thought. So, I ran EZNEC on it. I entered is as a squared off U that is 300 feet wide and and 350 feet tall. This is what I got on the various bands:

80m - Kind of useless, impedance is about 2000 ohms. No better than inv V.
40m - Starting to work, gain is about 9dbi and impedance around 400 Ohms resistive and 200 reactive.
20 - 10 m, Works like gangbusters with gain over 11 dbi, impedance same order of magnitude as on 40.

Looking at it from the top, the pattern looks like a mangled starfish, with the two main lobes to either side of open end of the U. I think you would want a 9:1 balun at the antenna, and a simple tuner in the shack to get rid of some of the reactance. You could also use open wire line, a 4:1 balun, and a short piece of coax going to an antenna tuner. I only did one frequency on each band. This is over real ground.

With all this space, you might want to consider a rhombic. I might take a look at that with 1000 feet of wire @ 60 FEET.

Tam/WB2TT
"Lloyd Guyot" <lguyot@chartermi.net> wrote in message
news:v29f2ermb7sc52@corp.supernews.com...
> Just for fun I am erecting a coax center fed U shaped dipole 1000' long
> (500' each leg) suspended in trees aprox. 60' high. The ends are aprox
300'
> apart. What type of performance should I expect? Is a 1:1 or 4:1 balun
> required? Thanks for educating this beginning antenna enthusiast.
>
>
>

1012. Re: Antenna Cable Good ?!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 17:35:55 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <jxOdnUd2TMRyBrijXTWc3A@comcast.com>
Source record: 127051

"Rickie / KC2KQQ" <rickiev@hotmail.com> wrote in message
news:b040ti$l84ks$1@ID-89515.news.dfncis.de...
> I will be installing a j-pole on the roof. Which cable would be best to
run
> down the building ? It would be about a 3 to 4 floor drop.
>
> Rickie / KC2KQQ

At VHF/UHF, Times Microwave LMR400. Available from AES, HRO, and
Cablexperts.

Tam/WB2TT

1013. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 17:52:50 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b0475k$laovr$1@ID-175933.news.dfncis.de>
Source record: 127052

However I was not attempting to respond to your point -- but observing that regardless of the reality of, and/or who wins your argument, the true power in the load is unlikely to be measured accurately by "in-line wattmeters."

RF

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E258B07.3000601@ieee.org...
> Richard Fry wrote:
> > Measuring the heat generated in a resistive termination always will lead
> > directly to the total RMS power dissipated there, regardless of the
> > number/phases/frequencies/waveshapes of the RF sources applied.
>
> My point was that there is a difference between two waves traveling
> in the same transmission line and two waves merging into a single
> integrated wave. What are the words used to differentiate between
> those two events?

1014. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 18:04:45 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <v2b8lvdkvlje8e@corp.supernews.com>
Source record: 127053

<4nec2@gmx.net> wrote in message
> More people who would like to get rid of 4nec2 ? Please let me know. I
> certainly have no commercial intentions, so it's easy for me to remove
> this from the web.

NO. Do stay and continue your significant contribution.

Regards,
Jim - ku5s

1015. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 18:05:09 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <pphV9.112250$hK4.9135365@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127054

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E2580F6.5000704@ieee.org...
>>
> Help me out here, Richard. My vocabulary is sadly lacking.
> What words are needed to describe two waves of the same
> frequency and phase existing independently within a
> transmission line Vs two waves of the same frequency and
> phase that merge into a single integrated wave?
> --

How can there be any difference if the two waves are at the same frequency
and phase? What would cause them to not look like a single combined wave?

Steve

1016. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 18:12:11 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <%vhV9.112261$hK4.9134471@bgtnsc05-news.ops.worldnet.att.net>
Source record: 127055

<4nec2@gmx.net> wrote in message
news:ee90361b.0301150528.63370e3b@posting.google.com...
>
> More people who would like to get rid of 4nec2 ? Please let me know. I
> certainly have no commercial intentions, so it's easy for me to remove
> this from the web.
>

Arie,

Why would you be concerned about this issue? Is the person raising a
concern associated with the patent in any way? No.

Maybe you've done something different and are not infringing on the patent.
Maybe you are. Maybe the patent holders don't even care. They don't seem
to be concerned about anyone else that using genetic algorithims in antenna
design. Some, like the SUPERNEC guys charge $ for their NEC GA program.

This issue is not for a third party to decide one way or the other.

Steve VE9SRB

1017. Re: Looking for an unusual J-Pole design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 18:29:06 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e25a045.417842687@news.galilei.com>
Source record: 127056

Hi Grant

It was on my website but I pulled it last fall because of too many
e-mails looking for the particular basal piece I had used.
Also large diameter copper pipe prices are now outta sight for the
short piece you do need for the project of my design.

I have placed a link at the end of the page for the Sperrtopf antenna,
it may be the page you have been looking for too. It's design is a
little more complicated than mine was, but it can be easily improvised
to what you have on hand. He used 3/8 copper for the vertical and
1-1/4 copper for the sleeve. You'll have a problem finding 3/8 in
hard copper here. Use 1/2 inch copper tube for the vertical and 1-1/2
inch copper for the sleeve and it will work just fine.

The original piece that I used to join the two pipes was a brass
flange type union, but the company that made it, changed their design,
so the part number indicated would no longer fit with the tubing used
in the project.
I then switched to a 1-1/2 x 1/2 copper reducer with a hole drilled in
its side for the coax to pass through, it was used upside down and
inside out, so to speak. The 1-1/2 inch part of the reducer fit
inside of the 1-1/2 inch pipe and the 1/2 inch pipe fit inside the
reducer at that end and allowed to slide through it about a foot to
give a support point for the mast.
It seems that this particular type of reducer is hard to get, except
through major plumbing parts suppliers.

I was working on one that used low cost aluminum flashing rolled into
a cylinder and pop riveted together but lost my time to mess with it.

The formula is the same for J-Poles as it is for dipoles, but don't
forget the k-factor in your calculations.

Link to the Sperrtopf antenna
http://www.antennex.com/hws/ws1002/sperrtof.pdf

TTUL
Gary

1018. Re: Antenna Cable Good ?!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 18:34:52 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E25A9CC.5199DA41@cwis.net>
Source record: 127057

Rickie,
The 'best' cable would be one that has low loss
at the frequency of use and that 'fits' your budget.
There is no ~single~ 'best' cable, there are a bunch
of them...
'Doc

1019. Re: big dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:05:40 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <PqOdnar6JbNkLbijXTWcqw@comcast.com>
Source record: 127058

Lloyd,

I ran the numbers for a rhombic with near your dimensions. This thing has BIG TIME gain. Used more or less ARRL values of 380 feet long and 194 feet wide in the middle. (Each side is 211 feet). Height is 60'. At the corner opposite the feedpoint the wires are brought to within 1 foot of each other, but not connected or terminated. Here is the poop:

FREQ Gain-DBI IMPEDANCE

7.3 12.6 300 - j740
14.2 17.46 600 -j900
21.3 19.63 350 -j500
28.4 17.15 300 - j250

Looks like a candidate for open wire line and a 4:1 transformer. F/B is about 2 -3 dB. This will not do you any good, unless it is pointed in your favorite direction, as the beamwidth is quite narrow. Not sure why the gain drops off at 28.4. I double checked the numbers.

Tam/WB2TT

1020. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:12:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <tf6b2vkv4ak1m48ecjn5qu3tik7cqit059@4ax.com>
Source record: 127059

On 15 Jan 2003 10:01:28 GMT, fractenna@aol.com (Fractenna) wrote:
>On Wed, 15 Jan 2003 08:38:36 GMT, Richard Clark <kb7qhc@attbi.com> wrote:
>>Yo!
>>
>>I have NEVER received one jot of claims, demands, offers,
>>propositions, NOR missives from lawyers, jurists, authorities, street
>>crossing guards or heroes from the office of Homeland Scrutiny. Would
>>I be over specific to embellish this with to say "not one atom of
>>physical correspondence?" (some electrons were disturbed, but they
>>are always that way)
>>
>>Who would want to put me up in front of judge to reveal the gaps
>>between undisclosed prior art and recent patent applications? ;-)
>
>I often wonder if the folks who devised this newsgroup speculated that some
>participants would use the NG in this and other unsettling ways.
>
>Ham radio has been very good at policing itself, for the most part.

********** Policing follows **********

The following quotes are from an original topic heading a new thread
submitted from the same address that I am responding through here:
>From: Fractenna (fractenna@aol.com)
>Subject: 'Wakefield Killer' callsign?
>Newsgroups: rec.radio.amateur.antenna
>Date: 2000-12-28 09:06:41 PST
>
>I just talked with someone who said the Wakfield killer was a former ham with a
>KA1 callsign.
>

Not an isolated instance at all as that thread grew through leaps of a
perverted imagination that could only heap abuse on a member of our
community:
>From: Fractenna (fractenna@aol.com)
>Subject: Re: 'Wakefield Killer' callsign?
>Newsgroups: rec.radio.amateur.antenna
>Date: 2000-12-28 14:51:34 PST
>
>>Fractenna <fractenna@aol.com> wrote:
>>
>Uhhhh.. you say that Bernie Goetz and xxxxxx xxxxxxxx are both radio HAMS??
>What do you think the random chance of two rampage killers being hams would
>be?? 1 in 10,000? 1 in 1,000,000?

>
(I struck out the name with xxxxxxx to not perpetuate this monstrous
and vicious attack an innocent member of our community.)

Then that is not enough, draw in others to spread the insidious lies:
>From: Fractenna (fractenna@aol.com)
>Subject: Re: 'Wakefield Killer' callsign?
>Newsgroups: rec.radio.amateur.antenna
>Date: 2000-12-28 16:04:46 PST
>
>Rickie it just gets more befuddlin' .Can you je's say wat u mean? I thought we
>were talkin' 'bout this killer who lives about 20 miles from you.
>

This may have proven to be very prophetic (with an ironic twist):
>From: Fractenna (fractenna@aol.com)
>Subject: Re: 'Wakefield Killer' callsign?
>Newsgroups: rec.radio.amateur.antenna
>Date: 2000-12-29 13:28:56 PST
>
>FYI...in case anyone wonders about why the new year brings legal issues, see
>for yourself.
>
>NC

Within a month, this station went silent. My guess is that the
prophecy kicked in. However, that was in the future and at the time,
the abuse was continued with full gusto and glee:
>From: Fractenna (fractenna@aol.com)
>Subject: KXXXX--'Wakefield Killer'?? Looks like it...
>Newsgroups: rec.radio.amateur.antenna
>Date: 2000-12-28 10:31:48 PST
>
>As suggested I did a name search on qrz.com. The Boston papers report this guy
>lives in xxxxxxx and sure enough there it is in the flesh as KXXXX.
>
>K-X-X-X-X
>
Our poster was concerned no one would read the call sign in the body
of the text and thus had to deliberately hi-light this entry (changed
by myself here and elsewhere to not perpetuate this monstrosity
visited upon a wholly uninvolved member of our community).

Our noble fellow who so valiantly champions the poor ham here, stated
in the past:
>From: Fractenna (fractenna@aol.com)
>Subject: Re: KXXXX as 'Wakefield Killer'---ARRL response??
>Newsgroups: rec.radio.amateur.antenna
>Date: 2000-12-28 14:55:31 PST
>
>Now you tell ME that this is just a random correlation.

>
>How many OTHER hams have been murderers??!
>
Apparently the source of this vicious lie is now polling the field for
more material.

>From: Fractenna (fractenna@aol.com)
>Subject: Re: KXXXX as 'Wakefield Killer'---ARRL response??
>Newsgroups: rec.radio.amateur.antenna
>Date: 2000-12-28 15:16:34 PST
>
>Its only a matter of time before they see a ham connection and that's why its
>best to do damage control for the fraternity.
>All I wanted to know was how and look where you guys took it. Bernard Goetz and
> god knows who else and how many ham killers. It's scary..
>
So, the presumption from this poster is that we are a nut fringe
community that breeds and harbors killers.

This vicious slander took place within a vigorous and concerted
campaign to spread the lies through aggressive postings and postures
that eventually bloomed to more than 100 entries. The few quotes
above (hardly their total) merely encompass the opening 27 hours of
that energetic campaign to smear the name of an innocent Ham.

In closing, let's re-visit that hypocritically manufactured sentiment
smugly offered as a response to my posting and my championing against
these scandals aggressively perpetuated upon fellow Hams:
>I often wonder if the folks who devised this newsgroup speculated that some
>participants would use the NG in this and other unsettling ways.
Many here already have comments offered to that very point (this one
being an example), and undoubtedly others have withheld their
astonished and angry responses to the filth offered from this source.

All editorialization aside, the fact remains that EVERY posting made
by this source to the effect of naming this innocent individual as a
murderer was completely wrong, was wholly manufactured through
original conjectures, speculations, and direct statements introduced
only by this source, and had absolutely no basis in reality.

********** Policing ends **********

73's
Richard Clark, KB7QHC

1021. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:15:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25B34F.7080502@ieee.org>
Source record: 127060

VE9SRB wrote:
> Good to see you back in usual form. This thread has nothing to do with the
> QEX article or the other transmission line examples we've been discussing -
> the boundary conditions are different.

Are you the netnews cop who keeps all threads on track? If so, you have
been failing miserably. :-) After a couple of days, virtually no posting
matches the subject line.

> Everytime I make a statement you go off on this tangent.

Every time you make a *false* statement, I try to correct it. If you want
to call that a "tangent", be my guest. BTW you, yourself, are often guilty
of such "tangents". Why is it OK for you and not for me?

> The law of conservation of power requires that the total power delivered to
> the system be equal to the total power dissipated in the system. It does
> not apply in the way you would like it to in the superposition of multiple
> powers in a single load.

You are the one superposing powers, Steve, not I. You're like the druggie
accusing the arresting cop of smelling like pot. I know better than to try
to superpose powers. Power is a scalar and cannot be superposed. You, OTOH,
with your 75W+8.33W=133.33W equation are *super-super*posing powers to
obtain more energy than exists. The correct equation is obviously
75W + 8.33W + 50W = 133.33W Isn't it strange that 50 joules/sec is the exact
amount of energy involved in your "rearward-traveling waves 1 and 2" undergoing
wave cancellation? Do you really think that is just a coincidence?

For over a year and a half, you have refused to answer my simple question.
Given that your "rearward-traveling waves 1 and 2" undergo wave cancellation,
where do the energy components (V^2/Z0) in those two waves go? I've given you
a multiple choice answer of all the possibilities but, after a year and a half,
you have yet to respond. Yet you *demand* that I answer your questions. Don't
you think that is a bit unfair? Here's that aging multiple choice question again:

In a matched system with reflections, the energy components in those two
canceled waves, i.e. your "rearward-traveling waves 1 and 2":

A. Disappear from the universe
B. Stand still and accumulate until the next Big Bang
C. Somehow disappear from the system but not from the universe
D. Reverse direction and head toward the load (Can you spell "re-reflected"?)

> In the QEX brainteaser, superposition of voltage and current is the only way
> to arrive at the correct soultion. Using individual scalar powers to
> determine the forward or rearward power in the line does not work.

It doesn't? Of course it does. It just doesn't give the wattmeter reading.
But SURPRISE!!! The wattmeter reading is WRONG! There's not really 225W there.
The two individual powers, 100W and 25W are dissipated in the Source A
impedance and, tah-dah, the total power dissipated in the Source A impedance
is 100W + 25W = 125W. That's not superposition, Steve. That's scalar addition,
you know the math/physics laws that SCALAR energy obeys?

> Power superposition simply does not work.

I've known that for 50 years. Power *super-super*position also does not
work. That's something that you have yet to learn.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1022. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:22:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2bd88rnb4flea@corp.supernews.com>
Source record: 127061

Note that the patent in question is owned by the U.S. government. See
the "Assignee" section of the patent.

Roy Lewallen, W7EL

VE9SRB wrote:
> <4nec2@gmx.net> wrote in message
> news:ee90361b.0301150528.63370e3b@posting.google.com...
>
>>More people who would like to get rid of 4nec2 ? Please let me know. I
>>certainly have no commercial intentions, so it's easy for me to remove
>>this from the web.
>>
>
>
> Arie,
>
> Why would you be concerned about this issue? Is the person raising a
> concern associated with the patent in any way? No.
>
> Maybe you've done something different and are not infringing on the patent.
> Maybe you are. Maybe the patent holders don't even care. They don't seem
> to be concerned about anyone else that using genetic algorithims in antenna
> design. Some, like the SUPERNEC guys charge $ for their NEC GA program.
>
> This issue is not for a third party to decide one way or the other.
>
> Steve VE9SRB
>
>
>

1023. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:26:15 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <n0db2vcpv7bu7p2af01fme65dh63otvqkn@4ax.com>
Source record: 127062

On Wed, 15 Jan 2003 09:40:38 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> On Tue, 14 Jan 2003 19:29:47 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>>Can we say the two waves in the first paragraph are not perfectly coherent?
>>
>> resist... the... urge... Cohehehеherent? ;-)
>
>Help me out here, Richard. My vocabulary is sadly lacking.
>What words are needed to describe two waves of the same
>frequency and phase existing independently within a
>transmission line Vs two waves of the same frequency and
>phase that merge into a single integrated wave?

Hi Cecil,

BS comes to mind, simply because you are trying to draw distinctions
between two non-alternatives.

73's
Richard Clark, KB7QHC

1024. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:37:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2be356ijrkpa2@corp.supernews.com>
Source record: 127063

Huh?

"Total voltage and current at any point of the line are found by adding the voltages and currents of the two waves at that point. For instance, voltage at the load is the sum of the voltage of the incident wave at the load and the voltage of the reflected wave at the load" -- Skilling, _Electric Transmission Lines_, p. 15. This is of course the phenomenon that produces standing waves.

Although the voltage and current at any point along a line is the sum of forward and reverse traveling voltage and current waves, I've found no reference to a "merged" or "integrated" wave. What is it? How do you make the waves on a transmission line "merge"?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
>
> My point was that there is a difference between two waves traveling
> in the same transmission line and two waves merging into a single
> integrated wave. What are the words used to differentiate between
> those two events?

1025. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:41:25 UTC
From: fractenna@aol.com
Message-ID: <20030115144125.04918.00000008@mb-cg.aol.com>
Source record: 127064

>
>Note that the patent in question is owned by the U.S. government. See
>the "Assignee" section of the patent.
>
>Roy Lewallen, W7EL
>
>VE9SRB wrote:
>> <4nec2@gmx.net> wrote in message
>> news:ee90361b.0301150528.63370e3b@posting.google.com...
>>
>>>More people who would like to get rid of 4nec2 ? Please let me know. I
>>>certainly have no commercial intentions, so it's easy for me to remove
>>>this from the web.
>>>
>>
>>
>> Arie,
>>
>> Why would you be concerned about this issue? Is the person raising a
>> concern associated with the patent in any way? No.
>>
>> Maybe you've done something different and are not infringing on the patent.
>> Maybe you are. Maybe the patent holders don't even care. They don't seem
>> to be concerned about anyone else that using genetic algorithims in antenna
>> design. Some, like the SUPERNEC guys charge $ for their NEC GA program.
>>
>> This issue is not for a third party to decide one way or the other.
>>
>> Steve VE9SRB
>>
>

Looks like Derek Linden has the exclusive license to the process. Good guy BTW.

See below.

73,
Chip N1IR

From www.lindenir.com :

"Linden Innovation Research Receives Exclusive License for Commercializing
Genetic Antennas
18 November 1999 -- On this date, the U. S. Air Force granted an exclusive
license to LIR to commercialize genetic antennas and the process that designs
them. Genetic antennas have been in existence since January, 1996, and have

been patented since February, 1998. Genetic antennas are designed entirely by optimization algorithm (which can be a genetic algorithm or some other iterative method), having no input to their theory of operation by a human engineer. They are not existing designs modified by optimization; they are wholly new antennas designed by computer.

The patent1 which protects this design process is owned by the U.S. Air Force, and covers both the process and all resulting antennas. Dr. Derek Linden, Chief Technical Officer of LIR, developed the genetic antenna design process and is co-inventor on the patent.

1 E.E. Altshuler and D.S. Linden. “A Process for the Design of Antennas using Genetic Algorithms.” Patent #5,719,794. "

1026. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:43:44 UTC
From: Bruce <abcincowbay@ns.sympatico.ca>
Message-ID: <3E25BA0F.94D5734D@ns.sympatico.ca>
Source record: 127065

I owe it all to empirical engineering ?
A.K.A. luck

OC_CAM's Razor wrote:

> Bruce wrote:
> > I have each leg of my antenna cut to 89 feet, and the
> > length of the feedline to 80 feet.
>
> Hi Bruce, see my posting on this subject. That is a good
> choice of a compromise feedline length.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1027. Re: Quad diamond or squared ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:44:15 UTC
From: sq4nr <sq4nr@wp.pl>
Message-ID: <b04dmselo1@news.tpi.pl>
Source record: 127066

Some people say that dimond configuration give 0,1-0,2 db more in the gain
than "Square" configuration....

73!
Greg SQ4NR
http://www.qsl.net/sq4nr

1028. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:54:49 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E25BC89.AEE21EF0@cwis.net>
Source record: 127067

Andy,
Just because I'm 'nosy', what is the 12.5 ohm load?
'Doc

1029. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:57:40 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25BD34.5070309@ieee.org>
Source record: 127069

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
>
>>Help me out here, Richard. My vocabulary is sadly lacking.
>>What words are needed to describe two waves of the same
>>frequency and phase existing independently within a
>>transmission line Vs two waves of the same frequency and
>>phase that merge into a single integrated wave?
>
> How can there be any difference if the two waves are at the same frequency
> and phase? What would cause them to not look like a single combined wave?

Good! We are getting close to a resolution. May the Best man win. Whoops,
that's ALWAYS you, isn't it? Darn, I don't have a chance. Maybe I should
say, may the man who is Moore of a man than the other win. How's that? :-)

They look like a single combined wave, Steve, but they are sometimes not
a single combined wave and instead, two independent waves occupying the
same transmission line . Let's see if I can show you the difference without
yet another complicated example. The first is our old favorite, case1:

100W----50 ohm-----x-------1/2WL 150 ohm--------50 ohm load

At the match point we have wave P1=75W and wave P2=8.33W superposing to
create a forward wave of 133.33W. The forward power wattmeter reads 133.33W
and 100W is delivered to the load. PLEASE NOTE THAT THE 100W DELIVERED TO
THE LOAD IS MORE THAN 75W + 8.33W. So energy *must* be supplied from somewhere
else to satisfy the load energy. That is what makes it different from the
following.

The second is a rearranged version of the QEX brainteaser.

75W Source A-------1WL 50 ohm----------33.33W Source B (50 ohms)
(150 ohms)

I hope I am correct about the phases and I hope you agree that a wattmeter
reading total forward power to the right will read 133.33W just as it does
in the above case1. Yet, in this case2, only 83.33W is delivered to the load,
different from above. PLEASE NOTE THAT THE 83.33W DELIVERED TO THE LOAD IS
EQUAL TO 75W + 8.33W, the scalar sum. That tells us that these two waves have
remained independent of each other and have not merged into one integrated wave.
That's what makes it different from the case1. No additional energy is needed
to satisfy the load energy in case2. See the difference? The difference is key
to my conservation of energy argument. That my vocabulary lacks the words to
describe the difference is why I have had trouble describing it. Are there words
to differentiate between the two cases?

The superposed waves *appear* to be identical in both cases but the power delivered to the load indicates that they are NOT identical. This answers your question above.

Hint: In case2, there is no need for destructive interference to supply energy to the constructive interference because no additional energy is needed in case2. Case1 requires additional energy from somewhere. That "somewhere" is destructive interference from the source side of the match point, i.e. from your canceled "rearward-traveling waves 1 and 2".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1030. Re: Quad diamond or squared ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 19:59:06 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E25BD8A.282BCEAC@cwis.net>
Source record: 127068

zig2,
There really isn't much, if any, difference
in performance. There can be a difference in
mechnical considerations, one being easier to
support than the other.
'Doc

1031. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:07:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cfeb2vg7osck8b5isp03s2g46ubcrik2s5@4ax.com>
Source record: 127070

On Wed, 15 Jan 2003 13:31:37 -0000, "andy swiffin"
<a.l.swiffin@dundee.ac.uk> wrote:

>Hi,
>
>I'm fairly new to the mysteries of balun design so forgive me if this is
>obvious.
>
>I want to make a balun to match 50ohm coax to a 12.5 ohm balanced load. Can
>I just make a standard toroidal voltage balun (4:1) wired the other way
>round or do I have to do something clever?
>
>Cheers
>Andy
>GM8OEG
>

Hi Andy,

The urge to treat a transmission line transformer like a power transformer is compelling but wholly wrong. They are not transforming in the same sense. Some want to count turns and compute winding ratios - it doesn't work that way with BalUns.

You can reverse the same configuration of transmission lines in the BalUn to attempt to perform the reverse transform (that is 4:1 or 50:12 instead of 1:4 or 50:200); but the transmission lines need to have a characteristic Z of roughly 25 Ohms. The standard 1:4 BalUn uses 100 Ohm transmission lines.

This will meet an anticipated need for use at higher frequencies (which may be of no concern to you). A fall back valuation would be transmission lines pegged at the Zc of the load - which makes this task even more difficult.

For those confused by my statement of Zc for transmission lines (what transmission lines?); I would suggest that close study into the fundamentals is called for. In a nutshell, what appear to be power windings are paired lines wound on or inserted through a toroid. Those pairs are transmission lines NOT a primary or secondary winding. These pairs are in the form of twin lead (not always obvious except in the best of designs), twisted twin lead, coax, and flat twin leads (strips of metal with intervening dielectric). Because the currents are balanced in these transmission lines, they create no flux in the transformer core (it is not there for that purpose anyway), and hence no flux linkage that is the hallmark for power transformer operation

(BalUns and power transformers operate on wholly different principles).

The last mentioned form of transmission line, flat twin leads, are the model for low Z transmission line and what you should be paying attention to if you want to build the best for your application. I would offer that it should not impede your attempts to try something less elegant (which could easily work if your demands are not great).

73's
Richard Clark, KB7QHC

1032. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:07:48 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25BF94.50908@ieee.org>
Source record: 127071

Richard Clark wrote:
> BS comes to mind, simply because you are trying to draw distinctions
> between two non-alternatives.

Nope, this time I promise there really is a wolf there. :-)
Take a look at my latest response to Steve and see if you
understand the distinction. I hope it is just my Fuzzy
Libertarian Thinking that is at fault.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1033. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:12:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25C0C3.3020003@ieee.org>
Source record: 127072

Roy Lewallen wrote:
> Although the voltage and current at any point along a line is the sum of
> forward and reverse traveling voltage and current waves, I've found no
> reference to a "merged" or "integrated" wave. What is it? How do you
> make the waves on a transmission line "merge"?

I guess you would agree that we can take two independent waves of 75W
and 8.33W traveling side-by-side in a transmission line and dissipate
that 83.33W of power in a load. In this case, it doesn't matter if
the waves are coherent or not.

Steve takes two waves of 75W and 8.33W and superposes them into a
superwave that delivers 100W to the load. That's the difference.
More power is delivered to the load than exists in the two waves.
Please see my latest response to Steve.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1034. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:14:02 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25C10A.6030307@ieee.org>
Source record: 127073

Bruce wrote:
> I owe it all to empirical engineering ?
> A.K.A. luck

Aha, so you also have a EE degree. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1035. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:16:53 UTC
From: k3bu@aol.com
Message-ID: <20030115151653.04849.00000021@mb-cg.aol.com>
Source record: 127074

> Genetic antennas are designed entirely by
>optimization algorithm (which can be a genetic algorithm or some other
>iterative method), having no input to their theory of operation by a human
>engineer. They are not existing designs modified by optimization; they are
>wholly new antennas designed by computer.
>

Too stupid to see the difference. Oh well, must take PhDuh to do that.
So next thing from Freaktown: all antenna designs produced by computer are property of Freaktennaaa, any wire with kink or bent in it is Freaktal, covered by mumbo-jumbo patent and you all shall sees and deseased from using, mentioning or even looking at any antenna.

This is publik notease and his layers will kontaktink you.

Bada BUm

1036. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:23:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <degb2vc0sjbmsf7paace4qcm3m4gn22t4n@4ax.com>
Source record: 127075

On Wed, 15 Jan 2003 14:07:48 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> BS comes to mind, simply because you are trying to draw distinctions
>> between two non-alternatives.
>
>Nope, this time I promise there really is a wolf there. :-)
>Take a look at my latest response to Steve and see if you
>understand the distinction. I hope it is just my Fuzzy
>Libertarian Thinking that is at fault.

Hi Cecil,

It is not so much a problem of my understanding, it is in your
implacable refusal to answer questions if I didn't. That legacy is
too extended for me to engage in any but the most trivial issues, or
the most egregious errors because even there, you respond identically.
These one-note operas are boring.

Basically you've reduced my role to entertainment critic (about the
only thing with real meat on it) - however, I am credentialed in that
respect so I hardly shun the occasion. ;-)

Thread rating: ⋆ï¿½ (one and one half stars out of 4)

73's
Richard Clark, KB7QHC

1037. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:24:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25C369.4030402@ieee.org>
Source record: 127076

'Doc wrote:
> Andy,
> Just because I'm 'nosy', what is the 12.5 ohm load?
> 'Doc

One possibility is two mobile screwdriver antennas mounted
as a dipole and used on 75m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1038. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:26:07 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <ztjV9.43412$p_6.3738478@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127077

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E25B34F.7080502@ieee.org...

> > In the QEX brainteaser, superposition of voltage and current is the only
way
> > to arrive at the correct soultion. Using individual scalar powers to
> > determine the forward or rearward power in the line does not work.
>
> It doesn't? Of course it does. It just doesn't give the wattmeter reading.
> But SURPRISE!!! The wattmeter reading is WRONG! There's not really 225W
there.
> The two individual powers, 100W and 25W are dissipated in the Source A
> impedance and, tah-dah, the total power dissipated in the Source A
impedance
> is 100W + 25W = 125W. That's not superposition, Steve. That's scalar
addition,
> you know the math/physics laws that SCALAR energy obeys?
>

Cecil, I made up the brainteaser for QEX.

I'm sorry but you need to check your analysis again.

If you have to, remove the transmission line entirely and reduce the problem
to a simple equivalent circuit with two voltages and two resistances. Don't
forget the opposite sign of the currents involved when you apply
superposition. Also, recognize that Source A voltage and Source B voltage
are not the same.

How much power is dissipated in source A?

There is 25 W of power dissipated in source A, not 125 W. Your scalar power
math is applied incorrectly.

The wattmeter readings are correct. There is 225 W of power arriving at
source A. The voltage arriving at source A is 106.066 V. 106.066^2/50 =
225.

Source A voltage is 141.42 V (based on previous posted values for P and R).
The forward voltage in source A impedance is 70.71 V. The rearward voltage
in source A impedance is 106.06 V (from the 225 W of power). The total
voltage in Source A impedance is 70.71 V - 106.06 (currents in different
directions) = 35.35 V. Source A power dissipation is 25 W.

Steve VE9SRB

1039. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:27:15 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <m8gb2vc0a1o31078rijrntuu89pt2e3jd9@4ax.com>
Source record: 127079

On 15 Jan 2003 05:28:57 -0800, 4nec2@gmx.net sent into the ether:

>"Yuri Blanarovich"
>> So far what I gather from 4NEC2 is not claiming to design antennas from
>> scratch, but improving on the old optimization technics, applying (some) GA
>> algorithm to the classical design process.
>
>Yes, you are correct.
>
>"from the patent":
>> We are only aware of one case in which a genetic algorithm has been used in
>> the design of an antenna, Bahr, et al
>
>Do a google search and you will find a lot more.
>(You will need a PostScript viewer to view most of these documents.)
>
>"J. Harvey"
>> Simply program the algorithm to explicitly calculate N iterations, but then
>> have it explicitly select the best result from iteration N-1 (i.e.. not
>> "from the final set"). This detail needs to be explicit in the source code,
>> but it can be hidden behind the GUI so that, from external appearances,
>> there is absolutely no impact.
>
>Thanks for the suggestion. I'll do that.
>You are right it wil have no impact on the solution.
>
>Arie.
>
>p.s.
>
>More people who would like to get rid of 4nec2 ? Please let me know. I
>certainly have no commercial intentions, so it's easy for me to remove
>this from the web.
>
>It's a pitty I am not commercial, because I think all this would be
>great advertisement, and all for free...
Arie,
Please ignore the Buffoon. It's kind of like the Wizard in the Wizard
of OZ. Well not really, the Wizard is/was loved, the Buffoon isn't
and the Buffoon has major problems as evidenced by his posts to many
groups over the years. That is how he earned the name Buffoon.

Arie, people do care about your contribution to the hobby. Stick
around, if it happens anything like in the past, watch the Buffoon
create many personas to help him defeat the evil forces arrayed

against him.

There is this tune I keep humming, I think the words would start out kinda like Mr. Buffoon, Mr. Buffoon. I can't remember what the tune is from and of course I would not want a problem with the original song writer :<}
Dan
Need a construction safety person?
Direct hire or contract.
Safe Today - Here Tomorrow
Don't Just Say It - Live It
Remove left x for direct reply

1040. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:27:53 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <dvjV9.43415$p_6.3737307@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127078

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E25BD34.5070309@ieee.org...

I'll look at this post when you correct the analysis of the brainteaser in
your other post.

Steve VE9SRB

1041. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:28:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25C468.20806@ieee.org>
Source record: 127080

Yuri Blanarovich wrote:
> ... his layers will kontaktink you.

One can hope that she's a 25 year old nympho.
(The devil made me say that.)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1042. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:34:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25C5CE.1010305@ieee.org>
Source record: 127081

Richard Clark wrote:
> It is not so much a problem of my understanding, it is in your
> implacable refusal to answer questions if I didn't.

I have tried to answer all your questions, Richard, except
the rhetorical ones, which I assume require no answer. Your
and my minds seem to be orthogonal to each other. Most of
what you say seems to me to be to be in a different dimension
from the one I occupy. One of us lives in Flatland and I
really don't know which one of us it is. It's probably me -
I'm pretty simple-minded.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1043. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:43:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b04h4o$t50$1@helle.btinternet.com>
Source record: 127083

What frequency range ? What power handling ?

Suggest you don't call it a balun. Its just an RF transformer.

Get a ferrite ring and wind a step-down transformer. Centre-tap the low
impedance secondary and ground the centre-tap.

Reg, G4FGQ

==========
"andy swiffin" <a.l.swiffin@dundee.ac.uk> wrote in message
news:3e256399@news1.tay.ac.uk...
> Hi,
>
> I'm fairly new to the mysteries of balun design so forgive me if this is
> obvious.
>
> I want to make a balun to match 50ohm coax to a 12.5 ohm balanced load.
Can
> I just make a standard toroidal voltage balun (4:1) wired the other way
> round or do I have to do something clever?
>
> Cheers
> Andy
> GM8OEG
>
>
>

1044. Re: Quad diamond or squared ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:46:59 UTC
From: zig2 <zigouille@free.fr>
Message-ID: <3e25c675$0$250$626a54ce@news.free.fr>
Source record: 127082

Good morning

For an antenna cubical quad 3 elements monobande 28 Mhz :
In the case of the diamond configuration is he customary CORRECT to put a gamma match in the corner ?

GG

1045. Re: Ringo Ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 20:59:41 UTC
From: Jim Leder <jleder@cinci.rr.com>
Message-ID: <jfib2vsl161prpcsq4rb28aupvhrjikkkt@4ax.com>
Source record: 127084

I've used one for 20 years (same one) and it's the best 2 meter
antenna I've used.

********** Jim Leder **********
Origin of the archery 'clicker' at:
WEB Page: http://home.cinci.rr.com/jleder/
EMAIL: jleder@cinci.rr.com

1046. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:03:07 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E25CC8B.C9B6B9E9@uci.edu>
Source record: 127086

OC_CAM's Razor wrote:
> My point was that there is a difference between two waves traveling
> in the same transmission line and two waves merging into a single
> integrated wave.

It would be beneficial to the discussion if you could illucidate and elaborate on the nature of this distinction. The concept that two distinct traveling waves become anything other than two distinct traveling waves, outside the terminus, would seem at odds with natural phenomena.

Note that the nodes of the standing wave pattern (or interference pattern) of two superposed traveling waves might give the impression that one is looking at a single distinct wave.

ac6xg

1047. butternut hf9v-owners: Houston we have a problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:07:48 UTC
From: tore stabell kulo <stabern@chello.no>
Message-ID: <j4kV9.596$t91.46894@amstwist00>
Source record: 127085

Hi!
I've put up a Butternut HF9V, and managed to get very good SWR's on 80 and 40. Perfect.
But the 30m coil is a big problem. We have tried to put it as described in the manual, but we get about 5 SWR over the whole band.
When compressing the coil, notheing happens. The strange thing is that when moving it forth an back by several centimeters, the result is the same: Flat 5 SWR.
Any suggestion? (The 30 m is not important, but it affects the higher bands, they are untunable)

Glad for any help.

Regards,
Tore Stabell Kulo,
LA5MDA

1048. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:08:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25CDE8.6070505@ieee.org>
Source record: 127087

VE9SRB wrote:
> Cecil, I made up the brainteaser for QEX.

Of course you did, Steve. You posted a similar example here on this newsgroup a few months ago. About a week ago, I told Walter Maxwell that I was certain that you made up the brainteaser.

> I'm sorry but you need to check your analysis again.

Doug Smith of QEX says my analysis is correct assuming the sources are signal generators equipped with perfect circulators/isolators and circulator/isolator loads. That was my assumption since the actual real-world sources were unspecified in the article.

> How much power is dissipated in source A?

The circulator taps off all the reverse power and dissipates it in a 50 ohm resistor. That answer is 125W. There is 100W of forward power dissipated in the 50 ohm source resistor. If you consider the entire signal generator box to be source A, the dissipation is a total of 225W.

> There is 25 W of power dissipated in source A, not 125 W. Your scalar power
> math is applied incorrectly.

There is 100W dissipated in the 50 ohm source resistor and there is 125W dissipated in the circulator/isolator 50 ohm load resistor. Your superposition math is apparently applied incorrectly.

A signal generator equipped with a perfect circulator/isolator and load is what I use for the Thevenin Equivalent Source since the Thevenin Equivalent Theorem PROHIBITS us from peeking inside the source. Steve, are you guilty of peeking inside the source and thus violating the rules of the theorem?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1049. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:11:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25CE7D.2020201@ieee.org>
Source record: 127088

VE9SRB wrote:
> I'll look at this post when you correct the analysis of the brainteaser in
> your other post.

Steve, given my assumptions about the signal generator source,
I don't see a thing wrong with my other post. For the sources,
I assumed laboratory signal generators with perfect circulator/
isolator loads. What did you assume?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1050. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:16:14 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25CF9E.8000707@ieee.org>
Source record: 127090

Jim Kelley wrote:
> OC_CAM's Razor wrote:
>
>>My point was that there is a difference between two waves traveling
>>in the same transmission line and two waves merging into a single
>>integrated wave.
>
> It would be beneficial to the discussion if you could illucidate and
> elaborate on the nature of this distinction.

I have, Jim. Please see the case1/case2 examples offered in a
reply to Dr. Best.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1051. Re: Ringo Ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:16:34 UTC
From: garigue <garigue@attbi.com>
Message-ID: <SckV9.691994$WL3.722513@rwcrnsc54>
Source record: 127089

Had mine up since the late 70's ...rebuilt it a couple of times but she is still holding. I used stainless steel hardware the last go about 3 yrs ago so hopefully the "mileage" should be good. I would highly recommend this antenna. God Bless 73 KI3R Tom nr Pittsburgh
"Jim Leder" <jleder@cinci.rr.com> wrote in message news:jfib2vsl161prpcsq4rb28aupvhrjikkkt@4ax.com...
> I've used one for 20 years (same one) and it's the best 2 meter
> antenna I've used.
>
>
> ********** Jim Leder **********
> Origin of the archery 'clicker' at:
> WEB Page: http://home.cinci.rr.com/jleder/
> EMAIL: jleder@cinci.rr.com
>

1052. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:32:31 UTC
From: a_g_lyph@hotmail.com
Message-ID: <f8479612.0301151332.46977394@posting.google.com>
Source record: 127091

fractenna@aol.com (Fractenna) wrote in message
news:<20030115090347.04849.00000004@mb-cg.aol.com>...

> Nor the infringement. See: Festo Corp. v. ShoketsuKinzoku Kogyo Kabushiki Co.
> Ltd. et al., Supreme Court decision, May, 2003.

Um, it's 15 JAN 03 where I sit. You have a Supreme Court (of the
United States, I would imagine) decision that will be (was?) handed
down in MAY 03?[1]

Do the magical, mystical properties of your fractal antennas permit
time travel? What are the Powerball numbers going to be next week?
If you provide them and I win, I'll bankroll future Fractenna R & D
for a yet-to-be-specified period. Honest!

A. G. Lyph

[1] No, I already know that decision was handed down 28 MAY 02

1053. Re: open letter to an internet would be bully

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:37:23 UTC
From: fractenna@aol.com
Message-ID: <20030115163723.03730.00000009@mb-ba.aol.com>
Source record: 127094

>Gentlemen, Is it time to call this quits?
>
>Baiting and attacking are not in the common interest of radio, amateur
>radio.
>
>Deacon Dave, W1MCE
>
>Fred Hambrecht Sr. wrote:
>> Open letter to Chip N1IR, Nathan Cohen Ph.D. et al.
>>
>> I have watched for the last number of years you playing the
>> Internet bully on the news groups. I have watched as
>> You have attempted to squelch the speech of others
>> With your treats of lawsuits, letters to employers, And
>> endless childish practices such as contacting internet
>> providers.
>>
>> I am calling you out Mr. Bully, I think you are
>> pond scum that normal people should never
>> Have to deal with.
>>
>> You have threatened me before with hollow threats
>> And I doubt that you are anything but a bag of wind.
>>
>> This is your opportunity to prove me wrong,
>> Bring on your lawyers and your Mommy. Be
>> Aware I have collected your rants ever since
>> Your first threats several years ago and look forward
>> To presenting them to a jury of your peers.
>>
>> You may have you attorneys serve me at the address below.
>> Be advised that no correspondence with me will be considered
>> confidential and will be posted on a new internet site I will create as
>well
>> as all applicable newsgroups.
>>
>> Govern yourself accordingly
>>
>> Fred Hambrecht Sr. W4JLE
>> 2029 Stone Marten Dr.
>> Beaufort, SC 29902
>>
>>

I resent the supposition that I am either baiting or attacking. These are most certainly not the case.

The nature of these activities by a handful of offenders is to attempt to get me to publicly libel someone else, thereby rendering moot the presently one-sided malicious and defamatory efforts against me.

K3BU has recently made the intentions very clear; that the key objective is to get me to give up my right to public communication. The fact is that I am the injured party here; that I have made attempts to resolve and clarify issues as an individual and with attorney; that I have succeeded in select cases with attorney (and have not failed in any closed attempt); that the magnitude of the offenses no longer justifies additional resolution out of court; that I have made a good faith offer to accept retractions by 30 January 2003; and beyond that the courts decide.

This is no fun and games. At least not for me.I see no reason why my enjoyment of ham radio; the internet; and professional reputation needs to be ruined or smeared daily. Do you understand the magnitude of the things that are being published and transmitted globally and openly on a daily basis? Is this acceptable to you?

The defendants in any future libel case are sufficiently numerous, and their offenses are of large enough magnitude, that a court action appears inevitable, subject to my 30 January 2003 offer for accepting settlement.

The statute of limitations is 3 years in Massachusetts for libel.

I hope this is clear Deacon Dave.

Best wishes,

Chip N1IR

1054. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:38:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <opjb2vo5sgqe9r638gon3tqsi9ts21jaja@4ax.com>
Source record: 127092

On Wed, 15 Jan 2003 14:34:22 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> It is not so much a problem of my understanding, it is in your
>> implacable refusal to answer questions if I didn't.
>
>I have tried to answer all your questions, Richard, except
>the rhetorical ones, which I assume require no answer. Your
>and my minds seem to be orthogonal to each other.

Orthogonal, hmmm? And such a fine hand at distinguishing questions as
"rhetorical" too, my. Methinks the aw-shucks populist style has some
glaring discontinuities in such wild divergence from
"simple-mindedness."

>Most of
>what you say seems to me to be to be in a different dimension
>from the one I occupy. One of us lives in Flatland and I
>really don't know which one of us it is. It's probably me -
>I'm pretty simple-minded.

Hi Cecil,

The entertainment critic hat is still firmly placed in consideration
of your portrayal of Will in
"No Time for Sargents": *** (three stars of four). Cecil,
enjoying the role immortalized by Andy Griffith, showed our audience
how his updated good-ol-boy transplanted to the modern reality of
electronics engages the post-nuclear age with humor and farce. This
engaging new face on the scene clearly has many in the audience
captivated by applying a fresh approach to old routines. I would,
however, caution my readers to let this play mellow. He has spent to
little time in the sticks to work out the rough edges and early
audiences found some unintended humor in odd scenes. Another
disappointment was found in the tiresome length at 7 acts. Our enfant
terribli¿½ star/director/writer may yet learn that it takes more than
persistence to sell seats.

Oh, and for the sake of keeping the record clear, there is only one
question in this post, and it is rhetorical.

73's
Richard Clark, KB7QHC

1055. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:39:25 UTC
From: fractenna@aol.com
Message-ID: <20030115163925.03730.00000010@mb-ba.aol.com>
Source record: 127093

>
>fractenna@aol.com (Fractenna) wrote in message
>news:<20030115090347.04849.00000004@mb-cg.aol.com>...
>
>> Nor the infringement. See: Festo Corp. v. ShoketsuKinzoku Kogyo Kabushiki
>Co.
>> Ltd. et al., Supreme Court decision, May, 2003.
>
>Um, it's 15 JAN 03 where I sit. You have a Supreme Court (of the
>United States, I would imagine) decision that will be (was?) handed
>down in MAY 03?[1]
>
>Do the magical, mystical properties of your fractal antennas permit
>time travel? What are the Powerball numbers going to be next week?
>If you provide them and I win, I'll bankroll future Fractenna R & D
>for a yet-to-be-specified period. Honest!
>
>A. G. Lyph
>
>[1] No, I already know that decision was handed down 28 MAY 02
>
>

Thanks for the correction Gordon:-)

Best Regards,
Chip N1IR

1056. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:45:09 UTC
From: Anonymous <cripto@ecn.org>
Message-ID: <62327e20fe622bd9f5d9ae582bcf1e43@ecn.org>
Source record: 127095

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:

> I have been clear on the matter of defamation and have proffered a remedy
> by January 30, 2003.
>
> 73,
> Chip N1IR

One can only specuklate!
Can this be the Fractal "Final Solution"?

1057. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:49:05 UTC
From: fractenna@aol.com
Message-ID: <20030115164905.02076.00000035@mb-fi.aol.com>
Source record: 127096

>This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna)
>sent into the ether:
>
>> I have been clear on the matter of defamation and have proffered a remedy
>> by January 30, 2003.
>>
>> 73,
>> Chip N1IR
>
>One can only specuklate!
>Can this be the Fractal "Final Solution"?
>

See, Deacon Dave? Now we see anti-semiticism, anonymously posted.

There are REAL problems here on this NG. I am not part of the problem.

73,
Chip N1IR

1058. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:50:02 UTC
From: Nomen Nescio <nobody@dizum.com>
Message-ID: <62327e20fe622bd9f5d9ae582bcf1e43@dizum.com>
Source record: 127097

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:

> I have been clear on the matter of defamation and have proffered a remedy
> by January 30, 2003.
>
> 73,
> Chip N1IR

One can only specuklate!
Can this be the Fractal "Final Solution"?

1059. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:57:30 UTC
From: Anonymous <cripto@ecn.org>
Message-ID: <507918f94f3c57f825658d37e6534d6f@ecn.org>
Source record: 127098

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:
>> Nathan Cohen has his position terminated on 1 Nov.
>>

>Heheheh! Thats the CEO position! That was two CEOs ago:-) Ive got a great
>CEO here now, and I sure dont want that job again:-)
>
>Get your facts right Fred. This has nothing to do with an "school" job.
>
>73,
>Chip N1IR

Ok so now we all know NO SCHOOL JOB lost it in Nov 2002 in Boston... any chance that Mr.Chip is a priest last name is Cohen....
2 CEOs in 60 days,smoking job!

1060. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 21:59:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25D9B1.3020908@ieee.org>
Source record: 127103

Richard Clark wrote:
> The entertainment critic hat is still firmly placed in consideration
> of your portrayal of Will in
> "No Time for Sargents": *** (three stars of four). Cecil,
> enjoying the role immortalized by Andy Griffith, showed our audience
> how his updated good-ol-boy transplanted to the modern reality of
> electronics engages the post-nuclear age with humor and farce. This
> engaging new face on the scene clearly has many in the audience
> captivated by applying a fresh approach to old routines. I would,
> however, caution my readers to let this play mellow. He has spent to
> little time in the sticks to work out the rough edges and early
> audiences found some unintended humor in odd scenes. Another
> disappointment was found in the tiresome length at 7 acts. Our enfant
> terriblï¿½ star/director/writer may yet learn that it takes more than
> persistence to sell seats.
>
> Oh, and for the sake of keeping the record clear, there is only one
> question in this post, and it is rhetorical.

Which demonstrates what I was talking about, Richard. I don't detect
a single question mark.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1061. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:00:01 UTC
From: Nomen Nescio <nobody@dizum.com>
Message-ID: <507918f94f3c57f825658d37e6534d6f@dizum.com>
Source record: 127100

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:

>> Nathan Cohen has his position terminated on 1 Nov.
>>

>Heheheh! Thats the CEO position! That was two CEOs ago:-) Ive got a great
>CEO here now, and I sure dont want that job again:-)
>
>Get your facts right Fred. This has nothing to do with an "school" job.
>
>73,
>Chip N1IR

Ok so now we all know NO SCHOOL JOB lost it in Nov 2002 in Boston... any chance that Mr.Chip is a priest last name is Cohen....
2 CEOs in 60 days,smoking job!

1062. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:00:21 UTC
From: "A.Melon" <juicy@melontraffickers.com>
Message-ID: <62327e20fe622bd9f5d9ae582bcf1e43@melontraffickers.com>
Source record: 127101

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:

> I have been clear on the matter of defamation and have proffered a remedy
> by January 30, 2003.
>
> 73,
> Chip N1IR

One can only specuklate!
Can this be the Fractal "Final Solution"?

1063. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:00:33 UTC
From: lcs Mixmaster Remailer <mix@anon.lcs.mit.edu>
Message-ID: <20030115220033.23302.qmail@nym.alias.net>
Source record: 127102

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:
>> Nathan Cohen has his position terminated on 1 Nov.
>>

>Heheheh! Thats the CEO position! That was two CEOs ago:-) Ive got a great
>CEO here now, and I sure dont want that job again:-)
>
>Get your facts right Fred. This has nothing to do with an "school" job.
>
>73,
>Chip N1IR

Ok so now we all know NO SCHOOL JOB lost it in Nov 2002 in Boston... any chance that Mr.Chip is a priest last name is Cohen....
2 CEOs in 60 days,smoking job!

1064. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:02:02 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E25DA5A.88248671@uci.edu>
Source record: 127099

OC_CAM's Razor wrote:
>
> Jim Kelley wrote:
> > OC_CAM's Razor wrote:
> >
> >>My point was that there is a difference between two waves traveling
> >>in the same transmission line and two waves merging into a single
> >>integrated wave.
> >
> > It would be beneficial to the discussion if you could illucidate and
> > elaborate on the nature of this distinction.

> I have, Jim. Please see the case1/case2 examples offered in a
> reply to Dr. Best.

If you had, I wouldn't have made the suggestion. I find nothing there to be illuminating of the nature of the claimed phenomenon. What you posed is an incomplete problem. It's not a solution to a complete problem which relies solely on the phenomenon you propose. Eistein didn't "leave it as an exercise for the student" to work out the basis of his theories.

1065. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:02:55 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <jUkV9.43510$p_6.3744690@bgtnsc04-news.ops.worldnet.att.net>
Source record: 127104

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E25CDE8.6070505@ieee.org...

>
> A signal generator equipped with a perfect circulator/isolator and load is
what
> I use for the Thevenin Equivalent Source since the Thevenin Equivalent
Theorem
> PROHIBITS us from peeking inside the source. Steve, are you guilty of
peeking
> inside the source and thus violating the rules of the theorem?
> --

A source with a circulator. That was not part of the QEX brainteaser.

Everyone should see why having a rational discussion with you is pointelss.
You set up whatever conditions suit your fancy and agenda.

Take care,

I'm done.

Steve VE9SRB

1066. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:04:05 UTC
From: fractenna@aol.com
Message-ID: <20030115170405.17320.00000020@mb-bd.aol.com>
Source record: 127105

>Ok so now we all know NO SCHOOL JOB lost it in Nov 2002 in Boston... any
>chance that Mr.Chip is a priest last name is Cohen....
>2 CEOs in 60 days,smoking job!
>

You are off by two years.

NC

1067. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:08:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25DBD3.7050206@ieee.org>
Source record: 127107

Jim Kelley wrote:
> If you had, I wouldn't have made the suggestion. I find nothing there
> to be illuminating of the nature of the claimed phenomenon. What you
> posed is an incomplete problem. It's not a solution to a complete
> problem which relies solely on the phenomenon you propose. Eistein
> didn't "leave it as an exercise for the student" to work out the basis
> of his theories.

That's because Einstein wasn't a small town boy from Madisonville, Texas.
I am asking questions, not answering them. Given two cases of seemingly
identical in-phase waves of 75W+8.33W, one case delivers 100W to the load
and the other case delivers 83.33W to the load even though the transmission
line conditions *appear* to be identical and a wattmeter registers the
same reading in both cases. What gives with that?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1068. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:09:08 UTC
From: Anonymous <nobody@paranoici.org>
Message-ID: <62327e20fe622bd9f5d9ae582bcf1e43@paranoici.org>
Source record: 127106

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:

> I have been clear on the matter of defamation and have proffered a remedy
> by January 30, 2003.
>
> 73,
> Chip N1IR

One can only specuklate!
Can this be the Fractal "Final Solution"?

1069. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:17:41 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E25DD9B.8040906@attbi.com>
Source record: 127108

No matter what our technical or legal concerns or questions regarding
patents or the credibility of 'Fractal Antennas' this discussion has
degenerated to the point of obscene.

As a Christian clergyman I find recent direct and indirect references to
holocaust images as totally inappropriate and morally wrong.

[Rev. Mr.] Deacon Dave, W1MCE

Fractenna wrote:
>>This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna)
>>sent into the ether:
>>
>>
>>>I have been clear on the matter of defamation and have proffered a remedy
>>>by January 30, 2003.
>>>
>>>73,
>>>Chip N1IR
>>
>>One can only specuklate!
>>Can this be the Fractal "Final Solution"?
>>
>
>
> See, Deacon Dave? Now we see anti-semiticism, anonymously posted.
>
> There are REAL problems here on this NG. I am not part of the problem.
>
> 73,
> Chip N1IR

1070. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:24:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25DF83.9050904@ieee.org>
Source record: 127109

VE9SRB wrote:
> A source with a circulator. That was not part of the QEX brainteaser.

The brainteaser didn't say the source didn't have a circulator. As such,
the brainteaser was ill defined. I have never seen a ham transmitter that
meets the brainteaser requirements. That's why I was forced to envision
a signal generator with which I am familiar.

> Everyone should see why having a rational discussion with you is pointelss.
> You set up whatever conditions suit your fancy and agenda.

You forgot to say it was before the fact, Steve. Doug Smith of QEX can
verify that those were my boundary conditions long before this discussion.

I hold a patent on a cellphone and have run a lot of bench experiments
using signal generators as real-world substitutes for Thevenin equivalent
sources. That's the only way I know how to do it. Since that's the only way
I know how to do it, why are you surprised that I made that assumption with
your brainteaser? Is there something wrong with my signal generator approach?
One advantage of my approach is that it keeps me from trying to peer inside
a Thevenin Equivalent Source and thus violating the rules for using that model.

Would you please describe what a real-world Thevenin Equivalent design looks
like that doesn't include a circulator? I am ignorant of any design like that.
That's why I always used the signal generator with which I am familiar.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1071. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:39:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <k5ob2v8scj8mfp6qv6lhobjv5su058q0nv@4ax.com>
Source record: 127110

On Wed, 15 Jan 2003 15:59:13 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> The entertainment critic hat is still firmly placed in consideration
>> of your portrayal of Will in
>> "No Time for Sargents": *** (three stars of four). Cecil,
>> enjoying the role immortalized by Andy Griffith, showed our audience
>> how his updated good-ol-boy transplanted to the modern reality of
>> electronics engages the post-nuclear age with humor and farce. This
>> engaging new face on the scene clearly has many in the audience
>> captivated by applying a fresh approach to old routines. I would,
>> however, caution my readers to let this play mellow. He has spent to
>> little time in the sticks to work out the rough edges and early
>> audiences found some unintended humor in odd scenes. Another
>> disappointment was found in the tiresome length at 7 acts. Our enfant
>> terribli¿½ star/director/writer may yet learn that it takes more than
>> persistence to sell seats.
>>
>> Oh, and for the sake of keeping the record clear, there is only one
>> question in this post, and it is rhetorical.
>
>Which demonstrates what I was talking about, Richard. I don't detect
>a single question mark.

Hi Cecil,

Going for the Oscar?
>>Orthogonal, hmmm?
You shouldn't go trimming your script before rehearsals. * (one of
four stars)

Another demonstration of how you fail to respond faithfully in the
space of one posting to a simple statement. This characteristic has
been pointed out on more than one occasion and why I limit my
exchanges with you to trivial details and egregious errors - and the
occasional theater notice.

73's
Richard Clark, KB7QHC

1072. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 22:50:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E25E5A5.9030500@ieee.org>
Source record: 127111

Richard Clark wrote:
> Going for the Oscar?
>
>>>Orthogonal, hmmm?
>>
> You shouldn't go trimming your script before rehearsals.

That's exactly what I did, Richard, trimmed your posting before I
read it. I guess that's a bad habit of mine.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1073. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:00:25 UTC
From: lcs Mixmaster Remailer <mix@anon.lcs.mit.edu>
Message-ID: <20030115230025.24634.qmail@nym.alias.net>
Source record: 127112

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:
>> Nathan Cohen has his position terminated on 1 Nov.
>>

>Heheheh! Thats the CEO position! That was two CEOs ago:-) Ive got a great
>CEO here now, and I sure dont want that job again:-)
>
>Get your facts right Fred. This has nothing to do with an "school" job.
>
>73,
>Chip N1IR

Ok so now we all know NO SCHOOL JOB lost it in Nov 2002 in Boston... any chance that Mr.Chip is a priest last name is Cohen....
2 CEOs in 60 days,smoking job!

1074. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:21:12 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <fkqb2v49fl9i90ps02i1qdopiogoocjjup@4ax.com>
Source record: 127113

On Wed, 15 Jan 2003 22:45:09 +0100 (CET), Anonymous <cripto@ecn.org>
wrote:

>This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the
ether:
>
>> I have been clear on the matter of defamation and have proffered a remedy
>> by January 30, 2003.
>>
>> 73,
>> Chip N1IR
>
>One can only specuklate!
>Can this be the Fractal "Final Solution"?

January 1999, 2000, 2001, 2002, 2003......

You could look it up.

1075. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:21:13 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <5nqb2v817bbp6rq495n1rmsoosu4qhcjtp@4ax.com>
Source record: 127114

On Wed, 15 Jan 2003 22:17:41 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>No matter what our technical or legal concerns or questions regarding
>patents or the credibility of 'Fractal Antennas' this discussion has
>degenerated to the point of obscene.
>
>As a Christian clergyman I find recent direct and indirect references to
>holocaust images as totally inappropriate and morally wrong.
>
>[Rev. Mr.] Deacon Dave, W1MCE

You're kidding, right? If not, peddle your mealy-mouthed version of
Xtianity elsewhere.

1076. Re: Ringo Ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:24:51 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E25EDC3.A6C92A65@bloomer.net>
Source record: 126970

Push RF into it, ether sucks RF out and sends it to all other
receivers. One of the best verticals I've used on 2M since 1982.
Durable and simple.

Scott
N0EDV

Claude Frantz wrote:
>
> What is the theory behind this antenna ?

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

1077. High Sierra Antennas (Excellent Customer Service)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:27:54 UTC
From: "Donnie (N4JZH)" <n4jzh@knology.net>
Message-ID: <ffpb2vsi6umrivsdh21f0hqlm85nhkmc2o@4ax.com>
Source record: 127115

Good Evening All,
I just wanted to share with the group my experience with Jim Heath and High Sierra Antennas,
I purchased my HS-1500 from Jim over 4 years ago, I have made several vehicle purchases in the last four years and have moved the antenna everytime I made a vehicle upgrade.
Anyway my 1500 finally developed a problem with the motor, so I contacted Jim and he instructed me to try some simple test all that indicated my antenna needed to be serviced.

I spoke with Jim and requested a box to ship my antenna to him safely BAM! it was at my door,
I shipped the antenna to Jim last Friday, over the weekend he communicated to me via email and
telephone the options I had to get my antenna back in AS-NEW operation for a nominal fee.

My antenna arrived today, I opened the box and to my suprise I found the antenna that resembled nothing to the antenna I sent him. Jim took my antenna and in short order turned my
antenna into his new HS-1800 also enclosed was a new control box to get the antenna up and down
with ease. I called him after I opened the box and expressed my thanks and I asked him why?

His answer plain and simple, I had to completely disassemble the antenna so I decided to give
the antenna a full upgrade, boy did he- internal antenna parts, new motor, control box, paint,
new covers, quick disconnects e.t.c. he in turn thanked me for the phone call. In my closing
comments to Jim I thanked him for his contribution to ham radio with a fine antenna and stated
I don't know how ham radio lasted this long without his antenna.

In closing, I am not a payed employee for HS and have nothing to gain or lose from this thread,
I am a ham in S.C. who spend alot of time in his mobile that requires a antenna that installs
with no problems if you follow the instructions, customer service ''second to none'' and a antenna that will stand up to the normal wear & tear, the elements, minor abuse from tree branches and STILL get a 5-9-9 anywhere I call. If you are thinking about purchasing a High Sierra Antenna, It will be the best money you have ever spent!

''Behold how good and pleasant it is for Brethren to dwell together in unity''
Donnie n4jzh@knology.net

1078. Re: High Sierra Antennas (Excellent Customer Service)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:32:19 UTC
From: fractenna@aol.com
Message-ID: <20030115183219.24967.00000007@mb-bh.aol.com>
Source record: 127116

>
>Good Evening All,
> I just wanted to share with the group my experience with Jim Heath and High
>Sierra Antennas,
> I purchased my HS-1500 from Jim over 4 years ago, I have made several
>vehicle purchases in
>the last four years and have moved the antenna everytime I made a vehicle
>upgrade.
> Anyway my 1500 finally developed a problem with the motor, so I contacted
>Jim and he
>instructed me to try some simple test all that indicated my antenna needed to
>be serviced.
>
> I spoke with Jim and requested a box to ship my antenna to him safely BAM!
>it was at my door,
>I shipped the antenna to Jim last Friday, over the weekend he communicated to
>me via email and
>telephone the options I had to get my antenna back in AS-NEW operation for a
>nominal fee.
>
> My antenna arrived today, I opened the box and to my suprise I found the
>antenna that
>resembled nothing to the antenna I sent him. Jim took my antenna and in short
>order turned my
>antenna into his new HS-1800 also enclosed was a new control box to get the
>antenna up and down
>with ease. I called him after I opened the box and expressed my thanks and I
>asked him why?
>
> His answer plain and simple, I had to completely disassemble the antenna so
>I decided to give
>the antenna a full upgrade, boy did he- internal antenna parts, new motor,
>control box, paint,
>new covers, quick disconnects e.t.c. he in turn thanked me for the phone
>call. In my closing
>comments to Jim I thanked him for his contribution to ham radio with a fine
>antenna and stated
>I don't know how ham radio lasted this long without his antenna.
>
>In closing, I am not a payed employee for HS and have nothing to gain or lose
>from this thread,
>I am a ham in S.C. who spend alot of time in his mobile that requires a
>antenna that installs
>with no problems if you follow the instructions, customer service ''second to

>none'' and a
>antenna that will stand up to the normal wear & tear, the elements, minor
>abuse from tree
>branches and STILL get a 5-9-9 anywhere I call. If you are thinking about
>purchasing a
> High Sierra Antenna, It will be the best money you have ever spent!
>
>
>
>''Behold how good and pleasant it is for Brethren to dwell together in
>unity''
> Donnie n4jzh@knology.net
>

Nice!:-)

73,
Chip N1IR

1079. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:33:29 UTC
From: Bruce <abcincowbay@ns.sympatico.ca>
Message-ID: <3E25EFE8.F4EBEB4D@ns.sympatico.ca>
Source record: 127117

Nope..

OC_CAM's Razor wrote:

> Bruce wrote:
> > I owe it all to empirical engineering ?
> > A.K.A. luck
>
> Aha, so you also have a EE degree. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1080. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:34:55 UTC
From: fractenna@aol.com
Message-ID: <20030115183455.24933.00000006@mb-bh.aol.com>
Source record: 127118

>This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna)
>sent into the ether:
>>> Nathan Cohen has his position terminated on 1 Nov.
>>>
>
>>Heheheh! Thats the CEO position! That was two CEOs ago:-) Ive got a great
>>CEO here now, and I sure dont want that job again:-)
>>
>>Get your facts right Fred. This has nothing to do with an "school" job.
>>
>>73,
>>Chip N1IR
>
>Ok so now we all know NO SCHOOL JOB lost it in Nov 2002 in Boston... any
>chance that Mr.Chip is a priest last name is Cohen....
>2 CEOs in 60 days,smoking job!
>

Can someone track down the origin of this guy? He seems to float through several different systems. I suspect he is in Europe, if he is the same guy who impersonated me a while back.

73,
Chip N1IR

1081. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:44:22 UTC
From: kf4toh@aol.com
Message-ID: <20030115184422.12566.00000026@mb-ci.aol.com>
Source record: 126969

Technically, an Extended Double Zepp is a single band antenna. If it
is used on other bands, it is no longer an EDZ. The EDZ is simply
two 5/8WL monopoles configured as a dipole of about 1.25WL length.
Anything that is 1.25WL long, is a single band antenna. If I
remember right, a 0.2WL matching section of 450 ohm ladder-line will
match the antenna pretty well on its intended single band frequency.

THANK YOU..... CECIL!!!!!!!!
i was wondering if i was the only one that
knew that!
i have one for 75 meters and one for 20
hope to pull one up for 40 soon . love um
anything else and its just a to long or to short
dipole feed by ladder line

1082. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-15 23:58:38 UTC
From: k1bqt@aol.com
Message-ID: <20030115185838.08956.00000016@mb-mf.aol.com>
Source record: 126971

>See, Deacon Dave? Now we see anti-semiticism, anonymously posted.<

Somehow, I think Fractalism is more a medical condition than a religious issue.

Rick K1BQT

1083. Re: Antenna Cable Good ?!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:04:24 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <LymV9.51813$wQ1.43503@fe01>
Source record: 126972

agree with Doc, no "Best", but avoid the "WORST"! i.e. little stuff, like rg 174(unless need to hide it, and only plan to work repeaters thru it! stuff about the size of a pencil's lead, but not great for more than short test cables!also, can't take much power) . rg-8 , at even 450 mhz should suffice (40 ft would lose about 2 dB loss, less than 1/2 power- relatively meaningless drop for rx and tx- and even with 58-u would lose about 4 db, over 1/2 signal, but not much ralative to things, tho with foam dialectric, would drop to about 2.7 dB- doubt could see on an s meter. 73, jim nn7k

Doc" <w5lz@cwis.net> wrote in message news:3E25A9CC.5199DA41@cwis.net...
>

1084. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:04:31 UTC
From: fractenna@aol.com
Message-ID: <20030115190431.06541.00000008@mb-cv.aol.com>
Source record: 126973

>Somehow, I think Fractalism is more a medical condition than a religious
>issue.
>
>
>Rick K1BQT
>

That wasn't the reference, Rick, but it is more than a bit distasteful for us to revisit.

Fractalism sounds like an art style to me...in fact it is. See www.fractalism.com. I like the alien worlds.

73,
Chip N1IR

1085. Re: butternut hf9v-owners: Houston we have a problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:09:23 UTC
From: "Bob M." <xxxxx@yyyy.zzz>
Message-ID: <H9idnRkDkLevZbijXTWc3A@comcast.com>
Source record: 126974

Welcome to the wonderful world of unsatisfied Butternut Antenna owners.

Mine did similar things, and I never could tune the 6 and 10 meter bands properly. Don't bother writing or phoning Bencher for tech support, as their canned response is that "hundreds (if not more) of our antennas are working just fine".

Other than making sure you've constructed it perfectly, which is no easy job considering that the parts are neither marked or labelled, there's not much you can do about it.

An Inadequate ground system is the biggest culprit. You really need a dozen or more ground radials stretched out to around 60 feet or more. Also how high you have the antenna off the ground will also affect the tuning. I never bought their mounting system and the manual didn't do a very good job telling me how high to put the 80m coil and insulator above ground. Put it as low as you can so the ground radials don't travel up the mast more than a couple of inches, if that.

Hope some of this gets you running. After a year of fighting with mine, I sold it for half price. Too bad it cost me over $600 to have the big tree removed to make room for the antenna !

Bob M.
======
"tore stabell kulo" <stabern@chello.no> wrote in message
news:j4kV9.596$t91.46894@amstwist00...
> Hi!
> I've put up a Butternut HF9V, and managed to get very good SWR's on 80 and
> 40. Perfect.
> But the 30m coil is a big problem. We have tried to put it as described in
> the manual, but we get about 5 SWR over the whole band.
> When compressing the coil, notheing happens. The strange thing is that
when
> moving it forth an back by several centimeters, the result is the same:
Flat
> 5 SWR.
> Any suggestion? (The 30 m is not important, but it affects the higher
bands,
> they are untunable)
>
> Glad for any help.
>
>
> Regards,
> Tore Stabell Kulo,

> LA5MDA
>
>

1086. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:13:51 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E25F93F.C17EA984@uci.edu>
Source record: 126976

OC_CAM's Razor wrote:
>
> Jim Kelley wrote:
> > If you had, I wouldn't have made the suggestion. I find nothing there
> > to be illuminating of the nature of the claimed phenomenon. What you
> > posed is an incomplete problem. It's not a solution to a complete
> > problem which relies solely on the phenomenon you propose. Eistein
> > didn't "leave it as an exercise for the student" to work out the basis
> > of his theories.
>
> That's because Einstein wasn't a small town boy from Madisonville, Texas.
> I am asking questions, not answering them. Given two cases of seemingly
> identical in-phase waves of 75W+8.33W, one case delivers 100W to the load
> and the other case delivers 83.33W to the load even though the transmission
> line conditions *appear* to be identical and a wattmeter registers the
> same reading in both cases. What gives with that?

Sounds like either a measurement error, or a circuit analysis error.
Can't tell. Haven't seen the circuits or made the measurements.

73, Jim AC6xg

1087. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:19:46 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2bul5gdkhof1c@corp.supernews.com>
Source record: 126975

Ah! the old your an anti-Semite gambit As one who enjoys the Kevin Bacon game, one can connect Adolph Hitler to Bacon in 3 moves.

I remember back to when I was in the process of evaluating the two meter fractal antenna and a white supremacist site could be reached from mine in only four clicks via links. (one more step than noted above)

I was attacked as an anti-Semite because the final site was run by Kevin Strom. Not withstanding the fact that the link pointed one to the goings on of 3950, or even the fact that my wife and children are Jewish.

Chip will pull out the anti-Semite card faster than Al Sharpton can flip out the race card when it serves as a distraction to his other transgressions.

When all else fails he becomes a professional victim and hopes for the pity of the newbys not familiar with his game.

.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Rick Littlefield" <k1bqt@aol.com> wrote in message
news:20030115185838.08956.00000016@mb-mf.aol.com...
> >See, Deacon Dave? Now we see anti-semiticism, anonymously posted.<
>
> Somehow, I think Fractalism is more a medical condition than a religious
issue.
>
>
> Rick K1BQT

1088. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:34:37 UTC
From: NoName <user@computer.net>
Message-ID: <7evb2vog7unff190lcrutasmrnbeb1bok2@4ax.com>
Source record: 126979

On 15 Jan 2003 23:34:55 GMT, fractenna@aol.com (Fractenna) wrote:

>>This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna)
>>sent into the ether:
>>>> Nathan Cohen has his position terminated on 1 Nov.
>>>>
>>
>>>Heheheh! Thats the CEO position! That was two CEOs ago:-) Ive got a great
>>>CEO here now, and I sure dont want that job again:-)
>>>
>>>Get your facts right Fred. This has nothing to do with an "school" job.
>>>
>>>73,
>>>Chip N1IR
>>
>>Ok so now we all know NO SCHOOL JOB lost it in Nov 2002 in Boston... any
>>chance that Mr.Chip is a priest last name is Cohen....
>>2 CEOs in 60 days,smoking job!
>>
>
>Can someone track down the origin of this guy? He seems to float through
>several different systems. I suspect he is in Europe, if he is the same guy who
>impersonated me a while back.
>
>73,
>Chip N1IR

Why in the Hell would anyone want to help you? You bluster you lie
you're just a big pain in the ass. Go back under your rock and sue
yourself.

1089. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:37:19 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <E1nV9.51839$wQ1.32907@fe01>
Source record: 126977

Maybe, I assum too much, but : NOTE- Andy's from the UK, and being a GM8, if memory serves me correctly, MEANS that he is talking VHF/UHF (G(x) 8 is the equivalent of our code free techs)(scotland)! and, from further deduction, believe he wanting to run 4-X 50 ohm loads (balanced) to a common 50 ohm unbalanced feed. actually , yes you can do that, altho may be a problem with interpertitation. yes you can convert 50 ohms source to 4 port output 50 ohm loads (or vice versa) . the formula is : Impedence of the matching line = square root (of impedence input , times impedence output) , at a 1/4 wave line (times velocity factor of the line, .66 , for polyethlyne, .80 for foam, or 1.0 for air-space coax) ! for 4 ports at , at 50 ohm in, requires 50 ohm coax (2 runs , 1/4 wavelength, times the velocity factor of the coax, and 3 "TEE" fittings,in a "T" configuration, and, no they are not critical to a fraction of a millimeter!! as to the balanced part (if that is indeed what he wants, suspect he just wants to stack 4 antennas ment to be fed by 50 ohm Un-Un would have been MORE CORRECT for this device.) then he would have to build 4 choke 1:1 baluns, read at these frequencies, a couple ferrite beads the diameter to pass coax thru would do nicely. hope this info helps, jim nn7k

"T" fitting _____ "tee" Fitting"
_____"tee" fitting

2-50 ohm 1/4 wavelength 50 -input 1/4
wavelength 2-50 ohm

loads
loads

"andy swiffin" <a.l.swiffin@dundee.ac.uk> wrote in message
news:3e256399@news1.tay.ac.uk...
> Hi,
>
> I'm fairly new to the mysteries of balun design so forgive me if this is
> obvious.
>
> I want to make a balun to match 50ohm coax to a 12.5 ohm balanced load.
Can
> I just make a standard toroidal voltage balun (4:1) wired the other way
> round or do I have to do something clever?
>
> Cheers
> Andy
> GM8OEG
>
>

>

1090. Re: Looking for an unusual J-Pole design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:37:45 UTC
From: "Donnie (N4JZH)" <n4jzh@knology.net>
Message-ID: <0kvb2v44fnbcv6kqjen7dao9kdofmpdrma@4ax.com>
Source record: 126978

On Tue, 14 Jan 2003 19:23:53 -0600 (CST), richardharrison@webtv.net (Richard Harrison) wrote:

>Grant, KD7JNW wrote:
>"Anyone seen this?"
>
>Search on "Cactus J-Pole". I got 15 hits and most were relevant.
>
>Best regards, Richard Harrison, KB5WZI
This months QST feature a dual band J-Pole... $10 construction cost...
''Behold how good and pleasant it is for Brethren to dwell together in unity''
Donnie n4jzh@knology.net

1091. Re: open letter to an internet would be bully

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:48:41 UTC
From: NoName <user@computer.net>
Message-ID: <qovb2v0o4u6qbv59fb6rvc02qhgemqbtsm@4ax.com>
Source record: 126984

On 15 Jan 2003 21:37:23 GMT, fractenna@aol.com (Fractenna) wrote:

Chip if it is not inconvenient could you possibly die. If this is not
convenient could you at least just go away.

Please note this is not in any way a threat but simply a request
for your help in making a significant improvement to the
human race.

Thank you in advance for your assistance in this matter.

>
>I resent the supposition that I am either baiting or attacking. These are most
>certainly not the case.
>
>The nature of these activities by a handful of offenders is to attempt to get
>me to publicly libel someone else, thereby rendering moot the presently
>one-sided malicious and defamatory efforts against me.
>
>K3BU has recently made the intentions very clear; that the key objective is to
>get me to give up my right to public communication. The fact is that I am the
>injured party here; that I have made attempts to resolve and clarify issues as
>an individual and with attorney; that I have succeeded in select cases with
>attorney (and have not failed in any closed attempt); that the magnitude of
>the offenses no longer justifies additional resolution out of court; that I
>have made a good faith offer to accept retractions by 30 January 2003; and
>beyond that the courts decide.
>
>This is no fun and games. At least not for me.I see no reason why my enjoyment
>of ham radio; the internet; and professional reputation needs to be ruined or
>smeared daily. Do you understand the magnitude of the things that are being
>published and transmitted globally and openly on a daily basis? Is this
>acceptable to you?
>
>The defendants in any future libel case are sufficiently numerous, and their
>offenses are of large enough magnitude, that a court action appears inevitable,
>subject to my 30 January 2003 offer for accepting settlement.
>
>The statute of limitations is 3 years in Massachusetts for libel.
>
>I hope this is clear Deacon Dave.
>
>Best wishes,
>
>Chip N1IR

1092. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 00:53:20 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b04vpv$ng3$1@helle.btinternet.com>
Source record: 126980

The man has asked a reasonable question. He doesn't mention antennas. All you lot can think about is virtual short-circuits, imaginary swr meters on non-existent transmission lines, reflected power, conjugal matches and suchlike, none of which are of any practical interest or use and are likely to drive him away from the hobby and return to rearing tropical fish in heated tanks!

He may wish to couple a low-power driver to the input of a push-pull bipolar power amplifier. But who cares? He has specified basic basic transformer requirements. If you don't know how to make one then at least try not to confuse the issue.

Wait for it, wait for it, here it comes . . . . . ! ;o)

Reg.

1093. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 01:01:37 UTC
From: Anonymous <cripto@ecn.org>
Message-ID: <5ef4bbb47970267d52b6b35518562bbf@ecn.org>
Source record: 126981

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:

>Nor the infringement. See: Festo Corp. v. ShoketsuKinzoku Kogyo
>Kabushiki Co. Ltd. et al., Supreme Court decision, May, 2003.
>
>
>73,
>Chip N1IR

Holy Bovine Scatalogy, Has the Chipster discoverd the "Fractal Time Machine" the last time I checked It was still mid January 2003, Chip do you read palms as well....

1094. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 01:01:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E26047B.5040602@ieee.org>
Source record: 126982

Bruce wrote:
> Nope..

Empirical Engineering is not a EE degree????
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1095. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 01:05:14 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <8PydnSj5mI6jmLujXTWcow@comcast.com>
Source record: 126983

Andy,

50 ohm unbalanced to 12.5 ohm balanced would be standard MO for the input coupling transformer for a push pull RF amplifier. They don't tend to look like an antenna balun, though. If you are trying to connect 4 antennas to 1 radio, better to build a 50 ohm combiner. Just takes a few T connectors and about a wavelength of 75 ohm coax.

Tam/WB2TT
"andy swiffin" <a.l.swiffin@dundee.ac.uk> wrote in message
news:3e256399@news1.tay.ac.uk...
> Hi,
>
> I'm fairly new to the mysteries of balun design so forgive me if this is
> obvious.
>
> I want to make a balun to match 50ohm coax to a 12.5 ohm balanced load.
Can
> I just make a standard toroidal voltage balun (4:1) wired the other way
> round or do I have to do something clever?
>
> Cheers
> Andy
> GM8OEG
>
>
>

1096. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 01:05:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E260568.1080304@ieee.org>
Source record: 126985

Reg Edwards wrote:
> The man has asked a reasonable question. He doesn't mention antennas. All
> you lot can think about is virtual short-circuits, imaginary swr meters on
> non-existent transmission lines, reflected power, conjugal matches and
> suchlike, ...

Reg, if I fly over for a visit, can you arrange a conjugal match for me?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1097. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 01:34:26 UTC
From: k1bqt@aol.com
Message-ID: <20030115203426.06541.00000016@mb-cv.aol.com>
Source record: 126986

>...he is the same guy who
impersonated me a while back.<

I thought that was Jodi Foster. I get so confused!

Rick K1BQT

1098. Full KW on GAP Titan?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 01:36:02 UTC
From: ardujenski@aol.com
Message-ID: <20030115203602.03650.00000017@mb-ba.aol.com>
Source record: 126987

Does anyone run a full KW into their GAP TITAN without any problems? I notice it is rated for 1.5KW.
Alan KB7MBI

1099. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 01:48:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2c3ql716olp32@corp.supernews.com>
Source record: 126988

Was that intended to be an answer to my question, or just another jab at Steve?

If it was an attempt to answer the question, it failed. And it seems that additional jabs at Steve are redundant.

And no, I can't agree with your premise. I don't believe there is such a thing as a traveling "wave" of average power. There are voltage and current waves on a transmission line, period.

Can you point to any text that discusses traveling waves of average power? I have three electromagnetics texts (Johnk, Kraus, Holt), one exclusively on transmission lines (Skilling), and one with a substantial transmission line section (King, Minmo, and Wing), and none even mention the concept of traveling power waves, let alone waves of average power. The latter seems to me to be pretty ridiculous, since average power is a mathematically derived value and is defined only for an integral number of cycles (of power, which is half cycles of voltage or current). But I'm willing to learn, if you can steer me to the appropriate text. Until I see some justification for the concept, it seems to me you can conjure just about any characteristics you want about this fictitous entity.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Although the voltage and current at any point along a line is the sum
>> of forward and reverse traveling voltage and current waves, I've found
>> no reference to a "merged" or "integrated" wave. What is it? How do
>> you make the waves on a transmission line "merge"?
>
>
> I guess you would agree that we can take two independent waves of 75W
> and 8.33W traveling side-by-side in a transmission line and dissipate
> that 83.33W of power in a load. In this case, it doesn't matter if
> the waves are coherent or not.
>
> Steve takes two waves of 75W and 8.33W and superposes them into a
> superwave that delivers 100W to the load. That's the difference.
> More power is delivered to the load than exists in the two waves.
> Please see my latest response to Steve.

1100. Re: Transient voltages?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 02:16:37 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301151816.6d81c793@posting.google.com>
Source record: 126990

Roger Halstead <rdhalste@tm.net> wrote in message
news:<s7l92v81ounkvbj5f94uql98cige9isc6o@4ax.com>...
> On Tue, 07 Jan 2003 22:14:59 GMT, Dave Shrader
> <david.shrader@attbi.com> wrote:
>
> >You are correct, 3 kv or 5kv are nice design parameters but at the KW+
> >level they might exhibit stress failure. If you are not planning a KW
> >class station then a 3 kv design would be great.
> >
snip
> Just another data point.
> I run the legal limit and have almost since first being licensed back
> in 1961.
>
> Although getting out to the point where the SWR is 3:1 and greater,
> most likely ends up in a distorted pattern, I have never lost a trap
> when operating at; say the bottom end of the CW band when the beam is
> tuned for the center of the phone band, or the other way around.
>
> I have lost one balun when I accidentally tuned up on the wrong
> antenna while using a line tuner. The ferrite cores shattered.

Now that is interesting. Though this thread talked of ferrites I came
across a statement that stated that said powdered iron should be used
in some cases such as top band because ferrite sometimes shatter!
Later I ran across a statement that the inductance under load was
different to that when there is no load, at which point the more I
read about toroids the less I knew so..... I have decided to stay
with my coils with it's slider.
Thanks to all for contributing
Regards
Art

>
> Roger Halstead (K8RI EN73 & ARRL Life Member)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)
> >
> >Many high power DX operators use antennas with no traps simply to avoid

1101. Re: 40 Meter Double Extended Zepp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 02:22:03 UTC
From: Bruce <abcincowbay@ns.sympatico.ca>
Message-ID: <3E261769.66919D3E@ns.sympatico.ca>
Source record: 126991

AHA... finally caught the punch line. yep.

OC_CAM's Razor wrote:

> Bruce wrote:
> > Nope..
>
> Empirical Engineering is not a EE degree????
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1102. Q. re 1/4 vs. 1/2 wave and groundplanes

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 02:22:22 UTC
From: Monkfish <respond@ingroup.xy>
Message-ID: <3e260f75@post.newsfeed.com>
Source record: 126989

*** post for FREE via your newsreader at post.newsfeed.com ***

just wanted to throw out a few newbie questions.

i know that a half-wave antenna is not as dependent on a ground plane as a quarter-wave antenna is, but there are a few things i'd like to clear up:

- an HT doesn't have much of a groundplane. does this mean that antennas made for HT's are usually half-wave antennas (when loading is taken into account)?

- or do they have to be quarter-wave antennas to match a 50-ohm connection?

- for frequencies 25-54 MHz, one common mobile antenna is a 3-5 foot whip with a loading coil in the base. are these antennas typically 1/4 or 1/2 wave (including the coil)?

- on a quarter-wave antenna, is it enough that the antenna is positioned above a metal roof, or is the coax shield supposed to be electrically connected to the roof?
if it's a mag-mount, how is the groundplane connected?

- there are a few different kinds of continuously loaded, wound antennas made for CB:
- a 1 foot "duck" like on an HT, but on a mag mount
- a single antenna about 4 feet tall
- a pair of phased antennas both 3-4 feet tall, that have to be placed about 9 feet apart to get the intended directional pattern, like you see on big rigs
which are 1/4 and which are 1/2 wave?

- are fiberglass / composite antennas typically wire-wound, or are they fiberglass around a straight whip?

- would the typical low-band spring-loaded whip, with no coils, be 1/4 wave if it's cut for the low end of the band, and 1/2 wave for the high end of the band?
1/4 of 12 meters vs. 1/2 of 6 meters.

- sometimes i see mobile antennas for 150 MHz use, that are about a meter tall, but with large bases, as if they had loading coils. since those are already 1/2 wave antennas, why would they have loading coils? is it be more likely that a match is inside?

- is it true that 1/2 and 5/8 wave antennas require a matching device? if so, what is their characteristic impedance?

- there exist glass-mount antennas for all different bands, which look like big cellular antennas. i can understand doing this with 70cm or 2 meters, but how do they load such an antenna for the low band? they don't have any visible coils other than that little "pigtail".

- what about the antennas for 450 MHz that have a band or pod in the middle, and it's two phased antennas on top of each other. are the elements 1/4 or 1/2 wave?

-----= Posted via Newsfeed.Com, Uncensored Usenet News =-----
http://www.newsfeed.com - The #1 Newsgroup Service in the World!
------== 100,000 Groups! - 19 Servers! - Unlimited Download! =-----

1103. Re: Q. re 1/4 vs. 1/2 wave and groundplanes

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 02:25:05 UTC
From: fractenna@aol.com
Message-ID: <20030115212505.06501.00000016@mb-cv.aol.com>
Source record: 126992

>newbie questions.
>
>i know that a half-wave antenna is not as dependent on a ground plane as a
>quarter-wave
>antenna is, but there are a few things i'd like to clear up:
>
>- an HT doesn't have much of a groundplane. does this mean that antennas
>made for HT's
>are usually half-wave antennas (when loading is taken into account)?

Usually 1/8 wave for short stubbies.

>
>- or do they have to be quarter-wave antennas to match a 50-ohm connection?
>

Actually a 1/4 wave (monopole) isn't a 50 ohm antenas. It's 37 ohms.

>- for frequencies 25-54 MHz, one common mobile antenna is a 3-5 foot whip
>with a loading
> coil in the base. are these antennas typically 1/4 or 1/2 wave (including
>the coil)?

Both. And neither.

There is no significance to whether a whip is 1/2 wave or 1/4 wave or 1/8 wave, if you can tune out the reactanace and match it. The bandwidth changes as, of course, does the efficiency. But there is no'magic' length in this condition.

When the electrical length exceeds 1/2 wave you get a second current max and col-linear phasing, which gives some azimuthal gain.

>- on a quarter-wave antenna, is it enough that the antenna is positioned
>above a metal
> roof, or is the coax shield supposed to be electrically connected to the
>roof?
> if it's a mag-mount, how is the groundplane connected?

If the ground plane is large then it acts like a mirror, and the gain can be as high as 5.4 dBi. If the ground plane is smaller, then the GP acts purely as a non-radiating counterpoise in the far field and the gain goes down to around 1.5 dBi. If the GP is asymmetric then pattern 'distortions' may arise. Sometimes you want this, as you get F/B. Other times you don't want it. Bumper mounts are notorious for pattern distortion.

>- there are a few different kinds of continuously loaded, wound antennas made
>for CB:

> - a 1 foot "duck" like on an HT, but on a mag mount
> - a single antenna about 4 feet tall
> - a pair of phased antennas both 3-4 feet tall, that have to be placed
>about 9 feet
> apart to get the intended directional pattern, like you see on big rigs
> which are 1/4 and which are 1/2 wave?
>
>- are fiberglass / composite antennas typically wire-wound, or are they
>fiberglass
> around a straight whip?
>
>- would the typical low-band spring-loaded whip, with no coils, be 1/4 wave
>if it's cut
> for the low end of the band, and 1/2 wave for the high end of the band?
> 1/4 of 12 meters vs. 1/2 of 6 meters.
>

The best short CB 'whip' I have seen is a plastic pipe job with a continuous coil connected to hot through a center wire. It is about 3 feet high. I use it as a benchmark in research here (and beat it, of course).

>- sometimes i see mobile antennas for 150 MHz use, that are about a meter
>tall, but
> with large bases, as if they had loading coils. since those are already
>1/2 wave antennas,
> why would they have loading coils?

Because they are being fed at a voltage max.

is it be more likely that a match is
>inside?
>

You bet.

>- is it true that 1/2 and 5/8 wave antennas require a matching device? if
>so, what is
> their characteristic impedance?

Yes. High. I can give you the theoreticals, but in practical ones you have to tweak to get a good match.

>- there exist glass-mount antennas for all different bands, which look like
>big cellular
> antennas. i can understand doing this with 70cm or 2 meters, but how do
>they
> load such an antenna for the low band? they don't have any visible coils
>other than that
> little "pigtail".
>

For the low bands?

>- what about the antennas for 450 MHz that have a band or pod in the middle,
>and it's
> two phased antennas on top of each other. are the elements 1/4 or 1/2
>wave?
>

It is a co-linear. The first section is an electrical 1/4 wave, the upper one
is probably a 1/2 wave.

73,
Chip N1IR

1104. Re: butternut hf9v-owners: Houston we have a problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 02:30:34 UTC
From: Bruce <abcincowbay@ns.sympatico.ca>
Message-ID: <3E261968.FE54D745@ns.sympatico.ca>
Source record: 126993

Some suggestions:
1) ensure connection top and bottom of coil are good and tight to vertical
2) ensure strap connection for 20 m to coil is tight
3) move 30 m coil around vertical to see if vswr changes ?

I found with mine that 30 m was very sensitive to any changes, If need be, I'll

go out in the snow and measure the length of my 30 m coil for you to have
a starting point.

My HF9 has 16 radials, 34 feet long. Only bands that are difficult are 17 and
6.
But, I knew 17 was difficult before buying.. and 6,.. well, guess it may or may
not
work, depending on installation

Overall, happy with antenna

good luck

rgds / VE1NB

1105. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 02:56:03 UTC
From: richardharrison@webtv.net
Message-ID: <18349-3E261F43-44@storefull-2314.public.lawson.webtv.net>
Source record: 126994

Roy, W7EL wrote:
"I`ve found no reference to a "merged" or "integrated" wave. What is it?"

I believe an example of two secondary windings on the same transformer may be an example. These may be connected phase aiding or phase opposing. Whatever the resulting motivating force is, if you have no knowledge of how the EMF was produced, from its characteristcs you would be hard pressed to determine its compositionn.

The two transfprmer windings could be separated by 90 degrees or 120 degrees, and from the two wires and the a-c potential between them, you still wouldn`t know the potentials and the various phases of the various windings summed to produce the resultant volts between the wires.

That`s the way it is with induced volts and amps in a wire pair, for a particular frequency. The current is induced to travel in one direction or another. All the currents of one frequency flowing in the same direction must merge.

They do this vectorially. We can resolve each constituent on the same set of rectangular coordinates into its vertical and horizontal components. Like components (vertical or horizontal) can be added and subtracted arithmetically and with the help of Pythagoras the combined vertical and horizontal values can be recomposed into a "merged or integrated" wave value.

Note to Ian: I did not steal this from any book. I am quoting from memory from something learned back in the 1940`s. So, there may be imperfections as my memory on this is ancient. My best recollections in this composition and resolution of forces is from the Mechanical Engineering courses I took.

Best regards, Richard Harrison, KB5WZI

1106. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 03:14:49 UTC
From: richardharrison@webtv.net
Message-ID: <18351-3E2623A9-7@storefull-2314.public.lawson.webtv.net>
Source record: 126996

Roy, W7EL wrote:
"There are voltage and current waves on a transmission line, period."

If one takes that attitude, one deprives himself of a powerful and valid tool. The line for practical purposes has a Zo = Ro. This Ro forces a unique value of voltage to current ratio. So, given the voltage or current in a given direction, one knows the power in that direction.

A directional coupler lets us determine the voltage and current in a particular direction. What you see in standing waves is not what you get. The volts and amps in a particular direction are not oscillating around some target value but are quite constant. SWR is mostly just a show.

Best regards, Richard Harrison, KB5WZI

1107. Re: High Sierra Antennas (Excellent Customer Service)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 03:28:34 UTC
From: Wayne and Louise <wirwin2@cfl.rr.com>
Message-ID: <CFpV9.93992$Sa3.2084224@twister.tampabay.rr.com>
Source record: 126995

I have to echo Donnie's comments. I reviewed the HS-1500 for QST a few years ago. I found it to be all that was claimed of it and much much more. Jim is running a first class operation, and he is every bit as nice as Donnie says he is.

The HS antennas are not the cheapest of the screwdriver antennas on the market. They are about the best quality you will find anywhere. They perform every bit as well as the manufacturer claims. Oh, and you get something else that isn't as common as it was years ago -- outstanding and personalized customer service, and that is something you can't put a price on! I have retired from ARRL HQ, but my High Sierra still works great. It has many miles to go before it is retired.

Thanks, Jim Heath!!!

73,

Wayne, W1KI/4
Ocala, Florida

"Donnie (N4JZH)" <n4jzh@knology.net> wrote in message news:ffpb2vsi6umrivsdh21f0hqlm85nhkmc2o@4ax.com...
> Good Evening All,
> I just wanted to share with the group my experience with Jim Heath and High Sierra Antennas,
> I purchased my HS-1500 from Jim over 4 years ago, I have made several vehicle purchases in
> the last four years and have moved the antenna everytime I made a vehicle upgrade.
> Anyway my 1500 finally developed a problem with the motor, so I contacted Jim and he
> instructed me to try some simple test all that indicated my antenna needed to be serviced.
>
> I spoke with Jim and requested a box to ship my antenna to him safely BAM! it was at my door,
> I shipped the antenna to Jim last Friday, over the weekend he communicated to me via email and
> telephone the options I had to get my antenna back in AS-NEW operation for a nominal fee.
>
> My antenna arrived today, I opened the box and to my suprise I found the antenna that
> resembled nothing to the antenna I sent him. Jim took my antenna and in short order turned my
> antenna into his new HS-1800 also enclosed was a new control box to get

the antenna up and down
> with ease. I called him after I opened the box and expressed my thanks and
I asked him why?
>
> His answer plain and simple, I had to completely disassemble the antenna
so I decided to give
> the antenna a full upgrade, boy did he- internal antenna parts, new motor,
control box, paint,
> new covers, quick disconnects e.t.c. he in turn thanked me for the phone
call. In my closing
> comments to Jim I thanked him for his contribution to ham radio with a
fine antenna and stated
> I don't know how ham radio lasted this long without his antenna.
>
> In closing, I am not a payed employee for HS and have nothing to gain or
lose from this thread,
> I am a ham in S.C. who spend alot of time in his mobile that requires a
antenna that installs
> with no problems if you follow the instructions, customer service ''second
to none'' and a
> antenna that will stand up to the normal wear & tear, the elements, minor
abuse from tree
> branches and STILL get a 5-9-9 anywhere I call. If you are thinking about
purchasing a
> High Sierra Antenna, It will be the best money you have ever spent!
>
>
>
> ''Behold how good and pleasant it is for Brethren to dwell together in
unity''
> Donnie n4jzh@knology.net
>

1108. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 04:01:34 UTC
From: richardharrison@webtv.net
Message-ID: <18349-3E262E9E-47@storefull-2314.public.lawson.webtv.net>
Source record: 126997

Now that I`ve posted, I see a grievous mistake. I am so sorry I did not make my subject and predicate agree in number. I wrote:
"My best recollections in this composition and resolution of forces is---".

I didn`t mean to add an "s" to recollection. I promise to try to be more careful. Otherwise, Richard Rye is likely to point out that I often misspell my own name.

Best regards, Richard Harrison, KB5WZI

1109. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 04:23:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2633B0.4020508@ieee.org>
Source record: 126998

Roy Lewallen wrote:
> Was that intended to be an answer to my question, or just another jab at
> Steve?

I don't have an answer, Roy. I'm asking the question. Why can a wave
of 106.066V in a 150 ohm line (106.066^2/150 = 75W) be superposed with
a wave of 35.355V in a 150 ohm line (35.355^2/150 = 8.33W) and the
result be 141.4V in that 150 ohm line (141.4^2/150 = 133.33W)?

> And no, I can't agree with your premise. I don't believe there is such a
> thing as a traveling "wave" of average power. There are voltage and
> current waves on a transmission line, period.

I'm not sure what you mean. Consider a flat 50 ohm line carrying 70.7V
at 1.414A. Those are RMS values. Isn't the average power in that traveling
wave 70.7*1.414 = 70.7^2/50 = 1.414^2*50 = 100W? That's what Dr. Best says
in his QEX article.

> Can you point to any text that discusses traveling waves of average
> power?

Dr. Best's QEX articles. SWR meters?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1110. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 04:44:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2638C3.2020708@ieee.org>
Source record: 126999

VE9SRB wrote:
> Cecil, I made up the brainteaser for QEX.

I wonder if the brainteaser results are the same with the Thevenin
Equivalent circuit as with the Norton Equivalent circuit?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1111. Re: big dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 05:10:53 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <mVSdnacJ3MRNo7ujXTWcoA@comcast.com>
Source record: 127000

I tried to post a PS to this, but that appears to have been censored by the spam filter. Probably because of the use of tabs. So, lets try again.

I ran the numbers for a rhombic with near your dimensions. This thing has BIG TIME gain. Without tabs the following is frequency, gain in dbi over real ground, and impedance:

7.3, 12.6, 300-j740;
14.2, 17.46, 600 - j900;
21.3, 19.63, 350 -j500;
28.4, 17.15, 300- j250.
This is an unterminated rhombic, and has a F/B of about 3db. The beam width is quite narrow, so it won't be of much use unless it is pointed in your favorite direction. Length is 380', width 194', which makes each side 211'.

By making it somewhat narrower, I got 22 dbi out of it on 6 meters, and 21 dbi on 2.

Tam/WB2TT

1112. Want

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 05:24:15 UTC
From: Roger Peterson <kc8qr@neo.rr.com>
Message-ID: <3mrV9.6549$i73.1611113@twister.neo.rr.com>
Source record: 127001

Does anyone have any Ham sticks that they do not need? I would like to get the 40 and the 20 and maybe a 17 meter one. Let me know here or at kc8qr@neo.rr.com.

Tnx

Pete kc8qr

1113. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 06:04:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2cis5grtqemd8@corp.supernews.com>
Source record: 127002

I'm not sure what you've said that contradicts what I did. Certainly, one can calculate power from voltage and current. But when you extrapolate that to traveling and reflecting waves of average power, which have no physical connection to what's really happening, opportunities abound for contradictory conclusions. As we've all been treated to in great number.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy, W7EL wrote:
> "There are voltage and current waves on a transmission line, period."
>
> If one takes that attitude, one deprives himself of a powerful and valid
> tool. The line for practical purposes has a Zo = Ro. This Ro forces a
> unique value of voltage to current ratio. So, given the voltage or
> current in a given direction, one knows the power in that direction.
>
> A directional coupler lets us determine the voltage and current in a
> particular direction. What you see in standing waves is not what you
> get. The volts and amps in a particular direction are not oscillating
> around some target value but are quite constant. SWR is mostly just a
> show.
>
> Best regards, Richard Harrison, KB5WZI
>

1114. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 06:41:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pnkc2vkfdinnm7q5stvrgvehnj4fih64ao@4ax.com>
Source record: 127003

On Wed, 15 Jan 2003 20:56:03 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>All the currents of one frequency flowing in the same
>direction must merge.

Hi Richard,

The unquoted material was a bit nebulous, so I stuck with one facet
above. In this regard, I think Roy's point (or at least one I would
offer) is that having said this, nothing new has been added to the
body of knowledge. There is no reason to give this the observation
the elevation of "phenomena," nor is there any reason to pursue it
academically (much less practically) or to explain it, or use it as an
explanation. There are already established concepts that preclude
this as either redundant, or worse, simply a tautology.

73's
Richard Clark, KB7QHC

1115. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 06:46:33 UTC
From: vk7ro@netspace.net.au
Message-ID: <3e265247.864473@news.netspace.net.au>
Source record: 127004

On Wed, 15 Jan 2003 13:31:37 -0000, "andy swiffin"
<a.l.swiffin@dundee.ac.uk> wrote:

>Hi,
>
>I'm fairly new to the mysteries of balun design so forgive me if this is
>obvious.
>
>I want to make a balun to match 50ohm coax to a 12.5 ohm balanced load. Can
>I just make a standard toroidal voltage balun (4:1) wired the other way
>round or do I have to do something clever?
>
>Cheers
>Andy
>GM8OEG
>
>
>
Do it with two current baluns with their inputs in series and their
outputs in parallel. In fixed pitch font, like this:

```
--------wwwww----+-----
+----wwwww----|-+
| | |
50 | | | 12.5
+----wwwww----+ |
--------wwwww------+---
```

73 Ric, VK7RO

1116. You are the reason

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 06:57:55 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <pilc2v4110lsqcoui4ug1dh1tg5nogetsr@4ax.com>
Source record: 127005

>On 15 Jan 2003 21:37:23 GMT, fractenna@aol.com (Fractenna) wrote:
>
>

>This is no fun and games. At least not for me.

Then stop being a sap.

>I see no reason why my enjoyment of ham radio; the internet; and professional reputation needs to be ruined or
>smeared daily.

Then remove the "Kick Me" sing you placed on your own backside.

>Do you understand the magnitude of the things that are being
>published and transmitted globally and openly on a daily basis?

Why don't you look at the magnitude of postings you have made on the internet? At least 6500! A significant number of which, the majority in fact, are either your inappropriate hype about fractal antennas, or threats to those who question that hype.

www.opsyhopsy.com/MiscJunk/who_is_nc.htm

At long last, will the boy genius grow up?

1117. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 06:58:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2cm0n8kjc4kd9@corp.supernews.com>
Source record: 127006

The average value of the power in the traveling wave you describe is indeed 100 watts.

To find what happens when two traveling waves of different voltages cross (i.e., occupy the same physical space), simply add their voltages and currents at each point like Skilling says in the textbook quote I gave. Surely that's not difficult to do. Doing so shows that the two waves you mention can add to any vector sum of those two voltages (and currents), depending on their phase angles. The magnitude of the result can be any of an infinite number of values, including but not limited to 106.066 - 35.355, 106.066 + 35.355, and sqrt(sum of their squares). But none of this justifies the concept of traveling waves of average power. And steve's articles don't constitute a textbook.

So I continue to dispute that traveling waves of average power is a valid concept, and that there's such a thing as "merged" waves that are somehow different that the simple addition of voltages and currents of waves passing each other at a given point. No one has shown a shread of evidence that either is valid. You've created a Yeti (or, as we call 'em here, Bigfoot) and are now arguing about how tall he is and how fast he walks. One "proof" is just as good as another.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Was that intended to be an answer to my question, or just another jab
>> at Steve?
>
>
> I don't have an answer, Roy. I'm asking the question. Why can a wave
> of 106.066V in a 150 ohm line (106.066^2/150 = 75W) be superposed with
> a wave of 35.355V in a 150 ohm line (35.355^2/150 = 8.33W) and the
> result be 141.4V in that 150 ohm line (141.4^2/150 = 133.33W)?
>
>> And no, I can't agree with your premise. I don't believe there is such
>> a thing as a traveling "wave" of average power. There are voltage and
>> current waves on a transmission line, period.
>
>
> I'm not sure what you mean. Consider a flat 50 ohm line carrying 70.7V
> at 1.414A. Those are RMS values. Isn't the average power in that traveling
> wave 70.7*1.414 = 70.7^2/50 = 1.414^2*50 = 100W? That's what Dr. Best says
> in his QEX article.

>
>> Can you point to any text that discusses traveling waves of average
>> power?
>
>
> Dr. Best's QEX articles. SWR meters?

1118. You are the reason (spelling correction)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 07:01:56 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <4kmc2v888ldeg0fpdelqanaigth3meuile@4ax.com>
Source record: 127007

>On 15 Jan 2003 21:37:23 GMT, fractenna@aol.com (Fractenna) wrote:
>
>

>This is no fun and games. At least not for me.

Then stop being a sap.

>I see no reason why my enjoyment of ham radio; the internet; and professional reputation needs to be ruined or
>smeared daily.

Then remove the "Kick Me" sign you placed on your own backside.

>Do you understand the magnitude of the things that are being
>published and transmitted globally and openly on a daily basis?

Why don't you look at the magnitude of postings you have made on the internet? At least 6500! A significant number of which, the majority in fact, are either your inappropriate hype about fractal antennas, or threats to those who question that hype.

www.opsyhopsy.com/MiscJunk/who_is_nc.htm

At long last, will the boy genius grow up?

1119. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 09:06:27 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0301160106.48ecc3b8@posting.google.com>
Source record: 127008

What an activity I caused....

I finally dicided to take a look at the patent too see what's all about, and it makes me smile even more. There are number of crucial things that are different. Maybe I should patent this different (new ?) approach myself...

I could mention them overhere, but this would lead to even more discussions, or I could open a competition for those who would like to search for and let me know about the differences. To give a hint, it's all mentioned in the help-file.

Thanks for ALL kind of reply/feedback and/or support,
Arie.

1120. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 10:02:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E268329.3050004@ieee.org>
Source record: 127009

Roy Lewallen wrote:
> The average value of the power in the traveling wave you describe is
> indeed 100 watts.

How did you get that value, Roy. By knowing that 100W is delivered to
the load? By surmising that reflected power equals 33.33W?

> To find what happens when two traveling waves of different voltages
> cross (i.e., occupy the same physical space), simply add their voltages
> and currents at each point like Skilling says in the textbook quote I
> gave. Surely that's not difficult to do. Doing so shows that the two
> waves you mention can add to any vector sum of those two voltages (and
> currents), depending on their phase angles.

The phase angles are all zero degrees in the example I gave.

> But none of this justifies the concept of traveling waves of average
> power. And steve's articles don't constitute a textbook.

Well, almost a textbook. It was 24 pages long. In Johnson's, "Transmission
Lines and Networks", He says the power transmitted by a line is:

P = |E+|^2/Z0 - |E-|^2/Z0

That would be the average power in the forward wave minus the average
power in the reflected wave.

In Ramo/Whinnery, "Fields and Waves in Modern Radio", they say,
"From the voltage-current viewpoint, the average power transmitted
by a single positively traveling wave is ..."

Wr = 0.5*Re(VI*) = Vo^2/2Z0

> So I continue to dispute that traveling waves of average power is a
> valid concept, ...

How does that square with your first statement above?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1121. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 10:25:26 UTC
From: andy swiffin <a.l.swiffin@dundee.ac.uk>
Message-ID: <3e268973$1@news1.tay.ac.uk>
Source record: 127010

> I want to make a balun to match 50ohm coax to a 12.5 ohm balanced load.
Can
> I just make a standard toroidal voltage balun (4:1) wired the other way
> round or do I have to do something clever?
>

Thanks for your responses guys, - what an active newsgroup, I must spend more time here I might learn something! I seem to have made more confusion for myself than clarity by asking the question though!!

To answer some of the reponses:

It is a Balun I want, as well as a step down transformer. I want to match 50ohm coax to a half wave dipole folded into a square halo, and this is at HF (10, 15, 20) so I don't really want to use a coax balun.

When you bend a dipole like this it reduces Zr to about 12.5 ohms. I've experimented with gamma matching and tee-gamma matching, and also used a folded dipole in place of the ordinary one. All of these yield a good match when the dipole is trimmed or extended appropriately. They all yield a fairly high Q antenna though and so it has a sharp bandwidth. So, as I plan to use a 1:1 balun anyway to match to the balanced load it represents I wondered if I might be better just using a 4:1 balun to achieve both transformation and bal-un.

I think what Richard Rogers was suggesting was a 'current' (guanella) balun which is one of the things I'm going to try. I was wondering if there's a reason why the simpler two winding 4:1 voltage balun won't work? Is there any reason why one side is 'balanced' and the other side is 'unbalanced'

I'm a bit puzzled about the references to particular impedances re 50:200 by Richard Clark. It seems from what I've looked at that the number of turns on a balun is noncritical, i.e. various examples go from 6 up to 25 turns, so is there a particular rule linking the number of turns on the toroid to any particular impedance?

I've seen that there is a commercially produced balun which claims to do exactly what I want (http://www.bytemark.com/products/baluns.htm) designed by w2fmi. I may buy one of these, but I'd rather experiment at the moment to get a better understanding. Does anyone know if this is described in his book (which I must get a copy of) and could give me a some idea as to its construction?

Cheers
Andy
gm8oeg

1122. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 11:08:00 UTC
From: Anonymous via the Cypherpunks Tonga Remailer <nobody@cypherpunks.to>
Message-ID: <507918f94f3c57f825658d37e6534d6f@cypherpunks.to>
Source record: 127011

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:
>> Nathan Cohen has his position terminated on 1 Nov.
>>

>Heheheh! Thats the CEO position! That was two CEOs ago:-) Ive got a great
>CEO here now, and I sure dont want that job again:-)
>
>Get your facts right Fred. This has nothing to do with an "school" job.
>
>73,
>Chip N1IR

Ok so now we all know NO SCHOOL JOB lost it in Nov 2002 in Boston... any chance that Mr.Chip is a priest last name is Cohen....
2 CEOs in 60 days,smoking job!

1123. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 11:08:10 UTC
From: Anonymous via the Cypherpunks Tonga Remailer <nobody@cypherpunks.to>
Message-ID: <62327e20fe622bd9f5d9ae582bcf1e43@cypherpunks.to>
Source record: 127012

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:

> I have been clear on the matter of defamation and have proffered a remedy
> by January 30, 2003.
>
> 73,
> Chip N1IR

One can only specuklate!
Can this be the Fractal "Final Solution"?

1124. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 11:08:14 UTC
From: Anonymous via the Cypherpunks Tonga Remailer <nobody@cypherpunks.to>
Message-ID: <5ef4bbb47970267d52b6b35518562bbf@cypherpunks.to>
Source record: 127013

This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:

>Nor the infringement. See: Festo Corp. v. ShoketsuKinzoku Kogyo
>Kabushiki Co. Ltd. et al., Supreme Court decision, May, 2003.
>
>
>73,
>Chip N1IR

Holy Bovine Scatalogy, Has the Chipster discoverd the "Fractal Time Machine" the last time I checked It was still mid January 2003, Chip do you read palms as well....

1125. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 11:14:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2d51bb2b0cj6d@corp.supernews.com>
Source record: 127014

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> The average value of the power in the traveling wave you describe is
>> indeed 100 watts.
>
>
> How did you get that value, Roy. By knowing that 100W is delivered to
> the load? By surmising that reflected power equals 33.33W?

The question I was answering is the following:

"Consider a flat 50 ohm line carrying 70.7V
at 1.414A. Those are RMS values. Isn't the average power in that
traveling wave 70.7*1.414 = 70.7^2/50 = 1.414^2*50 = 100W? That's what
Dr. Best says in his QEX article."

The power in the forward wave is calculated directly from V, I, and/or
R. I didn't attempt to answer your other question except to point out,
once again, that to find the voltage at any point along the line, simply
add the voltages and currents of the traveling waves at that point.

>> To find what happens when two traveling waves of different voltages
>> cross (i.e., occupy the same physical space), simply add their
>> voltages and currents at each point like Skilling says in the textbook
>> quote I gave. Surely that's not difficult to do. Doing so shows that
>> the two waves you mention can add to any vector sum of those two
>> voltages (and currents), depending on their phase angles.
>
>
> The phase angles are all zero degrees in the example I gave.
>
>> But none of this justifies the concept of traveling waves of average
>> power. And steve's articles don't constitute a textbook.
>
>
> Well, almost a textbook. It was 24 pages long. In Johnson's, "Transmission
> Lines and Networks", He says the power transmitted by a line is:
>
> P = |E+|^2/Z0 - |E-|^2/Z0
>
> That would be the average power in the forward wave minus the average
> power in the reflected wave.

I don't have any trouble with this, as long as he mentioned that this is
true only when the line's characteristic impedance is purely real.

Thanks for the reference -- I'll see if I can find a copy. Is this the same Johnson who currently edit's the _Antenna Engineering Handbook_?

Has someone posted or published something that contradicts this relationship?

> In Ramo/Whinnery, "Fields and Waves in Modern Radio", they say,
> "From the voltage-current viewpoint, the average power transmitted
> by a single positively traveling wave is ..."
>
> Wr = 0.5*Re(VI*) = Vo^2/2Z0

I have no trouble with that, either. You've calculated the average power of a traveling wave. You could also have calculated its impedance. But that doesn't create a traveling impedance wave.

>> So I continue to dispute that traveling waves of average power is a
>> valid concept, ...
>
>
> How does that square with your first statement above?

The fact that you can calculate the average (or peak, or PEP) power (or the cube root of the voltage times the logarithm of the current) of a traveling wave doesn't give these derived quantities any meaning as traveling waves. Or don't you see the distinction?

And I'm still waiting for an explanation of how you "merge" waves. (Sorry, Richard, I don't see any traveling waves at all in my (non-transmission-line) transformers, so your analogy was lost on me.)

Roy Lewallen, W7EL

1126. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 12:23:48 UTC
From: fractenna@aol.com
Message-ID: <20030116072348.08181.00000033@mb-cq.aol.com>
Source record: 127015

>
>What an activity I caused....
>
>I finally dicided to take a look at the patent too see what's all
>about, and it makes me smile even more. There are number of crucial
>things that are different. Maybe I should patent this different (new
>?) approach myself...
>
>I could mention them overhere, but this would lead to even more
>discussions, or I could open a competition for those who would like to
>search for and let me know about the differences. To give a hint, it's
>all mentioned in the help-file.
>
>Thanks for ALL kind of reply/feedback and/or support,
>Arie.
>
>

All it takes is one claim to amount to infringement..

You could have saved everyone a lot of time if you had answered the question I posed 9 days ago.Also, given your extant answers, you should realize that transitioning from unintentional to willful infringement is a very big issue in patent litigation.

I, for one, would be happy to tell the inventors how what we do here does not infringe on prior art.

I was happy to be a disinterested party and inform.

73,
Chip N1IR

1127. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 12:59:03 UTC
From: richardharrison@webtv.net
Message-ID: <29733-3E26AC97-181@storefull-2318.public.lawson.webtv.net>
Source record: 127017

I wrote:
"All the currents (of the same frequency) flowing in the same direction
(on the same conductors) must merge."

Richard Clark did not contradict the statement. He merely tried to smear
the statement, saying:
"There are already established concepts that preclude this as either
redundant, or worse, simply a tautology."

My response: B.S.!

Best regards, Ricjhard Harrison, KB5WZI

1128. Re: Want

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 13:13:38 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E26AFF6.6040608@tampabay.rr.com>
Source record: 127016

hey roger
as cheap as they are normally it wouldnt be bad to buy brand new ones
i think MFJ sells some for $19.95 plus shipping
good luck

Roger Peterson wrote:
> Does anyone have any Ham sticks that they do not need? I would like to get
> the 40 and the 20 and maybe a 17 meter one. Let me know here or at
> kc8qr@neo.rr.com.
>
> Tnx
>
> Pete kc8qr
>
>

1129. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 13:28:28 UTC
From: richardharrison@webtv.net
Message-ID: <29734-3E26B37C-88@storefull-2318.public.lawson.webtv.net>
Source record: 127018

Roy, W7EL wrote:
"Sorry Richard, I don`t see any traveling waves at all in
(non-transmission-line) transformers, so your analogy was lost on me."

Phasors apply exactly at r-f as they do at lower a-c frequencies.

Best regards, Richard Harrison, KB5WZI

1130. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 14:12:54 UTC
From: k3bu@aol.com
Message-ID: <20030116091254.14569.00000051@mb-fc.aol.com>
Source record: 126919

>
>All it takes is one claim to amount to infringement..
>
>You could have saved everyone a lot of time if you had answered the question
>I
>posed 9 days ago.Also, given your extant answers, you should realize that
>transitioning from unintentional to willful infringement is a very big issue
>in
>patent litigation.
>
>I, for one, would be happy to tell the inventors how what we do here does not
>infringe on prior art.
>
>I was happy to be a disinterested party and inform.
>
>73,
>Chip N1IR
>
>
>
>

Thick and getting Thicker!
Lemme see, we have now watchdog that is watching so that US government does not get infringed by unrelated work somewhere in the world. He is happy by keeping inventors informed. Now we have Mosad informer in the field of antennas?
Stupid is what stupid does!
Arie, please ignore garbage coming Freakaland, if you argue with them (personalieties), they will get educated and next thing you will see is it being patented by the "genius" with proper threats of law suits.

Bada BUm
(friend of Tony Soprano)

1131. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 14:43:15 UTC
From: richardharrison@webtv.net
Message-ID: <29735-3E26C503-32@storefull-2318.public.lawson.webtv.net>
Source record: 126921

Roy, W7EL wrote:
"Can you point to any text that discusses traveling waves of average power?"

Yes. "Bird Technical Series #1", Bird Electronic Corp. October 1987.

"By proper combination of the two samples (voltage and current) we obtain an RF voltage proportional to the square root of mainline power---."

"Any "43" element in any "43" wattmeter will meet published specifications of accuracy (+ or - 5% of full scale)."

And from the Bird "43" manual:
"a. The forward wave travels (and its power flows) from the source to the load. It has an RF Voltage Ef and current If in phase, with Ef / If = Zo.
B. The reflected wave originates by reflection at the load, travels (and its power flows) from the load back to the source and also has an RF voltage Er and current Ir, in phase, with Er / Ir = Zo.

Zo is the characteristic impedance of the uniform line, and simplifies matters by being nearly a pure resistance, usually 50 ohms, for useful lines.'

Roy is not a lone skeptic. But, they are all wrong as power is defined by the IEEE as the rate of energy flow. Cecil has quoted this many times, but it seems they justy don`t get it!

Best regards, Richard Harrison, KB5WZI

1132. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 14:55:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E26C7DD.3090903@ieee.org>
Source record: 126920

Roy Lewallen wrote:
> Is this the
> same Johnson who currently edit's the _Antenna Engineering Handbook_?

I doubt it. Walter C. Johnson's book is copyrighted 1950 when he was chairman of the EE Dept. at Princeton. That would make him a little long in the tooth nowadays.

> Has someone posted or published something that contradicts this
> relationship?

Dr. Best has published something that expands that relationship. If you have the ARRL 2001 CD, it is on there in the Nov/Dec 2001 QEX.

> And I'm still waiting for an explanation of how you "merge" waves.

Well, that's what I am also waiting for. We can take two transmitters and superpose the two in-phase output waves, one at 75W and the other at 8.33W, and deliver 83.33W to the load. Dr. Best can take two in-phase waves, one at 75W and the other at 8.33W, superpose them, and deliver 100W to the load. That's a difference of 16.67W. Dr. Best's method of superposition is much more efficient than ordinary superposition so it needs a different name. For want of a better name, I have been calling it super-superposition.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1133. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 15:50:32 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301160750.574ce5b@posting.google.com>
Source record: 126922

Anonymous via the Cypherpunks Tonga Remailer <nobody@cypherpunks.to> wrote in message news:<62327e20fe622bd9f5d9ae582bcf1e43@cypherpunks.to>...
> This is publik notease that Chipster N1IR AKA fractenna@aol.com (Fractenna) sent into the ether:
>
> > I have been clear on the matter of defamation and have proffered a remedy
> > by January 30, 2003.
> >
> > 73,
> > Chip N1IR
>
> One can only specuklate!
> Can this be the Fractal "Final Solution"?

Sir, this is a good newswgroup and you are now bringing it down
to a new low level. Though you are hiding behind a blanket by not \
giving your name your grammer seems familiar. Please back off
so that some decorum can return to this group.
Thanks
Art

1134. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 16:00:30 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <8gydnZ50rb6ISrujXTWcqw@comcast.com>
Source record: 126923

Andy,

You might want to look at RF amplifier input transformers. Basically, the secondary winding is one turn, made of two short pieces of small copper tubing - shorted on the input end, and each loaded with Ferrite. The two turn primary is wound through the holes in the tubing. Makes for very tight coupling. 12 Ohms is kind of high impedance for this, but should work down to 14 MHz OK.

Tam/WB2TT
"andy swiffin" <a.l.swiffin@dundee.ac.uk> wrote in message news:3e268973$1@news1.tay.ac.uk...
>
>
> > I want to make a balun to match 50ohm coax to a 12.5 ohm balanced load.....

1135. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 16:11:42 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E26D967.3090808@attbi.com>
Source record: 126924

Don't tell the electric utility about this free power!!

The national power grid all operates with generating stations of
different power outputs operating in phase and delivering power to the
same transmission lines. Oh!! That's the power hat got ENRON in trouble!

Somebody's fiddling with a 'Perpetual Motion Machine' !! Next, we will
be discussing the 'Fountain of Youth'.

There is no FREE power!!! If your model or analysis finds free power
you've blundered!!

Deacon Dave, W1MCE

Now, if you truly have a method to get free power off of a transmission
line I'd like to sign up for about 20 KWH per day. ;-)

I want to get

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Is this the same Johnson who currently edit's the _Antenna Engineering
>> Handbook_?
>
>
> I doubt it. Walter C. Johnson's book is copyrighted 1950 when he was
> chairman of the EE Dept. at Princeton. That would make him a little
> long in the tooth nowadays.
>
>> Has someone posted or published something that contradicts this
>> relationship?
>
>
> Dr. Best has published something that expands that relationship. If
> you have the ARRL 2001 CD, it is on there in the Nov/Dec 2001 QEX.
>
>> And I'm still waiting for an explanation of how you "merge" waves.
>
>
> Well, that's what I am also waiting for. We can take two transmitters
> and superpose the two in-phase output waves, one at 75W and the other
> at 8.33W, and deliver 83.33W to the load. Dr. Best can take two in-
> phase waves, one at 75W and the other at 8.33W, superpose them, and
> deliver 100W to the load. That's a difference of 16.67W. Dr. Best's
> method of superposition is much more efficient than ordinary

> superposition so it needs a different name. For want of a better
> name, I have been calling it super-superposition.

1136. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 17:04:30 UTC
From: richardharrison@webtv.net
Message-ID: <1170-3E26E61E-240@storefull-2311.public.lawson.webtv.net>
Source record: 126926

Cecil, W5DXP wrote:

"Dr. Best can take two in-phase waves, one at 75W and the other at 8.33W, superpose them, and deliver 100W to the load."

I took (2) 50-KW identical shortwave broadcast transmitters, drove them both from the same oscillator, and paralleled their outputs through a rat-race to the same load. The maximum output was 2X the output of one transmitter, for an unmodulated total of about 100 KW. That was the best we could do under any conditions.

Best regards, Richard Harrison, KB5WZI

1137. Re: Full KW on GAP Titan?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 17:11:44 UTC
From: rb <rbigg@seii.net>
Message-ID: <b06oq1$9ak$1@news.utelfla.com>
Source record: 126925

I have a GAP Voyager. I assume the Titan is similar to the Voyager in that it uses a capacitor at the top of the vertical. Two things:

1. tune up on low power

2. stay in the specified freq range "window", in the charts, for each band.

If you get outside the window, the SWR skirt goes steeply upward for every khz away from the windown edge you move. Hi-pwr applied in this condition will pop the capacitor in the top of the antenna so fast you won't believe it. Within the low SWR window, the antenna will take the rated power. Move outside the SWR curve, and pop goes the cap.

1138. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 17:29:23 UTC
From: richardharrison@webtv.net
Message-ID: <1170-3E26EBF3-243@storefull-2311.public.lawson.webtv.net>
Source record: 126928

Andy, GM8OEG wrote:
"Can I just make a standard toroidal voltage balun (4:1) wired the other way around or do I have to do something clever?"

The answer is: you can make a standard toroidal voltage balun. A transformer works equally well with either direction of power flow. The voltage ratio and impedance transformation work in both directions.

The Z ratio is the square of the turns and voltage ratios, so for a 4X Z-ratio, the turns-ratio is 2X.

I`ve only read Reg`s sensible response and I don`t know if my response is redundant, but that`s it.

Best regards, Richard Harrison, KB5WZI

1139. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 17:44:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kurd2v0vbb0gn1akf87hu69lp2q87uede0@4ax.com>
Source record: 126927

On Thu, 16 Jan 2003 06:59:03 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>I wrote:
>"All the currents (of the same frequency) flowing in the same direction
>(on the same conductors) must merge."
>
>Richard Clark did not contradict the statement. He merely tried to smear
>the statement, saying:
>"There are already established concepts that preclude this as either
>redundant, or worse, simply a tautology."
>
>My response: B.S.!
>
>Best regards, Ricjhard Harrison, KB5WZI
>

Hi Richard,

Loss of composure? B.S.? Smearing?

I see the nature of discussion has taken a personal turn. Sorry if
you felt that I offended you.

73's
Richard Clark, KB7QHC

1140. Half square for a beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 18:03:45 UTC
From: antswitch@tomochka.com
Message-ID: <47c89a30.0301161003.1d85c1e@posting.google.com>
Source record: 126929

Folks,

For a 10 meter beacon, which doesn't care about reception characteristics and wants to be as omni-directional as possible, which of these two antennas would be generally more preferable (each at a height of 3/4 wl): simple wire dipole or corner-fed half-square w/o radials?

73,

Casey

1141. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 18:12:36 UTC
From: richardharrison@webtv.net
Message-ID: <26170-3E26F614-240@storefull-2312.public.lawson.webtv.net>
Source record: 126933

Richard Clark. KB7QHC wrote:
"Loss of composure?"

I`m composed when I say repetition is not necessarily useless when so many obviously don`t get the point. Power flows.

Best regards, Richard Harrison, KB5WZI

1142. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 18:26:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E26F967.2000605@ieee.org>
Source record: 126930

Dave Shrader wrote:
> There is no FREE power!!! If your model or analysis finds free power
> you've blundered!!

It's not my model, Dave, it's Dr. Best's model. I'm just trying
to understand it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1143. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 18:29:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E26F9F5.2030102@ieee.org>
Source record: 126931

Richard Harrison wrote:
> Cecil, W5DXP wrote:
>
> "Dr. Best can take two in-phase waves, one at 75W and the other at
> 8.33W, superpose them, and deliver 100W to the load."
>
> I took (2) 50-KW identical shortwave broadcast transmitters, drove them
> both from the same oscillator, and paralleled their outputs through a
> rat-race to the same load. The maximum output was 2X the output of one
> transmitter, for an unmodulated total of about 100 KW. That was the best
> we could do under any conditions.

Why couldn't you superpose V1 and V2 to get V1+V2 and superpose I1 and I2
to get I1+I2? That's what some say happens in a transmission line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1144. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 18:37:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E26FBD5.7030809@ieee.org>
Source record: 126932

Richard Harrison wrote:
> Roy is not a lone skeptic. But, they are all wrong as power is defined
> by the IEEE as the rate of energy flow. Cecil has quoted this many
> times, but it seems they just don`t get it!

Well, some or all of our models of reality might be wrong, so
naturally there are some skeptics. Dr. Best adopted the reflection
model for his QEX article so I am working with the reflection model
even though some may say it is wrong. I believe I have found
inconsistencies in the way Dr. Best applies the reflection model
and have been attempting to point them out for some time. Dr. Best
and I are both under a lot of stress and sometimes it spills over
into this newsgroup. For that I apologize. Dr. Best and I exchange
both heated and friendly/sympathetic emails depending on the situation.
There's nothing personal involved and I suspect he and I are simply
too much alike. Ever put two cats in a tot'sack and shook them up? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1145. Senior Design Project

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 19:08:13 UTC
From: mwc@umich.edu
Message-ID: <277ff337.0301161108.645b66e7@posting.google.com>
Source record: 126934

I'm an Elec.Engin. senior, and my senior design class is RF Wireless/Antenna Design. I'm having a hard time thinking of a project topic. I was wondering if anyone has suggestions? Maybe there's something you've always thought was interesting? One thing I wanted to work on was an automated car lock/unlock system, but a group last semester already did that... Other projects from last semester were radio-links using exotic propagation like moon-bounce and meteor scatter. My project is not a full-blown design/development. Basically, it's a Phase A project, with a decent amount of theory and hypothesization, with the only "real" work being a Proof-of-concept demonstration.

Thanks for any help,
MC

1146. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 19:32:52 UTC
From: dplatt@radagast.org
Message-ID: <v2e274832hl94c@corp.supernews.com>
Source record: 126935

In article <ee90361b.0301160106.48ecc3b8@posting.google.com>,
<4nec2@gmx.net> wrote:

>What an activity I caused....
>
>I finally dicided to take a look at the patent too see what's all
>about, and it makes me smile even more. There are number of crucial
>things that are different. Maybe I should patent this different (new
>?) approach myself...

Or, alternatively, do a complete public disclosure of how it works.
That won't keep other people from using it, but it will prevent anyone
else from patenting the technique and stopping you from using it
(unless they can establish a prior-date-of-invention within the past
year).

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1147. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 20:08:14 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <M8adnUzSstf2jLqjXTWcqA@comcast.com>
Source record: 126936

Richard,

This may or may not work - the impedance is all wrong. Standard antenna baluns are meant to work 50 to 200 ohms. He wants 12.5 to 50. The standard balun has enough inductance to maintain 200 ohms at 3.5 MHz, where he only needs 50 ohms at 14 MHz. In addition to what I mentioned earlier, there are also ways of winding these with 25 Ohm coax (Yes there is such a thing), which is just right for a 12.5 - 50 ohm transformer because it maintains a 2:1 SWR in the transformer.

www.communication-concepts.com has all kinds of goodies, including Motorola ap notes that show how these transformers should be wound. Also, there are pictures under Products > HF Transformers.

http://www.rfparts.com/combiner.html#Broadband has wound and partially wound ferrite transformers, just scroll down the page.

Tam/WB2TT

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:1170-3E26EBF3-243@storefull-2311.public.lawson.webtv.net...
> Andy, GM8OEG wrote:
> "Can I just make a standard toroidal voltage balun (4:1) wired the other
> way around or do I have to do something clever?"
>
> The answer is: you can make a standard toroidal voltage balun. A
> transformer works equally well with either direction of power flow. The
> voltage ratio and impedance transformation work in both directions.
>
> The Z ratio is the square of the turns and voltage ratios, so for a 4X
> Z-ratio, the turns-ratio is 2X.
>
> I`ve only read Reg`s sensible response and I don`t know if my response
> is redundant, but that`s it.
>
> Best regards, Richard Harrison, KB5WZI
>

1148. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 20:10:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <26sd2vo47vlj26ui3sp8ksupgn69p2lkg1@4ax.com>
Source record: 126938

On Thu, 16 Jan 2003 10:25:26 -0000, "andy swiffin"
<a.l.swiffin@dundee.ac.uk> wrote:

>
>I'm a bit puzzled about the references to particular impedances re 50:200 by
>Richard Clark. It seems from what I've looked at that the number of turns
>on a balun is noncritical, i.e. various examples go from 6 up to 25 turns,
>so is there a particular rule linking the number of turns on the toroid to
>any particular impedance?

Hi Andy,

This is simply what you will get if you buy one (50:200).

The number of turns exactly correlates to ability of the BalUn to present a high Z between the input and output (lacking that, you have a short, and certainly a useless BalUn).

BalUns do not work over an infinite frequency range. They are limited devices and if you are interested in transmitting instead of heating the core, it pays to understand what IS important. You have noted at least two BalUns that have presented you with very different characteristics. You need only step back and think: what is the significance of this difference in fundamental terms?

More turns, more reactance. More turns, more resistance (another subject related to the loss property leveraged to an advantage through using Ferrite). More turns, more input/output isolation. More turns, more electrical distance between input and output (this is a bad characteristic when that distance becomes a significant portion of a wavelength, about 5 degrees). More turns, no change (an observation of two designs that vary in the composition of the core, which for a specific purpose is less effective for one BalUn than the other - thus more turns).

It is very difficult to divorce the prejudices of the term transformer through our common and ordinary usage of it. The "turns" is an example of that as a reflex of considering Power transformers and their "turns" ratio. BalUns do not have "turns" ratio's. A 4:1 BalUn is not constructed by observing a similar "turns" ratio. The turns in a BalUn do not build a magnetic field in the core because the turns are paired lines. These paired lines have their own current, that current is balanced, and the core does not impart ANY characteristic on their magnitude or phase (unless there are too many turns at a given frequency and even here, this is not core determined).

So, what is the significance of turns then?

Isolation. Think in terms of the application you desired. You want to feed a balanced antenna with an unbalanced feed line. Your goal is to maintain a balanced load, and your constraint is you have a grounded source. Let's step back and state the problem in terms of the goal. One half of a coax (or poorly connected twin lead) driven dipole is now attached to ground. Be mindful that this "short to ground" probably has some appreciable radiation resistance that limits that lower bound (in other words: not zero Ohms).

The line's radiation resistance is the first order of Isolation between one half of the antenna, and ground. That means when the antenna excitation leaves the transmission line and is presented with the load, it finds that load is a parallel combination of two radiation resistances: the antenna's and the transmission line's. If we ignore the ramifications of this additional radiation resistance, and instead look at its magnitude, this then becomes the value of how much separation there is between the afflicted half of the dipole and ground.

If you don't know, can't compute, or are afraid to guess the magnitude of your transmission line's isolation, then you can opt for cheap insurance: a BalUn. One major purpose of a BalUn is to give you isolation between the feed and the load.

Howcum?

Look at Richard Rogers very suitable response:

```
>
>
> --------wwwww----+-----
> +----wwwww----|-+
> | | |
>50 | | | 12.5
> +----wwwww----+ |
> --------wwwww------+---
>
>
>73 Ric, VK7RO
```

Saying you have a balanced 12.5 Ohm load means that each side of the load sees an equal amount of impedance as it struggles ground-ward. The w's in the illustration are good representations of the impedance in that balance with ground presumed to be found at the source, and the return path through ground back to the balanced tips of the antenna. I will amend Ric's drawing to show the complete circuit:

```
+----------wwwww----+-----+
| | |
| +----wwwww----|-+ |
z | | | Z
| | | | |
+-- 50 | | | 12.5--+
| | | | | | |
```

```
=== z +----wwwww----+ | Z ===
/// | | | ///
+----------wwwww------+---+
```

If were to observe a direct connection from source to load (no BalUn and thus no impedances represented by the w's); then each side of the load would find a path to ground that was equal to its other half.

Sadly, that is not the common state of affairs however, this is:

```
dipole element
+--O-------wwwww----+-----O---------+
| | |
| +----wwwww----|-+ |
| | | | Z coupling to ground
| | | | |
50 | | | 12.5 +---+
| | | | | |
| +----wwwww----+ | === Z coupling to ground
| | /// |
+--O-------wwwww------+---O---------+
| dipole element
===
///
```

While still ignoring the w's, you will note that the lower Z (representing one half of the dipole) now has ground on both sides of it. What does having grounds on both sides mean? No potential difference, no current flow. Given there are large physical structures involved and considerable distances involved somewhere in the mix, saying that both sides of one dipole element are at ground is a broad generalization. We in fact hope and wish for such an outcome because we can fix THAT problem (or problems like it which are not uncommon).

The solution to that problem arrives courtesy of the w's we have ignored to this point. The impedance/reactance/resistance offered by the BalUn is imposed between the two grounds moving the dipole element away and towards balance. Now you might rightly point out that still says nothing of how excitation gets there anyway. What's the point of isolation (we were faced with a shorted dipole element) if we cannot drive it (still looks like half goes to ground, even if through new and improved impedance/reactance/resistance courtesy of the miracle BalUn).

Now there is the conceptual knot. Those w's both represent impedance, and a direct connection to the source. The impedance is only seen by the pair (you need two sets of w's to constitute the impedance) and NOT by a single conductor. We need to now observe the necessity of isolation for the sake of impedance transformation and not just maintaining balance. The illustration has odd woven connections that are not common to many other transformer applications (again, NOT like

power transformers). If you were to throw an Ohm meter across the input of the BalUn, it would take a nanosecond to reveal that your output is shorted. Throw 100W at it, and the transmitter would act as though there were 50 Ohms (no short). Do you throw away your Ohm meter? What is going on here? How can the dipole load ignore a direct short across its input leads? Those w's.

Look at the drawing again, and completely dismiss what those w's are and tell yourself that the line that draws vertically through them splits off the left side and the right side into camps of equivalency. In the left camp we have a 50 Ohm source, and two transmission lines hooked in series. Those two transmission lines cross into the right camp; but from the left camp's perspective (not being able to see the right camp due to isolation), those two lines are terminated in their characteristic impedance: 25 Ohms (25 + 25 = 50) our goal is to conspire to make that true and now design the source to meet that load. The 50 Ohm source literally sees a 50 Ohm load. Having satisfied all conditions on the left, we can cast its characteristics into the right camp, THROUGH the transmission lines.

You should note that the right camp's load sees two transmission lines arriving from the left camp. From the right camp's perspective, those two lines are terminated in their characteristic impedance (we have conspired to do just that above, we thus fulfill the load's expectations). These lines are connected in parallel and present a transformed source impedance of 12.5 (25/2) Ohms. THUS the casting of the source through the lines transforms its characteristic, at the right side O's connections, the BalUn is indistinguishable from a 12.5 Ohm Source. The load matches that source and thus fulfills the expectations of the non-transformed source as well (the load is transformed through the BalUn to 50 Ohms).

The source and load meet each other's criterions AS LONG AS that imaginary line represents a considerable degree of Isolation. The magnitude of that degree is found in both the composition of the core of a BalUn, and in the number of passes (not turns!) that a transmission line makes through the core.

Now, for the magic answer howmuch? Look at the design requirements. A balanced 12.5 Ohm dipole. 50 Ohm source. 50, 12.5 .... I don't see any other "large" numbers, and smaller numbers are a cake walk. It comes down to how much of a short are you willing to live with? If you peg your Isolation at 10 times the largest number (call it 500 Ohms) you would find a safe harbor for typical applications.

How do I come by this amount? One bead (see other discussions) will add 23-27 Ohms to the Common Mode path (see other discussions) and the addition of 20 of these to a foot of cable (two such cables for Ric's suggestion above) will easily suffice as a BalUn. If you are winding cores, it is the number of passes (not turns!) through the core squared times that same resistance factor (which will vary according to formulation and core size - see other discussions).

73's
Richard Clark, KB7QHC

1149. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 20:10:32 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <Pbecna0uivYwjLqjXTWcoQ@comcast.com>
Source record: 126937

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:...
> Richard,
>
> This may or may not work - the impedance is all wrong. Standard antenna
> baluns are meant to work 50 to 200 ohms. He wants 12.5 to 50. The standard
> balun has enough inductance to maintain 200 ohms at 3.5 MHz, where he only
> needs 50 ohms at 14 MHz. In addition to what I mentioned earlier, there
are
> also ways of winding these with 25 Ohm coax (Yes there is such a thing),
> which is just right for a 12.5 - 50 ohm transformer because it maintains a
> 2:1 SWR in the transformer.
>
> www.communication-concepts.com has all kinds of goodies, including
Motorola
> ap notes that show how these transformers should be wound. Also, there are
> pictures under Products > HF Transformers.
>
> http://www.rfparts.com/combiner.html#Broadband has wound and partially
wound
> ferrite transformers, just scroll down the page.
>
> Tam/WB2TT
> _____________________________________
> "Richard Harrison" <richardharrison@webtv.net> wrote in message
> news:1170-3E26EBF3-243@storefull-2311.public.lawson.webtv.net...
> > Andy, GM8OEG wrote:
> > "Can I just make a standard toroidal voltage balun (4:1) wired the other
> > way around or do I have to do something clever?"
> >
> > The answer is: you can make a standard toroidal voltage balun. A
> > transformer works equally well with either direction of power flow. The
> > voltage ratio and impedance transformation work in both directions.
> >
> > The Z ratio is the square of the turns and voltage ratios, so for a 4X
> > Z-ratio, the turns-ratio is 2X.
> >
> > I`ve only read Reg`s sensible response and I don`t know if my response
> > is redundant, but that`s it.
> >
> > Best regards, Richard Harrison, KB5WZI
> >
>
>
>

>

1150. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 20:15:21 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ko4e2vc9rav8epe1hdrahq21t0q77q5380@4ax.com>
Source record: 126939

On Thu, 16 Jan 2003 19:32:52 -0000, dplatt@radagast.org (Dave Platt)
wrote:

>In article <ee90361b.0301160106.48ecc3b8@posting.google.com>,
> <4nec2@gmx.net> wrote:
>
>>What an activity I caused....
>>
>>I finally dicided to take a look at the patent too see what's all
>>about, and it makes me smile even more. There are number of crucial
>>things that are different. Maybe I should patent this different (new
>>?) approach myself...
>
>Or, alternatively, do a complete public disclosure of how it works.
>That won't keep other people from using it, but it will prevent anyone
>else from patenting the technique and stopping you from using it
>(unless they can establish a prior-date-of-invention within the past
>year).

Hi Dave, Arie,

Exactly the reason I injected the discussion of the application of
Fuzzy Logic to the design and optimization of Antennas. Given freely
to the Public Domain - barring rights already held.

73's
Richard Clark, KB7QHC

1151. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 20:29:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hu4e2vs4qn8pmbr62ols8vnut02qf5pap5@4ax.com>
Source record: 126940

On Thu, 16 Jan 2003 12:26:47 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Dave Shrader wrote:
>> There is no FREE power!!! If your model or analysis finds free power
>> you've blundered!!
>
>It's not my model, Dave, it's Dr. Best's model. I'm just trying
>to understand it.

Hi Cecil,

I cannot let that pass. It is YOUR interpretation of Steve's
statements - and much too often, statements you have literally
invented in Steve's behalf through the frustrating lack of his
response.

Do you still deny there is a difference between $20 in bills and $20
in coin? Do you still refuse to observe the law of Conservation of
Volume? Why do you fail to face up to this problem and answer these
questions I offered before? Don't you want to know the TRUTH?

Cecil sez: "$20 in bills is equivalent to $5 in change if I observe
the Conservation of Volume - I a'int buyin' it"

Oh ye of little faith.

73's
Richard Clark, KB7QHC

1152. Match homebrew antenna to feedline?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 20:29:54 UTC
From: Joshua G Senecal <senecal@mapson.cs.ucdavis.edu>
Message-ID: <Pine.LNX.4.44.0301161213090.3378-100000@pc10.cs.ucdavis.edu>
Source record: 126941

Hi all,

I am in the final stages of getting my apartment QTH up and running on a longwire (hopefully by Satudray!). I want to get a better antenna up ASAP, but because of severely limited space outside I may have to use something like a homebuilt helically wound dipole or vertical.

My question: how do I match the antenna to the feedline (without any fancy equipment--I'm on a tiny budget) to make the system as efficient as possible? I know that matching can be done with a wire loop transformer and a variable cap at the antenna feed point, but I still need a way to determine what number of loops and capacitor setting gives me an impedance match.

Assuming I'm using 300 Ohm feeder, the only solution I've thought of so far is to attach a 300 Ohm resistor across the end of the feedline, then use my antenna tuner to get a low SWR on the operating frequency. Then remove the resistor, attach the line to the antenna, and adjust the number of loops and cap setting until the antenna tuner shows a low SWR again.

I'm very new to all this so any suggestions or comments are greatly appreciated.

Thanks!

-Josh Senecal

--
---
senecal@mapson.cs.ucdavis.edu

Remove the reversed "nospam" in the address.

"Your most valuable asset is rampant ignorance."

-Dogbert

1153. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 20:35:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ut5e2v4i8lbqur704pn3fsgv733ism23bf@4ax.com>
Source record: 126942

On Thu, 16 Jan 2003 12:12:36 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark. KB7QHC wrote:
>"Loss of composure?"
>
>I`m composed when I say repetition is not necessarily useless when so
>many obviously don`t get the point. Power flows.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

I observe the point - I am not among the unwashed heathens. I adhere
to the principle Power flows.

So what's with this "smear?"

73's
Richard Clark, KB7QHC

1154. Re: Senior Design Project

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 20:49:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nm6e2v0q992cb9nupql5nd13d224cud174@4ax.com>
Source record: 126943

On 16 Jan 2003 11:08:13 -0800, mwc@umich.edu (MC) wrote:

>I'm an Elec.Engin. senior, and my senior design class is RF Wireless/Antenna
>Design. I'm having a hard time thinking of a project topic. I was
>wondering if anyone has suggestions? Maybe there's something you've always
>thought was interesting? One thing I wanted to work on was an automated car
>lock/unlock system, but a group last semester already did that... Other
>projects from last semester were radio-links using exotic propagation like
>moon-bounce and meteor scatter. My project is not a full-blown
>design/development. Basically, it's a Phase A project, with a decent amount
>of theory and hypothesization, with the only "real" work being a
>Proof-of-concept demonstration.
>
>Thanks for any help,
>MC

Hi MC,

How about a plasma field generator?

73's
Richard Clark, KB7QHC

1155. Re: Senior Design Project

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 20:58:50 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <3E271D0A.F0994A6C@ziplog.com>
Source record: 126944

One of the toughest things in Municipal Code Enforcement operations is the ability to document noise violations with sufficient standards of accuracy that the evidence is court-worthy by the time any official can get there to write the citations.

At work here is a monitoring system which is hard wired to the applicable computer sysem that does above-threshold alarm and come-alive, monitoring and audio track collection for evidenciary purposes. In the early stages here is also an RF linked remote probe that can be remotely monitored without hard line connection.

But that's not exactly what is needed yet which is also being researched here. To really work out the evidence game, in some cased, this has to be a triangulated multi-probe remote sensing effort! Described first as to technique on projects in which I worked here in the early 1960's, as part of the original weather radar and sferics research that became part of what is/was the Ryan Storm Scope, the sferics displays you now see on TV on the weather reports, it's really nothing more than an extension of that sensing game down to audio frequencies, as opposed to the RF siganture of lightning bolts!

Just as the advances of the sferics detection network have advanced to the point where satellite RF and other links can be used to coordinate the DF'ing of the sferics game, we are reaching the point where audio surveillance could be packaged and triangulated in compact RF linked form for the local short distance net needed. In this case, coordinated by GPS chips in the remote sensing mini-net package this would be, this could be deployed either in useful single unit versions, or three-unit pods for problem areas...

If you want a fun project that has a quaint future use for keeping the peace in the neighborhoods, try this one! Ready Kilowatt has taken on a whole new meaning from the old electric power companyy advertising, when 'e is everywhere in the form of KW pulse boom boxen that are springing up like weeds in certain yards!

;)

MC wrote:

> I'm an Elec.Engin. senior, and my senior design class is RF Wireless/Antenna
> Design. I'm having a hard time thinking of a project topic. I was
> wondering if anyone has suggestions? Maybe there's something you've always
> thought was interesting? One thing I wanted to work on was an automated car
> lock/unlock system, but a group last semester already did that... Other
> projects from last semester were radio-links using exotic propagation like
> moon-bounce and meteor scatter. My project is not a full-blown
> design/development. Basically, it's a Phase A project, with a decent amount

> of theory and hypothesization, with the only "real" work being a
> Proof-of-concept demonstration.
>
> Thanks for any help,
> MC

--

--> Sleep well; OS2's still awake! ;)

W5WQN
Mike Luther

1156. Re: Senior Design Project

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 21:47:59 UTC
From: fractenna@aol.com
Message-ID: <20030116164759.19886.00000046@mb-cu.aol.com>
Source record: 126945

>
>I'm an Elec.Engin. senior, and my senior design class is RF Wireless/Antenna
>Design. I'm having a hard time thinking of a project topic. I was
>wondering if anyone has suggestions? Maybe there's something you've always
>thought was interesting? One thing I wanted to work on was an automated car
>lock/unlock system, but a group last semester already did that... Other
>projects from last semester were radio-links using exotic propagation like
>moon-bounce and meteor scatter. My project is not a full-blown
>design/development. Basically, it's a Phase A project, with a decent amount
>of theory and hypothesization, with the only "real" work being a
>Proof-of-concept demonstration.
>
>Thanks for any help,
>MC
>

Did you ask your professor? What did he say?

73,
Chip N1IR

1157. Re: Match homebrew antenna to feedline?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 21:49:15 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2728DB.12E69351@cwis.net>
Source record: 126946

Josh,
If you're using a tuner and 300 ohm twin lead to feed
your antenna, I wouldn't bothering to worry about the
impedance mismatch at the antenna. As long as the tuner
will make your radio 'happy', there just won't be enough
of a mismatch to waste good 'worry' on...
'Doc

1158. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 22:01:48 UTC
From: vk7ro@netspace.net.au
Message-ID: <3e272370.441965@news.netspace.net.au>
Source record: 126947

On Thu, 16 Jan 2003 15:08:14 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:

>Richard,
>
>This may or may not work - the impedance is all wrong. Standard antenna
>baluns are meant to work 50 to 200 ohms. He wants 12.5 to 50. The standard
>balun has enough inductance to maintain 200 ohms at 3.5 MHz, where he only
>needs 50 ohms at 14 MHz. In addition to what I mentioned earlier, there are
>also ways of winding these with 25 Ohm coax (Yes there is such a thing),
>which is just right for a 12.5 - 50 ohm transformer because it maintains a
>2:1 SWR in the transformer.
>
>www.communication-concepts.com has all kinds of goodies, including Motorola
>ap notes that show how these transformers should be wound. Also, there are
>pictures under Products > HF Transformers.
>
>http://www.rfparts.com/combiner.html#Broadband has wound and partially wound
>ferrite transformers, just scroll down the page.
>
>Tam/WB2TT

It works alright and the impedance can be made correct. I have a 6M
yagi which I fiddled with EZNEC to have a 12.5 ohm feed impedance and
then used the 4:1 current balun to drive it. I used two pieces of
RG174 in parallel to give 25 ohm cable and two beads like Amidon
FB-43-5621 in each current balun.

This arrangement is/was also used in TV 75:300 ohm baluns where you
often found the "earthy" side of the coax conncted to the cente tap on
the 300 ohm side. It then looks as if one winding of the transformer
is short circuited! Very confusing to those who have only
encountered conventional transformers.

73, Ric, VK7RO

1159. Re: Match homebrew antenna to feedline?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 22:36:08 UTC
From: jgboyles@aol.com
Message-ID: <20030116173608.15467.00000023@mb-fw.aol.com>
Source record: 126948

>Assuming I'm using 300 Ohm feeder, the only solution I've thought of so
>far is to attach a 300 Ohm resistor across the end of the feedline, then
>use my antenna tuner to get a low SWR on the operating frequency. Then
>remove the resistor, attach the line to the antenna, and adjust the number
>of loops and cap setting until the antenna tuner shows a low SWR
Hi Josh, If you have an antenna tuner, and you are using 300 ohm twin lead to feed your antenna, you don't need to worry about matching at the antenna. 300 ohm line is fairly low loss, so most of the rf sent up the line will be passed on to the antenna, where hopefully it will be radiated. The matching will be done in the shack. The tuner must transform the impedance seen at the input to the 300 ohm line (it won't be 300 ohms, it can be just about anything depending on frequency, antenna dimensions, ect.) to the transmitter output impedance, usually 50 ohms. Use a 50 ohm swr bridge or an Antenna analyzer to adjust your tuner.
If your antenna is around 1/3 wavelength or longer at the operating frequency, a tuner and 300 ohm line will provide a very efficient antenna system.
A common misconception when using 300 ohm line or 450 ohm line is: the impedance at the transmitter end will be 300 or 450 ohms. Almost never true. Most commercial tuners have a 1:4 balun which may not do a thing to help the tuner match the antenna system.

73 Gary N4AST

1160. Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 23:03:27 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <3TGV9.45127$p_6.3865483@bgtnsc04-news.ops.worldnet.att.net>
Source record: 126949

I have a 40 mtr end fed ant fed with 450 ohm ladderline.
With a different matching unit could i use it for 2 mtr fm?
I don't care if the pattern is screwed up!

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03

1161. Re: Half square for a beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 23:06:27 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E273AF3.3F128D22@bloomer.net>
Source record: 126950

I'd go with a vertical or a vertically polarized dipole.

Scott
N0EDV

KS7J wrote:
>
> Folks,
>
> For a 10 meter beacon, which doesn't care about reception
> characteristics and wants to be as omni-directional as possible, which
> of these two antennas would be generally more preferable (each at a
> height of 3/4 wl): simple wire dipole or corner-fed half-square w/o
> radials?
>
> 73,
>
> Casey

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

1162. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 23:17:49 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E273D46.1010802@attbi.com>
Source record: 126951

YEP! And it would be screwed UP.

W1MCE

marvin rosen wrote:
> I have a 40 mtr end fed ant fed with 450 ohm ladderline.
> With a different matching unit could i use it for 2 mtr fm?
> I don't care if the pattern is screwed up!
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03
>
>

1163. 50 ohm coaxial balun for 2M

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 23:19:06 UTC
From: castles <castles@yestertronics.com>
Message-ID: <3E273DEA.C24F1B3C@yestertronics.com>
Source record: 126952

OK, I am in the process of making a 50 ohm coaxial balun for my 2 meter 14 element beam.

I have a MFJ analyzer and plan to use RG8/X as the coax. I believe this coax has a Vp of 90%.

I am planning to cut resonance for 146 MHz. What is you experience with cutting and tuning a balun on the bench and then connecting it to the actual antenna? What kind of shift should I expect, and can I offset things a little bit to account for this? Also should I choke the coaxial feedline with ferrites for isolation or are several turns of the coax near the feedpoint just as effective?

Thanks for you experience, Don Campbell W6QEY

1164. Re: Senior Design Project

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 23:29:59 UTC
From: m <asdf@asdf.com>
Message-ID: <6fHV9.50$XR3.2500@news.itd.umich.edu>
Source record: 126955

"Fractenna" <fractenna@aol.com> wrote in message
news:20030116164759.19886.00000046@mb-cu.aol.com...
> >
> >I'm an Elec.Engin. senior, and my senior design class is RF
Wireless/Antenna
> >Design. I'm having a hard time thinking of a project topic. I was
> >wondering if anyone has suggestions? Maybe there's something you've
always
> >thought was interesting? One thing I wanted to work on was an automated
car
> >lock/unlock system, but a group last semester already did that... Other
> >projects from last semester were radio-links using exotic propagation
like
> >moon-bounce and meteor scatter. My project is not a full-blown
> >design/development. Basically, it's a Phase A project, with a decent
amount
> >of theory and hypothesization, with the only "real" work being a
> >Proof-of-concept demonstration.
> >
> >Thanks for any help,
> >MC
> >
>
> Did you ask your professor? What did he say?
>
> 73,
> Chip N1IR

Thanks for the replies. The prof. kind of shrugged and said, "Anything you
want." He wasn't willing to offer suggestions. That's why I decided to ask
the opinions of the experts.

-Mike

1165. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 23:31:55 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <jaHV9.53861$wQ1.40744@fe01>
Source record: 126953

marvin rosen wrote:
> I have a 40 mtr end fed ant fed with 450 ohm ladderline.
> With a different matching unit could i use it for 2 mtr fm?
> I don't care if the pattern is screwed up!

You would put out a far better signal by making a 1/4 wave ground plane
from 1/8" copper welding rod and a SO-239 connector for about $5.00 - even
if it was just tossed up on the roof.

73 de W6DKN

1166. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 23:36:43 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3E27420B.551EDDBA@raytheon.com>
Source record: 126954

OC_CAM's Razor wrote:

> Roy Lewallen wrote:
> > Was that intended to be an answer to my question, or just another jab at
> > Steve?
>
> I don't have an answer, Roy. I'm asking the question. Why can a wave
> of 106.066V in a 150 ohm line (106.066^2/150 = 75W) be superposed with
> a wave of 35.355V in a 150 ohm line (35.355^2/150 = 8.33W) and the
> result be 141.4V in that 150 ohm line (141.4^2/150 = 133.33W)?

Transmission lines of the sort being discussed are Linear, Time Invariant (LTI) systems which support Transverse Electric and Magnetic (TEM) waves.

TEM waves are unique since they can exist at any practical frequency, and that the electric and magnetic fields associated with the TEM mode is known at any cross section where the voltage and current are known. The fields, and therefore voltage and current distribution, can be predicted at a future time by taking advantage of the fact that the voltage and current distributions are coupled, and are solutions to (obey) the one dimensional wave equation, subject to the proscribed boundary conditions. The wave equation itself is very easily solved for the simple traveling wave but can become complicated when simultaneously accommodating the boundary conditions.

The classic approach to solving the combined problem is to exploit the fact that the system is LTI, and to arbitrarily decompose the voltage and current distribution into the sum of a so called forward, and reverse traveling wave, each of which is chosen to be a solution to the wave equation for an infinite transmission line of the specified characteristics. The amplitude and time offset (phase for sinusoidially varying fields) are selected so that the voltage and currents match the boundary conditions imposed by the terminations. The LTI property of the system guarantees that any linear combination of solutions to the wave equation, is also a solution to the wave equation, and therefore capable of existing on the transmission line.

The voltage and current at any place and time is then computed as the sum of the contributions of the imaginary 'forward' and 'reverse' components. Thus, the complete solution is a linear combination of fictitious components, each having a simple analytical form.

Sometimes a fictional power associated with each of the traveling wave components (e.g. Pf(x,t) = Vf(x,t) * If(x,t)) is assigned for calculation convenience. It is important to understand that since the forward and reverse voltage and current components cannot be separated (not even with a directional coupler), no physical basis for the decomposition exists. The decomposition is simply the result of an algebraic manipulation. While these

two fictional power flows individually do not represent an actual power flow, the difference between them does! Since neither fictional power itself represents the transport of real energy, the principal of energy conservation does not apply to the forward and reverse components individually.

> > And no, I can't agree with your premise. I don't believe there is such a
> > thing as a traveling "wave" of average power. There are voltage and
> > current waves on a transmission line, period.

The physical laws governing the relationship between voltage, current, time and position on a TEM transmission line obey the wave equation. The relationship between power, time, and position does not obey the wave equation; therefore power is not a wave!!! If you take a detailed look at how the energy distribution changes with time it is actually quite obviously not a wave.

> I'm not sure what you mean. Consider a flat 50 ohm line carrying 70.7V
> at 1.414A. Those are RMS values. Isn't the average power in that traveling
> wave 70.7*1.414 = 70.7^2/50 = 1.414^2*50 = 100W?

Yes.

> That's what Dr. Best says
> in his QEX article.

He is correct.

bart
wb6hqk

1167. Re: Senior Design Project

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-16 23:58:49 UTC
From: fractenna@aol.com
Message-ID: <20030116185849.08239.00000015@mb-cq.aol.com>
Source record: 126956

>Thanks for the replies. The prof. kind of shrugged and said, "Anything you
>want." He wasn't willing to offer suggestions. That's why I decided to ask
>the opinions of the experts.
>
>-Mike

It is a tough problem, Mike, but you already have an expert--someone who is grading you--saying 'this is for you to work out'.

Why don't you go through IEEE Potentials and see what strikes your fancy, and then use the web to do a first order pass?

Asking on a NG is really not kosher, unless the prof explicitly says 'ask others'.

Have some fun with this: it's always more rewarding to come up with your own project rather than have one assigned.

Also, please don't change e-mails as it becomes suspicious as to whether it's the original poster.

Best,
Chip N1IR

1168. Re: Senior Design Project

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 00:09:43 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <bRHV9.1797$IZ5.1075@nwrddc04.gnilink.net>
Source record: 126957

How about building and testing performance of a "Crossfield Vertical"? It could actually end up being a doctor's thesis. Another idea would be to build/analyze a fractal Quad.

'73 KI4Z

"MC" <mwc@umich.edu> wrote in message news:277ff337.0301161108.645b66e7@posting.google.com...
> I'm an Elec.Engin. senior, and my senior design class is RF Wireless/Antenna
> Design. I'm having a hard time thinking of a project topic. I was
> wondering if anyone has suggestions? Maybe there's something you've always
> thought was interesting? One thing I wanted to work on was an automated car
> lock/unlock system, but a group last semester already did that... Other
> projects from last semester were radio-links using exotic propagation like
> moon-bounce and meteor scatter. My project is not a full-blown
> design/development. Basically, it's a Phase A project, with a decent amount
> of theory and hypothesization, with the only "real" work being a
> Proof-of-concept demonstration.
>
> Thanks for any help,
> MC

1169. Re: 50 ohm coaxial balun for 2M

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 00:27:48 UTC
From: jgboyles@aol.com
Message-ID: <20030116192748.15519.00000020@mb-fw.aol.com>
Source record: 126958

>OK, I am in the process of making a 50 ohm coaxial balun for my 2 meter
>14 element beam.
>
>I have a MFJ analyzer and plan to use RG8/X as the coax. I believe this
>coax has a Vp of 90%.

The first thing is: make sure your 14 el. beam presents a 50 ohm match to your RG8X coax. This is done by adjusting the matching elements on your antenna, usually a gamma match.
One way: Point the beam straight up with the reflector >6' or so above the ground. Tune with your mfj 259b to 50 ohms. Then when you connect the 50 ohm coax you will have a near 1:1 match..
A balun is not needed for general Amateur work, it will prevent Xmission line radiation, but who cares? Yes I know some care.
73 Gary N4AST

1170. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 00:31:31 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-1601031631310001@bni030qny8kc.bc.hsia.telus.net>
Source record: 126959

In article <3E27420B.551EDDBA@raytheon.com>, BHRowlett@raytheon.com wrote:

> TEM waves are unique since they can exist at any practical frequency, and that

...(snip)...

> Sometimes a fictional power associated with each of the traveling wave
> components (e.g. Pf(x,t) = Vf(x,t) * If(x,t)) is assigned for calculation
> convenience. It is important to understand that since the forward and reverse
> voltage and current components cannot be separated (not even with a
> directional coupler), no physical basis for the decomposition exists. The
> decomposition is simply the result of an algebraic manipulation. While these
> two fictional power flows individually do not represent an actual power flow,
> the difference between them does! Since neither fictional power itself
> represents the transport of real energy, the principal of energy conservation
> does not apply to the forward and reverse components individually.

...(snip)...

> The physical laws governing the relationship between voltage, current, time
> and position on a TEM transmission line obey the wave equation. The
> relationship between power, time, and position does not obey the wave
> equation; therefore power is not a wave!!! If you take a detailed look at how
> the energy distribution changes with time it is actually quite obviously not a
> wave.

Beautifully written. That should end it! But it won't.

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

1171. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 01:13:31 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <n4me2v85694n5ip5lvlhak7pbq81b15i5l@4ax.com>
Source record: 126960

On Thu, 16 Jan 2003 20:15:21 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:
[snip]
|
|Hi Dave, Arie,
|
|Exactly the reason I injected the discussion of the application of
|Fuzzy Logic to the design and optimization of Antennas. Given freely
|to the Public Domain - barring rights already held.

FWIW:

http://www.national.com/rap/Application/0,1570,25,00.html

1172. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 01:36:09 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <d6JV9.114369$hK4.9297061@bgtnsc05-news.ops.worldnet.att.net>
Source record: 126961

If i were to construct the ant you mentioned, i would lose
most of my signal in the coax! I have to use 100' of coax
to get to the roof. This is why i'm considering the "end fed"
approach.
.
> marvin rosen wrote:
> > I have a 40 mtr end fed ant fed with 450 ohm ladderline.
> > With a different matching unit could i use it for 2 mtr fm?
> > I don't care if the pattern is screwed up!
>
> You would put out a far better signal by making a 1/4 wave ground plane
> from 1/8" copper welding rod and a SO-239 connector for about $5.00 - even
> if it was just tossed up on the roof.
>
> 73 de W6DKN
>
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03

1173. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 01:48:54 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b07ndo$9fa$1@slb1.atl.mindspring.net>
Source record: 126962

Wes:

[snip]
> FWIW:
>
> http://www.national.com/rap/Application/0,1570,25,00.html
>
[snip]

Everybody knows Bob Pease don't like those stinkin Fuzzy Logicians!

--
Peter K1PO
Indialantic By-the-Sea, FL.

1174. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 01:54:35 UTC
From: dplatt@radagast.org
Message-ID: <v2eoir1ddh6k51@corp.supernews.com>
Source record: 126963

>If i were to construct the ant you mentioned, i would lose
>most of my signal in the coax! I have to use 100' of coax
>to get to the roof. This is why i'm considering the "end fed"
>approach.

A good RG-8X "minicoax" would lose somewhere around 4.5 dB over 100 feet at 144 MHz, I think. Not great - but it's less than one S-unit-according-to-the-usual-conventions and I'd guess that in many situations it wouldn't be enough to hurt too badly.

A low-loss RG-8 cable should lose around 2 dB.

I'd guess that either of these, feeding a J-pole or a center-fed halfwave dipole on the roof, would probably give you better and more consistent performance than you'd get with your 40M wire dipole and a ladder-line feed. Designing the matching network or balun for the ladder line might be a bit tricky at these frequencies.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1175. Been a long two weeks..

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 01:59:58 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <ysJV9.33497$H76.2484782@news1.east.cox.net>
Source record: 126964

says it all.

1176. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 02:08:33 UTC
From: tdonaly@aol.com
Message-ID: <20030116210833.02842.00000056@mb-mn.aol.com>
Source record: 126965

Excellent post!

Tom Donaly, KA6RUH

>
>
>OC_CAM's Razor wrote:
>
>> Roy Lewallen wrote:
>> > Was that intended to be an answer to my question, or just another jab at
>> > Steve?
>>
>> I don't have an answer, Roy. I'm asking the question. Why can a wave
>> of 106.066V in a 150 ohm line (106.066^2/150 = 75W) be superposed with
>> a wave of 35.355V in a 150 ohm line (35.355^2/150 = 8.33W) and the
>> result be 141.4V in that 150 ohm line (141.4^2/150 = 133.33W)?
>
>Transmission lines of the sort being discussed are Linear, Time Invariant
>(LTI) systems which support Transverse Electric and Magnetic (TEM) waves.
>
>TEM waves are unique since they can exist at any practical frequency, and
>that
>the electric and magnetic fields associated with the TEM mode is known at any
>cross section where the voltage and current are known. The fields, and
>therefore voltage and current distribution, can be predicted at a future time
>by taking advantage of the fact that the voltage and current distributions
>are
>coupled, and are solutions to (obey) the one dimensional wave equation,
>subject to the proscribed boundary conditions. The wave equation itself is
>very easily solved for the simple traveling wave but can become complicated
>when simultaneously accommodating the boundary conditions.
>
>The classic approach to solving the combined problem is to exploit the fact
>that the system is LTI, and to arbitrarily decompose the voltage and current
>distribution into the sum of a so called forward, and reverse traveling wave,
>each of which is chosen to be a solution to the wave equation for an infinite
>transmission line of the specified characteristics. The amplitude and time
>offset (phase for sinusoidially varying fields) are selected so that the
>voltage and currents match the boundary conditions imposed by the
>terminations. The LTI property of the system guarantees that any linear
>combination of solutions to the wave equation, is also a solution to the wave
>equation, and therefore capable of existing on the transmission line.
>
>The voltage and current at any place and time is then computed as the sum of
>the contributions of the imaginary 'forward' and 'reverse' components. Thus,

>the complete solution is a linear combination of fictitious components, each
>having a simple analytical form.
>
>Sometimes a fictional power associated with each of the traveling wave
>components (e.g. Pf(x,t) = Vf(x,t) * If(x,t)) is assigned for calculation
>convenience. It is important to understand that since the forward and reverse
>voltage and current components cannot be separated (not even with a
>directional coupler), no physical basis for the decomposition exists. The
>decomposition is simply the result of an algebraic manipulation. While these
>two fictional power flows individually do not represent an actual power flow,
>the difference between them does! Since neither fictional power itself
>represents the transport of real energy, the principal of energy conservation
>does not apply to the forward and reverse components individually.
>
>> > And no, I can't agree with your premise. I don't believe there is such a
>> > thing as a traveling "wave" of average power. There are voltage and
>> > current waves on a transmission line, period.
>
>The physical laws governing the relationship between voltage, current, time
>and position on a TEM transmission line obey the wave equation. The
>relationship between power, time, and position does not obey the wave
>equation; therefore power is not a wave!!! If you take a detailed look at
>how
>the energy distribution changes with time it is actually quite obviously not
>a
>wave.
>
>> I'm not sure what you mean. Consider a flat 50 ohm line carrying 70.7V
>> at 1.414A. Those are RMS values. Isn't the average power in that traveling
>> wave 70.7*1.414 = 70.7^2/50 = 1.414^2*50 = 100W?
>
>Yes.
>
>> That's what Dr. Best says
>> in his QEX article.
>
>He is correct.
>
>bart
>wb6hqk
>

1177. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 02:32:44 UTC
From: tdonaly@aol.com
Message-ID: <20030116213244.02842.00000059@mb-mn.aol.com>
Source record: 126966

Wes wrote,
>
>On Thu, 16 Jan 2003 20:15:21 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>[snip]
>|
>|Hi Dave, Arie,
>|
>|Exactly the reason I injected the discussion of the application of
>|Fuzzy Logic to the design and optimization of Antennas. Given freely
>|to the Public Domain - barring rights already held.
>
>FWIW:
>
>http://www.national.com/rap/Application/0,1570,25,00.html
>
>
I saw a fuzzy logic rice cooker for sale in the local ethnic foods
market once. How hard is it to cook rice?

Tom Donaly, KA6RUH

1178. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 02:52:08 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <66KV9.54131$wQ1.45909@fe01>
Source record: 126967

marvin rosen wrote:
>> marvin rosen wrote:
>>> I have a 40 mtr end fed ant fed with 450 ohm ladderline.
>>> With a different matching unit could i use it for 2 mtr fm?
>>> I don't care if the pattern is screwed up!
>>
>> You would put out a far better signal by making a 1/4 wave ground
>> plane from 1/8" copper welding rod and a SO-239 connector for about
>> $5.00 - even if it was just tossed up on the roof.
>>
>> 73 de W6DKN
>
> If i were to construct the ant you mentioned, i would lose
> most of my signal in the coax! I have to use 100' of coax
> to get to the roof. This is why i'm considering the "end fed"
> approach.
> .

If you use 9913 or LMR 400 you'll only lose around 1.5 db (1/4 of an "S" unit) - a *lot* less than you'll lose in trying to get a 40 meter end fed dipole to radiate efficiently on two meters...

73 de W6DKN

1179. Re: Match homebrew antenna to feedline?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 03:20:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E27766A.6050309@ieee.org>
Source record: 126968

Joshua G Senecal wrote:
> I'm very new to all this so any suggestions or comments are greatly
> appreciated.

Model your antenna to obtain something in the ballpark for the
feedpoint impedance. Just being in the ballpark is all it takes
to get started on getting it resonated. That's what I do.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1180. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 03:21:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2776D0.6040604@ieee.org>
Source record: 126869

marvin rosen wrote:
> I have a 40 mtr end fed ant fed with 450 ohm ladderline.
> With a different matching unit could i use it for 2 mtr fm?
> I don't care if the pattern is screwed up!

Do you care if the pattern is horizontally polarized while
2 mtr fm is usually vertically polarized?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1181. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 03:42:38 UTC
From: fractenna@aol.com
Message-ID: <20030116224238.03877.00000044@mb-fr.aol.com>
Source record: 126870

>Wes wrote,
>>
>>On Thu, 16 Jan 2003 20:15:21 GMT, Richard Clark <kb7qhc@attbi.com>
>>wrote:
>>[snip]
>>|
>>|Hi Dave, Arie,
>>|
>>|Exactly the reason I injected the discussion of the application of
>>|Fuzzy Logic to the design and optimization of Antennas. Given freely
>>|to the Public Domain - barring rights already held.
>>
>>FWIW:
>>
>>http://www.national.com/rap/Application/0,1570,25,00.html
>>
>>
> I saw a fuzzy logic rice cooker for sale in the local ethnic foods
>market once. How hard is it to cook rice?
>
>Tom Donaly, KA6RUH
>

What kind of rice?

Rice is nice...for breakfast; lunch; dinner; dessert. There are many different kinds, with different aromas and starch contents. They have different textures and tastes. To bring out the flavor and textures, you have to cook them right.

And, they require different times and methods of cooking. So the answer is: it's very easy to cook rice wrong:-)

The days of dropping in a pouch of 'converted' rice are a thing of the past.

73,
Chip N1IR

1182. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 03:44:34 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301161944.b7994e7@posting.google.com>
Source record: 126871

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:<M8adnUzSstf2jLqjXTWcqA@comcast.com>...
> Richard,
>
> This may or may not work - the impedance is all wrong. Standard antenna
> baluns are meant to work 50 to 200 ohms. He wants 12.5 to 50. The standard
> balun has enough inductance to maintain 200 ohms at 3.5 MHz, where he only
> needs 50 ohms at 14 MHz. In addition to what I mentioned earlier, there are
> also ways of winding these with 25 Ohm coax (Yes there is such a thing),
> which is just right for a 12.5 - 50 ohm transformer because it maintains a
> 2:1 SWR in the transformer.
>
> www.communication-concepts.com has all kinds of goodies, including Motorola
> ap notes that show how these transformers should be wound. Also, there are
> pictures under Products > HF Transformers.
>
> http://www.rfparts.com/combiner.html#Broadband has wound and partially wound
> ferrite transformers, just scroll down the page.
>
> Tam/WB2TT
> _____________________________________
> "Richard Harrison" <richardharrison@webtv.net> wrote in message
> news:1170-3E26EBF3-243@storefull-2311.public.lawson.webtv.net...
> > Andy, GM8OEG wrote:
> > "Can I just make a standard toroidal voltage balun (4:1) wired the other
> > way around or do I have to do something clever?"
> >
> > The answer is: you can make a standard toroidal voltage balun. A
> > transformer works equally well with either direction of power flow. The
> > voltage ratio and impedance transformation work in both directions.
> >
> > The Z ratio is the square of the turns and voltage ratios, so for a 4X
> > Z-ratio, the turns-ratio is 2X.

Richard, what about the unbalanced to balanced bit, does this also
conform when reversed ?
Art

> >
> > I`ve only read Reg`s sensible response and I don`t know if my response
> > is redundant, but that`s it.
> >
> > Best regards, Richard Harrison, KB5WZI
> >

1183. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 03:47:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E277CCB.5080201@ieee.org>
Source record: 126872

Bart Rowlett wrote:
> The voltage and current at any place and time is then computed as the sum of
> the contributions of the imaginary 'forward' and 'reverse' components.

Bart, if one feeds a 75 ohm TV set with 1000 ft of 450 ohm ladder-line matched at the source end, one will detect ghosting right where the reflected waves are predicted to be by the reflection model. Is that ghosting imaginary? How does the modulation obey the reflection model but the wave carrying the modulation not obey the reflection model?

> It is important to understand that since the forward and reverse
> voltage and current components cannot be separated (not even with a
> directional coupler), no physical basis for the decomposition exists.

The modulation on those waves can certainly be separated. The modulation essentially "colors" the individual waves so they can be identified. Is not the modulation associated with the wave that originally carried it? Does modulation jump around from wave to wave? Why does the modulation energy make round trips but the waves carrying that modulation energy not make round trips? If ocean waves can flow both directions at the same time and retain their individual identities, why can't electromagnetic waves do the same thing?

> The physical laws governing the relationship between voltage, current, time
> and position on a TEM transmission line obey the wave equation. The
> relationship between power, time, and position does not obey the wave
> equation; therefore power is not a wave!!! If you take a detailed look at how
> the energy distribution changes with time it is actually quite obviously not a
> wave.

That's the *average* energy. What about the modulation energy? Is the modulation quite obviously not carried by a wave? Why do the TV modulation bars show a round trip delay and decrease in magnitude proportional to the number of round trips they have made? Do TDM's lie to us?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1184. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 03:54:48 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E277E88.3080100@ieee.org>
Source record: 126873

Richard Clark wrote:
> Cecil sez: "$20 in bills is equivalent to $5 in change if I observe
> the Conservation of Volume - I a'int buyin' it"
>
> Oh ye of little faith.

Oh ye of little knowledge. My $50 Gold Eagles are worth $360 each
and rising. One oz of gold is "equivalent" 74 ozs of silver. You
don't have to buy it but I'm sure glad I did. Half my IRA is in
gold and went up 25% in 2002.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1185. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 04:06:14 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2f09lc24kc08c@corp.supernews.com>
Source record: 126874

If umpteen million Chinese do it every day, how tough can it be? ;>)

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Fractenna" <fractenna@aol.com> wrote in message
news:20030116224238.03877.00000044@mb-fr.aol.com...
> What kind of rice?
>
> Rice is nice...for breakfast; lunch; dinner; dessert. There are many
different
> kinds, with different aromas and starch contents. They have different
textures
> and tastes. To bring out the flavor and textures, you have to cook them
right.
>
> And, they require different times and methods of cooking. So the answer
is:
> it's very easy to cook rice wrong:-)
>
> The days of dropping in a pouch of 'converted' rice are a thing of the
past.
>
> 73,
> Chip N1IR
>
>
>
>

1186. Re: Q. re 1/4 vs. 1/2 wave and groundplanes

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 04:53:14 UTC
From: Monkfish <respond@ingroup.xy>
Message-ID: <3e278449$1@post.newsfeed.com>
Source record: 126875

*** post for FREE via your newsreader at post.newsfeed.com ***

Fractenna wrote:
> >- for frequencies 25-54 MHz, one common mobile antenna is a 3-5 foot whip
> >with a loading
> > coil in the base. are these antennas typically 1/4 or 1/2 wave (including
> >the coil)?
>
> Both. And neither.

am thinking more for landmobile use, where there's only few standard types
of antennas that are popular on each band.

the thing that got me started on this thread was finding an old CB HT with
a broken antenna. instead of having a BNC, the antenna went some distance
into the radio and was held in by a screw. was wondering if a different
antenna could be attached.

but you've got me thinking, since the radio didn't have a standard antenna jack,
the radio might want to see high impedance, it might want a reactive load, etc.

the antenna was an end-fed, center loaded whip about 5' tall.

now in a center-loaded whip, is there something about the two elements supposed
to be in phase or 90 deg out of phase? that would be a clue as to what kind of
antenna (1/8 vs 1/4 vs 1/2) it is electrically. i'm wondering if all center-loaded
verticals are 1/2 wave. i havent seen them specified any other way.

because if they're half-wave, it could explain the nonstandard connector, and
the lack of groundplane.

> > load such an antenna for the low band? they don't have any visible coils
> > other than that little "pigtail".
> For the low bands?

pardon me. i'm thinking landmobile again. ex. 25-50 MHz.
some of these antennas just have a little curl in the middle. i'm assuming
there must be a loading coil/match someplace else.

-----= Posted via Newsfeed.Com, Uncensored Usenet News =-----
http://www.newsfeed.com - The #1 Newsgroup Service in the World!
-----== 100,000 Groups! - 19 Servers! - Unlimited Download! =-----

1187. Re: 50 ohm coaxial balun for 2M

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 06:15:23 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <75OV9.2207$FG7.572741745@news.inreach.com>
Source record: 126876

Don:

If you are planning a 1/2 wavelength of coax to get a 4:1 transformation, with a 200 ohm feedpoint on your yagi (folded dipole driven element?), your bench tests should get you close enough. But you were not too specific about what kind of feedpoint you had in mind so we are sort of guessing.

An interesting alternative, if you are not already committed to a design, can be found at: http://www.qsl.net/dk7zb/dk7zb-match.htm

73,

Roger K6XQ

1188. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 07:40:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <71cf2v8m8fp3ohs7le8ftj08hg4f9hlut1@4ax.com>
Source record: 126877

On Thu, 16 Jan 2003 18:13:31 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>On Thu, 16 Jan 2003 20:15:21 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>[snip]
>|
>|Hi Dave, Arie,
>|
>|Exactly the reason I injected the discussion of the application of
>|Fuzzy Logic to the design and optimization of Antennas. Given freely
>|to the Public Domain - barring rights already held.
>
>FWIW:
>
>http://www.national.com/rap/Application/0,1570,25,00.html

Hi Wes,

Excellent author recommendation. I've been a follower of Robert Pease
for 20 odd years now and he makes an excellent case. The field of AI
which has spun off various disciplines has a dubious achievement
record - even Fuzzy math. However, Bob does recommend:
"For example, when an FL system claims to show great
advantages over a conventional system, the advantages
arise because the conventional system was badly done,
or because it was heavily nonlinear.
...
A while back, Lotfi Zadeh and I discussed ball-on-beam
balancing. He thought he could make a ball roll on a lossy tilting
surface (such as carpet) with humps to hinder the ball's free
roll, and could even make it arrive on target at a particular
time. I said that was possible with op amps, too, but he could
surely do it better, because FL is very good for nonlinear cases."

A point to Arie,
I've delved further into your work and found that it exceeds the
pedestrian efforts that pass for "state of the art." Kudos. I think
the principal advantage is in the flexibility, and superb directions
and technical explanations in your help pages (following your ironic
cue from an earlier posting, yes you have a point). As with any new
approach to a problem, one has the urge to use the latest tool to
confirm the adage "if all you have is a hammer, then all your problems
look like nails."

73's
Richard Clark, KB7QHC

1189. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 07:59:33 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <t1ee2v801fnuvtmqpbg79fkbuimg50kndo@4ax.com>
Source record: 126878

In article <b04qbq$d2n$1@news.netmar.com>, Prozma <prozma@ao1.com>
writes:
>
> Still under construction: "Fractal Antenna Information"
>
> Please stop by http://www.n1ir.info on January 31, 2003
>
>Thank you.
>
>
>

Is that a supplement to www.n1ir.com?

1190. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 08:18:38 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <OL61LJEex7J+EAou@ifwtech.co.uk>
Source record: 126879

Richard Rogers wrote:

>It works alright and the impedance can be made correct. I have a 6M
>yagi which I fiddled with EZNEC to have a 12.5 ohm feed impedance and
>then used the 4:1 current balun to drive it. I used two pieces of
>RG174 in parallel to give 25 ohm cable and two beads like Amidon
>FB-43-5621 in each current balun.

Another good "target" feed impedance for VHF yagis is 28 ohms, which may give lower currents (and losses) in the antenna elements. The reason why 28 is a good number is that a quarter-wave transformer of 37.5 ohms will match it to 50 ohms.

37 ohm coax is manufactured, but hard to find. For 50, 70 and 144MHz a good practical solution is two paralleled quarter-wave sections of 75 ohms cable. Coil it up and there's your choke balun.

W4RNL used this idea for two 3-element 50MHz yagis (QST) and also there are some good German long yagi designs based on 28 ohms (somewhere in my piling system).

I tried a version of the W4RNL 28 ohm yagis first with a gamma match, because I happened to have the parts. Big mistake - RFI problems, and local computer and other noise made the band unusable anyway. Sawed the driven element in half, insulated it from the boom and fed it with the 37.5 ohm transformer/balun - RFI and noise gone.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1191. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 12:08:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E27F252.6050500@ieee.org>
Source record: 126880

Bart Rowlett wrote:
> It is important to understand that since the forward and reverse
> voltage and current components cannot be separated (not even with a
> directional coupler), no physical basis for the decomposition exists.

Consider a TV signal generator source equipped with a directional coupler.
Feed the source signal into a long length of open ended low-loss transmission
line. Hang a TV receiver on the directional coupler port output. Given that
directional couplers are not perfect devices, are you saying that on the
TV screen we will not see any signal that has made a round trip to the
end of the transmission line and back? This is a pretty easy experiment
to run.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1192. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 12:11:11 UTC
From: fractenna@aol.com
Message-ID: <20030117071111.08441.00000050@mb-cq.aol.com>
Source record: 126881

>
>If umpteen million Chinese do it every day, how tough can it be? ;>)

Hi Fred,

By analogy, you might relate more directly to the potato.

You COULD just stick it in the coals of a fire and pull it out in an hour.

Or, you could make it in french fries; steak fries; au grautin; tots; mashed; whipped; and so on. Each requires a different cooking procedure. Heck, even getting fries right is hard. When's the last time you had a decent french fry:-)?

In the Far East, rice is both life giver and delicacy.

73,
Chip N1IR

1193. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 13:09:45 UTC
From: fractenna@aol.com
Message-ID: <20030117080945.05674.00000026@mb-fx.aol.com>
Source record: 126882

>Standard Time
>Message-id: <t1ee2v801fnuvtmqpbg79fkbuimg50kndo@4ax.com>
>
>In article <b04qbq$d2n$1@news.netmar.com>, Prozma <prozma@ao1.com>
>writes:
>>
>> Still under construction: "Fractal Antenna Information"
>>
>> Please stop by http://www.n1ir.info on January 31, 2003
>>
>>Thank you.
>>
>>
>>
>
>Is that a supplement to www.n1ir.com?
>

Mr. Ewald has replied to a post that doesn't exist, which only he seems to have had the interest in responding to. Some might ask: why this interest?

73,
Chip N1IR

1194. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 14:31:09 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <6didnX_NzrdFhLWjXTWc3g@comcast.com>
Source record: 126885

He want to work 14 to 29 MHz; so, a 1/4 wave won't do.

Tam/WB2TT
"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:OL61LJEex7J+EAou@ifwtech.co.uk...
>
> Another good "target" feed impedance for VHF yagis is 28 ohms, which may
> give lower currents (and losses) in the antenna elements. The reason why
> 28 is a good number is that a quarter-wave transformer of 37.5 ohms will
> match it to 50 ohms.>>>>>>>>>>>>>>>>>>.

1195. AO vs. EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 14:31:22 UTC
From: k3bu@aol.com
Message-ID: <20030117093122.20607.00000071@mb-fo.aol.com>
Source record: 126883

Howdy soft antenna afficionados.

I am finally getting back to fiddling with antenna designs (no Fractals, EH or CFA).
Started with good old AO (uses MiniNEC) and I entered my old hard modeled 3 el. quad at 146 MHz at half wave up, salt water. Optimized it for various parameters, ended up with slightly different (improved?) dimensions than my hard model. OK, maybe I was off? No direct verification now, too cold to get 2m test range going.
Then I used MultiNEC to import design and view/check it in EZNEC (use NEC2). I ended up with resonance at 147.1 using the same parameters. Patterns and figures seem to jive at their respective resonant freq.
Before I verify it on hard models, any idea why the difference? Is it in using different engines?
Next step is to bring 4NEC2 and see how it compares and performs at optimization and who is the closest to measured reality hard models.
Interesting note on AO, when I start with my good hard design, it "soft-improves" it, when I start with arbitrary (text book) design, it will not "find" my design. Wonder how good will GA or FL be, can "artificial intelligence" beat common sense "me stupidity"? :-)

Thanks,
Yuri, K3BU, VE3BMV

BTW MultiNEC 2 is out, it includes fitting antenna to propagation.
Gotta try it.

1196. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 14:41:11 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <b92g2vomp0teqibv2bmb1tir1475p8bekv@4ax.com>
Source record: 126884

On 17 Jan 2003 12:11:11 GMT, fractenna@aol.com (Fractenna) wrote:

|In the Far East, rice is both life giver and delicacy.

Anheuser-Busch have successfully incorporated it into the American
diet.

Beer! It's not just for breakfast anymore.

1197. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 15:01:56 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <EPKcnQpfELVGh7WjXTWcrg@comcast.com>
Source record: 126886

Here is something to consider, if you put up a 5/8 vertical or better antenna, and feed it with LMR400, 9913, or CPX1318, your NET gain will still be more than if you had a 1/4 vertical and 0 length coax.

Tam/WB2TT
"W6DKN" <w6dkn-nospam-@qsl.net> wrote in message
news:66KV9.54131$wQ1.45909@fe01...
> marvin rosen wrote:
> >> marvin rosen wrote:
> >>> I have a 40 mtr end fed ant fed with 450 ohm ladderline.
> >>> With a different matching unit could i use it for 2 mtr fm?
> >>> I don't care if the pattern is screwed up!
> >>
> >> You would put out a far better signal by making a 1/4 wave ground
> >> plane from 1/8" copper welding rod and a SO-239 connector for about
> >> $5.00 - even if it was just tossed up on the roof.
> >>
> >> 73 de W6DKN
> >
> > If i were to construct the ant you mentioned, i would lose
> > most of my signal in the coax! I have to use 100' of coax
> > to get to the roof. This is why i'm considering the "end fed"
> > approach.
> > .
>
> If you use 9913 or LMR 400 you'll only lose around 1.5 db (1/4 of an "S"
> unit) - a *lot* less than you'll lose in trying to get a 40 meter end fed
> dipole to radiate efficiently on two meters...
>
> 73 de W6DKN
>
>
>

1198. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 15:04:17 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <SeCcndUvU_D7hrWjXTWc3Q@comcast.com>
Source record: 126887

He wants to work 14 - 30 MHz, so a 1/4 wave matching section won't work.

Tam/WB2TT

_____-
"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:OL61LJEex7J+EAou@ifwtech.co.uk...
> Another good "target" feed impedance for VHF yagis is 28 ohms, which may
> give lower currents (and losses) in the antenna elements. The reason why
> 28 is a good number is that a quarter-wave transformer of 37.5 ohms will
> match it to 50 ohms.

1199. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 15:08:03 UTC
From: richardharrison@webtv.net
Message-ID: <138-3E281C53-149@storefull-2316.public.lawson.webtv.net>
Source record: 126892

Art Unwin, KB9MZ wrote:
"This may or may not work - the impedance is all wrong."

That is an asumption the user will make the wrong choices.

Coils used to couple circuits must have enough turns to offer high impedance as compared with the sources and loads shunted across them. The impedance of a coil is a function of frequency and limits the lowest useful frequency for a given loss. Whether a coil is excited in the step-up or step-down mode is indifferent.

Art also wrote:
"---what about the unbalanced to balanced bit, does this also conform when reversed?"

Again, the amplitude of the voltages and currents are a function of power level. Cores have limits. These are nearly the same regardless of flow direction through the transformer. So, imbalance which usually depends on capacitive imbalance, given a balanced winding with respect to making the turns, is the same regardless of power flow direction through the transformer. These are coupled circuits and perturbations in one side affect the other side of the coupling.

Sure, you can wind some turns on a core that will work poorly as a balun at some frequency or at all frequencies. But, between particular impedance levels at particular frequencies, it makes litle difference if the power flow reverses directions.

Best regards, Richard Harrison, KB5WZI

1200. Is this antenna for real?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 15:08:21 UTC
From: ve3bts@rac.ca
Message-ID: <1ed859b.0301170708.1be56962@posting.google.com>
Source record: 126888

http://www.hamuniverse.com/multivee.html

Please check above link and comment on that antenna.Eznec demo doesn't show any gain or F/B ,at least the way I entered data.

1201. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 15:23:42 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <MwRF17A+$BK+EASX@ifwtech.co.uk>
Source record: 126909

Tarmo Tammaru wrote:
>He wants to work 14 - 30 MHz, so a 1/4 wave matching section won't work.
>
>Tam/WB2TT
>
>_____-
>"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
>news:OL61LJEex7J+EAou@ifwtech.co.uk...
>> Another good "target" feed impedance for VHF yagis is 28 ohms, which may
>> give lower currents (and losses) in the antenna elements. The reason why
>> 28 is a good number is that a quarter-wave transformer of 37.5 ohms will
>> match it to 50 ohms.

My posting was in response to VK7RO's comment about 12.5 ohm monoband yagis.

However, the original question was also about 12.5 ohm halos, which I presume will be three monoband antennas so a quarter-wave solution with "25 ohm" coax (two paralleled 50 ohm) would work. For the balun function, just coil some of it up to make a choke.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1202. Re: Full KW on GAP Titan?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 15:30:28 UTC
From: Craig Buck <k4ia@cox.net>
Message-ID: <okVV9.36963$H76.2737987@news1.east.cox.net>
Source record: 126889

Worked fine for me. Just be sure the "tails" on your clamps do not come close to the elements. I tucked one in thinking it looked neater and it arced over to element. Hard to describe but if you look closely at the antenna you will understand.

k4ia
Buck
Fredericksburg, VA
"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20030115203602.03650.00000017@mb-ba.aol.com...
> Does anyone run a full KW into their GAP TITAN without any problems? I notice
> it is rated for 1.5KW.
> Alan KB7MBI

1203. Re: Q. re 1/4 vs. 1/2 wave and groundplanes

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 15:33:04 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301170733.15bb43e2@posting.google.com>
Source record: 126890

"Monkfi
>
> the thing that got me started on this thread was finding an old CB HT with
> a broken antenna. instead of having a BNC, the antenna went some distance
> into the radio and was held in by a screw. was wondering if a different
> antenna could be attached.

Sure, if it's resonant on 11m.
>
> but you've got me thinking, since the radio didn't have a standard antenna jack,
> the radio might want to see high impedance, it might want a reactive load, etc.

The jack, or plug, or whatever has no real bearing.
>
> the antenna was an end-fed, center loaded whip about 5' tall.
>
> now in a center-loaded whip, is there something about the two elements supposed
> to be in phase or 90 deg out of phase? that would be a clue as to what kind of
> antenna (1/8 vs 1/4 vs 1/2) it is electrically. i'm wondering if all center-loaded
> verticals are 1/2 wave. i havent seen them specified any other way.
>
> because if they're half-wave, it could explain the nonstandard connector, and
> the lack of groundplane.

In your case, that is not a 1/2 wave. It's a short loaded 1/4 wave.
You will see verticals for VHF/UHF that might use "phasing coils",
but this is different than your case.

> pardon me. i'm thinking landmobile again. ex. 25-50 MHz.
> some of these antennas just have a little curl in the middle. i'm assuming
> there must be a loading coil/match someplace else.

The loading coil is the one in the middle of the whip. It may or may
not use a matching coil. If it does, it will be at the base, inside
the radio. Most likely, it doesn't need one. The radio and your body
capacitively coupling to the radio is the lower "half" of the antenna.
You and the radio itself are the ground plane. MK

1204. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 15:45:39 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301170745.75ffe4dd@posting.google.com>
Source record: 126891

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:<d6JV9.114369$hK4.9297061@bgtnsc05-news.ops.worldnet.att.net>...
> If i were to construct the ant you mentioned, i would lose
> most of my signal in the coax! I have to use 100' of coax
> to get to the roof. This is why i'm considering the "end fed"
> approach.

Depends on the quality of coax. "loss per foot at that freq". Even a large loss from using thin coax, would not likely be enough to keep the ground plane from losing to the random wire. The end fed wire you propose for 2m FM will be horrible overall. The ground plane, even if you lose 75% of your power will still probably beat it by a large amount. You need vertical polarazation for FM use. You will have an appx 20 db attenuation just from cross polarization if you try to use the wire. I assume it's mainly horizontal...You can cut the losses down quite a bit if you invest in some good low loss coax for VHF use. You could hang a 1/4 wave GP from the ceiling in your house, and it would still probably beat the wire in most all cases. A 1/4 wave GP is a good "cheap" 2m antenna for FM. If it's up in the air a bit, the difference between it and a taller commercial vertical will be small. The taller antenna may have more gain, but I've found if the top tip of each antenna is at the same height, there is not a drastic difference. MK

1205. Re: Half square for a beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 16:11:13 UTC
From: antswitch@tomochka.com
Message-ID: <47c89a30.0301170811.67f4f443@posting.google.com>
Source record: 126893

Funny, but not unexpected I guess. I've had several replies and not
one addresses the question posed. :)

antswitch@tomochka.com (KS7J) wrote in message
news:<47c89a30.0301161003.1d85c1e@posting.google.com>...
> Folks,
>
> For a 10 meter beacon, which doesn't care about reception
> characteristics and wants to be as omni-directional as possible, which
> of these two antennas would be generally more preferable (each at a
> height of 3/4 wl): simple wire dipole or corner-fed half-square w/o
> radials?
>
> 73,
>
> Casey

1206. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 16:18:00 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E282CFD.FB318152@att.net>
Source record: 126894

Cecil,

Bart speaks the truth, and very elegantly.

Do you really believe that modulation "colors" the individual waves????
Sounds great for handwaving arguments, but a real engineer or scientist
would understand that this is not useful for solving a problem. If you
intend to use standard wave models it is necessary to consider the
freqency spectrum of this modulated wave. It is necessary to solve for
various components and recombine the results. One goes nowhere if an
attempt is made to analyze the entire "colored" system in one shot.

Yes, there are many elegant analysis tools to simplify this process, so
it may not be necessary to manually and laboriously work with individual
frequency components. However, the underlying model is always based on
the linear superposition of monochromatic wave components.

As Bart noted, these are linear systems. As a consequence it is *not*
possible to identify individual waves, even if they are "colored".

If you really attempt to solve the ghost problem in which you are so
interested, you will find that all of the wave equations work and no
Joules are harmed in the process.

I believe you have at least one degree in engineering. This sort of crap
is beneath you.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Bart Rowlett wrote:
> > The voltage and current at any place and time is then computed as the sum of
> > the contributions of the imaginary 'forward' and 'reverse' components.
>
> Bart, if one feeds a 75 ohm TV set with 1000 ft of 450 ohm ladder-line
> matched at the source end, one will detect ghosting right where the reflected
> waves are predicted to be by the reflection model. Is that ghosting imaginary?
> How does the modulation obey the reflection model but the wave carrying the
> modulation not obey the reflection model?
>
> > It is important to understand that since the forward and reverse
> > voltage and current components cannot be separated (not even with a
> > directional coupler), no physical basis for the decomposition exists.
>

> The modulation on those waves can certainly be separated. The modulation
> essentially "colors" the individual waves so they can be identified. Is not
> the modulation associated with the wave that originally carried it? Does
> modulation jump around from wave to wave? Why does the modulation energy make
> round trips but the waves carrying that modulation energy not make round trips?
> If ocean waves can flow both directions at the same time and retain their
> individual identities, why can't electromagnetic waves do the same thing?
>
> > The physical laws governing the relationship between voltage, current, time
> > and position on a TEM transmission line obey the wave equation. The
> > relationship between power, time, and position does not obey the wave
> > equation; therefore power is not a wave!!! If you take a detailed look at how
> > the energy distribution changes with time it is actually quite obviously not a
> > wave.
>
> That's the *average* energy. What about the modulation energy? Is the modulation
> quite obviously not carried by a wave? Why do the TV modulation bars show a
> round trip delay and decrease in magnitude proportional to the number of round
> trips they have made? Do TDM's lie to us?
> --
> cheers, CAM http://www.qsl.net/w5dxp

1207. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 16:53:59 UTC
From: richardharrison@webtv.net
Message-ID: <18347-3E283527-335@storefull-2314.public.lawson.webtv.net>
Source record: 126897

Bart Rowlett, WB6HQK wrote:
"The voltage and current at any place and time is then computed as the sum of the contributions of the imaginary "forward" and "reverse" components."

Imaginary!

Terman says on page 84 of the 1955 edition of "Electronic and Radio Engineering":
"The voltage and current existing on a transmission line given by Eqs. (4-6) can be conveniently expressed as the sum of the voltages and currents of the two waves. One of these waves can be regarded as traveling toward the receiving or load end of the line, and is called the incident wave because it is incident upon the load. The second wave can be thought of as traveling from the load toward the generator end of the line; it is termed the reflected wave, and is generated at the load by reflection of the incident wave. These two waves are identical in nature except for consequences arising from the different direction of travel."

Terman says nothing of "imaginary" forward and reverse components. SWR manifestations of conflict between incident and reflected waves are not imaginary. Reflected energy shunted off circulators into disposal loads produces real heat. A pulse bounced from a mismatched load doesn`t produce an imaginary blip on an oscilloscope. It`s really there.

With the commonly accepted definition of reality, waves on a transmission line are real.

Best regards, Richard Harrison, KB5WZI

1208. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 17:07:40 UTC
From: richardharrison@webtv.net
Message-ID: <18349-3E28385C-126@storefull-2314.public.lawson.webtv.net>
Source record: 126896

Art Unwin, KB9MZ wrote:
"Please back off so that some decorum can return to this group."

Beautifully said, Art. All the poster has done is agitate the group for no use.

Best regards, Richard Harrison, KB5WZI

1209. Re: Senior Design Project

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 17:21:24 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <3E283B94.DBFB41E4@core.com>
Source record: 126895

Actually I thought that what was said was very good advise. After all
the man was a Collage professor and that what he said was directed
towards.

Dave WD9BDZ

ps: keep up the commentary. It's very entertaining.

Gilbert Mouget wrote:

> In article <20030116164759.19886.00000046@mb-cu.aol.com>,
> dated 16 Jan 2003 21:47:59 GMT,
> Fractenna, <fractenna@aol.com> says...
>
> > Did you ask your professor? What did he say?
>
> He told us to ignore the crap coming from fractenna@aol.com
>
> --
> "You cannot move mountains if you believe them to be mountains.
> You must think of them as collections of small stones,
> Which can be moved one at a time, and then reassembled."
> -- The Tao of Meow

1210. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 17:23:58 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <3E283C2E.866E007D@core.com>
Source record: 126898

An interesting statistic is that the largest producer of rice is the
USA. More is produced in Asia but the individual countries do not grow
as much as the USA. Not even China.
Dave

Wes Stewart wrote:

> On 17 Jan 2003 12:11:11 GMT, fractenna@aol.com (Fractenna) wrote:
>
> |In the Far East, rice is both life giver and delicacy.
>
> Anheuser-Busch have successfully incorporated it into the American
> diet.
>
> Beer! It's not just for breakfast anymore.

1211. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 17:27:47 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <3E283D12.B8789E0A@core.com>
Source record: 126899

Chip;

Incase you don't realize it almost all of the replies/comments/etc. directed towards you and yours are intended to "pull you chain" and I must say that they are succeeding.
If you want to get people to quit bugging you just quit responding to their messages.

Dave WD9BDZ

PS: I really would like to know how fractile antenna's work in simple layman terms.

Fractenna wrote:

> >Standard Time
> >Message-id: <t1ee2v801fnuvtmqpbg79fkbuimg50kndo@4ax.com>
> >
> >In article <b04qbq$d2n$1@news.netmar.com>, Prozma <prozma@ao1.com>
> >writes:
> >>
> >> Still under construction: "Fractal Antenna Information"
> >>
> >> Please stop by http://www.n1ir.info on January 31, 2003
> >>
> >>Thank you.
> >>
> >>
> >>
> >
> >Is that a supplement to www.n1ir.com?
> >
>
> Mr. Ewald has replied to a post that doesn't exist, which only he seems to have
> had the interest in responding to. Some might ask: why this interest?
>
> 73,
> Chip N1IR

1212. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 17:42:23 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E2840C4.62620777@att.net>
Source record: 126900

Richard,

Look carefully at the quote you made from Terman.

"can be conveniently expressed "

"can be regarded"

"can be thought of"

Bart chose to use the term "imaginary", but the meaning is exactly the same.

In both cases a convenient mathematical division of the real physical wave is made. Bart uses "imaginary"; Terman uses "expressed", "regarded", and "thought of".

Terman would agree exactly 100% with what Bart wrote.

73,
Gene
W4SZ

Richard Harrison wrote:
>
> Bart Rowlett, WB6HQK wrote:
> "The voltage and current at any place and time is then computed as the
> sum of the contributions of the imaginary "forward" and "reverse"
> components."
>
> Imaginary!
>
> Terman says on page 84 of the 1955 edition of "Electronic and Radio
> Engineering":
> "The voltage and current existing on a transmission line given by Eqs.
> (4-6) can be conveniently expressed as the sum of the voltages and
> currents of the two waves. One of these waves can be regarded as
> traveling toward the receiving or load end of the line, and is called
> the incident wave because it is incident upon the load. The second wave
> can be thought of as traveling from the load toward the generator end of
> the line; it is termed the reflected wave, and is generated at the load
> by reflection of the incident wave. These two waves are identical in
> nature except for consequences arising from the different direction of
> travel."
>
> Terman says nothing of "imaginary" forward and reverse components. SWR
> manifestations of conflict between incident and reflected waves are not

> imaginary. Reflected energy shunted off circulators into disposal loads
> produces real heat. A pulse bounced from a mismatched load doesn`t
> produce an imaginary blip on an oscilloscope. It`s really there.
>
> With the commonly accepted definition of reality, waves on a
> transmission line are real.
>
> Best regards, Richard Harrison, KB5WZI

1213. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 17:57:54 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <9nXV9.55643$wQ1.17957@fe01>
Source record: 126901

Tarmo Tammaru wrote:
> "W6DKN" <w6dkn-nospam-@qsl.net> wrote in message
> news:66KV9.54131$wQ1.45909@fe01...
>> marvin rosen wrote:
>>>> marvin rosen wrote:
>>>>> I have a 40 mtr end fed ant fed with 450 ohm ladderline.
>>>>> With a different matching unit could i use it for 2 mtr fm?
>>>>> I don't care if the pattern is screwed up!
>>>>
>>>> You would put out a far better signal by making a 1/4 wave ground
>>>> plane from 1/8" copper welding rod and a SO-239 connector for about
>>>> $5.00 - even if it was just tossed up on the roof.
>>>>
>>>> 73 de W6DKN
>>>
>>> If i were to construct the ant you mentioned, i would lose
>>> most of my signal in the coax! I have to use 100' of coax
>>> to get to the roof. This is why i'm considering the "end fed"
>>> approach.
>>> .
>>
>> If you use 9913 or LMR 400 you'll only lose around 1.5 db (1/4 of an
>> "S" unit) - a *lot* less than you'll lose in trying to get a 40
>> meter end fed dipole to radiate efficiently on two meters...
>>
>> 73 de W6DKN
>
> Here is something to consider, if you put up a 5/8 vertical or better
> antenna, and feed it with LMR400, 9913, or CPX1318, your NET gain
> will still be more than if you had a 1/4 vertical and 0 length coax.
>
> Tam/WB2TT

I agree, personally I run 13 element yagi's fed with LMR 400 on 2 meters.
But the original poster was asking about using a 300 ohm end fed 40 meter
dipole on two meters, in which case a 1/4 wave coax fed ground plane would
be significantly better... *even* if he lost 75% of his power in the
feedline.

73 de W6DKN

1214. Re: Half square for a beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 18:03:23 UTC
From: Roscoe <Roscoe@nospam.com>
Message-ID: <3E284567.70F0A012@nospam.com>
Source record: 126902

hi

Well, the half square will have deep nulls at the broadsides and the
dipole will also have some nulls.

Have you check www.cebik.com for plots on halfsquares and the dipole ?

How about using two antenna, phased 180 out from each other ?

regards. roscoe.

KS7J wrote:

> Folks,
>
> For a 10 meter beacon, which doesn't care about reception
> characteristics and wants to be as omni-directional as possible, which
> of these two antennas would be generally more preferable (each at a
> height of 3/4 wl): simple wire dipole or corner-fed half-square w/o
> radials?
>
> 73,
>
> Casey

1215. Re: Is this antenna for real?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 18:23:13 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E284A11.8454B3AE@cwis.net>
Source record: 126903

It 'do' seem a bit too good to be true, doesn't it?
'Doc

1216. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 18:32:16 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E284C30.28176986@cwis.net>
Source record: 126904

"David G. Nagel" wrote:

> PS: I really would like to know how fractile antenna's work in simple layman terms.

Dave,
As has been demonstrated, they work 'less well' than other
antenna designs. The fractal 'shape' has no particular value.
If you will go to the trouble of finding the back posts in
this NG, you will see for your self...
'Doc

1217. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 18:36:09 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E284CBD.7050300@attbi.com>
Source record: 126905

Richard;

In the paragraph that follows Terman also presents equation 4-7 which is:
SQRT(Z*Y) = a + jb

where jb is the IMAGINARY [emphasis added] component.

Terman is using the word 'imaginary' to indicate that the term is a
complex number, having both magnitude and phase, not artificial.

The reflection coefficient at the load is a complex value having both
real [resistive] and reactive [imaginary] components; i.e. a magnitude
and a phase angle.

So, Terman is stating that the reflected wave has both magnitude and
phase as a function of the reflection coefficient. The combination of
the forward and reflected wave is a VECTOR sum not a linear sum.

Deacon Dave, W1MCE

Richard Harrison wrote:
> Bart Rowlett, WB6HQK wrote:
> "The voltage and current at any place and time is then computed as the
> sum of the contributions of the imaginary "forward" and "reverse"
> components."
>
> Imaginary!
>
> Terman says on page 84 of the 1955 edition of "Electronic and Radio
> Engineering":
> "The voltage and current existing on a transmission line given by Eqs.
> (4-6) can be conveniently expressed as the sum of the voltages and
> currents of the two waves. One of these waves can be regarded as
> traveling toward the receiving or load end of the line, and is called
> the incident wave because it is incident upon the load. The second wave
> can be thought of as traveling from the load toward the generator end of
> the line; it is termed the reflected wave, and is generated at the load
> by reflection of the incident wave. These two waves are identical in
> nature except for consequences arising from the different direction of
> travel."
>
> Terman says nothing of "imaginary" forward and reverse components. SWR
> manifestations of conflict between incident and reflected waves are not
> imaginary. Reflected energy shunted off circulators into disposal loads
> produces real heat. A pulse bounced from a mismatched load doesn`t
> produce an imaginary blip on an oscilloscope. It`s really there.

>
> With the commonly accepted definition of reality, waves on a
> transmission line are real.
>
> Best regards, Richard Harrison, KB5WZI
>

1218. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 18:44:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2mjg2v845bimkjkjuojlqenhj1n1bd7ns8@4ax.com>
Source record: 126906

On Fri, 17 Jan 2003 11:27:47 -0600, "David G. Nagel" <nagel@core.com>
wrote:

>PS: I really would like to know how fractile antenna's work in simple layman terms.

Hi Dave,

Couldn't resist a tug at that chain, hmmm? ;-)

73's
Richard Clark, KB7QHC

1219. Re: AO vs. EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 19:01:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o1kg2vkeg0uo2tksduh8sbaqruj4h7h13h@4ax.com>
Source record: 126907

On 17 Jan 2003 14:31:22 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

>can "artificial
>intelligence" beat common sense "me stupidity"?

Hi Yuri,

The day a computer refuses to open your pod bay door is when you can
indeed count yourself "stupid" and incapable of doing better than AI.

At other end of cosmic scale, yes, you would be indeed quite stupid to
do a machine's job(still using clay tablets?).

73's
Richard Clark, KB7QHC

1220. Re: AO vs. EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 19:28:41 UTC
From: k3bu@aol.com
Message-ID: <20030117142841.20637.00000096@mb-fo.aol.com>
Source record: 126908

>
>At other end of cosmic scale, yes, you would be indeed quite stupid to
>do a machine's job(still using clay tablets?).
>
>73's
>Richard Clark, KB7QHC
>
>

Don't knock the clay tablets, tablet computer is here :-)

Yuri

1221. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 19:32:04 UTC
From: richardharrison@webtv.net
Message-ID: <58-3E285A34-384@storefull-2313.public.lawson.webtv.net>
Source record: 126910

Gene, W4SZ wrote:
"Look carefully at the quote you wrote from Terman."

I have and don`t think it was written with weasel words. Terman believed in Radio Waves. On page 1 of his 1937 edition of Radio Engineering: "These waves, which are commonly called radio waves, travel with the velocity of light and consist of magnetic and electrostatic fields at right angles to each other and also at right angles to the direction of travel."

We have wires and waveguides to direct propagation of radio waves. We have wave reflections from discontinuities.

Bart and Gene say waves are imaginary but offer no proof they don`t exiat.

Silly, due to manifestations on all sides of the existence of waves and our ability to measure and predict their behavior. We have almost unlimited ability to produce and control waves. To declare, with a straight face, that waves are imaginary is to claim some privileged knowledge or it`s foolishness.

Best regards, Richard Harrison, KB5WZI

1222. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 20:07:33 UTC
From: richardharrison@webtv.net
Message-ID: <18347-3E286285-367@storefull-2314.public.lawson.webtv.net>
Source record: 126914

Dave Shrader, W1MCE wrote:
"The combination of the forward and reflected wave is a VECTOR sum not a linear sum."

That needs further definition.

Look carefully at what Terman said in the quotation:
"These two waves are identical in nature except for consequences arising from the different direction of travel."

The transmission line is an enforcer. When a voltage is imposed on it, a current instantly flows in proportion to the imposed voltage. The proportion is Zo. In practical lines this is Ro. Volts and amps are in-phase. Same is true for the reflection except for a 180 degree phase between volts and amps caused by the reflection.

The volts and amps in each direction taken by themselves only must add and subtract arithmetcally. When summing both directions of travel, you get the SWR pattern. But, by themselves, the volts and amps in each direction are constants.

Best regards, Richard Harrison, KB5WZI

1223. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 20:07:41 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E28628D.D7DBEC80@uci.edu>
Source record: 126911

Hi Bart,

I agree with you that power is not a wave. Definitions in physics make
that pretty clear. But why are you saying that foward and reverse waves
are ficticious? They wouldn't be able to TDR without them.

Thanks and 73,

Jim AC6XG

Bart Rowlett wrote:
>
> OC_CAM's Razor wrote:
>
> > Roy Lewallen wrote:
> > > Was that intended to be an answer to my question, or just another jab at
> > > Steve?
> >
> > I don't have an answer, Roy. I'm asking the question. Why can a wave
> > of 106.066V in a 150 ohm line (106.066^2/150 = 75W) be superposed with
> > a wave of 35.355V in a 150 ohm line (35.355^2/150 = 8.33W) and the
> > result be 141.4V in that 150 ohm line (141.4^2/150 = 133.33W)?
>
> Transmission lines of the sort being discussed are Linear, Time Invariant
> (LTI) systems which support Transverse Electric and Magnetic (TEM) waves.
>
> TEM waves are unique since they can exist at any practical frequency, and that
> the electric and magnetic fields associated with the TEM mode is known at any
> cross section where the voltage and current are known. The fields, and
> therefore voltage and current distribution, can be predicted at a future time
> by taking advantage of the fact that the voltage and current distributions are
> coupled, and are solutions to (obey) the one dimensional wave equation,
> subject to the proscribed boundary conditions. The wave equation itself is
> very easily solved for the simple traveling wave but can become complicated
> when simultaneously accommodating the boundary conditions.
>
> The classic approach to solving the combined problem is to exploit the fact
> that the system is LTI, and to arbitrarily decompose the voltage and current
> distribution into the sum of a so called forward, and reverse traveling wave,
> each of which is chosen to be a solution to the wave equation for an infinite
> transmission line of the specified characteristics. The amplitude and time
> offset (phase for sinusoidially varying fields) are selected so that the
> voltage and currents match the boundary conditions imposed by the
> terminations. The LTI property of the system guarantees that any linear
> combination of solutions to the wave equation, is also a solution to the wave

> equation, and therefore capable of existing on the transmission line.
>
> The voltage and current at any place and time is then computed as the sum of
> the contributions of the imaginary 'forward' and 'reverse' components. Thus,
> the complete solution is a linear combination of fictitious components, each
> having a simple analytical form.
>
> Sometimes a fictional power associated with each of the traveling wave
> components (e.g. Pf(x,t) = Vf(x,t) * If(x,t)) is assigned for calculation
> convenience. It is important to understand that since the forward and reverse
> voltage and current components cannot be separated (not even with a
> directional coupler), no physical basis for the decomposition exists. The
> decomposition is simply the result of an algebraic manipulation. While these
> two fictional power flows individually do not represent an actual power flow,
> the difference between them does! Since neither fictional power itself
> represents the transport of real energy, the principal of energy conservation
> does not apply to the forward and reverse components individually.
>
> > > And no, I can't agree with your premise. I don't believe there is such a
> > > thing as a traveling "wave" of average power. There are voltage and
> > > current waves on a transmission line, period.
>
> The physical laws governing the relationship between voltage, current, time
> and position on a TEM transmission line obey the wave equation. The
> relationship between power, time, and position does not obey the wave
> equation; therefore power is not a wave!!! If you take a detailed look at how
> the energy distribution changes with time it is actually quite obviously not a
> wave.
>
> > I'm not sure what you mean. Consider a flat 50 ohm line carrying 70.7V
> > at 1.414A. Those are RMS values. Isn't the average power in that traveling
> > wave 70.7*1.414 = 70.7^2/50 = 1.414^2*50 = 100W?
>
> Yes.
>
> > That's what Dr. Best says
> > in his QEX article.
>
> He is correct.
>
> bart
> wb6hqk

1224. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 20:13:26 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2gov69sa3v77b@corp.supernews.com>
Source record: 126912

You have watched Forrest Gump too many times ;>)

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Fractenna" <fractenna@aol.com> wrote in message
news:20030117071111.08441.00000050@mb-cq.aol.com...
> >
> >If umpteen million Chinese do it every day, how tough can it be? ;>)
>
> Hi Fred,
>
> By analogy, you might relate more directly to the potato.
>
> You COULD just stick it in the coals of a fire and pull it out in an hour.
>
> Or, you could make it in french fries; steak fries; au grautin; tots;
mashed;
> whipped; and so on. Each requires a different cooking procedure. Heck,
even
> getting fries right is hard. When's the last time you had a decent french
> fry:-)?
>
> In the Far East, rice is both life giver and delicacy.
>
> 73,
> Chip N1IR

1225. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 20:17:52 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <3E2864F0.B6C818D@core.com>
Source record: 126913

Istill would like to know more about them

Dave

'Doc wrote:

> "David G. Nagel" wrote:
>
> > PS: I really would like to know how fractile antenna's work in simple layman terms.
>
> Dave,
> As has been demonstrated, they work 'less well' than other
> antenna designs. The fractal 'shape' has no particular value.
> If you will go to the trouble of finding the back posts in
> this NG, you will see for your self...
> 'Doc

1226. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 20:55:44 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <f4rg2v0e7bnnmhsuits6dqfrrcc41e3hun@4ax.com>
Source record: 126915

On Fri, 17 Jan 2003 14:17:52 -0600, "David G. Nagel" <nagel@core.com>
wrote:

>Istill would like to know more about them
>
>Dave

Hi Dave,

OK, you want to pull my chain.

Browse:
http://www.qsl.net/kb7qhc/antenna/fractal/index.htm

This will not answer your question as a definition, but it will answer
your question by example. ...your mileage may vary.

73's
Richard Clark, KB7QHC

1227. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 20:55:55 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2gretadjru7ce@corp.supernews.com>
Source record: 126916

With all due respect Doc, they work neither better or worse than other designs. The "Fractal Flyer" for example was a simple to construct antenna with some interesting properties.

The ten meter beam was a nightmare to build before I laid out a piece of plywood with nails to bend the wire around. Once constructed it did exactly as claimed and had a small footprint. Other non fractal shapes in the same foot print work as well.

Fractals are one way to achieve an antenna with multi-resonance's. It is not the only way, and for a given amount of wire may or may not be the best way for a given application.

Fractals, as well as genetic solutions are an interesting foray in to radiating RF energy and once the politics are removed, become a fun exercise.

From my personal experience, the fractal quad required too much effort for the results achieved, but then again so did the alternatives such as those purposed by Dr. Best. The "Fractal Flyer" on the other hand did a good job with very little effort.

I lack the marketing expertise to comment on their applicability to commercial applications.

My two cents, your mileage may very.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"'Doc" <w5lz@cwis.net> wrote in message news:3E284C30.28176986@cwis.net...
>
>
> "David G. Nagel" wrote:
>
> > PS: I really would like to know how fractile antenna's work in simple layman terms.
>
>
> Dave,
> As has been demonstrated, they work 'less well' than other
> antenna designs. The fractal 'shape' has no particular value.

> If you will go to the trouble of finding the back posts in
> this NG, you will see for your self...
> 'Doc

1228. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 21:23:48 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E287464.6020800@ieee.org>
Source record: 126917

Gene Fuller wrote:
> Do you really believe that modulation "colors" the individual waves????

Notice that "colors" is in quotes indicating that it is being used
figuratively instead of literally. In a sense, adding modulation to
a wave is like coloring it since it allows us to identify and track
it through its round trip to a reflection point and back. I have
done that myself and am satisfied that the modulation generally
stays attached to its original wave.

> As Bart noted, these are linear systems. As a consequence it is *not*
> possible to identify individual waves, even if they are "colored".

Notice that I am asking questions, not making assertions. For the
wave not to be able to be identified by its modulation, that modulation
would somehow have to divorce itself from the wave with which it was
initially associated and move over to somewhere else. Exactly how does
that happen?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1229. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 21:28:40 UTC
From: richardharrison@webtv.net
Message-ID: <18347-3E287588-383@storefull-2314.public.lawson.webtv.net>
Source record: 126822

Jim Kelley wrote:
" I agree that power is not a wave."

Power is: The ability to do or act.

In physics: Power is the time rate of transferring or transforming energy. This certainly moves (flows) right along with the energy itself.

We are not interested in energy except in our "power" bill. We are interested in how fast energy can be applied, so we rate our transmitters in watts.

Power is measured by square meters in space and usually we express it in volts per meter but since we know this is related to power by a 377-ohm impedance, V/Meter is just as good.

Best regards, Richard Harrison, KB5WZI

1230. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 21:29:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2875BD.5030804@ieee.org>
Source record: 126918

Gene Fuller wrote:
> In both cases a convenient mathematical division of the real physical
> wave is made.

Please prove that the energy in a pulse from a TDR is somewhere
else besides where the pulse is located.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1231. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 21:31:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E287643.2050508@ieee.org>
Source record: 126819

Richard Harrison wrote:
> Bart and Gene say waves are imaginary but offer no proof they don`t
> exist.

I wonder what they believe causes the *reflections* of themselves
in a mirror. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1232. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 21:35:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E287735.7030207@ieee.org>
Source record: 126820

Jim Kelley wrote:
> I agree with you that power is not a wave. Definitions in physics make
> that pretty clear. But why are you saying that foward and reverse waves
> are ficticious? They wouldn't be able to TDR without them.

The Catch-22 argument goes like this. A TDR pulse is non-linear as is non-
recurring modulation. Only perfectly identical sign waves are allowed. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1233. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 21:40:09 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E28787E.CAC2E718@att.net>
Source record: 126821

Oh, Master of the non sequitur,

No one has said that radio waves do not exist or that radio waves are imaginary.

I will not try to defend myself or anyone else. If you do not understand Bart or me, so be it. Take another look at what Terman was saying. Those are "weasel words". They are not the precise words of science or engineering.

If you want to think I am an idiot, I will still sleep just fine tonight.

73,
Gene
W4SZ

Richard Harrison wrote:
>
> Gene, W4SZ wrote:
> "Look carefully at the quote you wrote from Terman."
>
> I have and don`t think it was written with weasel words. Terman believed
> in Radio Waves. On page 1 of his 1937 edition of Radio Engineering:
> "These waves, which are commonly called radio waves, travel with the
> velocity of light and consist of magnetic and electrostatic fields at
> right angles to each other and also at right angles to the direction of
> travel."
>
> We have wires and waveguides to direct propagation of radio waves. We
> have wave reflections from discontinuities.
>
> Bart and Gene say waves are imaginary but offer no proof they don`t
> exiat.
>
> Silly, due to manifestations on all sides of the existence of waves and
> our ability to measure and predict their behavior. We have almost
> unlimited ability to produce and control waves. To declare, with a
> straight face, that waves are imaginary is to claim some privileged
> knowledge or it`s foolishness.
>
> Best regards, Richard Harrison, KB5WZI

1234. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 22:06:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hovg2vguhv9r9dh4i7t2a496e6866edj6i@4ax.com>
Source record: 126823

On Fri, 17 Jan 2003 15:29:33 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>
>Please prove that the energy in a pulse from a TDR is somewhere
>else besides where the pulse is located.

And if we had two equal pulses there at the same time?

73's
Richard Clark, KB7QHC

1235. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 22:25:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2882C8.4040102@ieee.org>
Source record: 126826

Richard Clark wrote:
> On Fri, 17 Jan 2003 15:29:33 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Please prove that the energy in a pulse from a TDR is somewhere
>>else besides where the pulse is located.
>
> And if we had two equal pulses there at the same time?

Please specify the pulses.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1236. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 22:26:36 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <9o0h2v4oemru191lnrev8hj6c8d1cgqbvl@4ax.com>
Source record: 126824

On Fri, 17 Jan 2003 14:17:52 -0600, "David G. Nagel" <nagel@core.com>
wrote:

>Istill would like to know more about them
>
>Dave
>

There are a couple of fractal antenna lists at Yahoo groups, I think.

1237. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 22:26:37 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <tr0h2vsd32foh53i3fo2g5tb2bbhgfllb5@4ax.com>
Source record: 126825

On Fri, 17 Jan 2003 15:55:55 -0500, "Fred Hambrecht Sr."
<w4jle@charter.net> wrote:

>With all due respect Doc, they work neither better or worse than other
>designs. The "Fractal Flyer" for example was a simple to construct antenna
>with some interesting properties.
>
>The ten meter beam was a nightmare to build before I laid out a piece of
>plywood with nails to bend the wire around. Once constructed it did exactly
>as claimed and had a small footprint. Other non fractal shapes in the same
>foot print work as well.

As far as the bending goes, I've seem some inexpensive jigs available.

Hers'e one:

http://www.dickblick.com/zz334/09/products.asp?param=0&ig_id=2168

1238. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 22:49:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <br1h2vss9e2csg5qeik6thj0trruofsuag@4ax.com>
Source record: 126827

On Fri, 17 Jan 2003 16:25:12 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> On Fri, 17 Jan 2003 15:29:33 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>
>>>Please prove that the energy in a pulse from a TDR is somewhere
>>>else besides where the pulse is located.
>>
>> And if we had two equal pulses there at the same time?
>
>Please specify the pulses.

Gad Cecil,

What a tap dance....

I tell ya what, we cut down on using excess bandwidth and I admit that
I inappropriately offered a rhetorical question.

You can close on this cul-de-sac.

73's
Richard Clark, KB7QHC

1239. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 23:21:02 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E288FDE.96F7E22C@uci.edu>
Source record: 126828

I'd like to retract the question, Bart. I see now that you're saying
the calculation for power at points along the waveguide produces
ficticious numbers - not that the forward and reverse waves used for the
calculations are imaginary or ficticious.

Jim Kelley wrote:
>
> Hi Bart,
>
> I agree with you that power is not a wave. Definitions in physics make
> that pretty clear. But why are you saying that foward and reverse waves
> are ficticious? They wouldn't be able to TDR without them.
>
> Thanks and 73,
>
> Jim AC6XG
>
> Bart Rowlett wrote:
> >
> > OC_CAM's Razor wrote:
> >
> > > Roy Lewallen wrote:
> > > > Was that intended to be an answer to my question, or just another jab at
> > > > Steve?
> > >
> > > I don't have an answer, Roy. I'm asking the question. Why can a wave
> > > of 106.066V in a 150 ohm line (106.066^2/150 = 75W) be superposed with
> > > a wave of 35.355V in a 150 ohm line (35.355^2/150 = 8.33W) and the
> > > result be 141.4V in that 150 ohm line (141.4^2/150 = 133.33W)?
> >
> > Transmission lines of the sort being discussed are Linear, Time Invariant
> > (LTI) systems which support Transverse Electric and Magnetic (TEM) waves.
> >
> > TEM waves are unique since they can exist at any practical frequency, and that
> > the electric and magnetic fields associated with the TEM mode is known at any
> > cross section where the voltage and current are known. The fields, and
> > therefore voltage and current distribution, can be predicted at a future time
> > by taking advantage of the fact that the voltage and current distributions are
> > coupled, and are solutions to (obey) the one dimensional wave equation,
> > subject to the proscribed boundary conditions. The wave equation itself is
> > very easily solved for the simple traveling wave but can become complicated
> > when simultaneously accommodating the boundary conditions.
> >
> > The classic approach to solving the combined problem is to exploit the fact

> > that the system is LTI, and to arbitrarily decompose the voltage and current
> > distribution into the sum of a so called forward, and reverse traveling wave,
> > each of which is chosen to be a solution to the wave equation for an infinite
> > transmission line of the specified characteristics. The amplitude and time
> > offset (phase for sinusoidially varying fields) are selected so that the
> > voltage and currents match the boundary conditions imposed by the
> > terminations. The LTI property of the system guarantees that any linear
> > combination of solutions to the wave equation, is also a solution to the wave
> > equation, and therefore capable of existing on the transmission line.
> >
> > The voltage and current at any place and time is then computed as the sum of
> > the contributions of the imaginary 'forward' and 'reverse' components. Thus,
> > the complete solution is a linear combination of fictitious components, each
> > having a simple analytical form.
> >
> > Sometimes a fictional power associated with each of the traveling wave
> > components (e.g. Pf(x,t) = Vf(x,t) * If(x,t)) is assigned for calculation
> > convenience. It is important to understand that since the forward and reverse
> > voltage and current components cannot be separated (not even with a
> > directional coupler), no physical basis for the decomposition exists. The
> > decomposition is simply the result of an algebraic manipulation. While these
> > two fictional power flows individually do not represent an actual power flow,
> > the difference between them does! Since neither fictional power itself
> > represents the transport of real energy, the principal of energy conservation
> > does not apply to the forward and reverse components individually.
> >
> > > > And no, I can't agree with your premise. I don't believe there is such a
> > > > thing as a traveling "wave" of average power. There are voltage and
> > > > current waves on a transmission line, period.
> >
> > The physical laws governing the relationship between voltage, current, time
> > and position on a TEM transmission line obey the wave equation. The
> > relationship between power, time, and position does not obey the wave
> > equation; therefore power is not a wave!!! If you take a detailed look at how
> > the energy distribution changes with time it is actually quite obviously not a
> > wave.
> >
> > > I'm not sure what you mean. Consider a flat 50 ohm line carrying 70.7V
> > > at 1.414A. Those are RMS values. Isn't the average power in that traveling
> > > wave 70.7*1.414 = 70.7^2/50 = 1.414^2*50 = 100W?
> >
> > Yes.
> >
> > > That's what Dr. Best says
> > > in his QEX article.
> >
> > He is correct.
> >
> > bart
> > wb6hqk

1240. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 23:38:18 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2893EA.79F583C0@cwis.net>
Source record: 126829

Fred,
And that's just about what I said, isn't it.
'Doc

1241. Re: Half square for a beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 23:50:48 UTC
From: antswitch@tomochka.com
Message-ID: <47c89a30.0301171550.786fcc35@posting.google.com>
Source record: 126830

Is there an index or something on Mr. Cebik's site to find such
information quickly? He really needs a search engine on that site, it
is impossible to find such specific information unless you want to
brute force view each page. I didn't see anything on a half square on
his TOC. 73, Casey

Roscoe <Roscoe@nospam.com> wrote in message news:<3E284567.70F0A012@nospam.com>...
> hi
>
> Well, the half square will have deep nulls at the broadsides and the
> dipole will also have some nulls.
>
> Have you check www.cebik.com for plots on halfsquares and the dipole ?
>
> How about using two antenna, phased 180 out from each other ?
>
> regards. roscoe.
>
> KS7J wrote:
>
> > Folks,
> >
> > For a 10 meter beacon, which doesn't care about reception
> > characteristics and wants to be as omni-directional as possible, which
> > of these two antennas would be generally more preferable (each at a
> > height of 3/4 wl): simple wire dipole or corner-fed half-square w/o
> > radials?
> >
> > 73,
> >
> > Casey

1242. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-17 23:52:54 UTC
From: k1bqt@aol.com
Message-ID: <20030117185254.03877.00000052@mb-fr.aol.com>
Source record: 126831

>Anheuser-Busch have successfully incorporated it into the American diet. Beer! It's not just for breakfast anymore.<

The A/B product claims to "function as beer" but, to my taste, appears only to have sucessfully synthesized the organic architecture of skunk wee. Blah, poot!

Nevertheless, in the world of promotion (self and otherwise), the financial success of this grotesque non-solid has taught us that, if one repeats a lie (or wishful tale) often enough, there is always hope the masses will rip open their collective wallet to generously reward the skunk. That's why the profession of Marketing thrives, why draft horses and spotted dogs can still find work, and why America is one hell of a country!

Rick K1BQT

1243. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 00:16:42 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2h79d1aq5m1a6@corp.supernews.com>
Source record: 126832

Yeah! But I said it better :>)

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"'Doc" <w5lz@cwis.net> wrote in message news:3E2893EA.79F583C0@cwis.net...
> Fred,
> And that's just about what I said, isn't it.
> 'Doc

1244. Re: Half square for a beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 00:22:27 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <571W9.11241$fK.1239998@news20.bellglobal.com>
Source record: 126833

Roscoe
> Have you checked www.cebik.com for plots on halfsquares...

"KS7J"
> Is there an index or something on Mr. Cebik's site to find
> such information quickly? He really needs a search engine
> on that site, it is impossible to find such specific information
> unless you want to brute force view each page. I didn't see
> anything on a half square on his TOC. 73, Casey

Use Google's advanced search page
http://www.google.com/advanced_search

Enter:
exact phrase = half square
Domain = www.cebik.com

Precanned click per above:
www.google.com/search?as_epq=half+square&as_sitesearch=www.cebik.com

1245. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 01:29:26 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <b0aalm$8o4$1@mail.specsol.com>
Source record: 126834

Rick Littlefield <k1bqt@aol.com> wrote:
>>Anheuser-Busch have successfully incorporated it into the American
> diet. Beer! It's not just for breakfast anymore.<

> The A/B product claims to "function as beer" but, to my taste, appears only to
> have sucessfully synthesized the organic architecture of skunk wee. Blah, poot!

Tell us how your really feel Rick :-)

You haven't experienced bad beer unless you've been part of a bunch of
hot, tired, thirsty GIs that hadn't seen a cold beer (or a hot one for that
matter) in over three weeks all spit it out rather than swallow it.

Yes, it was American beer not the local embalming fluid, and no, it wasn't
an A/B product.

--
Jim Pennino

1246. Re: Senior Design Project

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 01:53:02 UTC
From: rmonagha@smu.edu
Message-ID: <b0ac1uqpt1@post.cis.smu.edu>
Source record: 126835

here's an idea guaranteed to get you an "A" ;-) Basically, it is a test range for antennas that fits into a briefcase ;-)

the hardest part of an RF/wireless course for many students is to visualize the antenna patterns, side lobes, angles of radiation etc. This is also very hard to teach, even with 2D graphics, a 3D setup.

we recently saw an ARRL video on Everything you wanted to know about antennas... in which the instructor had built a gigahertz band oscillator (with isolation stage) underneath a 1-2 ft metal ground plane. Different tiny antennas of various designs, including various beams, could be mounted on the RF output connector, at various heights etc. A handheld pickup unit converted the received signal to a sound output as you maneuvered the receiving antenna in the wand around the test antenna. Because of the high frequency, antenna size could be very small.

waving the wand around various antenna designs, yagis etc., showed visually and aurally the actual field generated by the antennas, including side lobes and drop-outs overhead etc.

this should be a very do-able project, but a winner from the Prof's viewpoint as it could be used as a teaching tool for various antenna designs...

regards bobm

--
* Robert Monaghan POB752182 So. Methodist Univ., Dallas Tx 75275 *
* Third Party 35mm Lenses: http://medfmt.8k.com/third/index.html *
* Medium Format Cameras: http://medfmt.8k.com/mf/index.html *

1247. Re: Is this antenna for real?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 02:24:24 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <OdCdnSwNA6pRJ7WjXTWcpA@comcast.com>
Source record: 126836

Maybe. I entered it into EZNEC, using a 5/8 inch radiator. Height was 50 feet. For a sanity check I also ran a 20m dipole at the same height. Gain of the dipole at 14.2 MHz was 7.86 dbi. This antenna had a gain at 14.2 of 8.57, so it would have a gain of about 0.7 dbd. Front to back ratio was 0db. The dbi gain at 21.3 and 28.4 was near identical to 20 meters, with a F/B of less than 1/2 db. At 50.125 MHz the gain was 10.63 dbi, with a F/B of 4db. However, a 6 meter dipole had a gain of 7.93 dbi, so the gain was less than 3dbd. The 20 m dipole had a gain of 9.39 dbi at 50.125.

Tam/WB2TT
"ve3bts" <ve3bts@rac.ca> wrote in message
news:1ed859b.0301170708.1be56962@posting.google.com...
> http://www.hamuniverse.com/multivee.html
>
> Please check above link and comment on that antenna.Eznec demo doesn't
> show any gain or F/B ,at least the way I entered data.

1248. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 02:54:41 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E28C1F1.21B03561@cwis.net>
Source record: 126837

LOL

1249. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 03:04:41 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <l0hh2v8rmi8nqbctb4rqomcsrbbe0f9pe6@4ax.com>
Source record: 126839

On 17 Jan 2003 23:52:54 GMT, k1bqt@aol.com (Rick Littlefield) wrote:

>The A/B product claims to "function as beer" but, to my taste, appears only to
>have sucessfully synthesized the organic architecture of skunk wee. Blah, poot!

Rick,

I presume then you don't care much for sake?

Danny

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

1250. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 03:11:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E28C5CE.2040605@ieee.org>
Source record: 126838

Richard Clark wrote:
> You can close on this cul-de-sac.

Well, I started out this exercise to try to figure out the difference in Walter Maxwell's arguments and Steve Best's arguments. They were both using the reflection model and arriving at different conclusions. How could that be?

I looked at Walt's arguments and at Steve's arguments and tried to resolve them to somewhere in between. I peeled off that last layer of onion and discovered an elegance that I had never realized before.

The full-fledged wave reflection model is perfectly symmetrical and consistent around an impedance discontinuity. It's just one of our human models of reality, but it is a very useful model, and I think it still has a few miles left on it.

Incidentally, I don't like to use the words, "power flow". I much prefer the concept that energy flows past a fixed point and power is measured at that point in joules/sec. I tend to talk about forward energy and reflected energy as the stuff that flows. However, the IEEE Dictionary talks about power vectors and power flow.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1251. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 03:37:13 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <aMsoPr14boZpvvnNYyTnDxFfe2xg@4ax.com>
Source record: 126840

"marvin rosen" <raghead@worldnet.att.net> wrote:

>If i were to construct the ant you mentioned, i would lose
>most of my signal in the coax! I have to use 100' of coax
>to get to the roof.

Why do you need the 2 meter antenna on the roof? If it is just 2 meter FM, and
you are reasonably close to the repeaters, indoor antennas work quite well.

Bob
k5qwg

>This is why i'm considering the "end fed"
>approach.
>.

1252. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 03:45:30 UTC
From: richardharrison@webtv.net
Message-ID: <137-3E28CDDA-515@storefull-2316.public.lawson.webtv.net>
Source record: 126841

Gene Fuller, W4SZ wrote:
"These are "weasel words"."

Terman has many references to r-f power and its movement. I picked a passage for my posting which paralleled Bart`s statement.

On page 891 of Terman`s 1955 edition, he uses the word "imagining" in reference to an expanding radiation sphere. Terman uses this imaginary sphere in the same sense as which a state boundary may be imaginary. These are declared limits but they are very real for practical purpposes.

Here is Terman`s statement:
"The total power radiated from an antenna system can be determined by imagining that the antenna is at the center of a very large sphere. The rate at which energy passes through each square meter of surface of such a sphere is the average energy density per cubic meter of volume at the surface of the sphere multiplied by the velocity with which the wave is traveling, i.e., the velocity of light."

Terman is not saying the power flow is imaginary.

Best regards, Richard Harrison, KB5WZI

1253. Re: Is this antenna for real?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 04:32:53 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <ZB-cna-6Z5x6RbWjXTWcqQ@comcast.com>
Source record: 126842

I looked at the ARRL antenna book. My numbers for 6 meter gain and F/B are in line with what the ARRL claims for an antenna with 1 Lambda sides. They had no data (at least I didn't see it) for the case where one side of the V was less than one wavelength.

Tam/WB2TT
"

1254. resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 04:47:25 UTC
From: whagen6@cs.com
Message-ID: <20030117234725.15467.00000048@mb-fw.news.cs.com>
Source record: 126843

After having given everything all the consideration it is due, coupled with maxing out the capabilities of my brain, I have come to the conclusion that the only thing a resonant antenna gives one is a particular radiation pattern that may be useful where non resonant antennas may have a lobe and a null pattern that may cause problems, generally speaking. If the only thing that controls power output is proper inpedence matching, and using low loss lines, then I feel the above statement is true. Please feel free to add, delete, or improve on the comment.
kc6ufe

1255. Re: AO vs. EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 05:06:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2ho5tst8b5df3@corp.supernews.com>
Source record: 126844

MININEC produces an error which is small enough that it's usually seen only in Yagis with a fairly large number of elements (say, 5 or more). The symptom is that the pattern and impedance are good, but at a slightly offset frequency. Some real experts, including the authors of MININEC, took a close look at this, and no one ever discovered where the error comes from. Brian claimed to have "corrected" the error in his programs, but no one knows what method or algorithm he used, or over what range of conditions it's effective. This might be the cause of the difference, but I sort of doubt it.

If the antenna doesn't have constant diameter elements, or if you're modeling the effect of the boom by changing the wire diameter near the boom, the problem likely has something to do with the EZNEC - NEC-2 stepped diameter problem. This produces an error whenever dissimilar diameter wires are connected. The error is small and can usually be ignored, but it can cause a very noticeable error in results if it occurs in a parasitic element. EZNEC can correct for this (by substituting an equivalent single diameter wire for calculations), and does so automatically, if the elements are full sized and symmetrical. If you do have non-constant-diameter elements, go to the Wires Window, and in the Other menu, select Show Stepped Dia Correction. In the display, make sure that the stepped diameter correction is being applied to all the wires making up the elements. If it isn't, the result is very likely to be in error. However, a stepped diameter error will generally affect the front/back ratio considerably more than it does the resonant frequency.

Roy Lewallen, W7EL

Yuri Blanarovich wrote:
> Howdy soft antenna afficionados.
>
> I am finally getting back to fiddling with antenna designs (no Fractals, EH or
> CFA).
> Started with good old AO (uses MiniNEC) and I entered my old hard modeled 3 el.
> quad at 146 MHz at half wave up, salt water. Optimized it for various
> parameters, ended up with slightly different (improved?) dimensions than my
> hard model. OK, maybe I was off? No direct verification now, too cold to get 2m
> test range going.
> Then I used MultiNEC to import design and view/check it in EZNEC (use NEC2). I
> ended up with resonance at 147.1 using the same parameters. Patterns and
> figures seem to jive at their respective resonant freq.
> Before I verify it on hard models, any idea why the difference? Is it in using
> different engines?
> Next step is to bring 4NEC2 and see how it compares and performs at

> optimization and who is the closest to measured reality hard models.
> Interesting note on AO, when I start with my good hard design, it
> "soft-improves" it, when I start with arbitrary (text book) design, it will not
> "find" my design. Wonder how good will GA or FL be, can "artificial
> intelligence" beat common sense "me stupidity"? :-)
>
> Thanks,
> Yuri, K3BU, VE3BMV
>
> BTW MultiNEC 2 is out, it includes fitting antenna to propagation.
> Gotta try it.

1256. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 05:23:53 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E28E4E9.DD168D1C@cwis.net>
Source record: 126845

William,
While a lot of what you say is correct, a resonant antenna, or one that is 'close' to resonant, does have advantages over a non-resonant antenna. If that were not true, then there would be no reason to ever use a resonant antenna, (and I don't think you're saying that, are you?).
'Doc

1257. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 05:33:55 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <20ph2v083cblea49e43i28vjo7rn6n8g8d@4ax.com>
Source record: 126847

On 18 Jan 2003 04:47:25 GMT, whagen6@cs.com (William F. Hagen) wrote:

>
>After having given everything all the consideration it is due, coupled with
>maxing out the capabilities of my brain, I have come to the conclusion that the
>only thing a resonant antenna gives one is a particular radiation pattern that
>may be useful where non resonant antennas may have a lobe and a null pattern
>that may cause problems, generally speaking. If the only thing that controls
>power output is proper inpedence matching, and using low loss lines, then I
>feel the above statement is true. Please feel free to add, delete, or improve
>on the comment.
>kc6ufe

Bill,

Not really. A 1ï¿½-wavelength dipole (which is resonate) will have six
lobes. A 1ï¿½-wavelength dipole (which is non-resonate) will have a
strong broadside pattern that has 3 db gain over a ï¿½-wave resonate
dipole which also has broadside pattern. A 3/8-wavelength
(non-resonate) dipole will has *essentially* the same pattern and gain
as a ï¿½-wavelength (resonate) dipole.

The fact that an antenna is resonate or not is not the determining
factor for performance.

The main advantage is that *generally* a resonate antenna is easier to
match.

k6mhe

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

1258. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 05:35:56 UTC
From: Jackie <no@address.given.com>
Message-ID: <0J5W9.720739$WL3.731633@rwcrnsc54>
Source record: 126846

I am new to antennas and propagation too- but my big question is this- just how much resonance and power does one need going out of an antenna if people using .5 watt QRP can regularly work the world?? I know that gain and power come in handy when trying to work through the pileups in contests, but some people can get the same distance with a crappy antenna and low power.

I really have to wonder how much about antennas is taken as religion because it's presented as some mystical art form vs. pure physics. Probably more of the former- but, the manufacturers of antennas seem to need to convince us that there's more of the former than the latter. Otherwise no one would do much homebrewing of antennas and get satisfactory results (for the end users). Isn't that what counts, though? End user satisfaction?

Jackie KC0ODY

"'Doc" <w5lz@cwis.net> wrote in message news:3E28E4E9.DD168D1C@cwis.net...
> William,
> While a lot of what you say is correct, a resonant
> antenna, or one that is 'close' to resonant, does have
> advantages over a non-resonant antenna. If that were
> not true, then there would be no reason to ever use a
> resonant antenna, (and I don't think you're saying that,
> are you?).
> 'Doc

1259. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 06:02:03 UTC
From: whagen6@cs.com
Message-ID: <20030118010203.05980.00000068@mb-fv.news.cs.com>
Source record: 126848

Doc,
Well, I suppose that has always been the question of everyone (and mine too), which is why go to the effort of trimming to resonance instead of just matching and/or transforming the impedance, and minimizing the power lost in characteristic line loss and losses due to swr, and losses in coils and capacitors.
What other advantages do you see in resonant antennas other than they might give a desirable radiation pattern? I suppose one might suggest that they make easier matches to coax under certain conditions. I think this is an interesting and sometimes confusing discussion. Because, at resonance, an antenna doesnt necessarily have a feedpoint impedance that matches a transmission, thus will have swr on the line, and will have to have its impedance transformed in some fashion to match the transmitter.
William F. Hagen kc6ufe

1260. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 06:11:27 UTC
From: whagen6@cs.com
Message-ID: <20030118011127.05980.00000069@mb-fv.news.cs.com>
Source record: 126849

In a lot of cases you dont need much power to work the world. That is controlled by the band you are on, the ionospheric effects on the band, and the static levels you are trying to overcome at the reciever end, not to mention the occaisional QRManners.
As far as the antenna goes, because it sometimes doesnt take much power to do the job, higher power transmitters can still get out even with sloppy lossy antenna/transmission line systems becasue enough gets out to do the job. At qrp levels though more attention is paid to the transmission and radiation system to minimize losses of that valuable half watt.
One wants as much of it to radiate as possible in the disired direction, and not warm gophers.
Does a resonant antenna matter here? I guess that is the ongoing question, and maybe the thing that matters more is proper impedance matching, low loss lines, and efficient grounding systems.
kc6ufe

1261. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 07:57:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5s1i2vc6b76s9uj92s2rhdhj8vudrhi70b@4ax.com>
Source record: 126850

On Fri, 17 Jan 2003 21:11:10 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>
>Well, I started out this exercise to try to figure out the difference
>in Walter Maxwell's arguments and Steve Best's arguments. They were
>both using the reflection model and arriving at different conclusions.
>How could that be?
>

Hi Cecil,

Walt was confusing effect with cause.

73's
Richard Clark, KB7QHC

1262. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 09:05:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2i66en79dml74@corp.supernews.com>
Source record: 126851

So don't keep us in suspense. Was it Pearl, or was it Lone Star?

Roy Lewallen, W7EL
-- been there, done that

Jim Pennino wrote:
> Rick Littlefield <k1bqt@aol.com> wrote:
>
>>>Anheuser-Busch have successfully incorporated it into the American
>>
>>diet. Beer! It's not just for breakfast anymore.<
>
>
>>The A/B product claims to "function as beer" but, to my taste, appears only to
>>have sucessfully synthesized the organic architecture of skunk wee. Blah, poot!
>
>
> Tell us how your really feel Rick :-)
>
> You haven't experienced bad beer unless you've been part of a bunch of
> hot, tired, thirsty GIs that hadn't seen a cold beer (or a hot one for that
> matter) in over three weeks all spit it out rather than swallow it.
>
> Yes, it was American beer not the local embalming fluid, and no, it wasn't
> an A/B product.
>

1263. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 09:28:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2i7h8jgij3215@corp.supernews.com>
Source record: 126852

There's nothing at all magic about resonance. No dramatic pattern, efficiency, or null change occurs at resonance. Resonance is simply the point at which the feedpoint reactance is zero, and impedance matching is sometimes easier when an antenna is resonant because of the purely resistive impedance. If you want to feed an antenna with coax and maintain a moderately low SWR, the antenna feedpoint reactance has to be pretty low, so the antenna has to be near resonance. If you're using a tuner and a line that can tolerate a high SWR without causing excessive loss, there's no reason to bother with making an antenna resonant.

A lot of popular antennas have been designed to produce desirable patterns with resonant or near-resonant elements. However, many antennas can be designed with elements that aren't resonant, or are far from being resonant, and have desirable patterns.

Roy Lewallen, W7EL

William F. Hagen wrote:
> After having given everything all the consideration it is due, coupled with
> maxing out the capabilities of my brain, I have come to the conclusion that the
> only thing a resonant antenna gives one is a particular radiation pattern that
> may be useful where non resonant antennas may have a lobe and a null pattern
> that may cause problems, generally speaking. If the only thing that controls
> power output is proper inpedence matching, and using low loss lines, then I
> feel the above statement is true. Please feel free to add, delete, or improve
> on the comment.
> kc6ufe
>

1264. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 11:46:00 UTC
From: richardharrison@webtv.net
Message-ID: <28656-3E293E78-79@storefull-2317.public.lawson.webtv.net>
Source record: 126856

Roy Lewallen, W7EL wrote:
"If you want to feed an antenna with coax and maintain a moderately low SWR, the antenna feedpoint reactance has to be pretty low, so the antenna has to be near resonance."

Yes. That is the usual case. There is another case. Put the matching network at the antenna feedpoint so that you have a flat transmission line. Broadcasters, medium wave and shortwave, all use flat (no SWR) transmission lines, whether the line is 50-ohm coax or 600-ohm open-wire line. Broadcasters prize their r-f too highly to waste it on transmission line loss.

But, broadcasters aren`t changing frequencies from minute to minute. Most listeners wouldn`t chase them around the dial. Broadcasters only change frequencies when predicted propagation conditions or other requirements mandate. When changes come frequently, they remotely control matching networks at the antenna drivepointt. Most broadcasters consider SWR unthinkable.

Best regards, Richard Harrison, KB5WZI

1265. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 11:53:03 UTC
From: richardharrison@webtv.net
Message-ID: <28656-3E29401F-80@storefull-2317.public.lawson.webtv.net>
Source record: 126857

Roy Lewallen, W7EL wrote:
"If you want to feed an antenna with coax and maintain a moderately low SWR, the antenna feedpoint reactance has to be pretty low, so the antenna has to be near resonance."

Yes. That is the usual case. There is another case. Put the matching network at the antenna feedpoint so that you have a flat transmission line. Broadcasters, medium wave and shortwave, all use flat (no SWR) transmission lines, whether the line is 50-ohm coax or 600-ohm open-wire line. Broadcasters prize their r-f too highly to waste it on transmission line loss.

But, broadcasters aren`t changing frequencies from minute to minute. Most listeners wouldn`t chase them around the dial. Broadcasters only change frequencies when predicted propagation conditions or other requirements mandate. When changes come frequently, they remotely control matching networks at the antenna drivepointt. Most broadcasters consider SWR unthinkable.

Best regards, Richard Harrison, KB5WZI

1266. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 11:54:52 UTC
From: richardharrison@webtv.net
Message-ID: <26170-3E29408C-465@storefull-2312.public.lawson.webtv.net>
Source record: 126855

Roy Lewallen, W7EL wrote:
"If you want to feed an antenna with coax and maintain a moderately low SWR, the antenna feedpoint reactance has to be pretty low, so the antenna has to be near resonance."

Yes. That is the usual case. There is another case. Put the matching network at the antenna feedpoint so that you have a flat transmission line. Broadcasters, medium wave and shortwave, all use flat (no SWR) transmission lines, whether the line is 50-ohm coax or 600-ohm open-wire line. Broadcasters prize their r-f too highly to waste it on transmission line loss.

But, broadcasters aren`t changing frequencies from minute to minute. Most listeners wouldn`t chase them around the dial. Broadcasters only change frequencies when predicted propagation conditions or other requirements mandate. When changes come frequently, they remotely control matching networks at the antenna drivepointt. Most broadcasters consider SWR unthinkable.

Best regards, Richard Harrison, KB5WZI

1267. Re: Two Meter End Fed Antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 12:07:02 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <YkMpPusQmCa6VJasHtk9bqPbBFP+@4ax.com>
Source record: 126853

"W6DKN" <w6dkn-nospam-@qsl.net> wrote:

>
>I agree, personally I run 13 element yagi's fed with LMR 400 on 2 meters.
>But the original poster was asking about using a 300 ohm end fed 40 meter
>dipole on two meters, in which case a 1/4 wave coax fed ground plane would
>be significantly better... *even* if he lost 75% of his power in the
>feedline.
>
>73 de W6DKN

For that matter, the Feb. QST has plans for a simple 2-meter J-pole built from 300 ohm twinlead and a coax stub. Hang that in your window, and you're in business.

Bob
k5qwg
>
>

1268. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 12:10:05 UTC
From: richardharrison@webtv.net
Message-ID: <1170-3E29441D-635@storefull-2311.public.lawson.webtv.net>
Source record: 126858

Roy Lewallen, W7EL wrote:
"If you want to feed an antenna with coax and maintain a moderately low SWR, the antenna feedpoint reactance has to be pretty low, so the antenna has to be near resonance."

Yes. That is the usual case. There is another case. Put the matching network at the antenna feedpoint so that you have a flat transmission line. Broadcasters, medium wave and shortwave, all use flat (no SWR) transmission lines, whether the line is 50-ohm coax or 600-ohm open-wire line. Broadcasters prize their r-f too highly to waste it on transmission line loss.

But, broadcasters aren`t changing frequencies from minute to minute. Most listeners wouldn`t chase them around the dial. Broadcasters only change frequencies when predicted propagation conditions or other requirements mandate. When changes come frequently, they remotely control matching networks at the antenna drivepointt. Most broadcasters consider SWR unthinkable.

Best regards, Richard Harrison, KB5WZI

1269. What antenna better to do for receiving on HF for DX?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 12:31:24 UTC
From: Ruslan <brunnen-g@NOSPAMkazan.ws>
Message-ID: <52ii2vk0qivl2733kraot1m4mh1na3hlna@4ax.com>
Source record: 126854

Prompt me what do the antenna to possible there was better take on short waves remote (weak) of station? Advisable in detail...

1270. broadcast TX locations ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 13:29:13 UTC
From: WJSchaible <donovan820@attbi.com>
Message-ID: <JEcW9.35748$kH3.4961@sccrnsc03>
Source record: 126859

I am comparing TV reception using an old fashion array antenna in my attic and rabbit ears. The array antenna can be manually rotated.

Without moving the antenna from it's original orientation, I get Ch9 good, Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard that some people around here get Ch9 good without any external antenna. I want to experiment with rotating the array antenna and comparing results for different channels. I wonder if there is a quick way to find out the location of the transmit towers for the local TV stations so I know their direction from my house. That will be useful for understanding the results I get from rotating the antenna.

QUESTION: Does anybody know a quick way to find tower locations in a local area (I am in Seattle, WA). It might be interesting to know tower locations for some of the radio stations as well.

TIA. Bill Schaible

1271. Re: AO vs. EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:12:01 UTC
From: k3bu@aol.com
Message-ID: <20030118091201.29886.00000101@mb-mv.aol.com>
Source record: 126860

Roy, W7EL wrote:

>MININEC produces an error which is small enough that it's usually seen
>only in Yagis with a fairly large number of elements (say, 5 or more).
>The symptom is that the pattern and impedance are good, but at a
>slightly offset frequency. Some real experts, including the authors of
>MININEC, took a close look at this, and no one ever discovered where the
>error comes from. Brian claimed to have "corrected" the error in his
>programs, but no one knows what method or algorithm he used, or over
>what range of conditions it's effective. This might be the cause of the
>difference, but I sort of doubt it.

Thanks Roy,
This could be it, I had no chance to verify this vs. reality (too cold out there), but I am in the process of loading and mastering other software (MMANA, 4NEC2, MutiNEC) to see which ones are "together" and closer to reality. So far I am testing it on 3 el. Quad, with the same wire, no stepped diameters. Also playing with optimizers, see how good or close they get to my hard models. Looks like optimizers in AO and MMANA use MiniNEC engines, while 4NEC2 and MultiNEC use NEC. Combination of all those should allow some sweeps and visualization of parameter changes.
The main thing is to find closer correlation to reality. After spending 3 months in freezing Canadian winter in Toronto while shuffling the real elements, I can appreciate the warmth of modeling :-)

73 Yuri, K3BU

1272. Re: What antenna better to do for receiving on HF for DX?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:15:01 UTC
From: k3bu@aol.com
Message-ID: <20030118091501.29886.00000102@mb-mv.aol.com>
Source record: 126861

>
>Prompt me what do the antenna to possible there was better take on
>short waves remote (weak) of station? Advisable in detail...
>
>
>
>
>

Posmotri na
http://members.aol.com/ve3bmv/index.htm
sama luczshaya antena v mire

Yuri, K3BU, VE3BMV

1273. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:19:01 UTC
From: richardharrison@webtv.net
Message-ID: <18349-3E296255-179@storefull-2314.public.lawson.webtv.net>
Source record: 126868

Roy Lewallen, W7EL wrote:
"If you want to feed an antenna with coax and maintain a moderately low SWR, the antenna feedpoint reactance has to be pretty low, so the antenna has to be near resonance."

Yes. That is the usual case. There is another case. Put the matching network at the antenna feedpoint so that you have a flat transmission line. Broadcasters, medium wave and shortwave, all use flat (no SWR) transmission lines, whether the line is 50-ohm coax or 600-ohm open-wire line. Broadcasters prize their r-f too highly to waste it on transmission line loss.

But, broadcasters aren`t changing frequencies from minute to minute. Most listeners wouldn`t chase them around the dial. Broadcasters only change frequencies when predicted propagation conditions or other requirements mandate. When changes come frequently, they remotely control matching networks at the antenna drivepointt. Most broadcasters consider SWR unthinkable.

Best regards, Richard Harrison, KB5WZI

1274. answered my own question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:19:18 UTC
From: WJSchaible <donovan820@attbi.com>
Message-ID: <GndW9.36257$kH3.4742@sccrnsc03>
Source record: 126862

OK. Cancel that question. I found a web page that has the LAT/LON for all the transmitter locations. Now all I need is the LAT/LON of my neighborhood. There is a fire station down the street. Possibly they know their LAT/LON. I will ask there.

Bill S.

--

WJSchaible <donovan820@attbi.com> wrote in message news:JEcW9.35748$kH3.4961@sccrnsc03...
> I am comparing TV reception using an old fashion array antenna in my attic
> and rabbit ears. The array antenna can be manually rotated.
>
> Without moving the antenna from it's original orientation, I get Ch9 good,
> Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard
> that some people around here get Ch9 good without any external antenna. I
> want to experiment with rotating the array antenna and comparing results for
> different channels. I wonder if there is a quick way to find out the
> location of the transmit towers for the local TV stations so I know their
> direction from my house. That will be useful for understanding the results
> I get from rotating the antenna.
>
> QUESTION: Does anybody know a quick way to find tower locations in a local
> area (I am in Seattle, WA). It might be interesting to know tower locations
> for some of the radio stations as well.
>
> TIA. Bill Schaible
>
>
>

1275. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:25:13 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <s0oi2vc4cf78dq414mlmfhbr5j0co7ut9r@4ax.com>
Source record: 126863

On Sat, 18 Jan 2003 01:05:16 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>So don't keep us in suspense. Was it Pearl, or was it Lone Star?
>
>Roy Lewallen, W7EL
> -- been there, done that

Black Label? Gennessee?

1276. MFJ-259B calibration

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:31:32 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <GH$3Y4CEVWK+EAh9@ifwtech.co.uk>
Source record: 126864

This is a follow-up to the discussion a few weeks ago.

There is a full discussion of accuracy issues, and detailed instructions
for checkout and recalibration , at:
http://www.w8ji.com/mfj-259b_calibration.htm

This is the real story, direct from the original designer.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1277. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:42:54 UTC
From: KAZeringue <kazeringue@aol.com>
Message-ID: <3E2968A6.3060205@aol.com>
Source record: 126865

Okay, here's the reasoning of an "amateur"....(It says so on my license!) I'm not an engineer, nor do I play one on TeeVee....

Undaunted by my lack of electical engineering education or knowledge, I have choosen to use "resonant" antennas. Mostly dipoles, which are resonant near enough to 50 ohms. (Yes, yes, technically somewhat higher..but in my yard, ranging from 30 to about 85 ohms, with both extremes uncommon)

See, for the longest time I didn't have a "tuner". Using an antenna that is "resonant" at 50 ohms or thereabouts allows the transmitter a decent match, without the tuner. The SWR bandwidth stinks under 20 meters, but even though they are inexpensive, tuners still cost more than dipoles. I like my folded dipole on 80 meters, stub matched to 50 ohms(right outta the ARRL Antenna Book). It cost $12 bucks.

For those with the space, but with budget constraints, its an easy, practical solution.

Finding the design that is resonant at 50 ohms, with a good radiation pattern bandwidth, and good SWR bandwidth, now that's a good job for the engineers!

Keith,
W4KAZ

1278. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:48:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E29694C.4050508@ieee.org>
Source record: 126867

William F. Hagen wrote:
> After having given everything all the consideration it is due, coupled with
> maxing out the capabilities of my brain, I have come to the conclusion that the
> only thing a resonant antenna gives one is a particular radiation pattern that
> may be useful where non resonant antennas may have a lobe and a null pattern
> that may cause problems, generally speaking. If the only thing that controls
> power output is proper inpedence matching, and using low loss lines, then I
> feel the above statement is true. Please feel free to add, delete, or improve
> on the comment. kc6ufe

ANY antenna, whether resonant or non-resonant, "may have a lobe and a null pattern that may cause problems". Whatever the choice of antenna, one should be aware that the resulting radiation pattern may or may not meet one's needs.

For instance, my 120 ft 75m dipole works well on 10m because the multi-lobed pattern is aimed at my favorite land masses of the world. If I replaced it with a 10m resonant dipole, the main lobes would miss my selected targets.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1279. Re: broadcast TX locations ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:49:28 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <o1qi2vgktko5vd0in8ooo29r805j4ec2cc@4ax.com>
Source record: 126866

On Sat, 18 Jan 2003 13:29:13 GMT, "WJSchaible" <donovan820@attbi.com>
wrote:

|I am comparing TV reception using an old fashion array antenna in my attic
|and rabbit ears. The array antenna can be manually rotated.
|
|Without moving the antenna from it's original orientation, I get Ch9 good,
|Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard
|that some people around here get Ch9 good without any external antenna. I
|want to experiment with rotating the array antenna and comparing results for
|different channels. I wonder if there is a quick way to find out the
|location of the transmit towers for the local TV stations so I know their
|direction from my house. That will be useful for understanding the results
|I get from rotating the antenna.
|
|QUESTION: Does anybody know a quick way to find tower locations in a local
|area (I am in Seattle, WA). It might be interesting to know tower locations
|for some of the radio stations as well.

For TV stations, type this into your web browser

http://www.fcc.gov/fcc-bin/tvq?call=xxxx

where xxxx is the call of the station you're locating.

Wes N7WS

1280. Re: broadcast TX locations ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 14:50:54 UTC
From: richardharrison@webtv.net
Message-ID: <18349-3E2969CE-182@storefull-2314.public.lawson.webtv.net>
Source record: 126772

Bill Schaible wrote:
"Does anybody know a quick way to find tower locations in a local area?"

Telephone calls to the stations should do the job.

Search the internet using the station call letters. You will find much interesting info including the history of broadcasting.

Best regards, Richard Harrison, KB5WZI

1281. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 15:04:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E296D03.7030008@ieee.org>
Source record: 126769

Richard Clark wrote:
> <Cecil.A.Moore@ieee.org> wrote:
> Walt was confusing effect with cause.

If so, that's a common problem with the steady-state model.
It seems to me that the virtual 50 ohms that exists at the
input of an antenna tuner is not the cause of there not being
any reflected energy flowing toward the source. That virtual
50 ohms is the *result* of the V/I ratio. The V/I ratio is the
result of superposition of waves at the match point. The waves
at the match point are the *result* of forward, reflected, and
re-reflected waves. The reflected and re-reflected waves are the
result of the real-world impedance discontinuity, i.e. given
some forward power as a boundary condition, the real-world
impedance discontinuity is the *cause* of everything else that
happens including the lack of reflected energy flowing toward
the source.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1282. Re: answered my own question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 15:19:30 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <oH2dneN1euUZ7bSjXTWcpA@crocker.com>
Source record: 126771

find your lat/lon on the web... lots of map info there, here are a few:

this one is pretty neat... keep clicking and zooming in until you find
yourself, the lat/lon of the cursor shows in the browser status bar:
http://gisdata.usgs.net/website/National_Map/viewer.htm

here is another one that gives your lat/lon
http://tiger.census.gov/cgi-bin/mapbrowse-tbl

or try:
http://terraserver.homeadvisor.msn.com/address.aspx
type in your address and then request the topo map, your lat/lon will show
in the url that it goes to.... why they don't put it on the page i have no
idea.

"WJSchaible" <donovan820@attbi.com> wrote in message
news:GndW9.36257$kH3.4742@sccrnsc03...
> OK. Cancel that question. I found a web page that has the LAT/LON for
all
> the transmitter locations. Now all I need is the LAT/LON of my
> neighborhood. There is a fire station down the street. Possibly they
know
> their LAT/LON. I will ask there.
>
> Bill S.
>
> --
>
> WJSchaible <donovan820@attbi.com> wrote in message
> news:JEcW9.35748$kH3.4961@sccrnsc03...
> > I am comparing TV reception using an old fashion array antenna in my
attic
> > and rabbit ears. The array antenna can be manually rotated.
> >
> > Without moving the antenna from it's original orientation, I get Ch9
good,
> > Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard
> > that some people around here get Ch9 good without any external antenna.
I
> > want to experiment with rotating the array antenna and comparing results
> for
> > different channels. I wonder if there is a quick way to find out the
> > location of the transmit towers for the local TV stations so I know
their
> > direction from my house. That will be useful for understanding the

> results
> > I get from rotating the antenna.
> >
> > QUESTION: Does anybody know a quick way to find tower locations in a
local
> > area (I am in Seattle, WA). It might be interesting to know tower
> locations
> > for some of the radio stations as well.
> >
> > TIA. Bill Schaible
> >
> >
> >
>
>

1283. NYC Radio Store ??!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 15:19:46 UTC
From: Rickie / KC2KQQ <RickieV@hotmail.com>
Message-ID: <b0br7b$nkudd$1@ID-89515.news.dfncis.de>
Source record: 126770
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna

Can someone tell me where in New York City, there is a Amateur Radio store beside Radio Shack. Most Radio Shack doesn't carry Ham Radio stuff anymore.

Thanks!!

Rickie / KC2KQQ
www.qsl.net/kc2kqq

1284. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 15:25:04 UTC
From: richardharrison@webtv.net
Message-ID: <59-3E2971D0-195@storefull-2313.public.lawson.webtv.net>
Source record: 126775

William F. Hagen wrote:
"I have come to the conclusion that the only thing a resonant antenna gives one is a particular radiation pattern---."

The pattern produced by an antenna is a function of antenna size versus the wavelength. Simple antennas may change pattern slowly with frequency. However, near resonance, reactance shifts abruptly from capacitance to inductance, with practically no change in radiation pattern. The main antenna change is often a rapid rise in impedance either side of resonance due to the reactive addition to the resistance of the antenna. This total impedance often is a formidable impediment to current in the antenna unless the reactance is neutralized by imposition of the opposite type of reactance.

Best regards, Richard Harrison, KB5WZI

1285. Apology to Doug Smith of QEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 15:29:59 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2972F7.7050702@ieee.org>
Source record: 126773

I stated in an earlier posting:

"Doug Smith of QEX says my analysis is correct assuming the sources are signal generators equipped with perfect circulators/isolators and circulator/isolator loads."

I should have said, "Doug Smith of QEX says that my answers to the brainteaser are correct and I assumed that my signal generators were equipped with perfect circulators/isolators and loads."

Doug did not say that my assumption of signal generators with circulators was correct and I didn't mean to imply that he did.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1286. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 15:40:14 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E29755E.40801@ieee.org>
Source record: 126774

KAZeringue wrote:
> See, for the longest time I didn't have a "tuner". Using an antenna
> that is "resonant" at 50 ohms or thereabouts allows the transmitter a
> decent match, without the tuner.

I have an SG-500 amp with a fixed 50 ohm output. I do not own a
tuner that will handle 500 watts. I use a 130 ft dipole fed with
ladder-line on all HF bands without a tuner. The SWR on my ladder-
line ranges from about 6:1 to about 14:1. I don't even know where
my dipole is resonant and I don't need to know. See how I do that
on my web page. Hint: 450/6 = 75 ohms, a 50 ohm SWR of 1.5:1.
450/14 = 32 ohms, a 50 ohm SWR of 1.6:1.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1287. Re: Half square for a beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 15:55:22 UTC
From: Roscoe <roscoe@nospam.com>
Message-ID: <3E2978E8.25FC546@nospam.com>
Source record: 126776

Hi,

Use your favorite search engine, www.cebik.com half square

Or at www.cebik.com click on technicals and after page loads up,
use ctrl-f key and you get search popup box from your browser,

Look in HF antenna section.

ros

KS7J wrote:

> Is there an index or something on Mr. Cebik's site to find such
> information quickly? He really needs a search engine on that site, it
> is impossible to find such specific information unless you want to
> brute force view each page. I didn't see anything on a half square on
> his TOC. 73, Casey
>
> Roscoe <Roscoe@nospam.com> wrote in message news:<3E284567.70F0A012@nospam.com>...
> > hi
> >
> > Well, the half square will have deep nulls at the broadsides and the
> > dipole will also have some nulls.
> >
> > Have you check www.cebik.com for plots on halfsquares and the dipole ?
> >
> > How about using two antenna, phased 180 out from each other ?

1288. Mobile Antenna Recommedation.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 16:58:11 UTC
From: Rickie / KC2KQQ <RickieV@hotmail.com>
Message-ID: <b0c0vt$mogrv$1@ID-89515.news.dfncis.de>
Source record: 126777

Can anyone recommend a good, noise free mobile antenna.
I will be using the htx-202 from radio shack in the car as a mobile.
Currently, using a window through mount with the htx. Some repeaters come
in clear and nice, others come in broke up and very noisy. Not sure, if its
me causing the noise on the other repeaters or if I am picking up noise from
the car.

Rickie / KC2KQQ

1289. Re: NYC Radio Store ??!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 17:13:38 UTC
From: Rickie / KC2KQQ <RickieV@hotmail.com>
Message-ID: <b0c1ss$nvj8h$1@ID-89515.news.dfncis.de>
Source record: 126778
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna

Awesome! Thanks for the Information...

Rickie

> On Sat, 18 Jan 2003 10:19:46 -0500, "Rickie / KC2KQQ"
> <RickieV@hotmail.com> wrote:
>
> >Can someone tell me where in New York City, there is a Amateur Radio
store
> >beside Radio Shack. Most Radio Shack doesn't carry Ham Radio stuff
anymore.
> >
> >Thanks!!
> >
> >Rickie / KC2KQQ
> >www.qsl.net/kc2kqq
> >
> Hope this helps.
>
> Scanner World, USA 10 New Scotland Ave. Albany, NY 12208 (518)
> 436-9606 Fax:(518) 465-2945
>
> Barry Electronics 540 Broadway New York, NY 10012 (212) 925-7000*****
>
> East Coast Amateur Radio 496 McConkey Dr. Tonawanda, NY 14150 (914)
> 835-8530
>
> Ham Central 3 Neptune Road Poughkeepsie, NY 12601 (914) 462-0415
>
> Hirsch Sales 219 California Dr. Williamsville, NY 14221 (716) 632-1189
>
> Roberts Electronics 4678 N. 20th St. Bemus Point, NY 14712 (703)
> 525-2382
>

1290. Re: MFJ-259B calibration

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 17:22:22 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E298D32.3FBB7933@shaw.ca>
Source record: 126779

"Ian White, G3SEK" wrote:
>
> This is a follow-up to the discussion a few weeks ago.
>
> There is a full discussion of accuracy issues, and detailed instructions
> for checkout and recalibration , at:
> http://www.w8ji.com/mfj-259b_calibration.htm
>
> This is the real story, direct from the original designer.

Ian, thanks for the tip!
Tom, thanks for this invaluable material!
It has always bothered me that I had no way of checking
out this important piece of my test equipment.

Irv, VE6BP

--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1291. Re: Mobile Antenna Recommedation.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 17:28:11 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <qj3j2v8cch1kghui41p7gdt0r4hcp0p11n@4ax.com>
Source record: 126780

Hard to beat a Larsen 5/8-wave mounted right in the center of your
roof.

Dick - W6CCD

On Sat, 18 Jan 2003 11:58:11 -0500, "Rickie / KC2KQQ"
<RickieV@hotmail.com> wrote:

>Can anyone recommend a good, noise free mobile antenna.
>I will be using the htx-202 from radio shack in the car as a mobile.
>Currently, using a window through mount with the htx. Some repeaters come
>in clear and nice, others come in broke up and very noisy. Not sure, if its
>me causing the noise on the other repeaters or if I am picking up noise from
>the car.
>
> Rickie / KC2KQQ
>

1292. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 17:52:20 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <b0c48k$22f$1@mail.specsol.com>
Source record: 126781

Roy Lewallen <w7el@eznec.com> wrote:
> So don't keep us in suspense. Was it Pearl, or was it Lone Star?

> Roy Lewallen, W7EL
> -- been there, done that

Not even close; Old Milwaukee.

--
Jim Pennino

1293. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 18:41:45 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b0c759$qe8$1@helle.btinternet.com>
Source record: 126782

"OC_CAM's Razor" wrote
> I don't even know where
> my dipole is resonant and I don't need to know.

==========

A lot of people think they know and think they need to know but, like you
Cec, they don't.

Reg, G4FGQ

1294. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 19:12:23 UTC
From: k3bu@aol.com
Message-ID: <20030118141223.10049.00000185@mb-md.aol.com>
Source record: 126783

>After having given everything all the consideration it is due, coupled with
>maxing out the capabilities of my brain, I have come to the conclusion that
>the
>only thing a resonant antenna gives one is a particular radiation pattern
>that
>may be useful where non resonant antennas may have a lobe and a null pattern
>that may cause problems, generally speaking. If the only thing that controls
>power output is proper inpedence matching, and using low loss lines, then I
>feel the above statement is true. Please feel free to add, delete, or improve
>on the comment.
>kc6ufe
>

It is like saying: why do we need automobiles, when bicycles will get us around (sooner or later). If you had the chance to compare dipole vs. stacked array, you would see the difference.

Resonance might not be important when you are considering single element radiator, but becomes important when you get into parasitc array design and maximizing antenna performance for particular goals. Loses in matching devices and feedlines become players too.

Yes, you can work world on the light bulb too, don't even need stinkin' antenna :-)

Yuri, K3BU

1295. Re: answered my own question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 19:39:21 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E29AD0D.5070706@attbi.com>
Source record: 126784

If you live in the good ol' USA you can get your Long/Lat right off the
web site:

<http://www.census.gov/cgi-bin/gazetteer>

Just enter your location or Zip code. You can interpolate to XX.XX places.

Deacon Dave, W1MCE

WJSchaible wrote:
> OK. Cancel that question. I found a web page that has the LAT/LON for all
> the transmitter locations. Now all I need is the LAT/LON of my
> neighborhood. There is a fire station down the street. Possibly they know
> their LAT/LON. I will ask there.
>
> Bill S.
>
> --
>
> WJSchaible <donovan820@attbi.com> wrote in message
> news:JEcW9.35748$kH3.4961@sccrnsc03...
>
>>I am comparing TV reception using an old fashion array antenna in my attic
>>and rabbit ears. The array antenna can be manually rotated.
>>
>>Without moving the antenna from it's original orientation, I get Ch9 good,
>>Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard
>>that some people around here get Ch9 good without any external antenna. I
>>want to experiment with rotating the array antenna and comparing results
>
> for
>
>>different channels. I wonder if there is a quick way to find out the
>>location of the transmit towers for the local TV stations so I know their
>>direction from my house. That will be useful for understanding the
>
> results
>
>>I get from rotating the antenna.
>>
>>QUESTION: Does anybody know a quick way to find tower locations in a local
>>area (I am in Seattle, WA). It might be interesting to know tower
>
> locations
>

>>for some of the radio stations as well.
>>
>>TIA. Bill Schaible
>>
>>
>>
>
>
>

1296. Cam??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 19:39:37 UTC
From: StarGazer <haha@hehehehe.com>
Message-ID: <3E29AD79.B57A8ADD@hehehehe.com>
Source record: 126786

How do you like your SG-500 amp?

What size power supply do you have for it?

What drive is required for 500 watts?

Do you have the optional fan with it? Or is it needed?

Does it actually do 160 - 10 m without any tuning or
adjusting of any kind?

I've been looking at this amp for a while.

thanks

1297. Re: 4nec2 genetic-optimizer

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 20:05:26 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E29B3CE.93A5D893@att.net>
Source record: 126785

Roy,

Smile when you say that, Pardner.

Lone Star is the National Beer of Texas. It is held in high esteem, even
if it is only marginally drinkable.

Pearl, on the other hand, is a great replacement for bottled water. It
is cheaper, about the same strength, and tastes a bit better.

73,
Gene
W4SZ

Roy Lewallen wrote:
>
> So don't keep us in suspense. Was it Pearl, or was it Lone Star?
>
> Roy Lewallen, W7EL
> -- been there, done that
>
> Jim Pennino wrote:
> > Rick Littlefield <k1bqt@aol.com> wrote:
> > >
> >>>Anheuser-Busch have successfully incorporated it into the American
> >>
> >>diet. Beer! It's not just for breakfast anymore.<
> > >
> > >
> >>The A/B product claims to "function as beer" but, to my taste, appears only to
> >>have sucessfully synthesized the organic architecture of skunk wee. Blah, poot!
> > >
> > >
> > Tell us how your really feel Rick :-)
> > >
> > You haven't experienced bad beer unless you've been part of a bunch of
> > hot, tired, thirsty GIs that hadn't seen a cold beer (or a hot one for that
> > matter) in over three weeks all spit it out rather than swallow it.
> > >
> > Yes, it was American beer not the local embalming fluid, and no, it wasn't
> > an A/B product.
> > >

1298. Re: Cam??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 20:43:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E29BC77.9050007@ieee.org>
Source record: 126787

StarGazer wrote:
> How do you like your SG-500 amp?

Given my method of antenna tuning, I like it fine.

> What size power supply do you have for it?

I have a 115 AH marine battery dual-charged from
an Astron RS-20M and a 75W solar panel.

> What drive is required for 500 watts?

I don't know exactly. I would estimate about 40W.

> Do you have the optional fan with it? Or is it needed?

I use it primarily inside my house without a fan. I've
never noticed any overheating. I only use it on SSB.

> Does it actually do 160 - 10 m without any tuning or
> adjusting of any kind?

I've only ever used it on 80m/40m/20m. It works well for
me on those bands and bandswitching is fully automatic.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1299. A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 21:22:23 UTC
From: "Ron P." <rpackerii@neo.rr.com>
Message-ID: <jAjW9.25183$i73.4382336@twister.neo.rr.com>
Source record: 126788

I just passed my morse code/General exam and I was wondering if my old pre-ham (for me) Antron 99 can be used for 10/12 meters? I don't have any extra spending money to buy a new antenna and was wondering if this could be tuned for these bands. Thanks!

Ron - kc8ulu/ag

1300. Rubber O ring

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 22:12:53 UTC
From: Jobobo <nooneuknow@nowhere.com>
Message-ID: <l7kj2v0lr02rod3a5hng97636d1kvvabvp@4ax.com>
Source record: 126789

I am trying to install an antenna in a 2000 Ford Ranger pickup. I am going to be drilling through the firewall for the electrical hookup. I am looking for a rubber 'o' ring that will fit a 3/4" hole. This will keep the wires from cutting on the metal body.
Anyone out there know where I can purchase this?

Thanks!

1301. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 22:35:53 UTC
From: Terry <ve1trb@hotmail.com>
Message-ID: <lFkW9.242662$C8.792170@nnrp1.uunet.ca>
Source record: 126790

Ron;
According to the info I have that comes with the antenna, it says it will operate "10 - 40 with a tuner, without cutting the whip".
Also, the antenna can be tuned by moving the rings 1/4 turn at a time. Moving the rings up raises the frequency, and lowering the ring lowers the frequency. But, it doesn't say how much it changes the frequency, max to min.it just says "a range"
Not much info, but I guess it's better than unttin'

Terry VE1TRB

"Ron P." <rpackerii@neo.rr.com> wrote in message news:jAjW9.25183$i73.4382336@twister.neo.rr.com...
> I just passed my morse code/General exam and I was wondering if my old
> pre-ham (for me) Antron 99 can be used for 10/12 meters? I don't have any
> extra spending money to buy a new antenna and was wondering if this could be
> tuned for these bands. Thanks!
>
> Ron - kc8ulu/ag
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.435 / Virus Database: 244 - Release Date: 12/30/2002

1302. Re: answered my own question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 23:02:39 UTC
From: Lou <tech@dp.net>
Message-ID: <b0cq7s$204s$1@news.dp.net>
Source record: 126792

You can do as Dave said or..... "if" your fire station has a current FCC license, the lon/lat should be listed for their transmitter site - OR - perhaps the coordinates for landing of the Medivac choppers. You may have to ask the EMS station for that... It depends on who is in charge of calling and/or landing them on site. Aside from all that, some "Astronomy" sites on the web also offer lon/lat for viewing purposes to figure out where you are as opposed to certain celestial objects in the sky. The last - but not least - option I have in mind is to get someone you may know with a GPS system to stand in your home or yard and take a reading.. Just my two cents with a few more tips.

--
Lou/Tech@DP.NET

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E29AD0D.5070706@attbi.com...
> If you live in the good ol' USA you can get your Long/Lat right off the
> web site:
>
> <http://www.census.gov/cgi-bin/gazetteer>
>
> Just enter your location or Zip code. You can interpolate to XX.XX places.
>
> Deacon Dave, W1MCE
>
>
>
>
> WJSchaible wrote:
> > OK. Cancel that question. I found a web page that has the LAT/LON for
all
> > the transmitter locations. Now all I need is the LAT/LON of my
> > neighborhood. There is a fire station down the street. Possibly they
know
> > their LAT/LON. I will ask there.
> >
> > Bill S.
> >
> > --
> >
> > WJSchaible <donovan820@attbi.com> wrote in message
> > news:JEcW9.35748$kH3.4961@sccrnsc03...
> >
> >>I am comparing TV reception using an old fashion array antenna in my
attic

> >>and rabbit ears. The array antenna can be manually rotated.
> >>
> >>Without moving the antenna from it's original orientation, I get Ch9
good,
> >>Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard
> >>that some people around here get Ch9 good without any external antenna.
I
> >>want to experiment with rotating the array antenna and comparing results
> >
> > for
> >
> >>different channels. I wonder if there is a quick way to find out the
> >>location of the transmit towers for the local TV stations so I know
their
> >>direction from my house. That will be useful for understanding the
> >
> > results
> >
> >>I get from rotating the antenna.
> >>
> >>QUESTION: Does anybody know a quick way to find tower locations in a
local
> >>area (I am in Seattle, WA). It might be interesting to know tower
> >
> > locations
> >
> >>for some of the radio stations as well.
> >>
> >>TIA. Bill Schaible
> >>
> >>
> >>
> >
> >
> >
>

1303. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 23:10:10 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0301181510.19f22bae@posting.google.com>
Source record: 126791

k3bu@aol.com (Yuri Blanarovich) wrote in message
news:<20030118141223.10049.00000185@mb-md.aol.com>...
> >After having given everything all the consideration it is due, coupled with
> >maxing out the capabilities of my brain, I have come to the conclusion that
> >the
> >only thing a resonant antenna gives one is a particular radiation pattern
> >that
> >may be useful where non resonant antennas may have a lobe and a null pattern
> >that may cause problems, generally speaking. If the only thing that controls
> >power output is proper inpedence matching, and using low loss lines, then I
> >feel the above statement is true. Please feel free to add, delete, or improve
> >on the comment.
> >kc6ufe
> >
>
> It is like saying: why do we need automobiles, when bicycles will get us around
> (sooner or later). If you had the chance to compare dipole vs. stacked array,
> you would see the difference.
>
> Resonance might not be important when you are considering single element
> radiator, but becomes important when you get into parasitc array design and
> maximizing antenna performance for particular goals. Loses in matching devices
> and feedlines become players too.
>
> Yes, you can work world on the light bulb too, don't even need stinkin' antenna
> :-)
>
> Yuri, K3BU

. . . done in the style of the classic FRC model.

w3rv

1304. Re: Rubber O ring

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 23:55:50 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E29E929.2020803@attbi.com>
Source record: 126793

Hold it!!!

There should already be a 3/4 inch hole with a grommet in it readily accessible to you!!

I've installed radios in a 1986, 1992 and 2003 Rangers and they all have the same hole!!

Left hand side of driver's seat between seat and door. Remove 4 screws that hold the floor molding at the door. Lift mat and carpet. VOILA! 3/4 inch hole [processing drain hole] with a plug installed about 1/2 way down the seat. Coax and power cables for an IC 706 MK IIg run right through it!!

Ten minute installation.

Deacon Dave, W1MCE

Jobobo wrote:
> I am trying to install an antenna in a 2000 Ford Ranger pickup. I am
> going to be drilling through the firewall for the electrical hookup. I
> am looking for a rubber 'o' ring that will fit a 3/4" hole. This will
> keep the wires from cutting on the metal body.
> Anyone out there know where I can purchase this?
>
> Thanks!
>

1305. Re: answered my own question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-18 23:58:19 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E29E9BE.7080700@attbi.com>
Source record: 126794

Bill, where's home? I'm in the Concord NH area and have a GPS if it
would help?

Deacon Dave, W1MCE

WJSchaible wrote:
> OK. Cancel that question. I found a web page that has the LAT/LON for all
> the transmitter locations. Now all I need is the LAT/LON of my
> neighborhood. There is a fire station down the street. Possibly they know
> their LAT/LON. I will ask there.
>
> Bill S.
>
> --
>
> WJSchaible <donovan820@attbi.com> wrote in message
> news:JEcW9.35748$kH3.4961@sccrnsc03...
>
>>I am comparing TV reception using an old fashion array antenna in my attic
>>and rabbit ears. The array antenna can be manually rotated.
>>
>>Without moving the antenna from it's original orientation, I get Ch9 good,
>>Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard
>>that some people around here get Ch9 good without any external antenna. I
>>want to experiment with rotating the array antenna and comparing results
>
> for
>
>>different channels. I wonder if there is a quick way to find out the
>>location of the transmit towers for the local TV stations so I know their
>>direction from my house. That will be useful for understanding the
>
> results
>
>>I get from rotating the antenna.
>>
>>QUESTION: Does anybody know a quick way to find tower locations in a local
>>area (I am in Seattle, WA). It might be interesting to know tower
>
> locations
>
>>for some of the radio stations as well.
>>
>>TIA. Bill Schaible
>>

>>
>>
>
>
>

1306. Looking for Rohn 25G or similar

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 00:28:55 UTC
From: Ray <none@none.net>
Message-ID: <v2js6m68a1c360@corp.supernews.com>
Source record: 126795

Portland, Oregon area

I'm looking for about 50' of rohn 25g or similar tower. A crank up mast would be ideal. Please email me at akraymond3_AT_yahoo_DOT_com

1307. Re: answered my own question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 00:44:42 UTC
From: WJSchaible <donovan820@attbi.com>
Message-ID: <_xmW9.731395$WL3.740349@rwcrnsc54>
Source record: 126796

Dave,

I live in Seattle, WA. Thank you for the useful information you posted -
and for the offer of the GPS help.

Bill Schaible

--

Dave Shrader <david.shrader@attbi.com> wrote in message
news:3E29E9BE.7080700@attbi.com...
> Bill, where's home? I'm in the Concord NH area and have a GPS if it
> would help?
>
> Deacon Dave, W1MCE
>
> WJSchaible wrote:
> > OK. Cancel that question. I found a web page that has the LAT/LON for
all
> > the transmitter locations. Now all I need is the LAT/LON of my
> > neighborhood. There is a fire station down the street. Possibly they
know
> > their LAT/LON. I will ask there.
> >
> > Bill S.
> >
> > --
> >
> > WJSchaible <donovan820@attbi.com> wrote in message
> > news:JEcW9.35748$kH3.4961@sccrnsc03...
> >
> >>I am comparing TV reception using an old fashion array antenna in my
attic
> >>and rabbit ears. The array antenna can be manually rotated.
> >>
> >>Without moving the antenna from it's original orientation, I get Ch9
good,
> >>Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard
> >>that some people around here get Ch9 good without any external antenna.
I
> >>want to experiment with rotating the array antenna and comparing results
> >
> > for
> >
> >>different channels. I wonder if there is a quick way to find out the

> >>location of the transmit towers for the local TV stations so I know
their
> >>direction from my house. That will be useful for understanding the
> >
> > results
> >
> >>I get from rotating the antenna.
> >>
> >>QUESTION: Does anybody know a quick way to find tower locations in a
local
> >>area (I am in Seattle, WA). It might be interesting to know tower
> >
> > locations
> >
> >>for some of the radio stations as well.
> >>
> >>TIA. Bill Schaible
> >>
> >>
> >>
> >
> >
> >
>

1308. Re: broadcast TX locations ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 00:45:45 UTC
From: WJSchaible <donovan820@attbi.com>
Message-ID: <ZymW9.731411$WL3.740372@rwcrnsc54>
Source record: 126797

Thank you everybody for the useful information.

Bill S.

--

WJSchaible <donovan820@attbi.com> wrote in message
news:JEcW9.35748$kH3.4961@sccrnsc03...
> I am comparing TV reception using an old fashion array antenna in my attic
> and rabbit ears. The array antenna can be manually rotated.
>
> Without moving the antenna from it's original orientation, I get Ch9 good,
> Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard
> that some people around here get Ch9 good without any external antenna. I
> want to experiment with rotating the array antenna and comparing results
for
> different channels. I wonder if there is a quick way to find out the
> location of the transmit towers for the local TV stations so I know their
> direction from my house. That will be useful for understanding the
results
> I get from rotating the antenna.
>
> QUESTION: Does anybody know a quick way to find tower locations in a local
> area (I am in Seattle, WA). It might be interesting to know tower
locations
> for some of the radio stations as well.
>
> TIA. Bill Schaible
>
>
>

1309. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 01:10:17 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301181710.287c2dd9@posting.google.com>
Source record: 126798

Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<20ph2v083cblea49e43i28vjo7rn6n8g8d@4ax.com>...
> On 18 Jan 2003 04:47:25 GMT, whagen6@cs.com (William F. Hagen) wrote:
>
snip
>
> The fact that an antenna is resonate or not is not the determining
> factor for performance.
snip>
> k6mhe
>
>
>
> Danny
> K6MHE
>
Danny,
I feel that so many people are missing the point regarding
'resonance'
which as always makes me the odd man out.But your statement above is
so stark
that I feel I must add my two pennyworth even tho I may come under
fire.
If an antenna does not receive a good signal it is of little use . The
maximum energy extracted from incoming radio waves by a antenna is one
of the lowest impedance which means WITHOUT reactance of any sort.
Surely this is the main determining factor for any antenna. True, it
makes it easier to match and also
to ward off unwanted signals, but the primary use of an antenna is to
receive a signal so that communication can begin ,which in turn means
maximum extraction of desired incomming energy i.e. the lowest
resonance obtainable.
Regards
Art

1310. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 01:23:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2jvgis7oel627@corp.supernews.com>
Source record: 126799

This is simply not true. I hate to see misinformation like this be posted.

Roy Lewallen, W7EL

Art Unwin KB9MZ wrote:
>. . .
> . . . The
> maximum energy extracted from incoming radio waves by a antenna is one
> of the lowest impedance which means WITHOUT reactance of any sort.
> Surely this is the main determining factor for any antenna. True, it
> makes it easier to match and also
> to ward off unwanted signals, but the primary use of an antenna is to
> receive a signal so that communication can begin ,which in turn means
> maximum extraction of desired incomming energy i.e. the lowest
> resonance obtainable.
> Regards
> Art

1311. Re: MFJ-259B calibration

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 01:25:52 UTC
From: derswede@aol.comspam.com
Message-ID: <20030118202552.01441.00000071@mb-mk.aol.com>
Source record: 126800

Ian, MANY thanks for posting this link. Immediately printed it to add to my manuals for the unit.

Andrew

1312. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 01:45:22 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b0cvvh$8ls$1@slb0.atl.mindspring.net>
Source record: 126801

It is all magic Jackie. RF obeys no laws or rules. It goes and comes as it pleases. Antennas are simple coupling devices to the ether. And should be 'resonate' to effect the proper energy transfer to the ether. See how simple that is?

Now will someone explain to me how a radio wave ACTUALLY travels from point A to point B ??

Dan/W4NTI

"Jackie" <no@address.given.com> wrote in message news:0J5W9.720739$WL3.731633@rwcrnsc54...
> I am new to antennas and propagation too- but my big question is this- just
> how much resonance and power does one need going out of an antenna if people
> using .5 watt QRP can regularly work the world?? I know that gain and power
> come in handy when trying to work through the pileups in contests, but some
> people can get the same distance with a crappy antenna and low power.
>
> I really have to wonder how much about antennas is taken as religion because
> it's presented as some mystical art form vs. pure physics. Probably more of
> the former- but, the manufacturers of antennas seem to need to convince us
> that there's more of the former than the latter. Otherwise no one would do
> much homebrewing of antennas and get satisfactory results (for the end
> users). Isn't that what counts, though? End user satisfaction?
>
> Jackie KC0ODY
>
> "'Doc" <w5lz@cwis.net> wrote in message news:3E28E4E9.DD168D1C@cwis.net...
> > William,
> > While a lot of what you say is correct, a resonant
> > antenna, or one that is 'close' to resonant, does have
> > advantages over a non-resonant antenna. If that were
> > not true, then there would be no reason to ever use a
> > resonant antenna, (and I don't think you're saying that,
> > are you?).
> > 'Doc
>
>

1313. lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 02:05:27 UTC
From: WJSchaible <donovan820@attbi.com>
Message-ID: <HJnW9.732852$P31.543399@rwcrnsc53>
Source record: 126802

OK. Thanks everybody for the info for finding my lat/lon from maps on the web. Now I need to know how degrees of lat and lon translate to feet or meters. It seems like longitude conversion depends on my latitude. Latitude conversion should be the same anywhere on the globe.

If I know these conversion factors I can calculate the bearing from here to another location in the local area (good enough) by assuming a flat earth model and not taxing my brain with the fine details.

MY QUESTION: What is the conversion of lat and lon degrees to horizontal distance ?

AN UNRELATED QUESTION: Does anyone know the difference between true north and mag north in Seattle WA ? If I remember correctly TRUE is west of MAG by about 20 degrees here. But I don't remember any closer than that.

Thanks for your help.

Bill S.

1314. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 02:48:21 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E2A11E6.3050401@tampabay.rr.com>
Source record: 126803

hey ron
i have one myself and straight out of the box no tuning or anything i
have the antenna mounted about 8 feet off the ground and fed it with 75
feet of RG-8x why that much feedline you ask cause thats the lenght i
had and was to lazy to cut it and resolder the connector
and believe it or not according to the MFJ 259 its below a 1.5:1 on 10
meters and below 1.3:1 on 17 meters it sucks on 12 and 15 but with a
tuner it works well on those as well
good luck

Ron P. wrote:
> I just passed my morse code/General exam and I was wondering if my old
> pre-ham (for me) Antron 99 can be used for 10/12 meters? I don't have any
> extra spending money to buy a new antenna and was wondering if this could be
> tuned for these bands. Thanks!
>
> Ron - kc8ulu/ag
>
>

1315. center mount for hamstick dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 02:59:40 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e2a19c0_1@news1.prserv.net>
Source record: 126804

I've heard there is a commercial product for the center/feedpoint to make
two Hamsticks into a dipole. Who sells it?

--
Crazy George
Remove NO and SPAM from return address

1316. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 03:13:58 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <b0d55mghs1@mail.specsol.com>
Source record: 126805

WJSchaible <donovan820@attbi.com> wrote:
> OK. Thanks everybody for the info for finding my lat/lon from maps on the
> web. Now I need to know how degrees of lat and lon translate to feet or
> meters. It seems like longitude conversion depends on my latitude.
> Latitude conversion should be the same anywhere on the globe.

> If I know these conversion factors I can calculate the bearing from here to
> another location in the local area (good enough) by assuming a flat earth
> model and not taxing my brain with the fine details.

> MY QUESTION: What is the conversion of lat and lon degrees to horizontal
> distance ?

> AN UNRELATED QUESTION: Does anyone know the difference between true north
> and mag north in Seattle WA ? If I remember correctly TRUE is west of MAG
> by about 20 degrees here. But I don't remember any closer than that.

> Thanks for your help.

> Bill S.

I have the source for an old C program that computes bearing and distance
between two lats and longs.

e-mail me if you want a copy.

Go to http://www.ngdc.noaa.gov/cgi-bin/seg/gmag/fldsnth1.pl for your
magnetic variation.

--
Jim Pennino

1317. Re: center mount for hamstick dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 03:36:26 UTC
From: feedbackBLOCK@BLOCKpcbmilling.com
Message-ID: <3e2a1d0d.13480000@news.east.cox.net>
Source record: 126806

I believe those are sold on the hamstick web site. I remember seeing
them listed there in VERY small print.

Mark
WA4KFZ

On Sat, 18 Jan 2003 20:59:40 -0600, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

>I've heard there is a commercial product for the center/feedpoint to make
>two Hamsticks into a dipole. Who sells it?
>
>--
>Crazy George
>Remove NO and SPAM from return address
>
>

--
PCB Milling
http://www.pcbmilling.com
Be sure to "unblock" the address to reply.
Your source for information on prototype
PC board fabrication, rapid prototyping
and related topics.

1318. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 03:40:41 UTC
From: richardharrison@webtv.net
Message-ID: <16992-3E2A1E39-606@storefull-2315.public.lawson.webtv.net>
Source record: 126810

Art, KB9MZ wrote:
"The maximum energy extracted from radio waves by an antenna is one of the lowest impedance which means without reactance of any sort."

This needs recasting. An antenna used for reception is simultaneously a transmitting antenna. When used for reception, it is excited by the r-f wave sweeping across it. The antenna doesn`t really care where the excitation came from. It is excited so it must radiate.

A 1/2-wave long rod situated in space to be excited is strongly excited when swept by its resonant radio frequency assuming correct attitude and placement. Its response is similar electrically to the mechanical response of a vibrating reed in a frequency meter when it is excited by the proper frequency of mechanical vibration. Off-resonance, neither the antenna nor the frequency meter reed gets very excited.

If we have our 1/2-wave in space swept by r-f of its resonant frequency, a strong current flows in the rod as only the resistance of the rod opposes current flow. In a good rod nearly all the resistance seen by current in the rod is radiation resistance. Off-resonance, reactance opposes current flow. Off-resonance reactance adds to the total opposition to current flow in the rod.

What is radiation resistance? It is the re-radiation from the rod.

We can break our resonant 1/2-wave rod in its middle and insert a load resistance (the receiver) which has a value equal to the antenna`s radiation resistance. In this case, the received energy will split 50-50 between between the receiver load and re-radiation from the antenna. This is the best split we can get. The receiver can get a maximum of 50% of the power in the antenna under ideal conditions. Any reactance in our antenna from detuning must be neutralized to get maximum received power from the antenna.

We simply must have a conjugate match between our antenna and its load to get maximum power transfer. The source resistance is the antenna`s radiation resistance and the load resistance is the receiver input.

So, Art has the right idea. Some readers may need more explanation. But, I`m no typist, so I`ll sign-off on expanding on Art`s comment.

There are more important aspects to receiving antennas than maximum signal delivery to the receiver because we can build receivers with low internal noise and tremendous gain. Maximization of signal to noise ratio is the name of the game. So, the antenna must be located for low noise pickup. Directional characteristics are most often used to reduce noise. The Beverage antenna is an example where the antenna has enormous

directivity but the antenna`s low-to-the-ground placement loss wipes out the gain that the directionality of its long wire provides. The net gain of a Beverage is somewhere near that of an isotropic antenna. Nevertheless, the Beverage remains a favorite with commercial users and noted amateur radio DXers. I used a Beverage for my personal listening, but commercially we used rhombics. Both antenna types received very well.

Best regards, Richard Harrison, KB5WZI

1319. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:05:50 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <v2k910s99jgp62@corp.supernews.com>
Source record: 126807

Hi,

I believe the ARRL handbook, or perhaps Operating Manual has BASIC code for
bearing.

Regards,
Jim - ku5s
--
email sent to: denews@taborsoft.com
is discarded without being seen.
Sorry for any inconvenience.
"WJSchaible" <donovan820@attbi.com> wrote in message
news:HJnW9.732852$P31.543399@rwcrnsc53...
> OK. Thanks everybody for the info for finding my lat/lon from maps on the
> web. Now I need to know how degrees of lat and lon translate to feet or
> meters. It seems like longitude conversion depends on my latitude.
> Latitude conversion should be the same anywhere on the globe.
>
> If I know these conversion factors I can calculate the bearing from here
to
> another location in the local area (good enough) by assuming a flat earth
> model and not taxing my brain with the fine details.
>
> MY QUESTION: What is the conversion of lat and lon degrees to horizontal
> distance ?
>
> AN UNRELATED QUESTION: Does anyone know the difference between true north
> and mag north in Seattle WA ? If I remember correctly TRUE is west of MAG
> by about 20 degrees here. But I don't remember any closer than that.
>
> Thanks for your help.
>
> Bill S.
>
>

1320. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:12:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2A25A3.2080401@ieee.org>
Source record: 126808

Art Unwin KB9MZ wrote:
> If an antenna does not receive a good signal it is of little use . The
> maximum energy extracted from incoming radio waves by a antenna is one
> of the lowest impedance which means WITHOUT reactance of any sort.
> Surely this is the main determining factor for any antenna.

Art, consider this. The loss in the received signal for 100 ft of
RG-58 on 10m is about 2.7 dB for a resonant 50 ohm 10m antenna. The
loss in 100 ft of open-wire line is about 0.7 dB for a 10m antenna
with a feedpoint impedance of 120+j600 ohms. I'm not willing to
sacrifice 2 dB of received signal just to have a resonant antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1321. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:14:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2A2639.6090909@ieee.org>
Source record: 126809

Dan/W4NTI wrote:
> Now will someone explain to me how a radio wave ACTUALLY travels from point
> A to point B ??

A changing electric field causes a changing magnetic field which causes
a changing electric field which causes a changing magnetic field which ...
It's all covered by Maxwell's equations.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1322. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:21:25 UTC
From: richardharrison@webtv.net
Message-ID: <26170-3E2A27C5-575@storefull-2312.public.lawson.webtv.net>
Source record: 126818

Dan, W4NTI wrote:
"It is all magic Jackie."

The magic is that a magnetic force can be exerted through a vacuum to pull on iron, for example, and that bits of paper can be attracted by an electric force exerted through a vacuum.

J.C. Maxwell speculated that displacement current, of the type that flows through the dielectric of a caopacitor, creates a magnetic field the same as current through a wire does. That proved true, so Maxwell explained that E and M fields take turns in regenerating each other as they propagate out of range of their source.

Best regards, Richard Harrison, KB5WZI

1323. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:29:44 UTC
From: bowman <bowman@montana.com>
Message-ID: <MPG.1893d79f5cfd63759896d4@News.CIS.DFN.DE>
Source record: 126811

In article <HJnW9.732852$P31.543399@rwcrnsc53>, donovan820@attbi.com
says...
> MY QUESTION: What is the conversion of lat and lon degrees to horizontal
> distance ?

The best approach is the inverse Vincenty formula.
http://www.ngs.noaa.gov/PC_PROD/Inv_Fwd/ has either a PC executable, or
the FORTRAN source. I've compiled the FORTRAN with g77 with no problem.
The code could be simplified for N lat and W lon and the WGS83 ellipsoid,
but the math still is a bit chewy. There are also 3D versions available.

1324. Re: Rubber O ring

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:32:43 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2A2A6B.59F783AC@cwis.net>
Source record: 126812

Jobobo,
It's called a 'grommet' and can usually be found
at auto-supply stores, hardware stores, etc.
'Doc

1325. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:34:44 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2A2AE4.DD2ABB50@cwis.net>
Source record: 126813

Ron,
It ought to work fine, just might need to re-tune it.
'Doc

1326. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:35:14 UTC
From: whagen6@cs.com
Message-ID: <20030118233514.20089.00000107@mb-cj.news.cs.com>
Source record: 126814

Just because an antenna is resonant doesnt mean that the impedance of that antenna is 50 ohms and will match a 50 ohm line. all it means is that there is no reactive component. There are the special cased of 50 ohm impedance feedpoints of resonant antennas, ie the dipole at proper hieght, the quarterwave vertical with 4 radials at angles, and other simple antennas. It is these cases where resonance makes matching to 50 ohms easy, but that is only at the resonant frequency.
So, when all the criterion are specified, then the discussion and answers can be presented more specifically.
This has been an interesting discussion, and I think practical examples really help explain to all what others think and are doing.
Really, the answer could be that the best antenna is one that puts all the available current onto the antenna via proper impedance matching and reactance cancelling, while using the lowest loss transmission line one can use.

1327. theory of yagi antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:37:18 UTC
From: Xanax <irishdude79___NoSpam___@y___ahoo.ie>
Message-ID: <LWpW9.3861$V6.5943@news.indigo.ie>
Source record: 126815

anybody got a url to a site that explains how yagi antennas opperate??

1328. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:38:40 UTC
From: richardharrison@webtv.net
Message-ID: <26171-3E2A2BD0-222@storefull-2312.public.lawson.webtv.net>
Source record: 126817

I wrote:
"(no SWR) transmission lines."

That only happens when the power is turned off. I`ve waited all day for a correction. With a perfect match, the SWR is 1:1, not zero.
Thank you for being so kind as to overlook my goof!

Best regards, Richard Harrison, KB5WZI

1329. Re: Mobile Antenna Recommedation.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 04:39:20 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2A2BF8.318C083D@cwis.net>
Source record: 126816

Rickie,
If it's been mounted correctly, an antenna very seldom
causes 'noise'. It may transmit noise produced by the transmitter,
or receive noise produced by who knows what, but produce
noise it's self? I doubt it...
'Doc

1330. Re: broadcast TX locations ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 05:24:08 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E2A3678.C9E5B7EC@northwest.com>
Source record: 126669

get an aviation sectional map. the sectional gives locations of the towers, with heights as well.

they cost about $11 at any aviation store.
=======

WJSchaible wrote:

> Thank you everybody for the useful information.
>
> Bill S.
>
> --
>
> WJSchaible <donovan820@attbi.com> wrote in message
> news:JEcW9.35748$kH3.4961@sccrnsc03...
> > I am comparing TV reception using an old fashion array antenna in my attic
> > and rabbit ears. The array antenna can be manually rotated.
> >
> > Without moving the antenna from it's original orientation, I get Ch9 good,
> > Ch7 and Ch11 not so good, and nothing else worth mentioning. I've heard
> > that some people around here get Ch9 good without any external antenna. I
> > want to experiment with rotating the array antenna and comparing results
> for
> > different channels. I wonder if there is a quick way to find out the
> > location of the transmit towers for the local TV stations so I know their
> > direction from my house. That will be useful for understanding the
> results
> > I get from rotating the antenna.
> >
> > QUESTION: Does anybody know a quick way to find tower locations in a local
> > area (I am in Seattle, WA). It might be interesting to know tower
> locations
> > for some of the radio stations as well.
> >
> > TIA. Bill Schaible
> >
> >
> >

1331. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 06:24:04 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2kh43s6u68q14@corp.supernews.com>
Source record: 126670

A minute is a nautical mile at the equator. There are any number of good programs floating around the net that allows you to put in your/other Lat/Long and through the miracle of spherical trig gives you the bearing and the distance.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"WJSchaible" <donovan820@attbi.com> wrote in message
news:HJnW9.732852$P31.543399@rwcrnsc53...
> OK. Thanks everybody for the info for finding my lat/lon from maps on the
> web. Now I need to know how degrees of lat and lon translate to feet or
> meters. It seems like longitude conversion depends on my latitude.
> Latitude conversion should be the same anywhere on the globe.
>
> If I know these conversion factors I can calculate the bearing from here
to
> another location in the local area (good enough) by assuming a flat earth
> model and not taxing my brain with the fine details.
>
> MY QUESTION: What is the conversion of lat and lon degrees to horizontal
> distance ?
>
> AN UNRELATED QUESTION: Does anyone know the difference between true north
> and mag north in Seattle WA ? If I remember correctly TRUE is west of MAG
> by about 20 degrees here. But I don't remember any closer than that.
>
> Thanks for your help.
>
> Bill S.
>
>

1332. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 07:05:56 UTC
From: artie <silli_artie@hotmail.com>
Message-ID: <180120032305579257%silli_artie@hotmail.com>
Source record: 126671

Get out a ping pong ball, a mechanical pencil, and a book on spherical trig.

You can use wild calculations based on various ellipsoid models, or you can use a simple spherical trig model forming an oblique triangle with one apex C at the north pole, one apex A at the first point, and the other apex B at the second point. Sides a, b, and c are opposite their corresponding apexes.

We now know the lengths of two sides, from the pole to A and from the pole to B. The angle between the two points (angle C) is the difference between the longitudes.

Given this, the distance between the starting point and the destination, c, using the law of cosines, is:

c = sin(lat1)sin(lat2) + cos(lat1)cos(lat2)cos(abs(long1-long2)) Eq.1

This is the distance in radians. Now we have all three sides to our spherical triangle, and one angle. We all know that in a spherical triangle with sides a, b, c and opposing angles A, B, C, that:

sin(a)/sin(A) = sin(b)/sin(B) = sin(c)/sin(C) Eq.2

This is the equation you use if you want to find the angle between first and second points.

If you have access to Mathematica, you can use the `Geodesy` package and play with both spherical and spheroidal distances (using the WGS-84 model) between two points.

In one example, the difference between the two models between points at 0,0 and 45,45 (degrees), was 9 kilometers, 6671.7 km for the spherical model, and 6662.47 km for the spheroidal model.

In article <MPG.1893d79f5cfd63759896d4@News.CIS.DFN.DE>, bowman <bowman@montana.com> wrote:

> In article <HJnW9.732852$P31.543399@rwcrnsc53>, donovan820@attbi.com
> says...
> > MY QUESTION: What is the conversion of lat and lon degrees to horizontal
> > distance ?
>
> The best approach is the inverse Vincenty formula.
> http://www.ngs.noaa.gov/PC_PROD/Inv_Fwd/ has either a PC executable, or
> the FORTRAN source. I've compiled the FORTRAN with g77 with no problem.
> The code could be simplified for N lat and W lon and the WGS83 ellipsoid,
> but the math still is a bit chewy. There are also 3D versions available.

>
>

1333. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 08:07:20 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <N1AVkLE4ylK+EAy+@ifwtech.co.uk>
Source record: 126672

"Jackie" wrote:
>> I am new to antennas and propagation too

Dan/W4NTI wrote:
>It is all magic Jackie. RF obeys no laws or rules. It goes and comes as it
>pleases. Antennas are simple coupling devices to the ether. And should be
>'resonate' to effect the proper energy transfer to the ether. See how
>simple that is?

H L Mencken (1880-1956) wrote:
"For every problem, there is a solution that is simple, neat, and
WRONG."

I'll go with Mencken.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1334. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 08:47:12 UTC
From: "Ron P." <rpackerii@neo.rr.com>
Message-ID: <kCtW9.25705$i73.5034089@twister.neo.rr.com>
Source record: 126673

Ok, so 10 & 17! Sounds like a winner for the Ham-on-a-budget! There is only one problm however...I don't have a tuner, only a built in SWR meter on my rig. Thanks and 73!

Ron - kc8ulu/ag
"'Doc" <w5lz@cwis.net> wrote in message news:3E2A2AE4.DD2ABB50@cwis.net...
> Ron,
> It ought to work fine, just might need to re-tune it.
> 'Doc

1335. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 12:34:45 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2A9B65.A81F409C@cwis.net>
Source record: 126674

Ron,
You really don't need a tuner, although it would certainly come in handy at times. The 'A99' has an impedance matching device built into it that would allow you to tune the antenna for ~a~ band (not two or more, though).
For a ham on a budget, the 'A99' isn't as good a bargain as making your own dipoles would be. Have you thought of that?
'Doc

1336. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 12:53:37 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <oUednXJ4juxMArejXTWcpw@crocker.com>
Source record: 126675

go to www.google.com and search for 'bearing and distance calculator' and
you will get a bunch of hits. here is one to try:
http://www.h-e.com/cgi-local/beardist.exe?init=0

"WJSchaible" <donovan820@attbi.com> wrote in message
news:HJnW9.732852$P31.543399@rwcrnsc53...
> OK. Thanks everybody for the info for finding my lat/lon from maps on the
> web. Now I need to know how degrees of lat and lon translate to feet or
> meters. It seems like longitude conversion depends on my latitude.
> Latitude conversion should be the same anywhere on the globe.
>
> If I know these conversion factors I can calculate the bearing from here
to
> another location in the local area (good enough) by assuming a flat earth
> model and not taxing my brain with the fine details.
>
> MY QUESTION: What is the conversion of lat and lon degrees to horizontal
> distance ?
>
> AN UNRELATED QUESTION: Does anyone know the difference between true north
> and mag north in Seattle WA ? If I remember correctly TRUE is west of MAG
> by about 20 degrees here. But I don't remember any closer than that.
>
> Thanks for your help.
>
> Bill S.
>
>

1337. Re: theory of yagi antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 13:15:22 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <b0e91hva2@reader11.wxs.nl>
Source record: 126676

http://ac6v.com/antprojects.htm

http://www.cebik.com/radio.html

1338. Re: How can a "beacon" be track down by a satellite???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 13:54:26 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <i6yW9.49$_N5.18671@news20.bellglobal.com>
Source record: 126677
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.design

"Laplace"
> a beacon is so smaller and it does not have a satellite
> disk to transmit data?

"news-server"
> if you are specifically thinking of an EPIRB or similar,
> then it through triangulation...

"Watson 'Atto Parsec' Name"
> If three satellites receive the (very weak) signal, they
> can find the position by triangulation...

Satellites that track rescue beacons do not use "triangulation" as such. The older systems depend upon analysis, at the ground station, of the Doppler shift imposed by the orbital motion of the satellite. The location is determined only with sufficient accuracy (~20km) that an aircraft can be sent to the general area. Also, the 'lost party' must crash within range of a ground station. The newer system uses GPS and you may crash anywhere you like.

1339. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 14:01:14 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301190601.247b8cf7@posting.google.com>
Source record: 126678

"WJSchaible" <donovan820@attbi.com> wrote in message
>
> AN UNRELATED QUESTION: Does anyone know the difference between true north
> and mag north in Seattle WA ? If I remember correctly TRUE is west of MAG
> by about 20 degrees here. But I don't remember any closer than that.

According to my info , the mag var at SEA-TAC is E-20. MK

1340. Re: broadcast TX locations ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 14:04:08 UTC
From: richardharrison@webtv.net
Message-ID: <26171-3E2AB058-245@storefull-2312.public.lawson.webtv.net>
Source record: 126679

Bill Schable wrote:
"I want to experiment with rotating the array antenna and comparing results for different channels."

That is the sane approach.

Map locations and path profiles are used to find sites that will work for line-of-sight stations. Bill`s TV stations are already sited and his receiving antenna has limited mobility.

Bill can look for a best location for reception of various signals with a portable TV or antenna. He should experiment with antenna position for best reception. That`s the final path adjustment for microwave. You aren`t really interested in station locations. You are interested in the best signal.

Best regards, Richard Harrison, KB5WZI

1341. Re: Mobile Antenna Recommedation.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 14:32:22 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <PrYqPmnLXGk+gE4VqWGoLp3JK6kB@4ax.com>
Source record: 126680

"Rickie / KC2KQQ" <RickieV@hotmail.com> wrote:

>Can anyone recommend a good, noise free mobile antenna.
>I will be using the htx-202 from radio shack in the car as a mobile.
>Currently, using a window through mount with the htx. Some repeaters come
>in clear and nice, others come in broke up and very noisy. Not sure, if its
>me causing the noise on the other repeaters or if I am picking up noise from
>the car.
>
> Rickie / KC2KQQ
>

There are lots of books on mobile operation that include sections on how to deal with noise coming from the engine apparatus. See the ARRL web site, the "product" area.

(It's hard to give you specific advice, given that the noise could be coming from most anywhere on your car.)

Bob
k5qwg

1342. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 15:08:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2ABF64.7050808@ieee.org>
Source record: 126681

OC_CAM's Razor wrote:
> VE9SRB wrote:
>> Cecil, I made up the brainteaser for QEX.
>
> I wonder if the brainteaser results are the same with the Thevenin
> Equivalent circuit as with the Norton Equivalent circuit?

Note that the brainteaser results are the readings of the wattmeters,
not the dissipation in the Thevenin equivalent sources. In fact, the
dissipation in the Thevenin equivalent source is often without
significance according to "Fields and Waves in Modern Radio" by
Ramo and Whinnery.

"It must be emphasized, as in any Thevenin equivalent circuit, that
the equivalent circuit was derived to tell what happens in the load
under different load conditions, and significance cannot be automatically
attached to a calculation of power loss in the internal impedance of
the equivalent circuit."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1343. Re: theory of yagi antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 15:30:13 UTC
From: AC6V <contact99@ac6v.com>
Message-ID: <9wzW9.106128$Qe5.629479@news1.west.cox.net>
Source record: 126683

Yagi's revealed at URL:
http://www.signalengineering.com/ultimate/yagi.html
AND
http://whatis.techtarget.com/definition/0,,sid9_gci214378,00.html

You really need to start using google http://www.google.com/
Not a criticism -- just a suggestion. In most cases google will find your
search. Use quotes will narrow the search, e.g., "Yagi Antennas"

--
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Xanax" <irishdude79___NoSpam___@y___ahoo.ie> wrote in message
news:LWpW9.3861$V6.5943@news.indigo.ie...
> anybody got a url to a site that explains how yagi antennas opperate??
>
>
>
>

1344. Thanks everyone for the info

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 15:30:34 UTC
From: WJSchaible <donovan820@attbi.com>
Message-ID: <uwzW9.52747$1q3.7388@sccrnsc01>
Source record: 126682

Thanks all. You gave me exactly what I needed.

Bill S.

--

WJSchaible <donovan820@attbi.com> wrote in message
news:HJnW9.732852$P31.543399@rwcrnsc53...
> OK. Thanks everybody for the info for finding my lat/lon from maps on the
> web. Now I need to know how degrees of lat and lon translate to feet or
> meters. It seems like longitude conversion depends on my latitude.
> Latitude conversion should be the same anywhere on the globe.
>
> If I know these conversion factors I can calculate the bearing from here
to
> another location in the local area (good enough) by assuming a flat earth
> model and not taxing my brain with the fine details.
>
> MY QUESTION: What is the conversion of lat and lon degrees to horizontal
> distance ?
>
> AN UNRELATED QUESTION: Does anyone know the difference between true north
> and mag north in Seattle WA ? If I remember correctly TRUE is west of MAG
> by about 20 degrees here. But I don't remember any closer than that.
>
> Thanks for your help.
>
> Bill S.
>
>

1345. Re: center mount for hamstick dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 15:32:52 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E2AC524.5864D0E6@qth.com>
Source record: 126684
Body handling: Binary attachment payload not displayed: radioranch.vcf

www.amcominc.com has it....people with the clearspeech and many
others too Im sure....73 K5MDM

Crazy George wrote:

> I've heard there is a commercial product for the center/feedpoint to make
> two Hamsticks into a dipole. Who sells it?
>
> --
> Crazy George
> Remove NO and SPAM from return address

[One or more binary attachments are retained only in the source text.]

1346. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 15:34:18 UTC
From: AC6V <contact99@ac6v.com>
Message-ID: <_zzW9.106161$Qe5.630461@news1.west.cox.net>
Source record: 126685

Formulae For Calculating Great Circle Heading and Distance Information

---

From the 1982 ARRL antenna book.

1. cos(D) = (sin(A) * sin(B)) + (cos(A) * cos(B) * cos(L))

2. cos(C) = (sin(B) - (sin(A) * cos(D))) / (cos(A) * sin(D))

WHERE:

A = YOUR latitude in degrees.
B = latitude of the other location in degrees.
L = YOUR longitude minus that of the other location. (Algebraic difference.)
D = Distance along path in degrees of arc.
C = True bearing from north if the value for sin(L) is positive. If
sin(L) is negative, true bearing is 360 - C.

To convert degrees of arc to statute miles, multiply by 69.041.
To convert degrees of arc to kilometers, multiply by 111.111.
Also See Aviation Formulary V1.29

--
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"WJSchaible" <donovan820@attbi.com> wrote in message
news:HJnW9.732852$P31.543399@rwcrnsc53...
> OK. Thanks everybody for the info for finding my lat/lon from maps on the
> web. Now I need to know how degrees of lat and lon translate to feet or
> meters. It seems like longitude conversion depends on my latitude.
> Latitude conversion should be the same anywhere on the globe.
>
> If I know these conversion factors I can calculate the bearing from here
to
> another location in the local area (good enough) by assuming a flat earth
> model and not taxing my brain with the fine details.
>
> MY QUESTION: What is the conversion of lat and lon degrees to horizontal
> distance ?
>
> AN UNRELATED QUESTION: Does anyone know the difference between true north

> and mag north in Seattle WA ? If I remember correctly TRUE is west of MAG
> by about 20 degrees here. But I don't remember any closer than that.
>
> Thanks for your help.
>
> Bill S.
>
>

1347. Re: center mount for hamstick dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 16:07:47 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <Lc0qPpEBPVvCZ3x6nCg=RSmxwa62@4ax.com>
Source record: 126686

"Crazy George" <munschNO@attglobal.net.SPAM> wrote:

>I've heard there is a commercial product for the center/feedpoint to make
>two Hamsticks into a dipole. Who sells it?

They have it at http://www.hamstick.com/ under "mounts."

Bob
k5qwg

1348. Parabolic Antenna Design and Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 16:20:28 UTC
From: jackpotcharters_com@envisiondevices.ws
Message-ID: <9d5983be.0301190820.bde99f0@posting.google.com>
Source record: 126687

I would like some assistance in designing a parabolic antenna. I have read tons of info on the subject and tried using the hdl_ant program and article written by Paul Wade N1BWT but it left me with more questions than it answered. Here is what I have so far.

This imaginary parabolic antenna has the following specs -

1 - 3.0 meters in diameter on long and short axis
I'm uncertain whether the whole of the short axis is actually used
2 - It is of offset design (point one was a clue here :-)
3 - It has a focal to diameter ratio of .60
4 - It's focal length is 1800 millimeters
F/D = R therefore F = DR and DR = .60 * 3.0
(correct me if I'm wrong)
5 - It's depth (at deepest point) on parabola is 312.5 millimeters
F = (DD)/(16d) therefore d = DD/16F = 3.0 * 3.0/16 * 1.8
(again correct me if I'm wrong - it's been a while since high school)
6 - The dish was cut from a prime focus dish of unknown specifications but it was cut from the center (focal point) out

Now if I run these specs through the hdl program they come out different. The F/D ratio is wrong and the focal length is wrong. I don't see where I'm making a mistake here unless my equations are not correct.

What I still need (assuming all my numbers are right) is the parabolic curve function so I can plot it's points manually and create a template. I have no idea how to calculate the parabola based on the info I have now. If someone could assist me with the function as well as an explanation of how it was derived I would greatly appreciate it.

Thanks guys,

Gerry Mackinnon

1349. Re: Rubber O ring

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 16:24:42 UTC
From: accrider3@aol.comnojunque
Message-ID: <20030119112442.06313.00000121@mb-fh.aol.com>
Source record: 126688

Just in case you can't find the proper grommet you can use small vacuum tubing.
You would split it lengthwise and feed it around the sheetmetal and trim to
length.
73
Dale
KG4KZG

1350. Re: How can a "beacon" be track down by a satellite???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 16:52:46 UTC
From: Stilz <stilz@attglobal.net>
Message-ID: <3E2AD7DE.96F556FA@attglobal.net>
Source record: 126689
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.design

"J. Harvey" wrote:

> Also, the 'lost party' must crash within range of a ground station.

I don't see how that could be with EPIRB. My only experience (a marine "problem"), the Coast Guard chopper pilot said that a bird detected the signal, it was isolate to a grid square, and they used standard RDF to do the final. That was several (10 or so) years ago.

Was he incorrect or perhaps over simplifying?

Mike

1351. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 17:09:54 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2ADB84.8090404@attbi.com>
Source record: 126690

To find THE answer simply look into a mirror. There you can see
Electromagnetic Waves.

Does that mean my 240# body is a resonant antenna?

Deacon Dave, W1MCE

Dan/W4NTI wrote:
> It is all magic Jackie. RF obeys no laws or rules. It goes and comes as it
> pleases. Antennas are simple coupling devices to the ether. And should be
> 'resonate' to effect the proper energy transfer to the ether. See how
> simple that is?
>
> Now will someone explain to me how a radio wave ACTUALLY travels from point
> A to point B ??
>
> Dan/W4NTI
>
> "Jackie" <no@address.given.com> wrote in message
> news:0J5W9.720739$WL3.731633@rwcrnsc54...
>
>>I am new to antennas and propagation too- but my big question is this-
>
> just
>
>>how much resonance and power does one need going out of an antenna if
>
> people
>
>>using .5 watt QRP can regularly work the world?? I know that gain and
>
> power
>
>>come in handy when trying to work through the pileups in contests, but
>
> some
>
>>people can get the same distance with a crappy antenna and low power.
>>
>>I really have to wonder how much about antennas is taken as religion
>
> because
>
>>it's presented as some mystical art form vs. pure physics. Probably more
>

> of
>
>>the former- but, the manufacturers of antennas seem to need to convince us
>>that there's more of the former than the latter. Otherwise no one would do
>>much homebrewing of antennas and get satisfactory results (for the end
>>users). Isn't that what counts, though? End user satisfaction?
>>
>>Jackie KC0ODY
>>
>>"'Doc" <w5lz@cwis.net> wrote in message news:3E28E4E9.DD168D1C@cwis.net...
>>
>>>William,
>>> While a lot of what you say is correct, a resonant
>>>antenna, or one that is 'close' to resonant, does have
>>>advantages over a non-resonant antenna. If that were
>>>not true, then there would be no reason to ever use a
>>>resonant antenna, (and I don't think you're saying that,
>>>are you?).
>>> 'Doc
>>
>>
>
>

1352. Re: center mount for hamstick dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 17:15:54 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2ADCF0.7050508@attbi.com>
Source record: 126691

HRO

Crazy George wrote:
> I've heard there is a commercial product for the center/feedpoint to make
> two Hamsticks into a dipole. Who sells it?
>
> --
> Crazy George
> Remove NO and SPAM from return address
>
>

1353. Re: NYC Radio Store ??!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 17:20:08 UTC
From: Allan Koenigsberg <ae2j@earthlink.net>
Message-ID: <3E2ADE9D.39274D80@earthlink.net>
Source record: 126693
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna

I think the closest store to NYC is kji electronics.. in Northern NJ check out www.kjielectronics.com

Allan, AE2J

Rickie / KC2KQQ wrote:

> Can someone tell me where in New York City, there is a Amateur Radio store
> beside Radio Shack. Most Radio Shack doesn't carry Ham Radio stuff anymore.
>
> Thanks!!
>
> Rickie / KC2KQQ
> www.qsl.net/kc2kqq

1354. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 17:28:43 UTC
From: Lou <tech@dp.net>
Message-ID: <b0eq27$2r31$1@news.dp.net>
Source record: 126694

Too bad you don't have a tuner... I have used my Antron 99 for close to 10 years now clear down to 80 with good results. Waning a bit the lower I went but still made contacts. But 10/12/17, man, works like gang busters. 40 doesn't do too bad, it does start falling off towards the middle of 80 going toward 160. One of the best investments I made.

--
Lou/Tech@DP.NET

"Ron P." <rpackerii@neo.rr.com> wrote in message news:kCtW9.25705$i73.5034089@twister.neo.rr.com...
> Ok, so 10 & 17! Sounds like a winner for the Ham-on-a-budget! There is only
> one problm however...I don't have a tuner, only a built in SWR meter on my
> rig. Thanks and 73!
>
> Ron - kc8ulu/ag
> "'Doc" <w5lz@cwis.net> wrote in message news:3E2A2AE4.DD2ABB50@cwis.net...
> > Ron,
> > It ought to work fine, just might need to re-tune it.
> > 'Doc
>
>

1355. Re: How can a "beacon" be track down by a satellite???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 17:29:17 UTC
From: Brett <tempacc0302@hostedscripts.com>
Message-ID: <b0emim$on8jb$1@ID-144300.news.dfncis.de>
Source record: 126692
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.design

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:i6yW9.49$_N5.18671@news20.bellglobal.com...
> a ground station. The newer system uses GPS and you may crash anywhere
you
> like.

I'll keep that in mind when I feel like crashing next time.

Brett

1356. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 17:34:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2AE197.1040704@ieee.org>
Source record: 126695

Dave Shrader wrote:
> To find THE answer simply look into a mirror. There you can see
> Electromagnetic Waves.

Dave, you must be imagining things. After all, forward energy
and reflected energy are imaginary concepts, aren't they?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1357. Re: Parabolic Antenna Design and Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 17:35:41 UTC
From: richardharrison@webtv.net
Message-ID: <29734-3E2AE1ED-290@storefull-2318.public.lawson.webtv.net>
Source record: 126696

Gerry Mackinnon wrote:
"What I still need (assuming all my numbers are right) is the parabolic curve function so I can plot its points manually and create a template."

Look at page 18-14 in the 19th edition of the ARRL Antenna Book, and Fig 17.

Ysquared = 4SX.
The focus is located at coordinates X = S. and Y=0.

Best regards, Richard Harrison, KB5WZI

1358. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 18:12:08 UTC
From: "Ron P." <rpackerii@neo.rr.com>
Message-ID: <YTBW9.27067$i73.5453052@twister.neo.rr.com>
Source record: 126697

Actually Doc, I had the A99 from my pre-ham days as an 11 meter rugrat. It was sitting around and collecting dust so I thought maybe it could be made resonant on 10 or 12 meters. Oh, and it does work ok...(note "ok") on 10...I was on 26.868 earlier this morning with a station in Arizona and I am in Ohio. That was on 100W (anything less and he couldn't hear me). Hopefully at our Hamfest coming up, I will be able to pick up a versa tuner or something. Don't have a whole lot of cheddar unfourtunatly. And believe me, I wish I had a tuner, and some coppershield, and some dacron rope, and some ladder line, and a new truck...er...oops!

Ron - kc8ulu/ag

1359. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 18:15:43 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301191015.120fc514@posting.google.com>
Source record: 126698

Roy Lewallen <w7el@eznec.com> wrote in message news:<v2jvgis7oel627@corp.supernews.com>...
> This is simply not true. I hate to see misinformation like this be posted.
>
> Roy Lewallen, W7EL
>
Thats what happens when mechanical engineers enter the electrical
scene by trying to give a specific answer to the initial post
What is wrong in invoking the Ohm's law that I read in a book? Has
it been superceded ? You made a statement which is your right
but what is your comment directed to and what is your contrary
evidence? In other words
'where's your beef?' (Ohm's law states... V = I R)
Art

> Art Unwin KB9MZ wrote:
> >. . .
> > . . . The
> > maximum energy extracted from incoming radio waves by a antenna is one
> > of the lowest impedance which means WITHOUT reactance of any sort.
> > Surely this is the main determining factor for any antenna. True, it
> > makes it easier to match and also
> > to ward off unwanted signals, but the primary use of an antenna is to
> > receive a signal so that communication can begin ,which in turn means
> > maximum extraction of desired incomming energy i.e. the lowest
> > resonance obtainable.
> > Regards
> > Art

1360. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 18:21:52 UTC
From: tdonaly@aol.com
Message-ID: <20030119132152.04929.00000094@mb-cs.aol.com>
Source record: 126699

```
Cecil wrote,
>
>Dave Shrader wrote:
>> To find THE answer simply look into a mirror. There you can see
>> Electromagnetic Waves.
>
>Dave, you must be imagining things. After all, forward energy
>and reflected energy are imaginary concepts, aren't they?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

How do you reflect the ability to do work, Cecil?
73,
Tom Donaly, KA6RUH
```

1361. Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 18:32:11 UTC
From: dream@alumni.utexas.net
Message-ID: <f9c1c3e6.0301191032.4a3dd813@posting.google.com>
Source record: 126700

In about 2 weeks, I will be operating marine mobile HF from a 50' chartered sailboat in the Virgin Islands. The boat is equipped with a VHF radio, but no SSB equipment whatsoever, including no provision for an HF antenna.

I would like to operate HF purely recreationally, so one or two bands is all I need to be able to operate on. My main constraint is size. We are each allowed to bring only one large dufflebag worth of stuff. My plan is to bring my Icom 706, power cords/adapters for 12 volt power, and one or two mono-band dipoles (plus 75' of RG8 50 ohm coax). Then string one end of the diploe up a halyard and secure the other end to about midway down the boom, so the dipole will be in basically a sloper configuration. The mast height is 55' so I should have plenty of height to do this including the small nylon cord I plan to use to secure each end of the dipole to the rigging. All rigging is metal, including the mast. Also, the system will only be used at anchor and not underway, so interfering with operation of the sails is not an issue.

I am bringing at least a 10 meter center-fed dipole, and maybe a 15 and/or 20 meter dipole as well. Question: should I also bring an antenna tuner or should I be able to trim the antenna once I set it up to achieve resonance? Since space in my duffel bag is at a serious premium already, I really can't bring the tuner unless I know ahead of time it'll be necessary. I know the rigging in close proximity to the antenna will detune it somewhat, but shouldn't I be able to still trim the antenna to resonance and NOT have to use a tuner? Am I asking for trouble by not bringing a tuner?

1362. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 18:50:26 UTC
From: Quahog <quahog@localnet.com>
Message-ID: <v2lsrictuqosfb@corp.supernews.com>
Source record: 126701

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in
news:3E2A2639.6090909@ieee.org:

> Dan/W4NTI wrote:
>> Now will someone explain to me how a radio wave ACTUALLY travels from
>> point A to point B ??
>
> A changing electric field causes a changing magnetic field which
> causes a changing electric field which causes a changing magnetic
> field which ... It's all covered by Maxwell's equations.

Nah... ya got it all wrong! It's really this verrrryy long invisible cat,
and when you pull his tail here then...

ooppss... Gotta go. They're having green Jell-o tonite!

Q

1363. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 18:54:05 UTC
From: Quahog <quahog@localnet.com>
Message-ID: <v2lt2dgmnej5bd@corp.supernews.com>
Source record: 126702

Dave Shrader <david.shrader@attbi.com> wrote in
news:3E2ADB84.8090404@attbi.com:

> To find THE answer simply look into a mirror. There you can see
> Electromagnetic Waves.
>

Howcum when I get up close to the mirror, and look down, I can see my feet?
The mirror ain't even looking at 'em... Is there really stuff in there?

Q

1364. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 18:57:59 UTC
From: richardharrison@webtv.net
Message-ID: <1170-3E2AF537-801@storefull-2311.public.lawson.webtv.net>
Source record: 126707

Tom Donaly, KA6RUH wrote:
"How do you reflect the ability to do work, Cecil?

I`m not Cecil,so I`ll ask another question. Have you seen the action on a billiard table?

Best regards, Richard Harrison, KB5WZI

1365. Re: Parabolic Antenna Design and Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 19:00:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <taql2vsdhbg94su0uaajbv77pop9a44i9o@4ax.com>
Source record: 126703

On 19 Jan 2003 08:20:28 -0800, jackpotcharters_com@envisiondevices.ws
(Gerry Mckinnon) wrote:

things were going well until:
>6 - The dish was cut from a prime focus dish of unknown
> specifications but it was cut from the center (focal point) out

We started with a checklist of an imaginary design and end up with
what appears to be its present, physical implementation (no longer
imaginary)?

>
>Now if I run these specs through the hdl program they come out
>different.

Different from what?

>The F/D ratio is wrong and the focal length is wrong. I
>don't see where I'm making a mistake here unless my equations are not
>correct.

Then that means the F/D ratio is right and the focal length is right.
If as 6 above proves to be its actual, physical manifestation, simply
try it and see.

I'm not particularly familiar with your equations (you did say you've
spent a lot of time studying this, didn't you?); but I would suspect
there may be a difference between optical focal points and radio focal
points (the point of focus for RF is so much bigger than for Optics).
This suspicion infers you may have the wrong equations (but
tantalizingly close).

>
>What I still need (assuming all my numbers are right) is the parabolic
>curve function so I can plot it's points manually and create a
>template. I have no idea how to calculate the parabola based on the
>info I have now. If someone could assist me with the function as well
>as an explanation of how it was derived I would greatly appreciate it.

Hi Gerry,

Make a template from a large sheet of stiff paper, cardboard, foam
board, or the like.

Assign one edge of the template stock the role of the directrix line
(a vertical line offset or at the Y axis of the plot you are about to
construct). I presume you come to the table with a focus already in
mind, so select a point halfway down the directrix, and measure a

point, at 90ï¿½ out twice the focus distance. Mark this point as the
focus of the Parabola.

As a simple description, the parabola is thus the loci of all points
that fall equal distance between the focus and any point emanating a
line cast perpendicular from the directrix.

For example, select any point along the directrix;
draw a line perpendicular out across the template;
choose a point along that line and through experimentation with a
compass adjust it back and forth until its distance from the directrix
is equal to is distance to the focus.

Repeat the process above by selecting a lot of points along the
directrix and discovering the equidistant point to the focus. Connect
the dots. Cut the dots. You are holding your finished Template.
Need I say that the resolution or "crispness" of focus are directly
related to the smoothness of the surface your template describes. It
is in your best interest to insure you select enough points to smooth
the curve you plot.
Example (use fixed, parabolic font:)

```
X
X-----------------P
X
X
X--------------P
X
X
X-----------P
X
X
R----------P----------f
X
X
X-----------P
X
X
X--------------P
X
X
X-----------------P
X
```

For anyone who needs a math fix, the equation for a parabola is:
yï¿½ = 2 * p * x
or
xï¿½ = 2 * p * y
for p being twice the focus (or the length of R---P---f above)
for x and y in standard cartesian co-ordinates (the two formulas
are 90ï¿½ translations, you can also use their negated value).

73's
Richard Clark, KB7QHC

1366. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 19:05:56 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2AF6B9.6070400@attbi.com>
Source record: 126704

Well, when I look in a mirror I am seeing a non-imaginary][i.e. real]
reflected Electromagnetic Spectrum in the 0.3 to 0.7 micron range.

It sure looks like me, at least that's what independent observers say.

Hmmm ... I wonder what the reflection coefficient [VSWR] of those EM
waves at the mirror to 'ether' interface really is? [Possibly 0.99%][I
know from my professional career that brightly polished aluminum has a
reflectivity of 0.97% across the EM Spectrum from 25 to 0.1 microns. But
at the 1,400,000 MHz region I'm not sure. But a VSWR of
[[1+.99]/[1-.99]] 199:1 sounds like no useful information is coupled to
the mirror. So, the useful information is the Reflected Waves!! W O W !!!

73, Deacon Dave, W1MCE, <grin>

OC_CAM's Razor wrote:
> Dave Shrader wrote:
>
>> To find THE answer simply look into a mirror. There you can see
>> Electromagnetic Waves.
>
>
> Dave, you must be imagining things. After all, forward energy
> and reflected energy are imaginary concepts, aren't they?

1367. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 19:18:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <49ul2vscjnr92kn4fbcu4o7rvifhqctg5p@4ax.com>
Source record: 126705

On 19 Jan 2003 10:32:11 -0800, dream@alumni.utexas.net (Darren418)
wrote:

>In about 2 weeks, I will be operating marine mobile HF from a 50'
>chartered sailboat in the Virgin Islands.

> Question: should I also bring an
>antenna tuner or should I be able to trim the antenna once I set it up
>to achieve resonance? Since space in my duffel bag is at a serious
>premium already, I really can't bring the tuner unless I know ahead of
>time it'll be necessary.

Hi OM,

I would presume an amateur on vacation would cut some slack somewhere.
Just let ALC do its job and take the power it offers. Sitting in the
middle of a perfect ground plane should make up for some of the
(perceived) loss.

73's
Richard Clark, KB7QHC

1368. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 19:21:35 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2AFA63.5060503@attbi.com>
Source record: 126706

They may be Imaginary [RE: Energy]. But I doubt it. Forward and
Reflected POWER are real!!

If Forward Energy is Imaginary then I can hold the radiating portion of
my antenna at a current maximum [Forward Energy Component] and I'll only
get Imaginary RF burns. I don't think so!! If my rig burns up an output
stage with a VSWR of 5:1 it's a long stretch to say it is an imaginary
failure.

But it was fun and confusing reading the various posts. I had to go back
to KRAUS, Electromagnetics; and Terman, Electronic and Radio Engineering
1955; and Terman, Radio Engineering, 1947; to put my feet back on the
ground. <grin>

Deacon Dave, W1MCE
PS: I'm dating myself

Tdonaly wrote:
> Cecil wrote,
>
>>Dave Shrader wrote:
>>
>>>To find THE answer simply look into a mirror. There you can see
>>>Electromagnetic Waves.
>>
>>Dave, you must be imagining things. After all, forward energy
>>and reflected energy are imaginary concepts, aren't they?
>>--
>>cheers, CAM http://www.qsl.net/w5dxp
>>
>
>
> How do you reflect the ability to do work, Cecil?
> 73,
> Tom Donaly, KA6RUH
>
>

1369. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 19:24:01 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2AFAF7.1070409@attbi.com>
Source record: 126708

Ah ha... here comes Physics with a mind experimant using Einstein's cat.
I wish I could remember the experimant <grin>

DD,W1MCE

Quahog wrote:
> OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in
> news:3E2A2639.6090909@ieee.org:
>
>
>>Dan/W4NTI wrote:
>>
>>>Now will someone explain to me how a radio wave ACTUALLY travels from
>>>point A to point B ??
>>
>>A changing electric field causes a changing magnetic field which
>>causes a changing electric field which causes a changing magnetic
>>field which ... It's all covered by Maxwell's equations.
>
>
> Nah... ya got it all wrong! It's really this verrrryy long invisible cat,
> and when you pull his tail here then...
>
> ooppss... Gotta go. They're having green Jell-o tonite!
>
> Q

1370. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 19:54:49 UTC
From: richardharrison@webtv.net
Message-ID: <60-3E2B0289-85@storefull-2313.public.lawson.webtv.net>
Source record: 126710

Darren wrote:
"I will be operating marine mobile HF from a 50` chartered sailboat in the Virgin Islands."

Horizontal polarization is only good for near vertical incidence propagation because almost 2 wavelengths of antenna height is required of a horizontal antenna over sea water.

You have an excellent earth connection in the sea and a vertical antenna only needs 1/4 wavelength for resonance. Loading coils can reduce the vertical`s height or you can do as Marconi and use a horizontal wire(s) as a capacitive top load.

Best regards, Richard Harrison, KB5WZI

1371. Re: How can a "beacon" be track down by a satellite???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 20:12:23 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <CEDW9.701$VS6.75168@news20.bellglobal.com>
Source record: 126709
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.design

"J. Harvey" wrote:
> The older systems... the 'lost party' must crash within
> range of a ground station.
> The newer system uses GPS and you may crash anywhere
> you like.

"Stilz"
> I don't see how that could be with EPIRB. My only experience
> (a marine "problem"), the Coast Guard chopper pilot said that a
> bird detected the signal, it was isolate to a grid square, and they
> used standard RDF to do the final. That was several (10 or so)
> years ago.
>
> Was he incorrect or perhaps over simplifying?

Like almost any topic, it gets complicated. The only simplification that is inarguable is that one would definitely want to have a newer emergency beacon.

"The Cospas-Sarsat specifications for 406 MHz beacons and LEOLUTs were amended in 1995 to provide for optionally encoding position information in the transmitted beacon message. The resulting new generation of beacons with this capability are referred to as location protocol beacons. <snip> Because location protocol beacons determine and transmit their location in the beacon message, they are able to provide rapid alerting and location information through the Cospas-Sarsat geostationary satellite components. Although non-location protocol beacons can provide alert information via both the GEO and LEO satellite components; they can only be located using the LEO satellite system and Doppler processing techniques."
www.cospas-sarsat.org/beacons/beacon_navigation_frame.html

"A distress signal transmitted on 121.5 MHz is lost if, on receiving it, the satellite is not within the range of a ground station. If no ground station is in range when a signal is transmitted on 406 MHz, the satellite will store the signal until it can return the signal to a ground station. This provides a means for distress calls to be heard regardless of their location in the world."
www.lap.on.ca/cospas.htm

"Local User Terminals (LUTs) are the system ground stations that receive and process distress signals and determine the geographical location of the distress."
www.fcdas.noaa.gov/html/sarsat.html

Map of LUTS:
www.sarsat.noaa.gov/luts.html

1372. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 20:30:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2B0ADE.3060407@ieee.org>
Source record: 126712

Tdonaly wrote:
> Cecil wrote,
>
>>Dave Shrader wrote:
>>
>>>To find THE answer simply look into a mirror. There you can see
>>>Electromagnetic Waves.
>>
>>Dave, you must be imagining things. After all, forward energy
>>and reflected energy are imaginary concepts, aren't they?
>
> How do you reflect the ability to do work, Cecil?

I'm glad you asked, Tom. That's one of the thought experiments
that I am going to post to my web page. Some of my thought
experiments involve a perfect one second long lossless transmission
line. Does such a thing exist? Of course not, but it helps to
slow everything down to human speeds to aid in our understanding.
When things happen in seconds instead of nanoseconds, it's amazing
how many people can gain a better understanding. It's also amazing
to observe the extent of the diversions by the people seduced and
prejudiced by the steady-state model.

Consider the following with a perfect one second long lossless open-
circuited transmission line with a Z0 equal to the output resistance
of the XMTR.

100W XMTR-----1 sec long lossless feedline--------open circuit

For one second from key down, we allow the XMTR to pour 100W
(joules/sec) into the feedline. During the 2nd second with the
key up, we switch the source end from the XMTR to a 10W Z0 ohm
dummy load and wait. Will the dummy load get warm? If we had
switched to a Z0 ohm antenna instead, would the *power* put into
the feedline by the XMTR be radiated as a one second long sine
wave? If you grabbed the terminals at the end of the 2nd second,
would you feel anything? What's the difference in this experiment
and an experiment using a perfect two second long lossless feedline
with a XMTR on the left and a Z0 ohm load on the right?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1373. Re: New Fractal Website

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 20:31:40 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <if2m2vsdcksgcvdjn6uog22e37icpvp4fv@4ax.com>
Source record: 126711

fractenna@aol.com (Fractenna) wrote in message
news:<20030117080945.05674.00000026@mb-fx.aol.com>...
> >Standard Time
> >Message-id: <t1ee2v801fnuvtmqpbg79fkbuimg50kndo@4ax.com>
> >
> >In article <b04qbq$d2n$1@news.netmar.com>, Prozma <prozma@ao1.com>
> >writes:
> >>
> >> Still under construction: "Fractal Antenna Information"
> >>
> >> Please stop by http://www.n1ir.info on January 31, 2003
> >>
> >>Thank you.
> >>
> >>
> >>
> >>
> >
> >Is that a supplement to www.n1ir.com?
> >
>
> Mr. Ewald has replied to a post that doesn't exist, which only he seems to have
> had the interest in responding to. Some might ask: why this interest?
>
> 73,
> Chip N1IR

Have we been spoofed by Prozma?

http://groups.google.com/groups?hl=en&lr=&ie=UTF-8&oe=UTF-8&q=author:prozma%40aol.com+

1374. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 20:35:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2B0C25.9020404@ieee.org>
Source record: 126713

Dave Shrader wrote:
> PS: I'm dating myself

Hmmmmm, I'll have to try that. My female friend has
stopped dating me.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1375. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 20:41:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2B0D83.1050103@ieee.org>
Source record: 126714

Dave Shrader wrote:
> Ah ha... here comes Physics with a mind experimant using Einstein's cat.
> I wish I could remember the experimant <grin>

As I remember it, a quantum event in a box either happens or not and
we don't know whether it happened or not. If it happens, it triggers
a poison pill that kills the cat in the same box. Apparently quantum
physics says the cat is neither dead nor alive or maybe half dead and
half alive until we open the box to find out what happened.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1376. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 20:47:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2B0EF5.4040706@ieee.org>
Source record: 126715

OC_CAM's Razor wrote:
> Dave Shrader wrote:
>
>> Ah ha... here comes Physics with a mind experimant using Einstein's
>> cat. I wish I could remember the experimant <grin>
>
> As I remember it, a quantum event in a box either happens or not and
> we don't know whether it happened or not. If it happens, it triggers
> a poison pill that kills the cat in the same box. Apparently quantum
> physics says the cat is neither dead nor alive or maybe half dead and
> half alive until we open the box to find out what happened.

Here's a question for all the quantum physicists. If termites eat away
the box leaving just the cat, is the cat dead or alive? (Termites aren't
smart enough to figure out the answer. Are we? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1377. Re: How can a "beacon" be track down by a satellite???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 20:55:33 UTC
From: Ken Taylor <ken123@xtra.co.nz>
Message-ID: <b0f3cm$op3gk$1@ID-76636.news.dfncis.de>
Source record: 126716
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.design

"Brett" <tempacc0302@hostedscripts.com> wrote in message
news:b0emim$on8jb$1@ID-144300.news.dfncis.de...
>
> "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
> news:i6yW9.49$_N5.18671@news20.bellglobal.com...
> > a ground station. The newer system uses GPS and you may crash anywhere
> you
> > like.
>
> I'll keep that in mind when I feel like crashing next time.
>
> Brett
>
The good thing is you no longer have to plan where you crash, as in the bad
old days......

1378. How to design Wilkinson divider-combiner

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 21:05:41 UTC
From: Lex-Lutor <lex-lutor@post.hinet.hr>
Message-ID: <b0f40p$f2fe$1@as201.hinet.hr>
Source record: 126717

HI,

I`m looking for information and tips about splitting and combining few power amplifiers in range from 80-120 Mhz. Power is about 300-500W for amplifier.

Input signal from driver stage must be divided to 2, 3 or 5 power amps and than combined again for output to antenna system.

Any information about software, strip-line design or any alternative is welcome.

Thanks in advance..

1379. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 21:15:20 UTC
From: whagen6@cs.com
Message-ID: <20030119161520.05527.00000095@mb-mp.news.cs.com>
Source record: 126718

Everything is only a theory, a construct to explain reality to the point of satisfactorily working with said reality. Ie., a somwhat incomplete analogy, always incorrect at some level of approximation. And, will remain at the imprecise level of approximation until a better analogy, construct, or if you will, theory comes along.

1380. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 21:17:24 UTC
From: brianburke@juno.com
Message-ID: <f45722ac.0301191317.7411f7a7@posting.google.com>
Source record: 126719

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18349-3E28385C-126@storefull-2314.public.lawson.webtv.net>...
> Art Unwin, KB9MZ wrote:
> "Please back off so that some decorum can return to this group."
>
> Beautifully said, Art. All the poster has done is agitate the group for
> no use.
>
> Best regards, Richard Harrison, KB5WZI

Same stuff, different year. I'll check back with you guys in 2007.

1381. Re: theory of yagi antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 21:48:44 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <b0f6maeai1@reader10.wxs.nl>
Source record: 126720

:-)

AC6V himself HI

at your site i saw many antenna related links.
also to the theory in the first 10 mentioned.
I copied many of your links trying to find my ideal wire antenna and feeding line.
It is sure a good sorce for starting and explore my knowledge at antenna related stuff.

Marco

1382. Re: theory of yagi antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 21:53:04 UTC
From: AC6V <contact99@ac6v.com>
Message-ID: <47FW9.108726$Qe5.734059@news1.west.cox.net>
Source record: 126721

Ah thanks Marco -- glad the pages are useful.
Stuck here with a vertical -- but can hear everywhere hi hi.

--
I Doubt, Therefore I Might Be
73 - Gd DX From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Marco PE1LPK" <m.vliet9@planet.nl> wrote in message
news:b0f6maeai1@reader10.wxs.nl...
> :-)
>
> AC6V himself HI
>
> at your site i saw many antenna related links.
> also to the theory in the first 10 mentioned.
> I copied many of your links trying to find my ideal wire antenna and
feeding
> line.
> It is sure a good sorce for starting and explore my knowledge at antenna
> related stuff.
>
> Marco
>
>
>
>

1383. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 21:57:05 UTC
From: Ron McConnell <rcmcc@earthlink.net>
Message-ID: <3E2B1F73.3CB00570@earthlink.net>
Source record: 126722

WJSchaible, Bill S. wrote:

> lat/lon from maps on the web. ...bearing from here to
> another location in the local area (good enough) by assuming a flat earth
> ...difference between true north and mag north in Seattle WA ? .... TRUE is
> west of MAG by about 20 degrees here.

These are VERY FAQ on the sci.geo.satellite-nav and
other GPS and navigation netnews groups.

For pointing antennas at local TV stations, a flat earth model,
(a.k.a. local map with the your home and TV stations marked)
and a compass will do just fine.
Unless you build a humongous rotatable rhombic antenna
your antenna beam angle will probably be 40 degrees
or more, so a few degrees error in bearing will not be
a big deal.

BUT if you want to pursue the matter further...

Lat/long vs. address on web, 2 examples of several:

World & USA: Maporama, Address to Lat/Long & Map
http://www.maporama.com/share/

Worldwide Country City/Town Database (USGS + NIMA +...)
http://www.heavens-above.com/countries.asp

Magnetic Declination/Variation vs. lat/lon, altitude, date
http://www.ngdc.noaa.gov/cgi-bin/seg/gmag/fldsnth1.pl

= 18.5deg E for Seattle for Jan. 2003 (changes with time)

Basics of navigation:
Ed Williams's Spherical Navigation Formulas with examples
http://williams.best.vwh.net/avform.html

- Use the 2nd haversine formula rather than the 1st common
cosine formula for spherical distance and bearing because
the cosine formula has problems for short distance with
computer arithmetic.

An azimuthal-equidistant projection map can be used
for world wide bearing and distance.
GCMWIN Az-Eq maps, SM3GSJ, freeware
http://hem.passangen.se/sm3gsj

If you want to get fancy, the ellipsoidal models, like
the Vincenty algorithms mentioned already
can be downloaded from

US NGS Ellipsoidal Earth Models, Vincenty Inverse & Forward
http://www.ngs.noaa.gov/PC_PROD/Inv_Fwd/

The World Magnetic Model, Vincenty Inverse
and Forward routines, MaxiMUF, a DX world database
are all included in my freeware, DOS command line
program GCGC available at
http://home.adelphia.net/~nj2dx/hoarc/gcgc9900.zip

GCGC calculates true and magnetic bearings from both ends.

Someday I will get a chance to finish the Linux version.
The basic functions work fine, but there's something
different in the way MSDOS f77 and g77 takes run time
prompts that I haven't figured out that stops
the MUF calculations.

Have fun.
There will be an exam.

Cheers, 73,

Ron McConnell
w2iol

1384. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 22:08:42 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2B218E.5020107@attbi.com>
Source record: 126723

Ah! Yes! This old brain remembers reading that stuff in 1958 or 59.
Never had a cat or a cat in the box. So, the experiment left me
UNCERTAIN with only a 50/50 probability.

It's like buying a lottery ticket. The odds are 50/50. You either win or
you don't: ergo 50/50.

W1MCE

OC_CAM's Razor wrote:
> Dave Shrader wrote:
>
>> Ah ha... here comes Physics with a mind experimant using Einstein's
>> cat. I wish I could remember the experimant <grin>
>
>
> As I remember it, a quantum event in a box either happens or not and
> we don't know whether it happened or not. If it happens, it triggers
> a poison pill that kills the cat in the same box. Apparently quantum
> physics says the cat is neither dead nor alive or maybe half dead and
> half alive until we open the box to find out what happened.

1385. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 22:08:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2m8fgk2o6g513@corp.supernews.com>
Source record: 126724

It's true that a Thevenin equivalent circuit often has different
internal dissipation than the circuit it's replacing, so its dissipation
can't be used to infer the dissipation of the circuit it's replacing.
However, in any circuit, the total steady state dissipation has to equal
the power supplied by the sources. If it doesn't, then the circuit
analysis is faulty. If the circuit includes a Thevenin equivalent, the
power supplied by the Thevenin voltage source and the power dissipated
by the Thevenin resistance are included in this calculation. That is,
you're not excused from the law of conservation of energy by choosing a
Thevenin equivalent source. The same, of course, holds true for a Norton
equivalent or any other combination of circuit elements.

If radiation is involved, it can be lumped in with the dissipation as
power leaving the circuit, for analysis.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> OC_CAM's Razor wrote:
>
>> VE9SRB wrote:
>>
>>> Cecil, I made up the brainteaser for QEX.
>>
>>
>> I wonder if the brainteaser results are the same with the Thevenin
>> Equivalent circuit as with the Norton Equivalent circuit?
>
>
> Note that the brainteaser results are the readings of the wattmeters,
> not the dissipation in the Thevenin equivalent sources. In fact, the
> dissipation in the Thevenin equivalent source is often without
> significance according to "Fields and Waves in Modern Radio" by
> Ramo and Whinnery.
>
> "It must be emphasized, as in any Thevenin equivalent circuit, that
> the equivalent circuit was derived to tell what happens in the load
> under different load conditions, and significance cannot be automatically
> attached to a calculation of power loss in the internal impedance of
> the equivalent circuit."

1386. Re: How to design Wilkinson divider-combiner

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 22:12:23 UTC
From: jgboyles@aol.com
Message-ID: <20030119171223.15688.00000096@mb-fw.aol.com>
Source record: 126725

>I`m looking for information and tips about splitting and combining few power
>amplifiers in range from 80-120 Mhz. Power is about 300-500W for amplifier.

Hi Lex, I don't think there is an Amateur band in the frequency range of
80-120 Mhz. There is not a problem with an Amateur radio operator building a
500W amplifier for this frequency range, you just can't put it on the air.
To build power splitters and combiners for HF look at Motorola application
note AN749. The principles should be the same for higher Freqs.as well if you
adjust the core material.
73 Gary N4AST

1387. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 22:27:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2m9j79j7o59e9@corp.supernews.com>
Source record: 126726

No problem, Art. Check any antenna text (or use EZNEC or a similar modeling program) and look at the gain you get from a dipole as a function of length. From infinitesimally short to about 5/4 wavelengths, the gain monotonically increases. There's no peak or other anomaly at resonance (near a half wavelength) or anti-resonance (near a full wavelength). Look elsewhere in the book for "reciprocity theorem" and you'll see that it was proven long ago that the amount of signal received for a given impinging field has the same relationship as the gain when transmitting. All you have to do when receiving is terminate the antenna in the complex conjugate of the feedpoint impedance you see when transmitting (a different value for each length of antenna), and you'll get a power in the resisitive part of the termination that increases monotonically from infinitely short to around 5/4 wavelength. This gain increase is due to favorable reinforcement of the fields from the various parts of the antenna in the broadside direction. At each length, the properly terminated receiving antenna is delivering half the intercepted energy to the terminating resistor and re-radiating the other half. The fact that the resistor dissipation increases with length shows that the amount of intercepted field increases with length (over this range of lengths).

These relationships have been confirmed by measurement countless times over the past hundred years or so. It doesn't take much of a search to find a multitude of evidence.

Certainly all this obeys Ohm's law. If you read in a book that Ohm's law shows that resonance is necessary to extract the most energy from radio waves, you need to find a different book. There are some pretty bad ones out there.

Roy Lewallen, W7EL

Art Unwin KB9MZ wrote:
> Roy Lewallen <w7el@eznec.com> wrote in message
news:<v2jvgis7oel627@corp.supernews.com>...
>
>>This is simply not true. I hate to see misinformation like this be posted.
>>
>>Roy Lewallen, W7EL
>>
>
> Thats what happens when mechanical engineers enter the electrical
> scene by trying to give a specific answer to the initial post
> What is wrong in invoking the Ohm's law that I read in a book? Has
> it been superceded ? You made a statement which is your right

> but what is your comment directed to and what is your contrary
> evidence? In other words
> 'where's your beef?' (Ohm's law states... V = I R)
> Art
>
>
>>Art Unwin KB9MZ wrote:
>> >. . .
>>
>>>. . . The
>>>maximum energy extracted from incoming radio waves by a antenna is one
>>>of the lowest impedance which means WITHOUT reactance of any sort.
>>>Surely this is the main determining factor for any antenna. True, it
>>>makes it easier to match and also
>>>to ward off unwanted signals, but the primary use of an antenna is to
>>>receive a signal so that communication can begin ,which in turn means
>>>maximum extraction of desired incomming energy i.e. the lowest
>>>resonance obtainable.
>>>Regards
>>>Art
>>

1388. Re: NYC Radio Store ??!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 22:29:38 UTC
From: "D. Stussy" <kd6lvw@bde-arc.ampr.org>
Message-ID: <Pine.LNX.4.51.0301192228310.1735@exp.bde-arc.ampr.org>
Source record: 126727
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna

What happened to Barry Electronics in Manhattan? (I live on the west coast, so
I don't have any first hand knowledge of it closing if it did.)

On Sun, 19 Jan 2003, Allan Koenigsberg wrote:
>I think the closest store to NYC is kji electronics.. in Northern NJ check out
>www.kjielectronics.com
>
>Rickie / KC2KQQ wrote:
>> Can someone tell me where in New York City, there is a Amateur Radio store
>> beside Radio Shack. Most Radio Shack doesn't carry Ham Radio stuff anymore.

1389. Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 22:46:10 UTC
From: Ben Sheehan <bigddybn@adelphia.net>
Message-ID: <SUFW9.9261$Fj2.5460993@news2.news.adelphia.net>
Source record: 126728

We live in a condo which pretty eliminates any possible outside antenna ideas. I'm looking for some type of antenna that can be used indoors. I do have a window right next to my chosen area for a "station" that could be utilized in some fashion. I realize that the gain on an indoor setup isn't going to be the greatest but is there something I can buy/build that would work at 144/440?

I know these noob questions get old, but thanks in advance for any advice you can offer.

1390. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 23:25:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2B33DE.7010508@ieee.org>
Source record: 126729

Roy Lewallen wrote:
> It's true that a Thevenin equivalent circuit often has different
> internal dissipation than the circuit it's replacing, so its dissipation
> can't be used to infer the dissipation of the circuit it's replacing.
> However, in any circuit, the total steady state dissipation has to equal
> the power supplied by the sources. If it doesn't, then the circuit
> analysis is faulty. If the circuit includes a Thevenin equivalent, the
> power supplied by the Thevenin voltage source and the power dissipated
> by the Thevenin resistance are included in this calculation. That is,
> you're not excused from the law of conservation of energy by choosing a
> Thevenin equivalent source.

However, apparently you are excused if you are using two Thevenin equivalent sources at the end of the same piece of transmission line. :-) For the two Thevenin sources in the brainteaser, I used signal generators with circulators. I got exactly the same wattmeter readings as Dr. Best but my signal generators dissipated a lot more power than Dr. Best's Thevenin equivalent sources. The wattmeter readings were correct for my signal generators and incorrect for Dr. Best's Thevenin equivalent sources. Of course, when I was in college back when dinosaurs roamed the earth, we were not allowed to even mention the power dissipation inside a Thevenin equivalent source box because we would be laughed out of class.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1391. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 23:35:20 UTC
From: AC6V <contact99@ac6v.com>
Message-ID: <YCGW9.109511$Qe5.766684@news1.west.cox.net>
Source record: 126730

Other than beams -- the vertical antennas fit indoors nicely. I run a diamond antenna dual band - indoors and get into most local repeaters with 5 watts with no problems. My antenna is not next to any window. VHF seems to go thru walls (with or without chicken wire) just fine. My favorite repeater is 25 miles away and 5 watts gives full quieting. Have worked 90 miles simplex (the other guy was on a mountain top).

Maybe try a home brew 1/4 wave first (coathanger special).
For homebrew antennas -- see URL:
http://ac6v.com/antprojects.htm

--
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Ben Sheehan" <bigddybn@adelphia.net> wrote in message
news:SUFW9.9261$Fj2.5460993@news2.news.adelphia.net...
> We live in a condo which pretty eliminates any possible outside antenna
> ideas. I'm looking for some type of antenna that can be used indoors. I do
> have a window right next to my chosen area for a "station" that could be
> utilized in some fashion. I realize that the gain on an indoor setup isn't
> going to be the greatest but is there something I can buy/build that would
> work at 144/440?
>
> I know these noob questions get old, but thanks in advance for any advice
> you can offer.
>
>

1392. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 23:41:54 UTC
From: richardharrison@webtv.net
Message-ID: <26170-3E2B37C2-688@storefull-2312.public.lawson.webtv.net>
Source record: 126734

Roy, W7EL wrote:
"All you have to do when receiving is terminate the antenna in the complex conjugate of the feedpoint impedance you see when transmitting----."

Yes. That could be called power factor correction (or tuning to resonance), and providing a matched load resistance.

Reactance of an antenna limitts current in an antenna to less than maximum unless and until it is tuned out. Art was saying something like that. Roy was covering his tracks with this posting.

Best regards, Richard Harrison, KB5WZI

1393. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 23:44:43 UTC
From: Roscoe <roscoe@nospam.com>
Message-ID: <3E2B3868.D9AC3747@nospam.com>
Source record: 126731

Hi,

Try the half square for 2m here: http://www.cebik.com/hs.html
you can scale it to 70cm. I know it is not dual band.

There are plans on www for dual band jpole, you can search for them.

Or try a small quad beam here: http://www.softcom.net/users/kd6dks/quad.html
two or more elements work out nice for me maybe same for you.

73 ros

Ben wrote:

> We live in a condo which pretty eliminates any possible outside antenna
> ideas. I'm looking for some type of antenna that can be used indoors. I do
> have a window right next to my chosen area for a "station" that could be
> utilized in some fashion. I realize that the gain on an indoor setup isn't
> going to be the greatest but is there something I can buy/build that would
> work at 144/440?
>
> I know these noob questions get old, but thanks in advance for any advice
> you can offer.

1394. Re: How can a "beacon" be track down by a satellite???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-19 23:59:20 UTC
From: Glenn Ashmore <rutu@bellsouth.net>
Message-ID: <3E2B3BD8.7030804@bellsouth.net>
Source record: 126732
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.design

I don't know how they do it but my 406 EPIRB triggered accidentally this summer because the case leaked in a rain storm. I got a call from the Coast Guard and they knew it was within a mile and a half of the marina it was actually in. That was without GPS encoding. With the GPS code they would have known within about 15'.

J. Harvey wrote:

> Satellites that track rescue beacons do not use "triangulation" as such.
> The older systems depend upon analysis, at the ground station, of the
> Doppler shift imposed by the orbital motion of the satellite. The location
> is determined only with sufficient accuracy (~20km) that an aircraft can be
> sent to the general area. Also, the 'lost party' must crash within range of
> a ground station. The newer system uses GPS and you may crash anywhere you
> like.

--
Glenn Ashmore

I'm building a 45' cutter in strip/composite. Watch my progress (or lack there of) at: http://www.rutuonline.com
Shameless Commercial Division: http://www.spade-anchor-us.com

1395. Re: How can a "beacon" be track down by a satellite???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 00:20:57 UTC
From: Ken Taylor <ken123@xtra.co.nz>
Message-ID: <b0ffdq$of5po$1@ID-76636.news.dfncis.de>
Source record: 126733
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.design

See:

http://www.boatsafe.com/nauticalknowhow/GPIRB.htm

Ken

"Glenn Ashmore" <rutu@bellsouth.net> wrote in message
news:3E2B3BD8.7030804@bellsouth.net...
> I don't know how they do it but my 406 EPIRB triggered accidentally this
> summer because the case leaked in a rain storm. I got a call from the
> Coast Guard and they knew it was within a mile and a half of the marina
> it was actually in. That was without GPS encoding. With the GPS code
> they would have known within about 15'.
>
> J. Harvey wrote:
>
>
> > Satellites that track rescue beacons do not use "triangulation" as such.
> > The older systems depend upon analysis, at the ground station, of the
> > Doppler shift imposed by the orbital motion of the satellite. The
location
> > is determined only with sufficient accuracy (~20km) that an aircraft can
be
> > sent to the general area. Also, the 'lost party' must crash within range
of
> > a ground station. The newer system uses GPS and you may crash anywhere
you
> > like.
>
>
> --
> Glenn Ashmore
>
> I'm building a 45' cutter in strip/composite. Watch my progress (or lack
> there of) at: http://www.rutuonline.com
> Shameless Commercial Division: http://www.spade-anchor-us.com
>
>

1396. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 00:25:59 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b0ffs9$t8b$1@slb9.atl.mindspring.net>
Source record: 126735

But where does the ether come in?

Dan/W4NTI

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E2A2639.6090909@ieee.org...
> Dan/W4NTI wrote:
> > Now will someone explain to me how a radio wave ACTUALLY travels from
point
> > A to point B ??
>
> A changing electric field causes a changing magnetic field which causes
> a changing electric field which causes a changing magnetic field which ...
> It's all covered by Maxwell's equations.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1397. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 00:32:31 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <v2mgsjaq1pbv29@corp.supernews.com>
Source record: 126736

"Ron P." <rpackerii@neo.rr.com> wrote in message
news:jAjW9.25183$i73.4382336@twister.neo.rr.com...
> I just passed my morse code/General exam and I was wondering if my old
> pre-ham (for me) Antron 99 can be used for 10/12 meters? I don't have any
> extra spending money to buy a new antenna and was wondering if this could
be
> tuned for these bands. Thanks!
>
> Ron - kc8ulu/ag
>
>

Ron
I'm using a A99 with a cheap MFJ-945E tuner
and I can run 10-17 meters just fine. It really out
does the G5RV that I use also on those frequencies.
But for anything outside of 10m you have to use the
tuner to make it work. Enjoy and congrats on the
upgrade!!!

--
'73' From KB9TMP
"The secret of life is honesty and fair dealing,
if you can fake that, you've got it made."
-Groucho Marx

1398. Re: NYC Radio Store ??!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 00:36:56 UTC
From: Glynn Kevin <kfglynn@mindspring.com>
Message-ID: <b0fgd6mdl1@slb6.atl.mindspring.net>
Source record: 126737
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.antenna

Barry Electronics is still around. I was there a few weeks ago. They're on 2nd Avenue and around E. 8th Street or so if I remember right. There was one guy who I used to haggle with and get things for a reasonable price, but he no longer works there. He would pretty much match what AES, HRO and R&L would get. They really don't have a lot of stuff on display, it's not like visiting HRO where you can get on the air...

73 Kevin N2TO

"D. Stussy" <kd6lvw@bde-arc.ampr.org> wrote in message news:Pine.LNX.4.51.0301192228310.1735@exp.bde-arc.ampr.org...
> What happened to Barry Electronics in Manhattan? (I live on the west coast, so
> I don't have any first hand knowledge of it closing if it did.)
>
> On Sun, 19 Jan 2003, Allan Koenigsberg wrote:
> >I think the closest store to NYC is kji electronics.. in Northern NJ check out
> >www.kjielectronics.com
> >
> >Rickie / KC2KQQ wrote:
> >> Can someone tell me where in New York City, there is a Amateur Radio store
> >> beside Radio Shack. Most Radio Shack doesn't carry Ham Radio stuff anymore.

1399. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 00:48:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2mhr4qe1c4v11@corp.supernews.com>
Source record: 126738

Egad, Cecil, isn't it possible for you to make a posting without bringing up Steve? If what you say is valid, it should stand on its own merits and not be right simply because it's different than what Steve has said.

I can imagine what an in-person conversation must be like:

Me: "Nice day, isn't it?"
Cecil: "Yes, it is a nice day. But according to Dr. Best's analysis, it can't be a nice day because 133 + 83 watts = 20 watts."
Me: "Oh, that's nice. How's the family?"
Cecil: "Well, they'd be better if Dr. Best didn't keep trying to create energy."
Me: "Well, let's change the subject. What's two plus two?"
Cecil: "According to Dr. Best, it's five."

Give it a rest.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> It's true that a Thevenin equivalent circuit often has different
>> internal dissipation than the circuit it's replacing, so its
>> dissipation can't be used to infer the dissipation of the circuit it's
>> replacing. However, in any circuit, the total steady state dissipation
>> has to equal the power supplied by the sources. If it doesn't, then
>> the circuit analysis is faulty. If the circuit includes a Thevenin
>> equivalent, the power supplied by the Thevenin voltage source and the
>> power dissipated by the Thevenin resistance are included in this
>> calculation. That is, you're not excused from the law of conservation
>> of energy by choosing a Thevenin equivalent source.
>
>
> However, apparently you are excused if you are using two Thevenin
> equivalent
> sources at the end of the same piece of transmission line. :-) For the two
> Thevenin sources in the brainteaser, I used signal generators with
> circulators.
> I got exactly the same wattmeter readings as Dr. Best but my signal
> generators
> dissipated a lot more power than Dr. Best's Thevenin equivalent sources.
> The
> wattmeter readings were correct for my signal generators and incorrect for
> Dr. Best's Thevenin equivalent sources. Of course, when I was in college

> back
> when dinosaurs roamed the earth, we were not allowed to even mention the
> power dissipation inside a Thevenin equivalent source box because we would
> be laughed out of class.

1400. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 00:56:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2miag1c2d416f@corp.supernews.com>
Source record: 126739

Sorry, I wasn't trying to "cover my tracks". If you consider a dipole that's, say, 0.7 wavelength long terminated with the conjugate of its feedpoint impedance a "resonant antenna", then yes, you get the most power out of "resonant antennas". And any old antenna can be made into a "resonant antenna" with a simple matching network. So, all antennas can be "resonant antennas" by this definition, and "resonant antennas" are best, so all antennas are best.

If Art was trying to say that you get the most energy out of a receiving antenna when it's properly matched to the load (which results in its being terminated by the conjugate of its terminal impedance), then I certainly agree. But if this is what he meant, others might have made the same interpretation I did, and reached a different conclusion.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy, W7EL wrote:
> "All you have to do when receiving is terminate the antenna in the
> complex conjugate of the feedpoint impedance you see when
> transmitting----."
>
> Yes. That could be called power factor correction (or tuning to
> resonance), and providing a matched load resistance.
>
> Reactance of an antenna limitts current in an antenna to less than
> maximum unless and until it is tuned out. Art was saying something like
> that. Roy was covering his tracks with this posting.
>
> Best regards, Richard Harrison, KB5WZI
>

1401. FA: ICOM AG-35 UHF PreAmp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:14:20 UTC
From: Headhamster <headhamster@earthlink.net>
Message-ID: <M3IW9.1652$Sv3.205771@newsread1.prod.itd.earthlink.net>
Source record: 126740
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.swap

I have an Icom AG-35 UHF PreAmp for auction. This unit is unused in the box.
It works with the IC-471 475 970 and other radios. Please take a look!
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3002140831

1402. FA: ICOM AG-25 VHF 2 Meter PreAmp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:20:13 UTC
From: Headhamster <headhamster@earthlink.net>
Message-ID: <h9lW9.1656$Sv3.206519@newsread1.prod.itd.earthlink.net>
Source record: 126741
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.swap

I have the Icom AG-25 VHF 2 Meter preamp for auction. This unit has never been mounted outdoors. It works with the IC-271 275 970 and other radios. Please take a look!
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3002139224

1403. Re: Mobile Antenna Recommedation.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:25:38 UTC
From: DA <dmamb@hotmail.com>
Message-ID: <b0fj6ffft1@galileo.ticon.net>
Source record: 126742

I would agree 100% with Dick! Ever since I went to the Larsen 5/8-wave I
have had excellent performance.

Donn - K9DA

"Dick" <rhughes33@cableone.net> wrote in message
news:qj3j2v8cch1kghui41p7gdt0r4hcp0p11n@4ax.com...
> Hard to beat a Larsen 5/8-wave mounted right in the center of your
> roof.
>
> Dick - W6CCD
>
> On Sat, 18 Jan 2003 11:58:11 -0500, "Rickie / KC2KQQ"
> <RickieV@hotmail.com> wrote:
>
> >Can anyone recommend a good, noise free mobile antenna.
> >I will be using the htx-202 from radio shack in the car as a mobile.
> >Currently, using a window through mount with the htx. Some repeaters
come
> >in clear and nice, others come in broke up and very noisy. Not sure, if
its
> >me causing the noise on the other repeaters or if I am picking up noise
from
> >the car.
> >
> > Rickie / KC2KQQ
> >
>

1404. Re: How can a "beacon" be track down by a satellite???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:29:36 UTC
From: Stilz <stilz@attglobal.net>
Message-ID: <3E2B5100.E5EAD474@attglobal.net>
Source record: 126743
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.design

"J. Harvey" wrote:
<snipped>

Thanks for the links. I've never actually given much thought to it
before but it's still nice to learn.

Mike

1405. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:37:20 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <DIIrPsojOD5IvSH9ORdCxYomqoVg@4ax.com>
Source record: 126746

"Ben Sheehan" <bigddybn@adelphia.net> wrote:

>We live in a condo which pretty eliminates any possible outside antenna
>ideas. I'm looking for some type of antenna that can be used indoors. I do
>have a window right next to my chosen area for a "station" that could be
>utilized in some fashion. I realize that the gain on an indoor setup isn't
>going to be the greatest but is there something I can buy/build that would
>work at 144/440?

The current Feb. 2003 QST has plans for a dual-band 144/440 J-pole made of 300
ohm twinlead you can hang in your window or hide in pvc pipe.

Bob
k5qwg

>
>I know these noob questions get old, but thanks in advance for any advice
>you can offer.
>

1406. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:37:32 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301191737.13c047fb@posting.google.com>
Source record: 126744

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:<3E2A25A3.2080401@ieee.org>...
> Art Unwin KB9MZ wrote:
> > If an antenna does not receive a good signal it is of little use . The
> > maximum energy extracted from incoming radio waves by a antenna is one
> > of the lowest impedance which means WITHOUT reactance of any sort.
> > Surely this is the main determining factor for any antenna.
>
> Art, consider this. The loss in the received signal for 100 ft of
> RG-58 on 10m is about 2.7 dB for a resonant 50 ohm 10m antenna. The
> loss in 100 ft of open-wire line is about 0.7 dB for a 10m antenna
> with a feedpoint impedance of 120+j600 ohms. I'm not willing to
> sacrifice 2 dB of received signal just to have a resonant antenna.

Cecil that does not pertain to the question made.
I made the simple statement of fact with respect to antennas and
resonant point.
Yes you can have losses and choices to make to transfer intelligence
from the antenna to else where, but the starting point which
determines what energy you have to transfer is made before you talk of
other things, consequences e.t.c.
Read Docs response at the beginning, resonance is important, if you do
not collect maximum intelligence at the onset feeder losses and
patterns discussions
fall by the wayside. I gave an answer to what I thought was the
question i.e.
resonance and antennas and as a response to a statement not a
dilliloquey of the dire affects as to what could happen down the
chain.
Can it be augued otherwise that as a voltage front aproaches an
antenna member
it inturn creates a current flow upon that member? If that statement
is correct
then science has provided a law that allows all to solve for impedance
and reveal its relationship. That law is V = I R or do you feel
happier with the addition of 'Cos phi' ? Roy suggests that it is
incorrect but he has been wrong many times before so why are you
following his aproach to the initial question so blindly? I only
entered the thread after more than fifty responses were given and
where few (some did)adressed the original question.
May I throw in another point about resonance, it allows the required
frequency
intelligence to survive while at the same time nullifies interference
from signals received by the same antenna member that arrive at a non

resonant point.
Let's all keep things simple so that talk of magic does not tend to
the fore.
Very best regards old chap, no offence received or given
Art

1407. Re: How can a "beacon" be track down by a satellite???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:39:59 UTC
From: Stilz <stilz@attglobal.net>
Message-ID: <3E2B536F.5513A11A@attglobal.net>
Source record: 126745
Cross-posted to: rec.radio.amateur.antenna,sci.electronics.design

Glenn Ashmore wrote:
>
> I don't know how they do it but my 406 EPIRB triggered accidentally this
> summer because the case leaked in a rain storm. I got a call from the
> Coast Guard and they knew it was within a mile and a half of the marina
> it was actually in. That was without GPS encoding. With the GPS code
> they would have known within about 15'.

I've never given much thought to EPIRBs .... until I actually needed
one.
It's is nice to know that the they work!

NICE cutter by the way.

Mike

1408. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:50:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2B55F5.3020003@ieee.org>
Source record: 126747

Dan/W4NTI wrote:
> But where does the ether come in?

Apparently there really is an "ether" after all. Clues to its
existence can be found around a black hole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1409. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:52:44 UTC
From: richardharrison@webtv.net
Message-ID: <137-3E2B566C-842@storefull-2316.public.lawson.webtv.net>
Source record: 126753

Roy Lewallen wrote:
"It`s true that a Thevenin equivalent circuit often has different
internal dissipation than the circuit it`s replacing---."

Yes, because almost any linear source can be replaced with its
Thevenin`s equivalent. The output of this source with a pair of output
terminals has an impedance given by its open-circuit voltage divided by
its short-circuit current.

Thevenin requires the relation between volts and amps at the output of
the source being replaced with its Thevenin equivalent be linear.

Thevenin does not preclude dissipationless resistance (such as
switched-off time) from making up part or all of the internal impedance
of the source being replaced. Clearly, dissipation of the actual source
and its Thevenin "equivalent" are unrelated except by accident.

Best regards, Richard Harrison, KB5WZI

1410. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:53:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2B568D.1090705@ieee.org>
Source record: 126748

Roy Lewallen wrote:
> Give it a rest.

Hard to do, Roy, given all that is going on in the background.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1411. Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 01:57:02 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301191757.d4cc786@posting.google.com>
Source record: 126749

Many years ago while working in Puerto Rico I operated mobile.
Traveling along the Auto Pista (highway) I would be the target
of European pileups. When driving on the mountain top which was
part of the rain forest there was so much static interference
that radio was a non issue. Since this shows that the interference
was local the following question arises. If an antenna was
covered with an insulator and then a aluminum skin ala
a static shield as used in many places in electrical engineering,
would the static noise be removed so radio work can proceed?
Thanks for any input regarding the above together with input
regarding grounding or non grounding of same.
Art

1412. Re: Mobile Antenna Recommedation.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:04:48 UTC
From: AC6V <contact99@ac6v.com>
Message-ID: <4PIW9.110415$Qe5.825532@news1.west.cox.net>
Source record: 126750

Yep love dem Larsons. Had them for 26 years. I use an NMO mount.
Use a Motorola tool to make the hole in the roof as todays sheet metal is
rather thin -- easy to dimple.
In three cars -- the hole was cut just above the dome light which gives easy
access.
Around town I use a 1/4 whip.
Travelling -- a 5/8 wave. Garage door opening is somewhat low for a 5/8 wave
but 1/4 wave works well around San Diego.

When cars are sold replace whip with a cell phone antenna or a cap.

Disclaimer -- Your radiation may vary

--
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"DA" <dmamb@hotmail.com> wrote in message
news:b0fj6ffft1@galileo.ticon.net...
> I would agree 100% with Dick! Ever since I went to the Larsen 5/8-wave I
> have had excellent performance.
>
> Donn - K9DA
>
>
> "Dick" <rhughes33@cableone.net> wrote in message
> news:qj3j2v8cch1kghui41p7gdt0r4hcp0p11n@4ax.com...
> > Hard to beat a Larsen 5/8-wave mounted right in the center of your
> > roof.
> >
> > Dick - W6CCD
> >
> > On Sat, 18 Jan 2003 11:58:11 -0500, "Rickie / KC2KQQ"
> > <RickieV@hotmail.com> wrote:
> >
> > >Can anyone recommend a good, noise free mobile antenna.
> > >I will be using the htx-202 from radio shack in the car as a mobile.
> > >Currently, using a window through mount with the htx. Some repeaters
> come
> > >in clear and nice, others come in broke up and very noisy. Not sure,
if
> its

> > >me causing the noise on the other repeaters or if I am picking up noise
> from
> > >the car.
> > >
> > > Rickie / KC2KQQ
> > >
> >
>
>

1413. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:05:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2B597E.5030503@ieee.org>
Source record: 126751

Art Unwin KB9MZ wrote:
> Can it be augued otherwise that as a voltage front aproaches an
> antenna member
> it inturn creates a current flow upon that member?

What can be argued, Art, is that a 130 ft dipole with a feedline of 86 ft of 450 ohm ladder-line is NOT resonant on 3.6 MHz. It is resonant on 4.0 MHz, at least at my QTH. You no doubt know that you can change the resonant frequency of an antenna with a tuning stub. Well that tuning "stub" can be the feedline. That's how I tune my antenna *system* to resonance. I vary the length of the feedline to choose what frequency the antenna system receives best. It happens to be very close to the frequency on which it transmits best.

My 130 ft. dipole, considered by itself, is resonant on 3.6 MHz. But adding 86 ft. of 450 ohm ladder-line in the center makes the antenna system NOT resonant on 3.6 MHz and a reduced amount of 3.6 MHz energy makes it to the receiver. The 3.6 MHz energy from the dipole sees a relatively high impedance looking down the ladder-line when the antenna system is tuned to 4.0 MHz.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1414. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:13:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2mmpmkifjqc13@corp.supernews.com>
Source record: 126752

Yeah, but 34 posts containing "Dr. Best" since December 9? Whenever I see yet another one, I write it off as just another of Cecil's rants and ignore whatever it is you might be trying to say. If other people have this reaction, it's counterproductive, since it's inhibiting your ability to communicate.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Give it a rest.
>
>
> Hard to do, Roy, given all that is going on in the background.

1415. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:31:42 UTC
From: richardharrison@webtv.net
Message-ID: <29737-3E2B5F8E-9@storefull-2318.public.lawson.webtv.net>
Source record: 126759

Roy, W7EL wrote:
"So all antennas can be "resonant antennas" by this definition and
"resonant antennas" are best, so all antennas are best,"

Not quite.

There are standing-wave antennas and there are traveling-wave antennas.

Standing-wave antennas have drivepoint impedances resulting from
reflections at their far ends. Traveling-wave antennas ideally are
terminated in their Zo`s at their far ends. Traveling-wave antennas tend
to have no reactance which requires tuning-out at their drivepoints, so
that maximum current flows on the traveling-wave antenna with no ado.

But, standing-wave antennas present reactance-free impedance at their
drivepoints only at their resonances. So, they must be tuned one way or
another for maximum performance when they are not being operated at
their natural resonant frequencies.

Best regards, Richard Harrison, KB5WZI

1416. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:36:57 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2B60C9.249EF16D@cwis.net>
Source record: 126755

Art,
No.
'Doc

1417. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:39:10 UTC
From: bowman <bowman@montana.com>
Message-ID: <b0fnc8$oioq4$1@ID-159066.news.dfncis.de>
Source record: 126754

Ron McConnell wrote:

> The basic functions work fine, but there's something
> different in the way MSDOS f77 and g77 takes run time
> prompts that I haven't figured out that stops
> the MUF calculations.

In what way? I've build the NGS source both for inverse.f and the SPCS conversions with g77 with no input problems (other than the somewhat primitive style). I will admit I get them into C as fast as I can, though. I remember just enough FORTRAN IV from years ago to be dangerous.

1418. FS: PS-430 power supply

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:42:07 UTC
From: Tom Stack <wq5j@airmail.net>
Message-ID: <4FAD32C665C16FF9.3BCC7BB40938BC1C.C9FB0030E39258EF@lp.airnews.net>
Source record: 126756

with original box $110 plus shipping ... thanks...

tom, WQ5J, Weatherford, TX

wq5j@arrl.net

1419. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:43:37 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2B6259.CC8B5857@cwis.net>
Source record: 126757

Ben,
Antennas for 144/440 Mhz are fairly small. Pick an
antenna design you think would fit inside your condo,
and try it.
'Doc

1420. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:44:06 UTC
From: richardharrison@webtv.net
Message-ID: <29735-3E2B6276-94@storefull-2318.public.lawson.webtv.net>
Source record: 126760

Roy Lewallen wrote:
"Give it a rest."

Keep it up, Cecil. Just keep on telling it like it is. I love it! You aren`t giving them hell, only the truth. They just think it`s hell. (A nod to Harry Truman, though I voted for Tom Dewey)

Best regards, Richard Harrison, KB5WZI

1421. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 02:51:44 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2B6440.8A8E9E71@cwis.net>
Source record: 126758

Darren,
My choice would be to take the tuner and to
load a fore or back stay.
'Doc

1422. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 03:21:40 UTC
From: Ben Sheehan <bigddybn@adelphia.net>
Message-ID: <8XJW9.9338$Fj2.5512613@news2.news.adelphia.net>
Source record: 126761

Hmm, may have to pick up a copy.

Are simple dipoles effective at these frequencies? I have tons of twinlead
sitting around.

"Bob Miller" <bxmillerSpamNot@texas.net> wrote in message
news:DlIrPsojOD5IvSH9ORdCxYomqoVg@4ax.com...

> The current Feb. 2003 QST has plans for a dual-band 144/440 J-pole made of
300
> ohm twinlead you can hang in your window or hide in pvc pipe.
>
> Bob
> k5qwg
>
>

1423. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 03:36:57 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <xG0rPt1m=jTe+LfQOZaSTLLt96Rd@4ax.com>
Source record: 126762

"Ben Sheehan" <bigddybn@adelphia.net> wrote:

>Hmm, may have to pick up a copy.
>
>Are simple dipoles effective at these frequencies?

The j-pole is similar to a dipole, but is end fed, and a little easier to match
to your rig's coax output.

Bob
k5qwg

> I have tons of twinlead
>sitting around.
>
>"Bob Miller" <bxmillerSpamNot@texas.net> wrote in message
>news:DlIrPsojOD5IvSH9ORdCxYomqoVg@4ax.com...
>
>> The current Feb. 2003 QST has plans for a dual-band 144/440 J-pole made of
>300
>> ohm twinlead you can hang in your window or hide in pvc pipe.
>>
>> Bob
>> k5qwg
>>
>>
>

1424. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 04:15:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <34um2vsqcclh0iee6vkb0jovu6u5nsv5l3@4ax.com>
Source record: 126763

On 19 Jan 2003 17:57:02 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>would the static noise be removed

Yes.

> so radio work can proceed?

No.

73's
Richard Clark, KB7QHC

1425. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 04:21:30 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301192021.17c8bb59@posting.google.com>
Source record: 126764

Roy Lewallen <w7el@eznec.com> wrote in message news:<v2m9j79j7o59e9@corp.supernews.com>...
> No problem, Art. Check any antenna text (or use EZNEC or a similar
> modeling program) and look at the gain you get from a dipole as a
> function of length. From infinitesimally short to about 5/4 wavelengths,
> the gain monotonically increases. There's no peak or other anomaly at
> resonance (near a half wavelength) or anti-resonance (near a full
> wavelength). Look elsewhere in the book for "reciprocity theorem" and
> you'll see that it was proven long ago that the amount of signal
> received for a given impinging field has the same relationship as the
> gain when transmitting. All you have to do when receiving is terminate
> the antenna in the complex conjugate of the feedpoint impedance you see
> when transmitting (a different value for each length of antenna), and
> you'll get a power in the resisitive part of the termination that
> increases monotonically from infinitely short to around 5/4 wavelength.
> This gain increase is due to favorable reinforcement of the fields from
> the various parts of the antenna in the broadside direction. At each
> length, the properly terminated receiving antenna is delivering half the
> intercepted energy to the terminating resistor and re-radiating the
> other half. The fact that the resistor dissipation increases with length
> shows that the amount of intercepted field increases with length (over
> this range of lengths).
>
> These relationships have been confirmed by measurement countless times
> over the past hundred years or so. It doesn't take much of a search to
> find a multitude of evidence.
>
> Certainly all this obeys Ohm's law. If you read in a book that Ohm's law
> shows that resonance is necessary to extract the most energy from radio
> waves, you need to find a different book. There are some pretty bad ones
> out there.
>
> Roy Lewallen, W7EL
Well you mentioned a lot of things but I don't know why since they do
not have any direct connection to what I said....still like to read it
tho.
I had the temererity to mention Ohms law because I read it in a book
and every body seems comfortable when things are written in a book.
Well silly me, after reading the responses I felt many were not
relavent to the question so I made the mistake of reading a book again
so as to provide a direct response. As I said earlier, silly me for
accepting something that is written in a book even tho the auther is a
very respected person.
Next time anybody else on this group has the gall to use Terman as a
reference

of note or authority you now have a chance to also have a blast at
them.
I certainly will be more cautious in whome I trust or read from with
respect to antennas tho I must admit I have not used Eznec as I use a
program from another vendor.
Regards
Art
>
> Art Unwin KB9MZ wrote:
> > Roy Lewallen <w7el@eznec.com> wrote in message
news:<v2jvgis7oel627@corp.supernews.com>...
> >
> >>This is simply not true. I hate to see misinformation like this be posted.
> >>
> >>Roy Lewallen, W7EL
> >>
> >
> > Thats what happens when mechanical engineers enter the electrical
> > scene by trying to give a specific answer to the initial post
> > What is wrong in invoking the Ohm's law that I read in a book? Has
> > it been superceded ? You made a statement which is your right
> > but what is your comment directed to and what is your contrary
> > evidence? In other words
> > 'where's your beef?' (Ohm's law states... V = I R)
> > Art
> >
> >
> >>Art Unwin KB9MZ wrote:
> >> >. . .
>
> >>>. . . The
> >>>maximum energy extracted from incoming radio waves by a antenna is one
> >>>of the lowest impedance which means WITHOUT reactance of any sort.
> >>>Surely this is the main determining factor for any antenna. True, it
> >>>makes it easier to match and also
> >>>to ward off unwanted signals, but the primary use of an antenna is to
> >>>receive a signal so that communication can begin ,which in turn means
> >>>maximum extraction of desired incomming energy i.e. the lowest
> >>>resonance obtainable.
> >>>Regards
> >>>Art
> >>

1426. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 04:31:04 UTC
From: Quahog <quahog@localnet.com>
Message-ID: <v2mus859vjcf3e@corp.supernews.com>
Source record: 126765

Dave Shrader <david.shrader@attbi.com> wrote in
news:3E2AFAF7.1070409@attbi.com:

> Ah ha... here comes Physics with a mind experimant using Einstein's
> cat.
> I wish I could remember the experimant <grin>

uh... yer thinkin of Shrodinger's cat, or Fat Freddie's cat, or somthin...
Einstein never had no cat. Nope, Einstein never had no pussy...

Q

1427. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 04:34:25 UTC
From: Quahog <quahog@localnet.com>
Message-ID: <v2mv2ht4a504f0@corp.supernews.com>
Source record: 126766

"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in
news:b0ffs9$t8b$1@slb9.atl.mindspring.net:

> But where does the ether come in?

Ether is a anaesthetic. I prefer a good Aussie Shiraz myself.

Q

1428. Ruggedized HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 04:38:48 UTC
From: KB7M <kb7m@arrl.net>
Message-ID: <s3LW9.87$Ch7.72914@news.uswest.net>
Source record: 126767

I will soon be installing an HF remote base on a nearby hilltop location. This location receives constant winds, and at time high winds. It is about 5100' ASL. I would like to use some sort of rugged all-band antenna for this with an automatic antenna tuner. It must be able to survive high winds and icing. I would like to operate all bands from 160m to 6m, though 80m and 40m are an absolute necessity. I am not interested in great DX qualities because the main focus of the installation is RACES and ARES comms. I would actually prefer something that will lend itself to NVIS propagation (out to about 300 or so miles). I am looking for suggestions for suitable antennas for this application.

Thanks and 73
Keith, KB7M

1429. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 05:10:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <751n2v05i0v6tvb3vr9cgi0vr0cr9l3531@4ax.com>
Source record: 126768

On 19 Jan 2003 20:21:30 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>On 19 Jan 2003 10:15:43 -0800, aunwin@insightbb.com (Art Unwin KB9MZ) wrote:
>
snip
>>What is wrong in invoking the Ohm's law that I read in a book? Has
>>it been superceded ?

snip
>> Certainly all this obeys Ohm's law. If you read in a book that Ohm's law
>> shows that resonance is necessary to extract the most energy from radio
>> waves, you need to find a different book. There are some pretty bad ones
>> out there.
>>
>> Roy Lewallen, W7EL

>Well you mentioned a lot of things but I don't know why since they do
>not have any direct connection to what I said....still like to read it
>tho.

Hi Art,

What are you talking about then?

73's
Richard Clark, KB7QHC

1430. Re: Parabolic Antenna Design and Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 05:43:57 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <803n2v0dv6uamdhgldunhpefs8gr78canp@4ax.com>
Source record: 126619

On 19 Jan 2003 08:20:28 -0800, jackpotcharters_com@envisiondevices.ws
(Gerry Mckinnon) wrote:

|I would like some assistance in designing a parabolic antenna. I have
|read tons of info on the subject and tried using the hdl_ant program
|and article written by Paul Wade N1BWT but it left me with more
|questions than it answered. Here is what I have so far.
|
|This imaginary parabolic antenna has the following specs -
|
|1 - 3.0 meters in diameter on long and short axis
| I'm uncertain whether the whole of the short axis is actually used
|2 - It is of offset design (point one was a clue here :-)
|3 - It has a focal to diameter ratio of .60
|4 - It's focal length is 1800 millimeters
| F/D = R therefore F = DR and DR = .60 * 3.0
| (correct me if I'm wrong)
|5 - It's depth (at deepest point) on parabola is 312.5 millimeters
| F = (DD)/(16d) therefore d = DD/16F = 3.0 * 3.0/16 * 1.8
| (again correct me if I'm wrong - it's been a while since
| high school)
|6 - The dish was cut from a prime focus dish of unknown
| specifications but it was cut from the center (focal point) out
|
|Now if I run these specs through the hdl program they come out
|different. The F/D ratio is wrong and the focal length is wrong. I
|don't see where I'm making a mistake here unless my equations are not
|correct.
|
|What I still need (assuming all my numbers are right) is the parabolic
|curve function so I can plot it's points manually and create a
|template. I have no idea how to calculate the parabola based on the
|info I have now. If someone could assist me with the function as well
|as an explanation of how it was derived I would greatly appreciate it.

I'm not going to wade through all of the above to see if it's
applicable but you might look at:

http://www.nitehawk.com/rasmit/offset.html

and see if it helps.

1431. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 06:16:09 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <085n2v8bbvmoarc4adgbbnnhbmijh027i7@4ax.com>
Source record: 126620

On Sun, 19 Jan 2003 22:08:42 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>Ah! Yes! This old brain remembers reading that stuff in 1958 or 59.
>Never had a cat or a cat in the box. So, the experiment left me
>UNCERTAIN with only a 50/50 probability.
>
>It's like buying a lottery ticket. The odds are 50/50. You either win or
>you don't: ergo 50/50.
>
>W1MCE
>
>OC_CAM's Razor wrote:
>> Dave Shrader wrote:
>>
>>> Ah ha... here comes Physics with a mind experimant using Einstein's
>>> cat. I wish I could remember the experimant <grin>
>>
>>
>> As I remember it, a quantum event in a box either happens or not and
>> we don't know whether it happened or not. If it happens, it triggers
>> a poison pill that kills the cat in the same box. Apparently quantum
>> physics says the cat is neither dead nor alive or maybe half dead and
>> half alive until we open the box to find out what happened.

Perhaps Einstein had two cats. This is the one I remember, not the one
in the box that got poisoned.

htt[://monster-island.org/tinashumor/humor/eincat.html

1432. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 06:23:58 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <vn5n2vgpc1o4kqr266s1cphu3e02otl7ls@4ax.com>
Source record: 126621

On Sun, 19 Jan 2003 13:54:49 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>You have an excellent earth connection in the sea and a vertical antenna
>only needs 1/4 wavelength for resonance. Loading coils can reduce the
>vertical`s height or you can do as Marconi and use a horizontal wire(s)
>as a capacitive top load.
>
>Best regards, Richard Harrison, KB5WZI

Just to confuse things, this is what sailors call a Marconi rig:

http://www.dixdesign.com/hb30tc.gif

1433. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 06:28:06 UTC
From: tdonaly@aol.com
Message-ID: <20030120012806.10126.00000255@mb-md.aol.com>
Source record: 126622

Richard Harrison wrote,
>(snip)
>
>Thevenin requires the relation between volts and amps at the output of
>the source being replaced with its Thevenin equivalent be linear.
>
>Thevenin does not preclude dissipationless resistance (such as
>switched-off time) from making up part or all of the internal impedance
>of the source being replaced. Clearly, dissipation of the actual source
>and its Thevenin "equivalent" are unrelated except by accident.
>
>Best regards, Richard Harrison, KB5WZI
>

Tell us once again, Richard, how a rapidly opening and closing
switch is linear.
73,
Tom Donaly, KA6RUH

1434. Re: Ruggedized HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 07:13:13 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2BA189.44468463@cwis.net>
Source record: 126623

Keith,
What kind of support structure(s) do you have
available for this antenna system?
'Doc

1435. Re: Ruggedized HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 11:28:56 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <vrmn2vod3mb8d3tjuguabfi73t71vlt7ml@4ax.com>
Source record: 126624

On Sun, 19 Jan 2003 21:38:48 -0700, "KB7M" <kb7m@arrl.net> wrote:

>I will soon be installing an HF remote base on a nearby hilltop location.
>This location receives constant winds, and at time high winds. It is about
>5100' ASL. I would like to use some sort of rugged all-band antenna for
>this with an automatic antenna tuner. It must be able to survive high winds
>and icing. I would like to operate all bands from 160m to 6m, though 80m
>and 40m are an absolute necessity. I am not interested in great DX
>qualities because the main focus of the installation is RACES and ARES
>comms. I would actually prefer something that will lend itself to NVIS
>propagation (out to about 300 or so miles). I am looking for suggestions
>for suitable antennas for this application.
>
>Thanks and 73
>Keith, KB7M
>
Hi Keith given the paramaters you have set and not knowing what you
have for a support structure (I'll get flamed for this) but I would
go with a very strongly built Inverted vee. made with say #10 coper
weld wire. use the heaviest duty ladder line you can find to feed it
to a remote Balun connected to a Remote tuner Ala SGC. for Nivis you
would not have to have the antenna very high off the ground. but it
should be at least 10' or so to keep it out of touch of any one
strolling by.

Your other alternative would be to errect a B&W T2FD the stainless
steel one. That would be the second best I think (Again no flames
please I aready know all the poor points of this antenna) but given
the constraints Keith posted it's would not be a poor choice for this
application.

hope this is of help
73 Dave KC1DI

1436. Re: Ruggedized HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 11:43:26 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E2BE0DE.5074BCB2@bloomer.net>
Source record: 126625

If you are able and willing to travel to the site to change bands, I
would think about using an Outbacker mobile antenna and some buried
ground radials. Just a thought.

Scott
N0EDV

KB7M wrote:
>
> I will soon be installing an HF remote base on a nearby hilltop location.
> This location receives constant winds, and at time high winds. It is about
> 5100' ASL. I would like to use some sort of rugged all-band antenna for
> this with an automatic antenna tuner. It must be able to survive high winds
> and icing. I would like to operate all bands from 160m to 6m, though 80m
> and 40m are an absolute necessity. I am not interested in great DX
> qualities because the main focus of the installation is RACES and ARES
> comms. I would actually prefer something that will lend itself to NVIS
> propagation (out to about 300 or so miles). I am looking for suggestions
> for suitable antennas for this application.
>
> Thanks and 73
> Keith, KB7M

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

1437. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 11:52:09 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <kmnn2vc1t83rdu3csed4mvecr5qrghenmm@4ax.com>
Source record: 126626

On Sun, 19 Jan 2003 16:56:43 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Sorry, I wasn't trying to "cover my tracks". If you consider a dipole
>that's, say, 0.7 wavelength long terminated with the conjugate of its
>feedpoint impedance a "resonant antenna", then yes, you get the most
>power out of "resonant antennas". And any old antenna can be made into a
>"resonant antenna" with a simple matching network. So, all antennas can
>be "resonant antennas" by this definition, and "resonant antennas" are
>best, so all antennas are best.
>
>If Art was trying to say that you get the most energy out of a receiving
>antenna when it's properly matched to the load (which results in its
>being terminated by the conjugate of its terminal impedance), then I
>certainly agree. But if this is what he meant, others might have made
>the same interpretation I did, and reached a different conclusion.
>
>Roy Lewallen, W7EL
>
>Richard Harrison wrote:
>> Roy, W7EL wrote:
>> "All you have to do when receiving is terminate the antenna in the
>> complex conjugate of the feedpoint impedance you see when
>> transmitting----."
>>
>> Yes. That could be called power factor correction (or tuning to
>> resonance), and providing a matched load resistance.
>>
>> Reactance of an antenna limitts current in an antenna to less than
>> maximum unless and until it is tuned out. Art was saying something like
>> that. Roy was covering his tracks with this posting.
>>
>> Best regards, Richard Harrison, KB5WZI

I Believe the problem here arises from the term Resonance.. It means
many things to different people. Most however seem to mean that the
antenna is about a 1/2 wave at a given Frequency.

If this is what is ment then their is no magic in how well or poorly
it readiates or receives over anyother peace of wire... the key as Roy
is pointing out is in how the 1/2 wave or any other Wave-- is matced
to it's feedline and the associated losses on the feed line.. not the
length of the wire.. used for the antenna. When ever you introduce a
mismatch to your feed system there are losses associated with the
mismatch. Some feed lines (Open wire) can handle the mismatch with a

minum of loss or signal degradation others (Coax) normally can not.

If by Resonant a person means that the antenna wire matches a 50 Impediance-- then a low half wave center fed dipole fed with coax should always be better than say a highly mounted end fed longwire fed with 600 ohm open wire.. (about a 4:1 swr in most cases) I'd take the second example almost every time.. (except perhaps for NIVIS work).

before you can have a intellegent discussion about resonance one must first be in agreement as to what Resonance is.

To me resonance means that the wire I'm feeding is matched to the impedience of the feed line /radio I'm using at that moment.. an off center fed windom can be resonate at many harmonic frequencies as well as a center fed .. but the impedences in each case are different. Lets define what we mean by resonance.

Dave Rowe, KC1DI

1438. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 12:22:36 UTC
From: richardharrison@webtv.net
Message-ID: <27976-3E2BEA0C-10@storefull-2312.public.lawson.webtv.net>
Source record: 126628

Tom, KA6RUH wrote:
"Tell us again, Richard, how a rapidly opening and closing switch is linear."

Easy. A filter removes all harmonics, leaving a pure fundamental sine wave. Were it not so, broadcast stations could be heard at multiples of their assigned frequences. Regulations against transmission of harmonics are handily complied with despite continued use of high level modulated Class-C amplifiers.

Best regards, Richard Harrison, KB5WZI

1439. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 12:24:36 UTC
From: richardharrison@webtv.net
Message-ID: <2719-3E2BEA84-7@storefull-2317.public.lawson.webtv.net>
Source record: 126629

Tom, KA6RUH wrote:
"Tell us again, Richard, how a rapidly opening and closing switch is linear."

Easy. A filter removes all harmonics, leaving a pure fundamental sine wave. Were it not so, broadcast stations could be heard at multiples of their assigned frequences. Regulations against transmission of harmonics are handily complied with despite continued use of high level modulated Class-C amplifiers.

Best regards, Richard Harrison, KB5WZI

1440. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 12:35:58 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2BECCD.9060606@attbi.com>
Source record: 126627

The 'ether' doesn't exist!! It's a man made image to 'explain' the
'unexplainable'. [I.E. something had to carry the radio waves just like
the ocean carries the water waves].

ether = SQRT[Permittivity of free space/permeability of free space) = ~
377 Ohms = a characteristic of free space!

Deacon Dave
++++++++++++++++
Dan/W4NTI wrote:
> But where does the ether come in?
>
> Dan/W4NTI
>
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E2A2639.6090909@ieee.org...
>
>>Dan/W4NTI wrote:
>>
>>>Now will someone explain to me how a radio wave ACTUALLY travels from
>>
> point
>
>>>A to point B ??
>>
>>A changing electric field causes a changing magnetic field which causes
>>a changing electric field which causes a changing magnetic field which ...
>>It's all covered by Maxwell's equations.
>>--
>>cheers, CAM http://www.qsl.net/w5dxp
>>
>>
>>
>>-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>>http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>>------== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>
>

1441. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 12:46:07 UTC
From: richardharrison@webtv.net
Message-ID: <2720-3E2BEF8F-3@storefull-2317.public.lawson.webtv.net>
Source record: 126634

William Ewald wrote:
"Just to confuse things, this is what sailors call a Marconi rig."

Fair enough. It looks like a folded unipole. Almost any antenna with a significant vertically polarized component may be called a Marconi.

Point is, only vertical polarization is very useful at low heights over sea water for DX.

Best regards, Richard Harrison, KB5WZI

1442. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 13:09:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2BF4FD.5080809@ieee.org>
Source record: 126630

Tdonaly wrote:
> Tell us once again, Richard, how a rapidly opening and closing
> switch is linear.

Is the operation of a pendulum linear? Does it really matter if
the pendulum is given a non-linear shot of energy every cycle
to keep its average linear magnitude from decaying?

Is the operation of a tank circuit linear? Does it really matter
if the resonant tank circuit is given a non-linear shot of energy
every cycle to keep its average linear magnitude from decaying?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1443. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 13:10:55 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b0gsgv$441$1@sparta.btinternet.com>
Source record: 126631

Art says -
> I had the temererity to mention Ohms law because I read it in a book
> and every body seems comfortable when things are written in a book.

==========

Art, unfortunately very true - specially if it's one of Terman's or an amateur radio publication.

But recently there's a tendency to obtain comfort and support from computer programs.

Reg, G4FGQ

1444. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 13:14:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2BF62F.4050408@ieee.org>
Source record: 126632

KC1DI wrote:
> When ever you introduce a
> mismatch to your feed system there are losses associated with the
> mismatch. Some feed lines (Open wire) can handle the mismatch with a
> minum of loss or signal degradation others (Coax) normally can not.

There are also matched line losses in matched systems. 100' of RG-58
has a matched line loss of about 2.7 dB on 10m. Open-wire line has
a matched line loss of about 0.1 dB on 10m. Thus open-wire line can
tolerate quite a bit of mismatch loss before it equals the matched
loss of RG-58.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1445. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 13:19:46 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2BF772.8020603@ieee.org>
Source record: 126633

Dave Shrader wrote:
> The 'ether' doesn't exist!! It's a man made image to 'explain' the
> 'unexplainable'.

Dave, radiation from a black hole has convinced a lot of scientists
that some sort of ï¿½ther ('ether') does exist. It's not the same ï¿½ther
envisioned back around the end of the 19th century, but empty space
appears not to be empty. Black holes tear apart the fabric of "empty
space".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1446. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 14:20:11 UTC
From: tdonaly@aol.com
Message-ID: <20030120092011.24547.00000194@mb-fa.aol.com>
Source record: 126635

Cecil wrote,
>
>Is the operation of a pendulum linear? Does it really matter if
>the pendulum is given a non-linear shot of energy every cycle
>to keep its average linear magnitude from decaying?
>
>Is the operation of a tank circuit linear? Does it really matter
>if the resonant tank circuit is given a non-linear shot of energy
>every cycle to keep its average linear magnitude from decaying?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

So you and Richard Harrison really believe that you can apply a signal to a rapidly opening and closing switch and get a magnified copy of that same signal out the other side. By the way, Cecil, what's an "average linear magnitude?"
73,
Tom Donaly

1447. Re: Ruggedized HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 14:34:12 UTC
From: KB7M <kb7m@arrl.net>
Message-ID: <FNTW9.12$Zw.10601@news.uswest.net>
Source record: 126636

I realized after I made the post that I had left out some key information. The enclosure for the repeater is a 10' x 12' military surplus aluminum truck body. There is 25' of Rohn 45 tower that must also hold the UHF repeater antenna and the solar panels for powering the installation. There is also a line of grounded chain link fence mearby owned by commercial tower company. The reason I want to use the automatic tuner is that the site is approximately 20 miles away (500' - 1000' above the valley floor), and is inaccessible for several days after a snow storm. I DO NOT want to travel to the site to change bands. If it makes any difference, the HF radio is an ICOM IC-706 (original).

"'Doc" <w5lz@cwis.net> wrote in message news:3E2BA189.44468463@cwis.net...
> Keith,
> What kind of support structure(s) do you have
> available for this antenna system?
> 'Doc

1448. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 14:43:53 UTC
From: richardharrison@webtv.net
Message-ID: <2721-3E2C0B29-4@storefull-2317.public.lawson.webtv.net>
Source record: 126637

Dave, KC1DI wrote:
"I believe the problem here arises from the term Resonant."

In physics, resonance is an abnormally large response of a system having a natural frequency to a periodic external stimulus of the same or nearly the same frequency.

In electricity, resonance is that condition of a circuit with respect to a given frequency or the like in which the total reactance is zero and the current flow is maximum.

Thanks to the "American College Dictionary".

A wire in space has a first (lowest frequency) resonance where its capacitance is equal to its inductance. At this frequency, the wire is almost 1/2-wavelength in space. It is a little short due to thickness of the wire, reduction of wave velocity due to the wire, and increased capacitive effect caused by voltage doubling due to reflection from the open-circuit ends of the wire.

The 1/2-wave wire in space responds to its resonant excitation by an "abnormally large response" ("maximum current flow"). There should be no mystery here. Reactance in the length of resonant wire is zero to allow maximum current flow.

Antennas have the natural resonance described. We can alter the natural resonance by adding capacitance or inductance to the basic wire.

Best regards, Richard Harrison, KB5WZI

1449. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 15:07:41 UTC
From: richardharrison@webtv.net
Message-ID: <2719-3E2C10BD-23@storefull-2317.public.lawson.webtv.net>
Source record: 126638

Tom Donaly wrote:
"So you and Richard Harrison really believe that you can apply a signal to a rapidly opening and closing switch and get a magnified copy of that same signal on the other side."

That is how the Class-C amplifier does it. A small signal controls the switch (the PA tube or transistor). The output is a series of short pulses. The output tank cleans up the signal to produce sine waves without the short pulses.

The incentive to use Class-C is an efficiency exceeding 50%. The extra efficiency is the direct result of dissipationless resistance (the off-time of the electronic switch).

Best regards, Richard Harrison, KB5WZI

1450. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 15:33:25 UTC
From: tdonaly@aol.com
Message-ID: <20030120103325.24633.00000195@mb-fa.aol.com>
Source record: 126640

Richard Harrison wrote,
>
>Tom Donaly wrote:
>"So you and Richard Harrison really believe that you can apply a signal
>to a rapidly opening and closing switch and get a magnified copy of that
>same signal on the other side."
>
>That is how the Class-C amplifier does it. A small signal controls the
>switch (the PA tube or transistor). The output is a series of short
>pulses. The output tank cleans up the signal to produce sine waves
>without the short pulses.
>
>The incentive to use Class-C is an efficiency exceeding 50%. The extra
>efficiency is the direct result of dissipationless resistance (the
>off-time of the electronic switch).
>
>Best regards, Richard Harrison, KB5WZI
>

So I can make any amplifier linear just by putting a tank circuit on the
output.
Of course, if I put a square wave in one side I'll get a sine wave out the
other.
Ditto with a triangle wave. In fact, it doesn't matter what goes in one side,
the other will always be a sine wave, or close to it. You and Cecil sure have
funny ideas about what constitutes linearity.
73,
Tom Donaly, KA6RUH

1451. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 15:55:40 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2C1B99.1030702@attbi.com>
Source record: 126641

Empty space is NOT empty. It is full of residual radiation from the 'Big Bang', or something, with a photon energy level in the less than 10 eV range. NASA has some spectacular x-ray images, colorized to reflect the energy levels, from the Milky Way. Now we all know that if photon energy exists then mass exists in Space.

Now, that 'ether' is not the 'ether' of 1880 AD [common era].

OC_CAM's Razor wrote:
> Dave Shrader wrote:
>
>> The 'ether' doesn't exist!! It's a man made image to 'explain' the
>> 'unexplainable'.
>
>
> Dave, radiation from a black hole has convinced a lot of scientists
> that some sort of ï¿½ther ('ether') does exist. It's not the same ï¿½ther
> envisioned back around the end of the 19th century, but empty space
> appears not to be empty. Black holes tear apart the fabric of "empty
> space".

1452. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 15:56:06 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C1C16.4010703@ieee.org>
Source record: 126642

Tdonaly wrote:
> Cecil wrote,
>>Is the operation of a pendulum linear? Does it really matter if
>>the pendulum is given a non-linear shot of energy every cycle
>>to keep its average linear magnitude from decaying?
>>
>>Is the operation of a tank circuit linear? Does it really matter
>>if the resonant tank circuit is given a non-linear shot of energy
>>every cycle to keep its average linear magnitude from decaying?
>
> So you and Richard Harrison really believe that you can apply a
> signal to a rapidly opening and closing switch and get a magnified
> copy of that same signal out the other side.

I didn't say that and I don't think Richard did either. What
comes out of a transmitter is close to a pure sine wave. The
source of the pure sine wave is the tank circuit/pi-network
filter that ideally shorts out or blocks all the energy except the
desired linear energy in the designed-for single frequency sine
wave output. In a well-designed transmitter, the resonant output
filter can be considered to be the source of the desired linear
single frequency signal. The harmonics are suppressed.

> By the way, Cecil, what's an "average linear magnitude?"

For our purposes, it's the RMS value of a pure sine wave.
When we say there's 70.71V and 1.414A of RF in a transmission
line, you don't think those are DC values, do you?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1453. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:04:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C1E06.5060906@ieee.org>
Source record: 126643

Richard Harrison wrote:
> The 1/2-wave wire in space responds to its resonant excitation by an
> "abnormally large response" ("maximum current flow"). There should be no
> mystery here. Reactance in the length of resonant wire is zero to allow
> maximum current flow.
>
> Antennas have the natural resonance described. We can alter the natural
> resonance by adding capacitance or inductance to the basic wire.

Exactly, and that capacitance or inductance can come from the transmission line. A tuned transmission line can change the resonant frequency of the dipole system. My dipole length is 130 ft which is a resonant length on 3.6 MHz. If I fed it with 50 ohm (flat) coax, the resonant frequency would still be around 3.6 MHz. But when I feed it with 86 ft. of 450 ohm ladder-line, I introduce a series reactance which raises the resonant frequency of the antenna system to 4.0 MHz, i.e. maximum energy transfer on both transmit and receive occurs at 4.0 MHz, not at 3.6 MHz. I think that's what Art is missing.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1454. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:06:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C1E94.4040309@ieee.org>
Source record: 126645

Tdonaly wrote:
> So I can make any amplifier linear just by putting a tank circuit on the
> output.
> Of course, if I put a square wave in one side I'll get a sine wave out the
> other.
> Ditto with a triangle wave. In fact, it doesn't matter what goes in one side,
> the other will always be a sine wave, or close to it. You and Cecil sure have
> funny ideas about what constitutes linearity.

Last time Richard and I took the time to look, a pure sine wave is linear.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1455. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:06:46 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2C1E32.6060606@attbi.com>
Source record: 126644

Are we confusing some of our readers with loose application of terms.

An Antenna is a radiating conductive surface, either wire, rod or slot.

Such an antenna has natural resonance[s] at the frequencies where a 1/2 wavelength, or odd multiples of a 1/2 wavelength, can be supported by the radiating surface.

Now, an Antenna SYSTEM includes the antenna and the means to couple energy into or from the antenna.

As a consequence "All antennas are resonant [at some frequencies]. However they may not be resonant at a desired frequency. For these cases the antenna system is tuned to resonance by a network, or stubs, or lengths of transmission line.

Example: a 100 foot antenna is resonant at approximately 4.68 MHz. I can tune an antenna system using this antenna to 3.6 MHz with a tuner, stubs or selected length of transmission line. Then the antenna SYSTEM is resonant at the desired frequency.

73, Deacon Dave, W1MCE

Richard Harrison wrote:
> Dave, KC1DI wrote:
> "I believe the problem here arises from the term Resonant."
>
> In physics, resonance is an abnormally large response of a system having
> a natural frequency to a periodic external stimulus of the same or
> nearly the same frequency.
>
> In electricity, resonance is that condition of a circuit with respect to
> a given frequency or the like in which the total reactance is zero and
> the current flow is maximum.
>
> Thanks to the "American College Dictionary".
>
> A wire in space has a first (lowest frequency) resonance where its
> capacitance is equal to its inductance. At this frequency, the wire is
> almost 1/2-wavelength in space. It is a little short due to thickness of
> the wire, reduction of wave velocity due to the wire, and increased
> capacitive effect caused by voltage doubling due to reflection from the
> open-circuit ends of the wire.
>
> The 1/2-wave wire in space responds to its resonant excitation by an
> "abnormally large response" ("maximum current flow"). There should be no

> mystery here. Reactance in the length of resonant wire is zero to allow
> maximum current flow.
>
> Antennas have the natural resonance described. We can alter the natural
> resonance by adding capacitance or inductance to the basic wire.
>
> Best regards, Richard Harrison, KB5WZI
>

1456. Re: Ruggedized HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:11:08 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <wcVW9.4304$zF6.370609@bgtnsc04-news.ops.worldnet.att.net>
Source record: 126646

> I realized after I made the post that I had left out some key information.
> The enclosure for the repeater is a 10' x 12' military surplus aluminum
> truck body. There is 25' of Rohn 45 tower that must also hold the UHF
> repeater antenna and the solar panels for powering the installation. There
> is also a line of grounded chain link fence mearby owned by commercial tower
> company....

How about an end-fed, thick (#8) copper wire from the opposite
side of the truck body to the top of the tower and then over to
the farthest fence support? Maybe break it with an insulator before
it gets too close to the ground. Stick a loading coil in it near
the tower if the SGC can't find a match on 80. Ground radials on
the truck body would also help.

--
Jim Bromley, K7JEB k7jeb(at)arrl(dot)net
Glendale, Arizona

1457. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:15:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C209D.3080707@ieee.org>
Source record: 126647

Dave Shrader wrote:
> Example: a 100 foot antenna is resonant at approximately 4.68 MHz. I can
> tune an antenna system using this antenna to 3.6 MHz with a tuner, stubs
> or selected length of transmission line. Then the antenna SYSTEM is
> resonant at the desired frequency.

The matching can be done with a series-section transformer. 30 ft of
twinlead resonates it somewhere in the 80m ham band. Unfortunately,
the resonant resistance is about 10 ohms but that's still resonant.
Wow, I think I've just invented the G5RV. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1458. Re: Ruggedized HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:19:35 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <rkVW9.63822$4j5.9860999@newssvr28.news.prodigy.com>
Source record: 126639

Based on your parameters, I would have to agree with Dave. Since you're looking for close-in coverage, height isn't too important. Since SGCs will handle balanced antennas, you probably don't need a balun...but you'll have to be careful about selection of leg lengths and feedline length to avoid a voltage node near the bands you want to use. You should also make sure the SGC is close to ground and well grounded. Another possibility would be a bottom fed loop...which might have less of a voltage range at the feed point.

73,
Larry N8LP
www.telepostinc.com/n8lp.html

"KC1DI" <elbc2@gwi.net> wrote in message
news:vrmn2vod3mb8d3tjuguabfi73t71vlt7ml@4ax.com...
> On Sun, 19 Jan 2003 21:38:48 -0700, "KB7M" <kb7m@arrl.net> wrote:
>
> >I will soon be installing an HF remote base on a nearby hilltop location.
> >This location receives constant winds, and at time high winds. It is
about
> >5100' ASL. I would like to use some sort of rugged all-band antenna for
> >this with an automatic antenna tuner. It must be able to survive high
winds
> >and icing. I would like to operate all bands from 160m to 6m, though 80m
> >and 40m are an absolute necessity. I am not interested in great DX
> >qualities because the main focus of the installation is RACES and ARES
> >comms. I would actually prefer something that will lend itself to NVIS
> >propagation (out to about 300 or so miles). I am looking for suggestions
> >for suitable antennas for this application.
> >
> >Thanks and 73
> >Keith, KB7M
> >
> Hi Keith given the paramaters you have set and not knowing what you
> have for a support structure (I'll get flamed for this) but I would
> go with a very strongly built Inverted vee. made with say #10 coper
> weld wire. use the heaviest duty ladder line you can find to feed it
> to a remote Balun connected to a Remote tuner Ala SGC. for Nivis you
> would not have to have the antenna very high off the ground. but it
> should be at least 10' or so to keep it out of touch of any one
> strolling by.
>
> Your other alternative would be to errect a B&W T2FD the stainless
> steel one. That would be the second best I think (Again no flames

> please I aready know all the poor points of this antenna) but given
> the constraints Keith posted it's would not be a poor choice for this
> application.
>
> hope this is of help
> 73 Dave KC1DI
>

1459. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:26:58 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2C22EF.50006@attbi.com>
Source record: 126648

Hey! Let's patent it! You can get the name "The OC_CAM Hybrid".

DD, <grin>

OC_CAM's Razor wrote:
> Dave Shrader wrote:
>
>> Example: a 100 foot antenna is resonant at approximately 4.68 MHz. I
>> can tune an antenna system using this antenna to 3.6 MHz with a tuner,
>> stubs or selected length of transmission line. Then the antenna SYSTEM
>> is resonant at the desired frequency.
>
>
> The matching can be done with a series-section transformer. 30 ft of
> twinlead resonates it somewhere in the 80m ham band. Unfortunately,
> the resonant resistance is about 10 ohms but that's still resonant.
> Wow, I think I've just invented the G5RV. :-)

1460. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:33:46 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E2C2534.2A82DFD6@att.net>
Source record: 126649

Cecil,

Not sure how this analogy pertains to the subject at hand, but no, the
operation of a pendulum is not linear.

This is very basic stuff found in any Physics 101 textbook.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Tdonaly wrote:
> > Tell us once again, Richard, how a rapidly opening and closing
> > switch is linear.
>
> Is the operation of a pendulum linear? Does it really matter if
> the pendulum is given a non-linear shot of energy every cycle
> to keep its average linear magnitude from decaying?
>
> Is the operation of a tank circuit linear? Does it really matter
> if the resonant tank circuit is given a non-linear shot of energy
> every cycle to keep its average linear magnitude from decaying?
> --
> cheers, CAM http://www.qsl.net/w5dxp

1461. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:35:38 UTC
From: richardharrison@webtv.net
Message-ID: <27976-3E2C255A-45@storefull-2312.public.lawson.webtv.net>
Source record: 126651

Tom, KA6RUH wrote:
"You and Cecil sure have funny ideas of what constitutes linearity."

"Linearity" as applied to amplification means an output which is an accurate replica of the input, only bigger.

Amplification of a continuous wave which produces a bigger sine wave gualifies as linear reproduction.

A Class-C amplifier is not a "linear amplifier" because it mixes multifrequency signals producing new frequencies. AM and SSB signals are impaired by this amplifier mixing. CW and FM signals are not so impaired.

CW and FM find Class-C capable of accurately repoducing the desired signal.

Best regards, Richard Harrison, KB5WZI

1462. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 16:47:14 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301200847.3424f84c@posting.google.com>
Source record: 126650

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<751n2v05i0v6tvb3vr9cgi0vr0cr9l3531@4ax.com>...
> On 19 Jan 2003 20:21:30 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
Richard I will be happy to share my thoughts and that is
all they are,since I do not wish to be combative I will then
leave the thread. The key words I focussed on were resonance and
antenna

>
> >On 19 Jan 2003 10:15:43 -0800, aunwin@insightbb.com (Art Unwin KB9MZ) wrote:
> >
> snip
> >>What is wrong in invoking the Ohm's law that I read in a book? Has
> >>it been superceded ?
>
> snip
> >> Certainly all this obeys Ohm's law. If you read in a book that Ohm's law
> >> shows that resonance is necessary to extract the most energy from radio
> >> waves, you need to find a different book. There are some pretty bad ones
> >> out there.
> >>
> >> Roy Lewallen, W7EL
>
> >Well you mentioned a lot of things but I don't know why since they do
> >not have any direct connection to what I said....still like to read it
> >tho.
>
> Hi Art,
>
> What are you talking about then?
>
> 73's
> Richard Clark, KB7QHC

Hi Richard let me share with you my train of thought.
It is non combative which thus allows me to leave this thread.
The keywords I focussed on were 'resonance' and 'antenna' which is
the medium used in amateur radio for transfer intelligence.
Resonance means many things of which an importantant factor is Q.
Q allows efficient transfer of energy for that portion of energy
by not wasting energy to extract unnecessary information or energy
that is present in the initial madium which in this case is the ether.
So Q is very important for the receiving medium which in this case
is called an antenna.

Now most people focussed on wavelength pattern etc which describes on form of recieving medium as known in amateur radio but these are not all encompassing of a receiver Where coupling is not welcome to all amateurs it does also provide a method of efficient energy extraction that is
divorced from wavelengths as we know it. Others brought into the picture matching situations and efficiency which tho inportant pertains to the conservation of the transferred energy and you can only conserve
energy or intelligence that was initially provided. Now none of this aproach voids statements made by others even tho it doesn't include other coupling methods which because of ham radios unbending reliance on the dipole aproach which is not all inclusive. So I looked for an all encompassing response, a scientific response that covered all regardless of methods used relevant to the energy in the ether and it transference of required portiones of energy that contained pertinent
comunication to a receiver in this case the word 'antenna' was used. Terman gave the answer that I was looking for which was deliciously short and simple and all encompassing of the energy tranfer which was all encompassing and did not exclude antennas of mine that do not revolve about half wave lengths etc. but the maintenance of resonance and high Q regardles of frequency used.
I am not good at communication nor am I a electrical engineer, my 'out of the box' aproach comes purely from a undiciplined self education that does
not follow the conformity or regimen of the normal education. This allows me an unfettered aproach to redesigning the wheel if I chose to do so.
Best Regards and thanks for the opportunity to declare my reasoning. methods
Art, an amateur.

1463. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 17:02:19 UTC
From: richardharrison@webtv.net
Message-ID: <25730-3E2C2B9B-60@storefull-2314.public.lawson.webtv.net>
Source record: 126653

Gene, W4SZ wrote:
"Not sure how this analogy pertains to the subject at hand, but no, the operation of a pendulum is not linear."

Sure, you can restrict a definition of "linear" to a literal straight line. Doing so, a sine wave is not linear. The only linear electricity is d-c, and it can`t really be linear because it is switched on and off.

One meaning of electrical linearity is adherence to Ohm`s law over a wide amplitude range.

Cecil`s point, I think, was that the pendulum faithfully follows the rules of simple harmonic motion (SHM). The transmitter "tank circuit" also follows the rules of SHM. This precludes variations from the fundamental frequency in both cases.

Best regards, Richard Harrison, KB5WZI

1464. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 17:05:15 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301200905.413b6d87@posting.google.com>
Source record: 126652

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<34um2vsqcclh0iee6vkb0jovu6u5nsv5l3@4ax.com>...
> On 19 Jan 2003 17:57:02 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >would the static noise be removed
>
> Yes.
>
> > so radio work can proceed?
>
> No.
>
> 73's
> Richard Clark, KB7QHC

Your response as well as Docs are very specific. Could you supply
some of the reasonings behind these conclusions so that I may learn
from the education that you have received? For instance, you said
static would be removed, is it essential to have the shield grounded
in this case as I see that in electrical engineerig shields are not
always grounded.
Also, if static noise or interference is removed when it is a
local source, normal audio is not able to arise above remaining
noise.
Thanks and best regards
Art

1465. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 17:28:06 UTC
From: tdonaly@aol.com
Message-ID: <20030120122806.21495.00000259@mb-mu.aol.com>
Source record: 126654

Cecil wrote,
>
>Last time Richard and I took the time to look, a pure sine wave is linear.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>

Would you like to explain that?
73,
Tom Donaly, KA6RUH

1466. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 17:43:48 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E2C359E.E21D538F@att.net>
Source record: 126655

Richard,

If that was Cecil's point then he is wrong. A pendulum does not follow the rules of SHM.

Again, this is basic stuff found in any physics textbook.

If the pendulum problem is simplified by restricting the swing to very small values then the pendulum system becomes nearly linear, and the pendulum almost (but not quite) follows SHM.

"Linear" in the context of systems has nothing to do with "literal straight lines". (Remember, the start of this part of the message thread was related to Thevenin equivalent sources, not drawing artwork on paper.)

Linearity in systems requires two things.

1. Superposition must apply

2. Scaling must apply

If one or both of these conditions is not met then the system is not linear.

Non-linearity of a pendulum is very easy to show. That is why this is one of the relatively few non-linear problems shown in beginning physics classes.

73,
Gene
W4SZ

Richard Harrison wrote:
>
> Gene, W4SZ wrote:
> "Not sure how this analogy pertains to the subject at hand, but no, the
> operation of a pendulum is not linear."
>
> Sure, you can restrict a definition of "linear" to a literal straight
> line. Doing so, a sine wave is not linear. The only linear electricity
> is d-c, and it can`t really be linear because it is switched on and off.
>
> One meaning of electrical linearity is adherence to Ohm`s law over a
> wide amplitude range.
>
> Cecil`s point, I think, was that the pendulum faithfully follows the
> rules of simple harmonic motion (SHM). The transmitter "tank circuit"

> also follows the rules of SHM. This precludes variations from the
> fundamental frequency in both cases.
>
> Best regards, Richard Harrison, KB5WZI

1467. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 17:49:02 UTC
From: Ron McConnell <rcmcc@earthlink.net>
Message-ID: <3E2C3685.DB5C86E2@earthlink.net>
Source record: 126656

bowman wrote:

> Ron McConnell wrote:
> > The basic functions work fine, but there's something
> > different in the way MSDOS f77 and g77 takes run time
> > prompts that I haven't figured out that stops
> > the MUF calculations.
>
> In what way?

Probably in some simple, silly way that I'm overlooking
from ignorance. Or maybe it's something else in the
code surrounding the prompts.

The fancy inverse.f, forward.f, maximuf.f, magnetic model,
lat/long/grid conversions, ... stuff work just fine on
Unix f77, MSDOS Fortran, and g77.

GCGC is mainly free form command line argument driven
like Unix tools. The DOS command line arguments
are something like ("g" is the basic command):

g + VY0 n 40.7817 w 74 41 24 f 150

where "f 150" is for an optional MUF calculation
to/from w2iol to Nunavut for a solar flux of 150.
GCGC first does the bearings (true & magnetic)
and distances. Before it does the MUF,
it pauses to let the user check the results so far
and save them to a file, quit or continue on to MUF.
It's here that _only_ the g77 compiled version seems
not to see the user prompted input, like carriage return
to continue, and just quits before doing MUF.
(I can suppy the few lines of code,
or the whole source.)

I wrote GCGC several years ago to be a no-compromise-
in-algorithms program that would work on "big" machines
and handheld DOS palmtops like the HP-95, HP-100
and Fujitsu Poquet Plus. It started on Unix f77.
I tweaked the system date calls for for the MUF
and magnetic variation calculations first for MSDOS
and then again for g77.

My problem at the moment is that I don't have Linux
g77 capability _yet_. Other family matters
are consuming nearly all my spare moments and US$.

My xyl doesn't know I'm taking time for this note. :)

Joop Stakenborg [pa3aba@debian.org]
"Hamsoft, Linux Software for the Hamradio Community"
http://radio.linux.org.au/
compiled GCGC for me last summer.
After a couple of little tweaks to clear up
minor compiler complaints,
it worked as described above. The g77 compiler
is much more particular than the MSDOS compiler
about fine points of syntax.
Then Joop and I both got distracted by other affairs
and duties. The notes here just jiggled my memory.

bowman wrote:

> I will admit I get them into C as fast as I can, though.
> I remember just enough FORTRAN IV from years ago to be dangerous.

I know just enough C to be dangerous.

Cheers, 73,

Ron McConnell
w2iol
http://home.adelphia.net/~nj2dx/hoarc/gcgc9900.zip

1468. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 18:03:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2oefulqv7hcbd@corp.supernews.com>
Source record: 126657

But "linearity" as applied to circuit theory (which determines whether or not you can pull tricks like using a Thevenin source, among other things) has a very different definition and meaning. (That definition has been presented on this newsgroup several times not long ago.) It's very important to say which you mean when discussing a transmitter or amplifier as part of a circuit.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Tom, KA6RUH wrote:
> "You and Cecil sure have funny ideas of what constitutes linearity."
>
> "Linearity" as applied to amplification means an output which is an
> accurate replica of the input, only bigger.
>
> Amplification of a continuous wave which produces a bigger sine wave
> gualifies as linear reproduction.
>
> A Class-C amplifier is not a "linear amplifier" because it mixes
> multifrequency signals producing new frequencies. AM and SSB signals are
> impaired by this amplifier mixing. CW and FM signals are not so
> impaired.
>
> CW and FM find Class-C capable of accurately repoducing the desired
> signal.
>
> Best regards, Richard Harrison, KB5WZI
>

1469. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 18:31:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C4077.7030601@ieee.org>
Source record: 126658

Gene Fuller wrote:
> Cecil,
> Not sure how this analogy pertains to the subject at hand, but no, the
> operation of a pendulum is not linear.
>
> This is very basic stuff found in any Physics 101 textbook.

Hmmmmmm, from my Physics 101 textbook: "The rotational motion
of a pendulum about a horizontal axis through its point of
support approximates *simple harmonic motion* very closely,
provided the amplitude of oscillation about the equilibrium
position is small compared to one radian." It goes on to
use linear algebra on the system.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1470. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 18:41:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C42F4.7080205@ieee.org>
Source record: 126659

Tdonaly wrote:
> Cecil wrote,
>>Last time Richard and I took the time to look, a pure sine wave is linear.
>
> Would you like to explain that?

Sure, Tom. All of the periodic waveforms that you mentioned can
be broken down into their Fourier series components, which are pure
sine waves, and can be linearly analyzed separately and independently
of each other. What you will find is that all the non-fundamental
frequency components are exposed to a very low impedance to ground
or a very high series impedance and thus are not allowed to reach
the output. Ideally, the only component of that Fourier series
that is allowed to reach the output is the fundamental frequency
component and will be as close to a sine wave as we can make it.

Thus, for the purposes of our analysis, the filtered Class-C source
can be considered to be a pure sine wave at the fundamental frequency.
If you so desire, you can use linear math to analyze all the other
frequency components but doing so is only of academic interest since
the FCC requires that we get rid of those components somehow.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1471. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 18:45:03 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301201045.76883279@posting.google.com>
Source record: 126660

KC1DI <elbc2@gwi.net> wrote in message
news:<kmnn2vc1t83rdu3csed4mvecr5qrghenmm@4ax.com>...
> On Sun, 19 Jan 2003 16:56:43 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
> >Sorry, I wasn't trying to "cover my tracks". If you consider a dipole
> >that's, say, 0.7 wavelength long terminated with the conjugate of its
> >feedpoint impedance a "resonant antenna", then yes, you get the most
> >power out of "resonant antennas". And any old antenna can be made into a
> >"resonant antenna" with a simple matching network. So, all antennas can
> >be "resonant antennas" by this definition, and "resonant antennas" are
> >best, so all antennas are best.
> >
> >If Art was trying to say that you get the most energy out of a receiving
> >antenna when it's properly matched to the load (which results in its
> >being terminated by the conjugate of its terminal impedance), then I
> >certainly agree. But if this is what he meant, others might have made
> >the same interpretation I did, and reached a different conclusion.
> >
> >Roy Lewallen, W7EL
> >
> >Richard Harrison wrote:
> >> Roy, W7EL wrote:
> >> "All you have to do when receiving is terminate the antenna in the
> >> complex conjugate of the feedpoint impedance you see when
> >> transmitting----."
> >>
> >> Yes. That could be called power factor correction (or tuning to
> >> resonance), and providing a matched load resistance.
> >>
> >> Reactance of an antenna limitts current in an antenna to less than
> >> maximum unless and until it is tuned out. Art was saying something like
> >> that. Roy was covering his tracks with this posting.
> >>
> >> Best regards, Richard Harrison, KB5WZI
>
> I Believe the problem here arises from the term Resonance.. It means
> many things to different people. Most however seem to mean that the
> antenna is about a 1/2 wave at a given Frequency.
>
> If this is what is ment then their is no magic in how well or poorly
> it readiates or receives over anyother peace of wire... the key as Roy
> is pointing out is in how the 1/2 wave or any other Wave-- is matced
> to it's feedline and the associated losses on the feed line.. not the

> length of the wire.. used for the antenna. When ever you introduce a
> mismatch to your feed system there are losses associated with the
> mismatch. Some feed lines (Open wire) can handle the mismatch with a
> minum of loss or signal degradation others (Coax) normally can not.
>
> If by Resonant a person means that the antenna wire matches a 50
> Impediance-- then a low half wave center fed dipole fed with coax
> should always be better than say a highly mounted end fed longwire fed
> with 600 ohm open wire.. (about a 4:1 swr in most cases) I'd take the
> second example almost every time.. (except perhaps for NIVIS work).
>
> before you can have a intellegent discussion about resonance one must
> first be in agreement as to what Resonance is.
>
> To me resonance means that the wire I'm feeding is matched to the
> impedience of the feed line /radio I'm using at that moment.. an off
> center fed windom can be resonate at many harmonic frequencies as well
> as a center fed .. but the impedences in each case are different.
> Lets define what we mean by resonance.
>
> Dave Rowe, KC1DI

Exactly, I did not use the term 'resonance' alone as if I was
referring to any old resonance, I specifically qualified it by
referring to the 'lowest impedence' a point that appears to be
overlooked.
Art

1472. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 18:55:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C4615.4090305@ieee.org>
Source record: 126661

Gene Fuller wrote:
> Richard,
>
> If that was Cecil's point then he is wrong. A pendulum does not follow
> the rules of SHM.
>
> Again, this is basic stuff found in any physics textbook.

Again, quoting my Physics 101 Textbook: "The rotational motion of a
pendulum about a horizontal axis through its point of support APPROXIMATES
SIMPLE HARMONIC MOTION ***VERY CLOSELY***, provided the amplitude of oscillation
about the equilibrium position is small compared to one radian."

> If the pendulum problem is simplified by restricting the swing to very
> small values then the pendulum system becomes nearly linear, and the
> pendulum almost (but not quite) follows SHM.

57.3 degrees is NOT a "very small value", Gene, and is 16% of a full circle.
All of our models only approximate reality. Even relativity and quantum
mechanics give differing results for some matched particle conditions.
It's a copout to plead that the model is not perfect.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1473. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 18:59:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C471E.7010100@ieee.org>
Source record: 126662

Art Unwin KB9MZ wrote:
> Exactly, I did not use the term 'resonance' alone as if I was
> referring to any old resonance, I specifically qualified it by
> referring to the 'lowest impedence' a point that appears to be
> overlooked.

Art, did you consider what happens to resonance when you install
a stub at the 'lowest impedance' point? The resonant frequency
changes. That's what happens with tuned feeders.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1474. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 19:05:46 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301201105.5c177309@posting.google.com>
Source record: 126663

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message

> Read Docs response at the beginning, resonance is important, if you do
> not collect maximum intelligence at the onset feeder losses and
> patterns discussions
> fall by the wayside.

50 ohm resonance is not important at all unless you want an antenna
that matches coax without any matching devices. Many question the
meaning of resonance. This is why I separate "antenna" resonance from
"system" resonance. A half size dipole only has about .3 db less gain
in it's favored direction than a full size 1/2 wave dipole. As long as
you can make a low loss matching section, you will see little
difference in performance from a full size dipole. The pattern is
determinded by the wire length, shape, etc. Nothing you do with the
feeder will change that pattern unless your feeder becomes part of the
antenna and starts to radiate. Feeder losses become the important
factor. Feeders losses are very low in the case of a coax fed dipole.
At the resonant frequency, feeder losses are low. At a non resonant
frequency, feeder losses are high. But there is no shortage of energy
being received by the antenna in this case. It's just not making it to
and from the radio without large losses.

> May I throw in another point about resonance, it allows the required
> frequency
> intelligence to survive while at the same time nullifies interference
> from signals received by the same antenna member that arrive at a non
> resonant point.

Not true the way I see it. Feeder losses are what "nullifies" other
out of band signals. If your feeder losses are low on nearly any
frequency, there will be no shortage of out of band signals. The only
reason "resonant" antennas are popular or special is because it makes
things easy as far as low loss feeding with coax which just happened
to be designed with a 50-75 ohm impedance.
Any other impedance could be choosed to set up this type of operation.
Could be 300 ohms, could be 450..whatever...Naturally, you would need
to choose an antenna with a matching feedpoint impedance. Folded
dipole, etc... Anyway, "antenna resonance" just doesn't mean too much
as far as having high performance, or low losses in itself. "System
resonance" sure can be a large factor though. Hope this makes some
sense...MK

1475. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 19:10:07 UTC
From: richardharrison@webtv.net
Message-ID: <726-3E2C498F-29@storefull-2318.public.lawson.webtv.net>
Source record: 126664

Art, KB9MZ wrote:
"If an antenna were covered with an insulator and then with an aluminum skin ala a static shield would noise be reduced?"

Possibly. Shielded loop antennas reduce static noise reception.

QRN and QRM are ever present threats to reception. QRM comes from spark plugs and other electrical devices. QRN comes from thunderstorms and other sources of natural electrical discharges.

Precipitation static is a natural noise source from charged particles falling on or near an antenna., or from an accumulation of charge building until it breaks down the resistance of the surrounding air and discharges.

It is not clear what caused Art`s interference. Art observed mountain top interference. The location may have exposed Art to interference screened away at lower elevations. Mountain tops get rains not produced by climate conditions at lower altitudes. The rain cloud build up may introduce QRN right on site. The air is thinner at high altitude and makes electrical discharge easier.

Insulated antennas are less troubled by precipitation static. A corona ball on the antenna tip reduces its static discharge. Pointed dischargers sited well away from the antenna may drain static and produce lower receiver noise levels.

More data would be needed to make a better guess as to the source of Art`s noise.

Best regards, Richard Harrison, KB5WZI

1476. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 19:50:40 UTC
From: richardharrison@webtv.net
Message-ID: <21466-3E2C5310-1@storefull-2315.public.lawson.webtv.net>
Source record: 126668

Mark, NM5K wrote:
"At a non-resonant frequency, feeder losses are high. But there is no shortage of energy being received in this case."

Unless the impediment of a high reactance is removed from an antenna, it won`t receive a large induced current. So the standing-wave type antenna must be resonant to get a large current. It is unfortunate that a myth is being promulgated that an antenna need not be resonant.

I`ll give an example. The radio station where I worked had a pattern null monitoring point measure much too much signal. A scan of the horizon revealed a new grounded tower of about !/4-wave height at our frequency, not far distant from our station. We ended up hanging wires on the new tower to detune it. That robbed the new tower of its resonant current and our null signal strength was right back down to normal. It was as if the new tower did not exist.

Best regards, Richard Harrison, KB5WZI

1477. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 19:51:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1bko2v4fje7m3pjpq8i9l58t5jtdet8a4r@4ax.com>
Source record: 126665

On 20 Jan 2003 09:05:15 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in message
news:<34um2vsqcclh0iee6vkb0jovu6u5nsv5l3@4ax.com>...
>> On 19 Jan 2003 17:57:02 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>> wrote:
>>
>> >would the static noise be removed
>>
>> Yes.
>>
>> > so radio work can proceed?
>>
>> No.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Your response as well as Docs are very specific. Could you supply
>some of the reasonings behind these conclusions so that I may learn
>from the education that you have received? For instance, you said
>static would be removed, is it essential to have the shield grounded
>in this case as I see that in electrical engineerig shields are not
>always grounded.
>Also, if static noise or interference is removed when it is a
>local source, normal audio is not able to arise above remaining
>noise.
>Thanks and best regards
>Art

Hi Art,

The response was probably too succinct because the opposite advice
would have worked as well.

Insulated wire to combat precipitation static has been reported here
to work quite effectively. Grounded wire antennas (such as folded
dipoles or those fed by gamma/delta/what-have-you matches) also
exhibit no problem through the conduction of such potentials directly
to ground.

Your proposal seems to be a combination of the two without either's
finishing touch. You initially insulate the element, but then go
another step and cover the insulation with a conductor. The second
step is redundant to the element already covered and worse, if you

ground it, you have just shielded the radiating element, not a very useful proposition for the sake of reducing noise (your receiver will also be quite deaf). If you choose not to ground it, well nothing will come of this addition except some broadening of the tuning of the element (through thickening it). It is like building a capacitor over your element which may prove some advantage, but certainly has little, additional effect on the original problem, and is arguable that the effort was worth this surprise benefit (whatever it is, and if ever it appears).

73's
Richard Clark, KB7QHC

1478. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 19:55:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <j2lo2vspnct76nk34ldcsddvf6f86jg514@4ax.com>
Source record: 126666

On Mon, 20 Jan 2003 06:24:36 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Tom, KA6RUH wrote:
>"Tell us again, Richard, how a rapidly opening and closing switch is
>linear."
>
>Easy. A filter removes all harmonics, leaving a pure fundamental sine
>wave. Were it not so, broadcast stations could be heard at multiples of
>their assigned frequences. Regulations against transmission of harmonics
>are handily complied with despite continued use of high level modulated
>Class-C amplifiers.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

So then, Thevinin has a seat next to Riley on the FCC board? Does the
FCC now do field tests of Norton sources too?

73's
Richard Clark, KB7QHC

1479. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:14:00 UTC
From: richardharrison@webtv.net
Message-ID: <21464-3E2C5888-58@storefull-2315.public.lawson.webtv.net>
Source record: 126570

Cecil wrote:
"Hmmmmmmm, from my physics 101 textbook: "The rotational motion of a pendulum about a horizontal axis through its point of support approximates "simple harmonic motion" very closely---."

I recall Cecil saying his text was by Shortley and Williams. Mine was too. But, I haven`t seen mine for 50 years so I can`t quote it verbatim.

Best regards, Richard Harrison, KB5WZI

1480. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:17:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vklo2vo6og9errdasrls14mv1esapl0p1k@4ax.com>
Source record: 126667

On Mon, 20 Jan 2003 09:56:06 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>What
>comes out of a transmitter is close to a pure sine wave.

Hi Cecil,

Such a statement must come from one who has actually never looked at the waveform - but close is in the eye of an FCC field station monitor.

Back when vinyl records roamed the planet and the most advanced of players offered a pickup that did not exhibit "skating"; O'scopes revealed a considerable distortion that was plainly visible, but was argued as being wholly outside of the range of the ear to distinguish: "close enough to a pure sine wave" as they would have said back then. In other words, those opposed to yet another device suggested it didn't matter. History buried them - right, wrong or indifferent.

And it is for this very reason of sine wave purity that the assumption:
>For our purposes, it's the RMS value of a pure sine wave.
leads to considerable error for those who insist accuracy is their middle name. These are the same folk who measure an audio signal that is neither harmonic, nor within the frequency range of the meter, to declare an absolutely accurate value (my meter show 5 places yours only two).

Truth is, no one here has faithfully measured the RMS value of anything over 1KHz. Even worse, there are few here who even have an RMS detector in the meter they swear by.

73's
Richard Clark, KB7QHC

1481. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:28:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <limo2vkci3r0jrra8hvc5tnq0t6v4ugagj@4ax.com>
Source record: 126569

On Mon, 20 Jan 2003 12:41:56 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Sure, Tom. All of the periodic waveforms that you mentioned can
>be broken down into their Fourier series components, which are pure
>sine waves

Hi Cecil,

It is obvious that you have done very little in the implementation of an FFT. In fact, Fourier Analysis is NOT limited to periodic waveforms and in fact the major application of the FFT is in the analysis of non-periodic waveforms. This does not reduce the requirement of the applied waveform meeting constraints that are periodic, but that is managed through the normal FFT pre-processing of "windowing" the data.

The single greatest application of Fourier techniques is to discover and separate out non-linearities in the data (and they are ALWAYS there).

Back in the mid-80's when I was writing FFT software for HP, it was revealed that the Microsoft Transcendentals Library was pitiful. A "pure" sine wave exhibited a noise floor of 80dB down from the bin magnitude of the frequency being analyzed. The Borland Transcendentals Library on the other hand performed the same analysis with a noise floor down 200dB!

Microsoft, as you, would offer that it was "close enough to a pure sine wave" and they too were buried by History - that Library was deep-sixed long, long ago.

73's
Richard Clark, KB7QHC

1482. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:34:43 UTC
From: richardharrison@webtv.net
Message-ID: <21466-3E2C5D63-2@storefull-2315.public.lawson.webtv.net>
Source record: 126573

Richard Clark wrote:
"So then, Thevenin has a seat next to Riley on the FCC board?"

No, those lawyers leave the technical stuff to the staff.

Rules limit harmonics, noise, and distortion. Further, U.S. broadcast transmitters must be type accepted which includes a proof of performance.

Best regards, Richard Harrison, KB5WZI

1483. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:39:14 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2C5E18.6090907@attbi.com>
Source record: 126571

Richard, I use an antenna that has a VSWR less than 1.7 to 1 from 13.5 to 33 MHz. That is before I connect any transmission line to the antenna. [i.e. measured at the antenna connector]. Where is that resonant?

Answer: everywhere between 13.5 and 33 MHz. It is an array known as a Log Periodic.

The ANTENNA SYSTEM has to be resonant for maximum power transfer! The piece of wire hanging off the end is one piece of a system!! The wire does not have to be resonant.

Terminated Rhombics are non resonant traveling wave systems that give high gain.

Terminated Beverages are traveling wave antennas that are NOT resonant and give high gain.

Change your vocabulary to ANTENNA SYSTEMS and you won't have any further dialog here.

Deacon Dave, W1MCE

Richard Harrison wrote:
> Mark, NM5K wrote:
> "At a non-resonant frequency, feeder losses are high. But there is no
> shortage of energy being received in this case."
>
> Unless the impediment of a high reactance is removed from an antenna, it
> won`t receive a large induced current. So the standing-wave type antenna
> must be resonant to get a large current. It is unfortunate that a myth
> is being promulgated that an antenna need not be resonant.
>
> I`ll give an example. The radio station where I worked had a pattern
> null monitoring point measure much too much signal. A scan of the
> horizon revealed a new grounded tower of about !/4-wave height at our
> frequency, not far distant from our station. We ended up hanging wires
> on the new tower to detune it. That robbed the new tower of its resonant
> current and our null signal strength was right back down to normal. It
> was as if the new tower did not exist.
>
> Best regards, Richard Harrison, KB5WZI
>

1484. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:47:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C6077.5070901@ieee.org>
Source record: 126572

Richard Harrison wrote:
> It is unfortunate that a myth
> is being promulgated that an antenna need not be resonant.

It's a semantics problem, Richard. Some people do not consider
a tuned feedline and/or antenna tuner to be part of the antenna.
That's why I try to use the term "antenna system" instead of just
"antenna". I don't give a hoot where my dipole alone is resonant.
All I care about is where my antenna *system* is resonant.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1485. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:49:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C60F4.3090800@ieee.org>
Source record: 126574

Richard Clark wrote:
> So then, Thevinin has a seat next to Riley on the FCC board? Does the
> FCC now do field tests of Norton sources too?

Speaking of Norton sources, the dissipation in the source of the QEX
brainteaser is completely different between the Thevenin and Norton
sources.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1486. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:51:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C6166.9040605@ieee.org>
Source record: 126575

Richard Harrison wrote:
> Cecil wrote:
> "Hmmmmmmm, from my physics 101 textbook: "The rotational motion of a
> pendulum about a horizontal axis through its point of support
> approximates "simple harmonic motion" very closely---."
>
> I recall Cecil saying his text was by Shortley and Williams. Mine was
> too. But, I haven`t seen mine for 50 years so I can`t quote it verbatim.

Dang, that's a close guess. Mine is copyrighted 1953.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1487. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:54:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C61F0.108@ieee.org>
Source record: 126576

Richard Clark wrote:
> Truth is, no one here has faithfully measured the RMS value of
> anything over 1KHz. Even worse, there are few here who even have an
> RMS detector in the meter they swear by.

I'm relying on the ICOM engineers to meet the FCC standards for
purity of emissions. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1488. Re: Ruggedized HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:56:30 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e2c67d7_4@news1.prserv.net>
Source record: 126578

Keith:

For short haul, what is now popularly called NVIS, and what I have been calling local coverage for 50 years, you need a horizontal antenna. Go up there and look at the electric utility power line construction approach. They put horizontally disposed wires in the air which are supposed to stay up for 40 years unless something bigger falls on them. Think rugged. Dipole with an open wire feeder made out of the strongest cable you can afford.

If you only want 75 and 40, put up a dual band dipole, feed it with coax, and forget the tuner.

By the way, with the single exception of 6 meters, putting the station on top of a hill buys you only grief for local coverage. NVIS goes up from everywhere with sight of the clouds equally well.

--
Crazy George
Remove NO and SPAM from return address
"KB7M" <kb7m@arrl.net> wrote in message
news:s3LW9.87$Ch7.72914@news.uswest.net...
> I will soon be installing an HF remote base on a nearby hilltop location.
> This location receives constant winds, and at time high winds. It is
about
> 5100' ASL. I would like to use some sort of rugged all-band antenna for
> this with an automatic antenna tuner. It must be able to survive high
winds
> and icing. I would like to operate all bands from 160m to 6m, though 80m
> and 40m are an absolute necessity. I am not interested in great DX
> qualities because the main focus of the installation is RACES and ARES
> comms. I would actually prefer something that will lend itself to NVIS
> propagation (out to about 300 or so miles). I am looking for suggestions
> for suitable antennas for this application.
>
> Thanks and 73
> Keith, KB7M
>
>

1489. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 20:56:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <dkno2vkfbf07ecpl8ufct6lbg7isqbpe69@4ax.com>
Source record: 126577

On 20 Jan 2003 08:47:14 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

> the maintenance of resonance and high Q

Hi Art,

You have to separate out the meaning of Q from its application for
this to make sense. In other words, you are applying an argument that
is based on "unloaded Q" and applying it to a situation that demands
"loaded Q."

A High-Q antenna has relatively little loss by the definition of
High-Q if we were to just say that and walk away. The problem with
that is it condemns the antenna to a mute existence. High Q suggests
nothing is radiated because the energy is still stored. On the other
hand, a Low-Q antenna freely radiates (it is a poor storage device).

Now, before you or others blow a fuse; this discussion of Q demands
some context - again the loaded/unloaded aspect of Q's description.
An unloaded High-Q suggests there is very little Ohmic loss in the
structure. A loaded High-Q suggests there is very little radiative
loss from the structure. An unloaded Low-Q suggests that power is
being lost to resistance in the structure. A loaded Low-Q suggests
that power is being lost to radiation (assuming is it is also NOT an
unloaded Low-Q element). Thus to be useful as a measure of Quality,
you should know/find/have both values.

You've no doubt read correspondence where some build a superlative
coil with a Q in the 100's. This is the unloaded specification. Read
Terman and his comments about the common Tank circuit found in the
last stage of a transmitter. The Q (loaded) of that resonant circuit
is often less than 10 (Terman explains quite well). As the antenna is
a direct beneficiary of that power, it would not serve radiation for
that antenna to exhibit a higher Q (for the same reason Terman
explained earlier).

The pursuit for a loaded, exceptionally High-Q is about as specious as
ironing out the last decimal from SWR.

73's
Richard Clark, KB7QHC

1490. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:00:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C6358.4050002@ieee.org>
Source record: 126580

Richard Clark wrote:
> It is obvious that you have done very little in the implementation of
> an FFT. In fact, Fourier Analysis is NOT limited to periodic
> waveforms and in fact the major application of the FFT is in the
> analysis of non-periodic waveforms. This does not reduce the
> requirement of the applied waveform meeting constraints that are
> periodic, but that is managed through the normal FFT pre-processing of
> "windowing" the data.

Heck Richard, I was Intel's DSP "expert" and I know that. But ham
transmitters generate periodic waveforms so I didn't even mention
non-periodic waveforms. Why are they important to the discussion?

Are you one of those mathematicians who wouldn't even begin to
approach a beautiful female of the species across the room
because you know you would never 100% get there? Have you ever
believed in the engineer's concept of "close enough"? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1491. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:01:57 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2C636A.9060807@attbi.com>
Source record: 126579

Hey Cecil! We agree!!

DD, W1MCE

OC_CAM's Razor wrote:
> Richard Harrison wrote:
>
>> It is unfortunate that a myth
>> is being promulgated that an antenna need not be resonant.
>
>
> It's a semantics problem, Richard. Some people do not consider
> a tuned feedline and/or antenna tuner to be part of the antenna.
> That's why I try to use the term "antenna system" instead of just
> "antenna". I don't give a hoot where my dipole alone is resonant.
> All I care about is where my antenna *system* is resonant.

1492. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:05:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C649E.8090804@ieee.org>
Source record: 126581

Dave Shrader wrote:
> Hey Cecil! We agree!!

Yep, except on the subject of dating ourselves. I tried
it and I've never had a more boring date. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1493. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:09:14 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <fdpo2vgviuhtis011ra0fo91qtop4dudl0@4ax.com>
Source record: 126582

On Mon, 20 Jan 2003 15:55:40 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>Empty space is NOT empty. It is full of residual radiation from the 'Big
>Bang', or something, with a photon energy level in the less than 10 eV
>range. NASA has some spectacular x-ray images, colorized to reflect the
>energy levels, from the Milky Way. Now we all know that if photon energy
>exists then mass exists in Space.
>
>Now, that 'ether' is not the 'ether' of 1880 AD [common era].
>
>OC_CAM's Razor wrote:
>> Dave Shrader wrote:
>>
>>> The 'ether' doesn't exist!! It's a man made image to 'explain' the
>>> 'unexplainable'.
>>
>>
>> Dave, radiation from a black hole has convinced a lot of scientists
>> that some sort of ï¿½ther ('ether') does exist. It's not the same ï¿½ther
>> envisioned back around the end of the 19th century, but empty space
>> appears not to be empty. Black holes tear apart the fabric of "empty
>> space".

Hi All,

Both of you appear to be stuck in the Astronomy of several decades
back (when you guys were last in school?).

In recent years there has been much discussion into the "missing"
matter of the universe that has been shown to "perhaps" be explained
for with Dark Matter. Astronomers seem to have been fairly satisfied
with this new concept in Physics as they are now talking about Dark
Energy.

73's
Richard Clark, KB7QHC

1494. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:12:33 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rmpo2vscsrj20psvh32r39s29dtp275it9@4ax.com>
Source record: 126583

On Mon, 20 Jan 2003 14:49:56 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> So then, Thevinin has a seat next to Riley on the FCC board? Does the
>> FCC now do field tests of Norton sources too?
>
>Speaking of Norton sources, the dissipation in the source of the QEX
>brainteaser is completely different between the Thevenin and Norton
>sources.

Uh, Cecil,

This is something I pointed out to Roy about a month ago. It is a
classic example of why NO ONE should look beneath the hood of an
"equivalent" source.

73's
Richard Clark, KB7QHC

1495. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:18:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <krpo2v0msactlj4hop59rps99s2os5p9ek@4ax.com>
Source record: 126584

On Mon, 20 Jan 2003 15:00:08 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> It is obvious that you have done very little in the implementation of
>> an FFT. In fact, Fourier Analysis is NOT limited to periodic
>> waveforms and in fact the major application of the FFT is in the
>> analysis of non-periodic waveforms. This does not reduce the
>> requirement of the applied waveform meeting constraints that are
>> periodic, but that is managed through the normal FFT pre-processing of
>> "windowing" the data.
>
>Heck Richard, I was Intel's DSP "expert" and I know that.

Hi Cecil,

Yes, we are so long used to your boot-toe stubbing aw-shucks I'm a
simple hamatur that we fail to appreciate your professional talents.
However, as a matter of style, you sometimes (often?) shoot yourself
in the foot bumbling the fast-draw too.

73's
Richard Clark, KB7QHC

1496. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:23:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o5qo2vomfhasv44rbnljf62rn0diapksoo@4ax.com>
Source record: 126585

On Mon, 20 Jan 2003 14:54:08 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Truth is, no one here has faithfully measured the RMS value of
>> anything over 1KHz. Even worse, there are few here who even have an
>> RMS detector in the meter they swear by.
>
>I'm relying on the ICOM engineers to meet the FCC standards for
>purity of emissions. :-)

Hi Cecil,

Fine, that qualifies you as Equipment Operator 3rd Class. It also
obviates the need for an Amateur Class of radio operation where we
have the privilege of being the ONLY class of service that does NOT
need FCC type acceptance. As such, equipment operators are simply
CB'ers with extended band plans.

73's
Richard Clark, KB7QHC

1497. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:23:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C68C0.7080808@ieee.org>
Source record: 126586

Richard Clark wrote:
> Both of you appear to be stuck in the Astronomy of several decades
> back (when you guys were last in school?).

I can't remember exactly but I had a pet Dodo Bird at the time.

> In recent years there has been much discussion into the "missing"
> matter of the universe that has been shown to "perhaps" be explained
> for with Dark Matter. Astronomers seem to have been fairly satisfied
> with this new concept in Physics as they are now talking about Dark
> Energy.

Could the dark stuff be the proverbial ï¿½ther? (For those without MS
special characters that's "AEther".)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1498. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:29:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C6A43.2090003@ieee.org>
Source record: 126587

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Speaking of Norton sources, the dissipation in the source of the QEX
>>brainteaser is completely different between the Thevenin and Norton
>>sources.
>
> This is something I pointed out to Roy about a month ago. It is a
> classic example of why NO ONE should look beneath the hood of an
> "equivalent" source.

If you are correct, why did you-know-who pour so much effort and
assign so much importance into calculating the dissipations in
his Thevenin equivalent sources? (Sorry, I'm not allowed to mention
you-know-who's name anymore.)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1499. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:31:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C6A9F.4090806@ieee.org>
Source record: 126588

Richard Clark wrote:
> However, as a matter of style, you sometimes (often?) shoot yourself
> in the foot bumbling the fast-draw too.

No pain, no gain. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1500. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:31:58 UTC
From: richardharrison@webtv.net
Message-ID: <21465-3E2C6ACE-25@storefull-2315.public.lawson.webtv.net>
Source record: 126591

Richard Clark wrote:
"Such a statement (what comes out of a transmitter is close to a pure sine wave) must come from one who has actually never looked at the waveform---."

As one who has early and often scoped the unmodulated carrier swept rapidly enough and high enough to examine a few alternations in great detail, I attest that broadcast transmitters produce pristine cycles.

Broadcasters are required to continuously use modulation monitors, not oscilloscopes. But, even the stations I`ve worked in which were equipped in the 1930`s had RCA oscilloscope modulation monitors in addition to their meter-monitors with overmodulation alarms, as required by the rules. The oscilloscopes were interesting to watch.

Broadcasters also have noise and distortion analyzers. They methodically use these and date and record their results in the station maintenance log. They need evidence for the inspector, should he visit from the FCC, that the performance has ben within limits regardless of accusations.

Richard Clark also wrote:
"Truth is, no one here has faithfully measured the RMS value of anything over 1 KHz.

Well. I beg to differ. It`s easy to do with a fair oscilloscope and generator. It`s even easy to do with a better "true rms voltmeter". These employ cheap "true rms converter chips".

Best regards, Richard Harrison, KB5WZI

1501. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:34:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <npqo2v80l60pgntaakv34th4kpfs70tnrn@4ax.com>
Source record: 126589

On Mon, 20 Jan 2003 15:23:12 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Both of you appear to be stuck in the Astronomy of several decades
>> back (when you guys were last in school?).
>
>I can't remember exactly but I had a pet Dodo Bird at the time.
>
>> In recent years there has been much discussion into the "missing"
>> matter of the universe that has been shown to "perhaps" be explained
>> for with Dark Matter. Astronomers seem to have been fairly satisfied
>> with this new concept in Physics as they are now talking about Dark
>> Energy.
>
>Could the dark stuff be the proverbial ï¿½ther? (For those without MS
>special characters that's "AEther".)

Hi Cecil,

Nope, it would have been measured by now. The Dark Matter/Energy is
still being studied through inference and proposed models.

You don't need MS products to write ï¿½ther (ALT-0198) or ï¿½ther
(ALT-0230).

73's
Richard Clark, KB7QHC

1502. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:35:11 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2C6B8F.F5694F46@cwis.net>
Source record: 126590

Art,
Insulating the antenna may help slightly with particular
kinds of static noise. Then, putting the antenna inside a
'shield' would reduce the received noise even more. The
'catch' is that it would also reduce the desired signals.
Sort of like mounting your mobile antenna inside the trunk
of your car.
'Doc

1503. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:51:24 UTC
From: "William M. Bickley" <bickley@dmv.com>
Message-ID: <v2qhv1sqh2bia8@corp.supernews.com>
Source record: 126558

Using this approach would require an insulator towards the top of the stay. It may or may not be present on the backstay. You said no provision for HF, so it is likely missing. It almost certainly will not be present on the forestay. Assuming it is present on the backstay, you'll then need to assure that the lower end of the backstay is not connected to ground (it should have been disconnected, if the owner went to the trouble of installing the insulator). Finally, you'll need the material and method to somehow get to a keel bolt or some other ground with a lot of surface area. And you'll need a tuner. With certain lengths of backstay, tuning is a challenge, so prepare to be disappointed on one or more bands.

For what you have in mind, get a Hamstick or two and a mounting bracket for the sternrail. Trim with the stinger. With salt water, you'll be very pleased with the result, even using a modest antenna setup.

PS: Take care to consider the effect on navigational and other electronic equipment installed on the boat.

Have fun.

Bill W2ET

"'Doc" <w5lz@cwis.net> wrote in message news:3E2B6440.8A8E9E71@cwis.net...
>
>
> Darren,
> My choice would be to take the tuner and to
> load a fore or back stay.
> 'Doc

1504. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:55:57 UTC
From: richardharrison@webtv.net
Message-ID: <21464-3E2C706D-70@storefull-2315.public.lawson.webtv.net>
Source record: 126594

It seems everyone has forgotten that you put a gap in the loop shield making it a Faraday screen. Then it works fine and does not kill the signal.

Best regards, Richard Harrison, KB5WZI

1505. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 21:56:58 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3uro2vcr6d6bji139hp2suet7lhldvlnvr@4ax.com>
Source record: 126592

On Mon, 20 Jan 2003 15:29:39 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Speaking of Norton sources, the dissipation in the source of the QEX
>>>brainteaser is completely different between the Thevenin and Norton
>>>sources.
>>
>> This is something I pointed out to Roy about a month ago. It is a
>> classic example of why NO ONE should look beneath the hood of an
>> "equivalent" source.
>
>If you are correct, why did you-know-who pour so much effort and
>assign so much importance into calculating the dissipations in
>his Thevenin equivalent sources? (Sorry, I'm not allowed to mention
>you-know-who's name anymore.)

Hi Cecil,

One of those editor's? Sorry for the lost effort, but as Burn's said:
"The best laid schemes o' Mice an' Men gang aft a-gley
An' lae'e us nought but grief and pain, for promised joy."

If I am correct? Such advice long precedes my being right or wrong
and always bites someone who ignores it.

73's
Richard Clark, KB7QHC

1506. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 22:01:22 UTC
From: wieland@copland.udel.edu
Message-ID: <b0hrji$5dm$1@copland.udel.edu>
Source record: 126593

I think you mean Scrohdinger's cat. This was a "paradox" he proposed to
get across some of the more mind-bending aspects of quantum theorey.

The other reference is a humorous quote from Einstein:

"The wireless telegraph is not hard to understand.
The wired telegraph she is like a long cat,
You pull her tail in New York and she meows in Los Angeles.
The wireless is the same, only without the cat."

In article <3E2B0D83.1050103@ieee.org> you write:
> As I remember it, a quantum event in a box either happens or not and
> we don't know whether it happened or not. If it happens, it triggers
> a poison pill that kills the cat in the same box. Apparently quantum
> physics says the cat is neither dead nor alive or maybe half dead and
> half alive until we open the box to find out what happened.
>--
>cheers, CAM http://www.qsl.net/w5dxp

1507. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 22:25:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7gso2vcqu5mmcf49eib92irq8bc50qc3ob@4ax.com>
Source record: 126595

On Mon, 20 Jan 2003 15:31:58 -0600 (CST), richardharrison@webtv.net (Richard Harrison) wrote:

>
>Well. I beg to differ. It`s easy to do with a fair oscilloscope and
>generator. It`s even easy to do with a better "true rms voltmeter".
>These employ cheap "true rms converter chips".
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

You may protest, but unless your skills at graphical analysis of complex waveforms is exceedingly expert, you stand absolutely no chance of rendering an RMS valuation to any order of accuracy without exceptional instrumentation to take up your shortfall.

The ONLY measurements of any accuracy in most instrumentation is confined to absolutely distortionless sine waves of a frequency within the range of the meter's pass band (very often exceptionally limited and equally poor).

It is a cruel joke that meters with more digits than accuracy have flooded the market offering the hollow promise of extended resolution. True RMS meters (and they are marketed as such as you have noted) are exceedingly rare in comparison and few extend into even modest AF (10 - 20 KHz). The conversion chips may be cheap (not an assumption I would subscribe to), but they are hardly universal.

As an example, I have a Radio Shack True RMS voltmeter (cost me about $100 at the time) that at best offers 3% accuracy 30Hz - 1KHz if and only if the Crest Factor is not exceeded (and frequently is in normal audio transmissions). This accuracy, by the way, comes with 10 times more resolution than error to give that warm squishy feeling of being in control.

73's
Richard Clark, KB7QHC

1508. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:10:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2p0ef4v5ujq40@corp.supernews.com>
Source record: 126596

Sorry to sound like a broken record, but it's important to always look under the hood of an "equivalent" source, to make sure that all the Joules you're playing with are accounted for. Again, the dissipation of a Thevenin or Noron equivalent can't be depended upon to have any particular relationship with the dissipation of the circuit it's replacing. But conservation of energy still has to work, even with the equivalent circuit. So the total energy delivered by all the sources, including the ideal source of an equivalent circuit, has to equal the total energy dissipated (and radiated) by all the load resistances, including the equivalent circuit load resistances. If it doesn't, then there's something wrong with the analysis.

Roy Lewallen, W7EL

Richard Clark wrote:
> On Mon, 20 Jan 2003 14:49:56 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Richard Clark wrote:
>>
>>>So then, Thevinin has a seat next to Riley on the FCC board? Does the
>>>FCC now do field tests of Norton sources too?
>>
>>Speaking of Norton sources, the dissipation in the source of the QEX
>>brainteaser is completely different between the Thevenin and Norton
>>sources.
>
>
> Uh, Cecil,
>
> This is something I pointed out to Roy about a month ago. It is a
> classic example of why NO ONE should look beneath the hood of an
> "equivalent" source.
>
> 73's
> Richard Clark, KB7QHC

1509. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:23:34 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b0i0dl$44s$1@knossos.btinternet.com>
Source record: 126597

```
>> Read Terman . . . .
>> Richard Clark, KB7QHC

=====================

Rich, why?

Surely you don't lack self-confidence, in dire need of additional support?

In any case very few people have ready access to 'bibles' or they wouldn't
enquire.

Your obedient clown,

Punchinello.

Alias G4FGQ
```

1510. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:25:54 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301201525.4752dc46@posting.google.com>
Source record: 126598

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<726-3E2C498F-29@storefull-2318.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "If an antenna were covered with an insulator and then with an aluminum
> skin ala a static shield would noise be reduced?"
>
> Possibly. Shielded loop antennas reduce static noise reception.
>
> QRN and QRM are ever present threats to reception. QRM comes from spark
> plugs and other electrical devices. QRN comes from thunderstorms and
> other sources of natural electrical discharges.
>
> Precipitation static is a natural noise source from charged particles
> falling on or near an antenna., or from an accumulation of charge
> building until it breaks down the resistance of the surrounding air and
> discharges.
>
> It is not clear what caused Art`s interference. Art observed mountain
> top interference. The location may have exposed Art to interference
> screened away at lower elevations. Mountain tops get rains not produced
> by climate conditions at lower altitudes. The rain cloud build up may
> introduce QRN right on site. The air is thinner at high altitude and
> makes electrical discharge easier.
>
> Insulated antennas are less troubled by precipitation static. A corona
> ball on the antenna tip reduces its static discharge. Pointed
> dischargers sited well away from the antenna may drain static and
> produce lower receiver noise levels.
>
> More data would be needed to make a better guess as to the source of
> Art`s noise.
>
> Best regards, Richard Harrison, KB5WZI

Richard you have pinpointed to what was in the back of my mind
i.e. the loop antenna which is why I was specific in referencing
to local noise rather than propagated noise. With my own antenna
I was wondering whether it would be worthwhile to shield the driven
element . I know little regarding the advisability of grounding like
the loop antenna and am cognisant of the fact that commercial
manufactures have not implimented shielding techniques probably for
the same reasons stated by Richard Clark. I do suspect however that
such a technique could well resolve problems when antennas are placed
close to each other which seems a common problem. Oh well, just a

thought that came to mind after thinking about old work experiences in
the islands.
Thanks to both for your inputs
Art

1511. Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:26:35 UTC
From: Mont O'Leary <k0ycn@arrl.net>
Message-ID: <LA%W9.888$UQ2.336510115@newssvr12.news.prodigy.com>
Source record: 126599

I'm looking for a design to home-brew a clip-on (or clamp-on) wattmeter that can be used to measure common-mode current on a coaxial feedline -- something similar in function to the Amprobe used for measuring mains current.

Something simple that could be used in conjunction with a digital voltmeter would be nice.

Thanks, Mont - K0YCN

1512. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:27:10 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <iB%W9.98898$kY3.5653849@twister.southeast.rr.com>
Source record: 126600

One more item to check on. When you are at sea, you are maritime mobile W4XYZ/MM. When you are docked you are part of the local country, thus need to have the license from the local government. No problem if you are docked at Key West, but if you are going to a Caribbean island, you will need a license from that authority.

That's my understanding, check with the ARRL, they have a pretty good source of foreign licensing requirements.

Good luck and good cruising,

73, Bill, W4WNT

"Darren418" <dream@alumni.utexas.net> wrote in message news:f9c1c3e6.0301191032.4a3dd813@posting.google.com...
> In about 2 weeks, I will be operating marine mobile HF from a 50'
> chartered sailboat in the Virgin Islands. The boat is equipped with a
> VHF radio, but no SSB equipment whatsoever, including no provision for
> an HF antenna.
>
> I would like to operate HF purely recreationally, so one or two bands
> is all I need to be able to operate on. My main constraint is size.
> We are each allowed to bring only one large dufflebag worth of stuff.
> My plan is to bring my Icom 706, power cords/adapters for 12 volt
> power, and one or two mono-band dipoles (plus 75' of RG8 50 ohm coax).
> Then string one end of the diploe up a halyard and secure the other
> end to about midway down the boom, so the dipole will be in basically
> a sloper configuration. The mast height is 55' so I should have
> plenty of height to do this including the small nylon cord I plan to
> use to secure each end of the dipole to the rigging. All rigging is
> metal, including the mast. Also, the system will only be used at
> anchor and not underway, so interfering with operation of the sails is
> not an issue.
>
> I am bringing at least a 10 meter center-fed dipole, and maybe a 15
> and/or 20 meter dipole as well. Question: should I also bring an
> antenna tuner or should I be able to trim the antenna once I set it up
> to achieve resonance? Since space in my duffel bag is at a serious
> premium already, I really can't bring the tuner unless I know ahead of
> time it'll be necessary. I know the rigging in close proximity to the
> antenna will detune it somewhat, but shouldn't I be able to still trim
> the antenna to resonance and NOT have to use a tuner? Am I asking for
> trouble by not bringing a tuner?

1513. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:30:29 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b0i0ql$r7j$1@sparta.btinternet.com>
Source record: 126601

Rich wrote -
> It is unfortunate that a myth
> is being promulgated that an antenna need not be resonant.

==========

The very original plagiarised old wives' tale in reverse ?

1514. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:34:30 UTC
From: starsekr@aol.com
Message-ID: <f2828edc.0301201534.17ac40b5@posting.google.com>
Source record: 126602

richardharrison@webtv.net (Richard Harrison) wrote in message news:<60-3E2B0289-85@storefull-2313.public.lawson.webtv.net>...

> Horizontal polarization is only good for near vertical incidence
> propagation because almost 2 wavelengths of antenna height is required
> of a horizontal antenna over sea water.

Richard,
Could you direct me to your source for this info? There is a chart in the ARRL Handbook (Antenna Fundamentals) "Effects of ground on the radiation of horizontal antennas..." If I'm reading the chart correctly, at one wavelength above ground, there is a major lobe maximum at 15 degs. This is about 35 foot up for 10 meters
On another issue, since the proposed antenna is a sloping dipole, it will have a combination of horizontal and vertical radiation, which doesn't mean much after it makes a bounce or two off the ionosphere. Add to that the angle of the mast if he tries communication while sailing (daytime - 10 meters?). So my advice is don't worry about polarization.
Check out the general advice in the handbook on sloping dipoles; keep the antenna ends away from the mast and the hull, in fact keep the lower end higher then arms reach from someone standing on the seat in the cockpit. You might try a vertical dipole, the apex hanging down from the backstay a bit (which moves it away from the mast) and the feedline at right angles to the main halyard and down. The handbook recommends a balun on the antenna to help decouple the outer coax from effects of a metal support. I would take 2 extra pulleys (blocks) with you, each with a shackle and d-ring (the type called "dinghy size") and 200 feet of parachute cord, as well as 20 feet of 1/2 inch copper braid and some stainless hose clamps as well as a roll of duct tape and 20 or 30 plastic ty-wraps.
Good luck and tell us how it went,
Jim, KA6TPR

1515. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:36:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b0i16l$4d3$1@venus.btinternet.com>
Source record: 126603

Cec wrote -
> All I care about is where my antenna *system* is resonant.

==========

Cecil, no you don't !

Just be honest about it - all you care about is whether you transmitter
sees 50 ohms or not as indicated on your TLI. ;o)

Yours, Reg.

1516. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:37:41 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C8845.2000807@ieee.org>
Source record: 126604

Richard Clark wrote:
> You don't need MS products to write ï¿½ther (ALT-0198) or ï¿½ther
> (ALT-0230).

They tell me Apples won't do that.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1517. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:46:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b0i1oa$sl6$1@sparta.btinternet.com>
Source record: 126606

Cec, it appears you're obsessed with the idea that all can be explained in terms of tuned feeders.

Most others are obsessed with their own narrow minded ideas. All appear ignorant of the fact that resonance is also associated with high resistive impedances.

Art appears to be under the mistaken impression he can learn something from the discussion. But please keep trying.

Really, it's all so very simple and obvious.

But I'm just a poor ill-educated foreigner with less time on my hands.

;o) ;o) ;o)

Reg, G4FGQ

--
========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E2C471E.7010100@ieee.org...
> Art Unwin KB9MZ wrote:
> > Exactly, I did not use the term 'resonance' alone as if I was
> > referring to any old resonance, I specifically qualified it by
> > referring to the 'lowest impedence' a point that appears to be
> > overlooked.
>
> Art, did you consider what happens to resonance when you install
> a stub at the 'lowest impedance' point? The resonant frequency
> changes. That's what happens with tuned feeders.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1518. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:46:51 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <9v1p2v0gi1l0h956imfggcsc1jcg8aehlr@4ax.com>
Source record: 126605

On Mon, 20 Jan 2003 22:25:02 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:
[snip]
|
|Hi Richard,
|
|You may protest, but unless your skills at graphical analysis of
|complex waveforms is exceedingly expert, you stand absolutely no
|chance of rendering an RMS valuation to any order of accuracy without
|exceptional instrumentation to take up your shortfall.
|
|The ONLY measurements of any accuracy in most instrumentation is
|confined to absolutely distortionless sine waves of a frequency within
|the range of the meter's pass band (very often exceptionally limited
|and equally poor).
|
|It is a cruel joke that meters with more digits than accuracy have
|flooded the market offering the hollow promise of extended resolution.

Ain't that the truth.

|True RMS meters (and they are marketed as such as you have noted) are
|exceedingly rare in comparison and few extend into even modest AF (10
|- 20 KHz). The conversion chips may be cheap (not an assumption I
|would subscribe to), but they are hardly universal.

Uh, how about an HP 8481 (or equivalent) thermistor power sensor? You
put in watts at your choice of frequency (ies) and waveform, the
thermistor gets hot and unbalances a bridge. The unbalance is
measured and converted to a DC equivalent and displayed as a power
reading.
|
|As an example, I have a Radio Shack True RMS voltmeter (cost me about
|$100 at the time) that at best offers 3% accuracy 30Hz - 1KHz if and
|only if the Crest Factor is not exceeded (and frequently is in normal
|audio transmissions). This accuracy, by the way, comes with 10 times
|more resolution than error to give that warm squishy feeling of being
|in control.

Can you say handheld "antenna analyzer?"

1519. Re: Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:54:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C8C23.20508@ieee.org>
Source record: 126608

Mont O'Leary wrote:
> I'm looking for a design to home-brew a clip-on (or clamp-on) wattmeter that
> can be used to measure common-mode current on a coaxial feedline --
> something similar in function to the Amprobe used for measuring mains
> current.
>
> Something simple that could be used in conjunction with a digital voltmeter
> would be nice.

Let me describe what I use. I have an Amidon FT-114-61 ferrite toroid
with 20 turns of magnet wire. The toroid is slipped over an S0-239
barrel connector and two nuts hold the toroid in place. Coax cables
can screw on each end of the barrel connector. The 20 turns goes to
a small PC board with a load resistor, 1N34, and an RC filter which
then drives my DC digital voltmeter. It gives relative readings. The
PC boards and components are left over from a commercial endeavor I
was involved in years ago. It rectifies RF. If anyone is interested
in acquiring one of these PC boards, please send me an email.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1520. Re: Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:54:42 UTC
From: jgboyles@aol.com
Message-ID: <20030120185442.22075.00000170@mb-ca.aol.com>
Source record: 126607

>I'm looking for a design to home-brew a clip-on (or clamp-on) wattmeter that
>can be used to measure common-mode current on a coaxial feedline --
>something similar in function to the Amprobe used for measuring mains
>current.

Hi, Mont Head for your local Radio Shack and get RS part # 273-105. Snap together ferrite choke core. Wind about 3 turns of #30 wire through core to use as a pickup. Down at your DVM make a diode detector with 1N34 diodes and .01 caps in a voltage doubler circuit. I made mine on a small RS circuit board with banana plugs that plug directly into the DVM. Very sensitive, I can get readings when using an MFJ-259 as a signal source.
This core will work with RG-8x coax, but I don't think it will snap around full size RG-8. Good luck, hope you don't find too much common current.
73 Gary N4AST

1521. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:56:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C8CC8.9090104@ieee.org>
Source record: 126610

Reg Edwards wrote:
> Cec wrote -
>
>>All I care about is where my antenna *system* is resonant.
>
> Cecil, no you don't !
>
> Just be honest about it - all you care about is whether you transmitter
> sees 50 ohms or not as indicated on your TLI. ;o)

Actually, with my no-tuner setup, I do care where my antenna system
is resonant as that point makes my transmitter happy.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1522. Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:57:52 UTC
From: starsekr@aol.com
Message-ID: <f2828edc.0301201557.48b31b4b@posting.google.com>
Source record: 126609

With the price of SA's below $200 on ebay and at swap meets, I've been
getting a bug to buy one of these. Does anyone want to offer pro's
and cons on different types, such as the HP-140 or 141 systems or
Tektronix 7000 series scopes with a SA plug-in?
Both general observations or specific recommendations are welcome.
Jim, KA6TPR

1523. Re: Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-20 23:59:29 UTC
From: k9sqg@aol.com
Message-ID: <20030120185929.07691.00000093@mb-mg.aol.com>
Source record: 126611

Palomar used to make such a device. QST had a construction article for one also but I don't remember the reference info.

73s,

Evan

1524. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 00:00:01 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2C8D81.8040303@ieee.org>
Source record: 126612

Reg Edwards wrote:
> Cec, it appears you're obsessed with the idea that all can be explained in
> terms of tuned feeders.

Not if you don't have a tuned feeder. :-)

> Most others are obsessed with their own narrow minded ideas. All appear
> ignorant of the fact that resonance is also associated with high resistive
> impedances.

When I was at Texas A&M, we called that point the anti-resonant point.
Sort of like the series Vs parallel resonant point in a XTAL.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1525. Decoupling 2m antenna feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 00:05:00 UTC
From: castles <castles@yestertronics.com>
Message-ID: <3E2C8EAC.FD6371F3@yestertronics.com>
Source record: 126613

I am putting my 2 meter 24 element beam, vertically polarized, over a tri band beam. I have installed a section of fiberglass tubing to support the two meter beam above the tri-bander. I am thinking of winding the feedline around the fiberglass tube on its way down to isolate it from effecting the two meter beam parameters. I was thinking of widely spaced turns of RG8/U (i.e. two turns per foot)

Have any of you used this technique?
How about further isolation at the feed point? I this needed when the coax is mounted along the boom on its way back to the mast? I am guessing that a good drip loop is adequate here.

One last question. What is a good coating to use over the electrical connections. Is regular old silicone sealant a good choice?

Thanks, Don

1526. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 00:14:51 UTC
From: tdonaly@aol.com
Message-ID: <20030120191451.18373.00000092@mb-mc.aol.com>
Source record: 126614

Cecil wrote,
>
>Tdonaly wrote:
>> Cecil wrote,
>>>Last time Richard and I took the time to look, a pure sine wave is linear.
>>
>> Would you like to explain that?
>
>Sure, Tom. All of the periodic waveforms that you mentioned can
>be broken down into their Fourier series components, which are pure
>sine waves, and can be linearly analyzed separately and independently
>of each other. What you will find is that all the non-fundamental
>frequency components are exposed to a very low impedance to ground
>or a very high series impedance and thus are not allowed to reach
>the output. Ideally, the only component of that Fourier series
>that is allowed to reach the output is the fundamental frequency
>component and will be as close to a sine wave as we can make it.
>
>Thus, for the purposes of our analysis, the filtered Class-C source
>can be considered to be a pure sine wave at the fundamental frequency.
>If you so desire, you can use linear math to analyze all the other
>frequency components but doing so is only of academic interest since
>the FCC requires that we get rid of those components somehow.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>
I know what you're saying, Cecil. Because you can get a sine wave out
of a switch and a tank circuit, you contend your circuit can be replaced, for
analysis,
by a linear combination of a source and a "dissipationless resistor." You
then reify this abstraction and use it to justify Walt Maxwell's conjugate
match theorem for amplifiers. Fine. This has caused a lot of controversy in
the past. Hopefully, it will in the future, too.
73,
Tom Donaly
(P.S. I was hoping you'd tell me what makes a disembodied sine wave linear.)

1527. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 00:24:41 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2C92EC.8040908@attbi.com>
Source record: 126615

>
> Truth is, no one here has faithfully measured the RMS value of
> anything over 1KHz.
>
> 73's
> Richard Clark, KB7QHC

I beg to differ! I have measured true RMS! I did it for a full summer in 1959*. I did it in a Precision Measurements Standards Laboratory. I made measurements at frequencies between 24 GHz and 100 GHz on military magnetrons. I was a technician between my Junior and Senior year in college. It is a very straight forward measurement if you simply stop for a moment and consider what RMS means.

RMS equates to HEAT, to Power delivered to a load! Example: 1.00 Volt DC connected to a 1.00 ohm resistor delivers 1 watt +/- 1%. A 1.414 peak, 2.828 peak to peak, sine wave voltage, 1.000 VRMS, delivers the same power, i.e. causes the same temperature rise, in the load resistor. Independent of waveform, temperature rise is a direct measurement of voltage*current = RMS.

The test setup was a dummy load cooled by a controlled flow rate of distilled water. Temperature rise in the water is directly proportional to power delivered, independent of waveform!! Temperature rise is a measurement of RMS values. The specific heat of water at 68 degrees F and 1 standard atmosphere is well know. The volume of water in a 1 minute interval is precisely measured by the flowmeter. The temperature was measured using two precision mercury thermometers, one at the cool water input the second at the heated water output. Total accuracy was approximately 2% limited by the ability to measure temperature.

Production lines in Microwave component fabrication facilities calibrate a power measurement Bolometer and series attenuators and can make RMS measurements within 5% by basically unskilled labor.

Be careful with blanket statements.

Most amateurs do not have the capability to measure true RMS. But, it has been done by some of us.

73, Deacon Dave, W1MCE

* 1959, BOMAC Microwave Devices, Beverly Massachusetts
++++++++++++++++++++++

1528. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 00:28:26 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2C93CD.1090205@attbi.com>
Source record: 126616

Well I'm still dating myself, but more like a fine wine.

Too bad I'm almost a teetotaler [sp?] except for a small sip
[< 1/4 teaspoon] of altar wine 3 to 5 times a week. <grin>

OC_CAM's Razor wrote:
> Dave Shrader wrote:
>
>> Hey Cecil! We agree!!
>
>
> Yep, except on the subject of dating ourselves. I tried
> it and I've never had a more boring date. :-)

1529. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 00:42:13 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2C9707.9070200@attbi.com>
Source record: 126617

I'm 100% IGNORANT in the field of Astronomy!

My formal background is Electrical [not electronic] Engineering [circa 1960]. My professional background includes 20 years working with Nuclear PHD's. So, they pushed my physics a little bit in their direction. We had to communicate [understand] one another. I was stuck as the 'boss'.

When I retired I considered pursuing a PHD in Physics just to round out [formalize] my education. But all the universities I contacted wanted me to re-matriculate as Freshman in Physics 101. [I used to teach Physics 101 and 102 as an undergradute instructor].

So, I finally decided to major in RETIREMENT, church ministry, fishing and ham radio. My wife has me employed as Mr. MOM :-(

Now, do I presume that DARK Energy is Related to DARK Matter by the speed of DARK Light squared?? [De = Dm * Dc^2]

Deacon Dave, W1MCE
++++++++++++++++++

Richard Clark wrote:

> Hi All,
>
> Both of you appear to be stuck in the Astronomy of several decades
> back (when you guys were last in school?).
>
> In recent years there has been much discussion into the "missing"
> matter of the universe that has been shown to "perhaps" be explained
> for with Dark Matter. Astronomers seem to have been fairly satisfied
> with this new concept in Physics as they are now talking about Dark
> Energy.
>
> 73's
> Richard Clark, KB7QHC

1530. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 00:56:08 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0301201656.2132a360@posting.google.com>
Source record: 126618

brianburke@juno.com (Brian) wrote in message
news:<f45722ac.0301191317.7411f7a7@posting.google.com>...
> richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18349-3E28385C-126@storefull-2314.public.lawson.webtv.net>...
> > Art Unwin, KB9MZ wrote:
> > "Please back off so that some decorum can return to this group."
> >
> > Beautifully said, Art. All the poster has done is agitate the group for
> > no use.
> >
> > Best regards, Richard Harrison, KB5WZI
>
> Same stuff, different year. I'll check back with you guys in 2007.

Izzat when you expect to finally figger out how to put up ANY antenna
and actually get on the air?

w3rv

1531. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 01:00:28 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2C9B4E.9090201@attbi.com>
Source record: 126519

Art, take the antenna you define as resonant:

"Exactly, I did not use the term 'resonance' alone as if I was
referring to any old resonance, I specifically qualified it by
referring to the 'lowest impedence' a point that appears to be
overlooked."

so, the conclusion is that the exact same antenna has to be NON RESONANT
if it is end fed by open wire feeders [highest impedance point].

In either case a full 1/2 wave would be supported on the antenna with a
current maximum at the center.

Your definition has problems and I can't accept it. Try again.

My definition is "Resonant antenna supports an integral number of half
waves".

Deacon Dave, W1MCE

1532. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 01:05:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2p76e3dhbji91@corp.supernews.com>
Source record: 126520

I'm trying to make an honest effort to understand Walt's explanations, but am stuck with needing to understand the "dissipationless resistor". I need more information about how these behave before I can do any kind of circuit analysis to understand what's going on. Would someone who understands the concept of a "dissipationless resistor" please fill in the blanks for V and I below? It would really help me understand these things.

Suppose we have two black boxes, A and B. Box A contains a 100 volt RMS single-frequency voltage source in series with a 50 ohm resistor. Box B contains the same kind of source, but it's in series with a 50 ohm dissipationless resistor. Each has a set of terminals connected to the ends of the series circuit (i.e., as a typical Thevenin source). I'll define positive current as flowing out of the box from the terminal connected to the resistor. It would be very helpful to me in understanding this device and its characteristics if you would fill in the blanks for box B:

1. Terminals open circuited.
Box A: V = 100, I = 0
Box B: V = , I =
2. Terminals short circuited.
Box A: V = 0, I = 2
Box B: V = , I =
3. Terminals connected to a 50 ohm resistor.
Box A: V = 50, I = 1
Box B: V = I =
4. Terminals connected to a +j50 ohm inductance.
Box A: V = 50 + j50, I = 1 - j1
Box B: V = , I =
5. Terminals connected to a 100 volt voltage source (+ to +)
Box A: V = 100, I = 0
Box B: V = , I =
6. Terminals connected to a 50 volt voltage source (+ to +)
Box A: V = 50, I = 1
Box B: V = , I =
7. Terminals connected to a -2 amp current source (current in)
Box A: V = 200, I = -2
Box B: V = , I =
8. Terminals connected to a 2 amp current source (current out)
Box A: V = 0, I = 2
Box B: V = , I =

Any other examples you can come up with that illustrate the difference between the two boxes, as seen from the world outside the boxes, will be

welcome.

Thanks!
Roy Lewallen, W7EL

Tdonaly wrote:
>
> I know what you're saying, Cecil. Because you can get a sine wave out
> of a switch and a tank circuit, you contend your circuit can be replaced, for
> analysis,
> by a linear combination of a source and a "dissipationless resistor." You
> then reify this abstraction and use it to justify Walt Maxwell's conjugate
> match theorem for amplifiers. Fine. This has caused a lot of controversy in
> the past. Hopefully, it will in the future, too.
> 73,
> Tom Donaly
> (P.S. I was hoping you'd tell me what makes a disembodied sine wave linear.)
>
>

1533. Re: Decoupling 2m antenna feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 01:11:34 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <KLqcndEk48xHMbGjXTWcqg@ctc.net>
Source record: 126526

> I am putting my 2 meter 24 element beam, vertically polarized, over a
> tri band beam. I have installed a section of fiberglass tubing to
> support the two meter beam above the tri-bander. I am thinking of
> winding the feedline around the fiberglass tube on its way down to
> isolate it from effecting the two meter beam parameters. I was thinking
> of widely spaced turns of RG8/U (i.e. two turns per foot)
>
> Have any of you used this technique?
> How about further isolation at the feed point? I this needed when the
> coax is mounted along the boom on its way back to the mast? I am
> guessing that a good drip loop is adequate here.
>
> One last question. What is a good coating to use over the electrical
> connections. Is regular old silicone sealant a good choice?

I think the turns would be too small in diameter for rg-8 size coax. I would just bring it down the mast and not worry about it. It may distort the patern, but about the only other way is to run it out the back of the beam or mount two verticals and phase them.

Be careful of the silicon. Some of it will eat copper wire. I usually wrap the connector with some stuff like caax seal. The makeres of rthe Scotch electrical tape makes a product that is lke rubber but it will stick to its self . I wrap the connector with that and thena layer ot two of the Scotch tape.

1534. Re: Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 01:22:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2p87m2d500df0@corp.supernews.com>
Source record: 126521

Begin with a high-permeability (Fair-Rite/Amidon type 43 or 70 series or equivalent) split ferrite core. Wind 10 turns around one half the core. (Each pass through the hole when the core is assembled counts as one turn.) Connect a 50 ohm resistor across the winding. This is very important -- otherwise the core will choke the current, affecting the measurement. If you want, you can connect the winding to a piece of 50 ohm coax, and put the 50 ohm resistor on the far end of the coax instead of directly across the winding. This allows remote measurement. Clamp the core around the coax you're measuring.

The actual current on the outside of the coax shield = N * V / R, where

V = the RF voltage across the resistor
N = the number of turns on the core
R = the value of the resistance

For R = 50 and N = 10, the wire current in amperes = the resistor voltage in volts / 5.

The insertion impedance (that is, the impedance presented to the current by placing the core around the coax) is approximately R / N^2, or 0.5 ohms for the recommended values. This is low enough to not significantly disturb the current.

To convert the RF voltage into a DC voltage, you can use a diode detector consisting of a series diode and bypass capacitor of around 0.001 - 0.1 uF or so. A germanium diode will allow accurate measurements to the lowest voltage, followed by shottky diodes, then silicon. At moderate signal levels, you'll get the peak voltage, which is about 1.4 times the RMS value.

Roy Lewallen, W7EL

Mont O'Leary wrote:
> I'm looking for a design to home-brew a clip-on (or clamp-on) wattmeter that
> can be used to measure common-mode current on a coaxial feedline --
> something similar in function to the Amprobe used for measuring mains
> current.
>
> Something simple that could be used in conjunction with a digital voltmeter
> would be nice.
>
> Thanks, Mont - K0YCN
>
>
>

>

1535. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 01:35:30 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2CA385.6000107@attbi.com>
Source record: 126522

I can't resolve the author but as Roy points out there is a problem here:

"That is how the Class-C amplifier does it. A small signal controls the switch (the PA tube or transistor). The output is a series of short pulses. The output tank cleans up the signal to produce sine waves without the short pulses.

The incentive to use Class-C is an efficiency exceeding 50%. The extra efficiency is the direct result of dissipationless resistance (the off-time of the electronic switch)."

In a Class C amplifier there is no such thing as a 'dissipationless resistor"!

The efficiency in a class C amplifier comes from the duty cycle of the tube or semiconductor. Class C is by definition the condition where the device conducts for less than 1/2 cycle [i.e. < 50%].

A reminder: Class B is where the device conducts for 50% of the cycle; and Class A is where the device conductsd for 100% of the cycle.

So, for Class C operation the power device is driven into saturation for less than 50% of the duty cycle. Then it is cutoff for the remainder of the duty cycle. Class C power amplifier circuits generally run at 30% duty cycle.

This produces two dynamic impedances [resistances] the 'On' resistance and the 'Off" resistance. In a solid state device the 'On' resistance is less than 0.05 ohm and the 'Off' resistance is typically greater than 1 MegOhm. For Power Analysis a load line on the I-V curve between the cutoff point and the saturation point is used as a 'dynaimc resistance' primarily for the design of the matching output circuit.

As Roy and others have stated, the tuned circuits provide two functions. First, they optimize the fundamental signal and suppress harmonics in the output signal. Second they convert the 'dynamic resistance' to an equivalent 50 ohms for our coax.

So, the 'dissipationless' resistance is a non entity. The closest thing is the cutoff resistance of the power generating device when it's not generating any power.

So for circuit modeling, you now need two synchronized Thevinin [or Norton] circuits; one for the 'On' state and time, the second for the 'Off' state and time. It can be done with an non-symmetrical square wave generator driving first one Thevinin Circuit[On] then the other [Off].

Deacon Dave, W1MCE

1536. Re: Ruggedized HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 01:41:54 UTC
From: KB7M <kb7m@arrl.net>
Message-ID: <Cz1X9.312$Zw.71919@news.uswest.net>
Source record: 126523

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3e2c67d7_4@news1.prserv.net...
> Keith:
snip
>
> By the way, with the single exception of 6 meters, putting the station on
> top of a hill buys you only grief for local coverage. NVIS goes up from
> everywhere with sight of the clouds equally well.
>
> --
> Crazy George

I am aware that putting the remote on a hilltop will probably not improve my HF NVIS or other skywave coverage (even though it may improve groundwave coverage a little). The reason that we are putting the remote on the hilltop is to improve the coverage of the UHF repeater that is used to access it. In this case, obviously, higher IS better.

1537. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 01:56:20 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2CA866.6040602@attbi.com>
Source record: 126524

Isn't Linear really very simple?

If I have V(t1) = Vp*Cos(wt + Theta),

then any linear process produces:

V(t2) = k*V(t1) = k*(Vp*Cos(wt + Theta). {amplitude scaling}.

Any non-linear process produces:

V(t3) = [k1* Vp*Cos(wt + theta)] + [k2*Vp*(Cos(2wt) + theta)] +
[k3*Vp*Cos(3wt + theta)} ... ad infinity. {introduction of harmonics}

So, taking a non-symmetrical waveform as the output from a Class C amplifier [non -linear] and using it as the input to a tuned tank circuit [linear] results in a SYSTEM that optimizes the fundamental signal, k*Vp*Cos(wt+theta), and supresses the harmonic terms, k2*Vp*Cos(2wt+theta) etc. The circuit that performs the optimization and rejection is LINEAR in that it introduces NO HARMONIC terms.

RE: Electronic Circuits 202 and 203 etc.

Deacon Dave, W1MCE

1538. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 02:01:36 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-2001031801360001@bni030qny8kc.bc.hsia.telus.net>
Source record: 126525

In article <3E2C8845.2000807@ieee.org>, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

> Richard Clark wrote:
> > You don't need MS products to write ther (ALT-0198) or ther
> > (ALT-0230).
>
> They tell me Apples won't do that.

Another bit of misinformation about Macintosh computers.

I saw both the upper case diphthong and the lower case one, using
NewsWatcher on my 2001 model Mac G4 tower, in the several postings in this
thread where they appeared. Here they are:

Æ
æ

Can you Windows people receive them when a Mac sends them? If not, it's
not the first asymmetry between the platforms (Macs can read, and often
write, almost all Windows files with little trouble, but the opposite is
false).

David, ex-W8EZE, about ready to plunge into the UNIX world (the Mac OS X
version thereof), and disbeliever in both ther and ther

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

1539. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 02:12:19 UTC
From: richardharrison@webtv.net
Message-ID: <27985-3E2CAC83-3@storefull-2312.public.lawson.webtv.net>
Source record: 126527

Reg, G4FGQ wrote:
"The very original plagiarised old wives tale in reverse?"

Something like that.

There was an earlier posting today by a very knowledgeable amateur who seems to have bought the idea that size makes no difference up to a certain point where it becomes counterproductive, but up to that point larger is better. He obviously has missed the point that reactance needs to be neutralized internally or externally in the antenna system to get maximum performance.

The antenna doesn`t have to be a resonant length. I worked in a broadcast plant in 1949 in Houston which had a main antenna tower constructed and used for awhile by a station around 740 KHz. Stations on 950 KHz and 1320 KHz had moved in and shared the tower after the 740 KHz station moved out. Each of these new users succeeded in loading and using the same tower. The coverage of the 950 KHz and 1320 KHz stations was about the same and also about the same as the 740 KHz station had enjoyed. The reactance each station experienced at its frequency was tuned out and each station was isolated from the other by pass-reject filters.

So, the transmitting tower does not have to be inherently resonant at the transmitting frequency, but the reactance must be tuned out for the tower to load on the particular operating frequency for effetive power transfer. A separate adjustment is needed for each transmitter. Pass and reject filters were used with each transmitter to prevent interaction between them as they shared the tower.

At the end of WW-2, I bought a surplus military multiband receiver. It was equipped with an antenna trimmer knob. When the receiver was operated from a random wire antenna, I found adjustment of the knob often had a pronounced effect on receiver performance.

Similarly, many readers may have experienced the substantial difference tuning of the automobile radio trimmer makes at the high frequency end of the AM broadcast band.

Bottom line: resonance makes a difference on a standing-wave antenna system.

Best regards, Richard Harrison, KB5WZI

1540. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 02:47:03 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301201847.4c72b9f6@posting.google.com>
Source record: 126528

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<dkno2vkfbf07ecpl8ufct6lbg7isqbpe69@4ax.com>...
> On 20 Jan 2003 08:47:14 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> > the maintenance of resonance and high Q
>
> Hi Art,
>
> You have to separate out the meaning of Q from its application for
> this to make sense. In other words, you are applying an argument that
> is based on "unloaded Q" and applying it to a situation that demands
> "loaded Q."
>
> A High-Q antenna has relatively little loss by the definition of
> High-Q if we were to just say that and walk away. The problem with
> that is it condemns the antenna to a mute existence. High Q suggests
> nothing is radiated because the energy is still stored. On the other
> hand, a Low-Q antenna freely radiates (it is a poor storage device).
>
> Now, before you or others blow a fuse; this discussion of Q demands
> some context - again the loaded/unloaded aspect of Q's description.
> An unloaded High-Q suggests there is very little Ohmic loss in the
> structure. A loaded High-Q suggests there is very little radiative
> loss from the structure. An unloaded Low-Q suggests that power is
> being lost to resistance in the structure. A loaded Low-Q suggests
> that power is being lost to radiation (assuming is it is also NOT an
> unloaded Low-Q element). Thus to be useful as a measure of Quality,
> you should know/find/have both values.
>
> You've no doubt read correspondence where some build a superlative
> coil with a Q in the 100's. This is the unloaded specification. Read
> Terman and his comments about the common Tank circuit found in the
> last stage of a transmitter. The Q (loaded) of that resonant circuit
> is often less than 10 (Terman explains quite well). As the antenna is
> a direct beneficiary of that power, it would not serve radiation for
> that antenna to exhibit a higher Q (for the same reason Terman
> explained earlier).
>
> The pursuit for a loaded, exceptionally High-Q is about as specious as
> ironing out the last decimal from SWR.
>
> 73's
> Richard Clark, KB7QHC

O.K. Richard I am wrong in passing along information that is not true as
Roy stated for which I apologise to Roy and all. Does anybody want to buy a Terman book ? I have many of them unfortunately as I was not aware of the facts pertaining to the book that Roy has pointed out. To the others who took exception to what I stated, I feel that this was mainly due to the fact that they migrated beyond the point at issue where I attempted to stay in the first stage ie.extraction of energy from the ether at which I understood the question was posed. In the main I have no quarrel with facts provided by some
other than I considered it beyond the scope of the question i.e. considerations
to be made with respect to the conservation of the energy that has already been received.
I will now withdraw and learn from comments if the thread continues.
Again apologies to all especially to those who took umbrance to my intrusion.
Art.
Regards
Art

1541. Re: 2m antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 03:00:45 UTC
From: Ed <imctcomments@ac3l.com>
Message-ID: <xJ2X9.764716$WL3.754238@rwcrnsc54>
Source record: 126529

http://ac3l.com/tiny2.htm
http://ac3l.com/tiny3.htm

Ed

"Peter" <peterlmiles@hotmail.com> wrote in message
news:3e254776$0$5701$afc38c87@news.optusnet.com.au...
> See my web page for the antenna that I have built.
>
> http://members.optushome.com.au/vk3ysf/main.htm
>
> Cheers
>
> "Gregi" <gregi_9a6pgm@hotmail.com> wrote in message
> news:avsig0$i25$1@bagan.srce.hr...
> > if anybody have something or plans how to build a good antenna for
144-146
> > MHz please send it to my mail
> >
> >
>
>

1542. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 03:16:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2CBBA7.B7FC85AA@cwis.net>
Source record: 126530

Richard,
What loop shield? That wasn't how it was described,
was it?
'Doc

1543. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 03:23:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3cfp2vgbdk6e8hdqap4jkpa79jbikle986@4ax.com>
Source record: 126531

On Mon, 20 Jan 2003 15:10:05 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Sorry to sound like a broken record, but it's important to always look
>under the hood of an "equivalent" source, to make sure that all the
>Joules you're playing with are accounted for. Again, the dissipation of
>a Thevenin or Noron equivalent can't be depended upon to have any
>particular relationship with the dissipation of the circuit it's
>replacing. But conservation of energy still has to work, even with the
>equivalent circuit. So the total energy delivered by all the sources,
>including the ideal source of an equivalent circuit, has to equal the
>total energy dissipated (and radiated) by all the load resistances,
>including the equivalent circuit load resistances. If it doesn't, then
>there's something wrong with the analysis.
>
>Roy Lewallen, W7EL
>
>Richard Clark wrote:
>> On Mon, 20 Jan 2003 14:49:56 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>
>>>Richard Clark wrote:
>>>
>>>>So then, Thevinin has a seat next to Riley on the FCC board? Does the
>>>>FCC now do field tests of Norton sources too?
>>>
>>>Speaking of Norton sources, the dissipation in the source of the QEX
>>>brainteaser is completely different between the Thevenin and Norton
>>>sources.
>>
>>
>> Uh, Cecil,
>>
>> This is something I pointed out to Roy about a month ago. It is a
>> classic example of why NO ONE should look beneath the hood of an
>> "equivalent" source.
>>
>> 73's
>> Richard Clark, KB7QHC

Hi Roy,

I don't see why you would want to balance the energy books when the
Norton Equivalent and the Thevenin Equivalent are both Equivalent to

the same thing (insofar as what power is available at the terminals) and both are so very far apart (internally) in power consumption/efficiency. They are not only equivalent to each other, but certainly what they replace (the whole point of the exercise) and each is more than likely to offer different outcomes.

No. Equivalency was not offered to make life difficult or force tautologies.

From outside the source, there is nothing to be upset about. Look under the hood and you will find the Norton Source is an energy pig. Sure, all the energy needs to be accounted for, but that came free with the equivalent source and may be freely assumed. That is the whole point of substitution methods. What lies outside of the hood is what is under investigation, and absolutely nothing from under the hood is going to change that.

You don't have to introduce an equivalent source to foul up an energy budget - contrariwise, introducing an equivalent can have no effect but to prove you were fouling up already (which is to say it only confirms the error, and is never the source of it).

The ultimate test of this concern is that you cannot distinguish between a Norton source and a Thevenin source in the first place to perform the energy balance by considering the power load under the hood. In other words, your rational demands we violate Thevenin/Norton to preserve Conservation of Energy. That is a poor trade which is not demanded.

73's
Richard Clark, KB7QHC

1544. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 03:25:09 UTC
From: richardharrison@webtv.net
Message-ID: <721-3E2CBD95-143@storefull-2318.public.lawson.webtv.net>
Source record: 126535

Jim, KA6TPR wrote:
"Could you direct me to your source for this information?"

More or less. I remember Terman repeating this three times in the 1955 edition of "Electronic and Radio Engineering". I didn`t bookmark the pages, but a short search reveals one of the quotations and this one is on page 808:

"Examination of these vector diagrams shows that with a perfect reflector the horizontal component of electric fields will exactly cancel each other at the surface of the perfect reflector. In contrast, the vertical components of the incident and reflected waves do not cancel, but rather add at the surface with small angular values.'

From my own WW-2 experience at sea, we had to be within about 500 miles of a port station (about 2 days travel) to make radio contact. We had a low inverted L antenna, a type of Marconi antenna with little vertical height and considerable horizontal wire for capacitive loading. The navy wanted it that way to avoid DX interference and reduce detection by the enemy when we broke radio silence.

Best regards, Richard Harrison, KB5WZI

1545. 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 03:37:07 UTC
From: Jackie <no@address.given.com>
Message-ID: <Df3X9.765033$WL3.753902@rwcrnsc54>
Source record: 126532

Hi there,

I'm getting a 4 band vertical antenna on loan from a friend this coming weekend, and the only place I can put it in my yard (due to the presence of trees, most of which are very near to powerlines) is to strap it to my deck- away from said trees (rest of the yard's off-limits as well, due to various reasons). I know that verticals work best with a good radial system, but this is obviously going to be a problem with the antenna strapped to a wooden deck.

My question is this- what would work as a decent counterpoise for this type of set-up? I would be able to put the antenna on a 5' mast and drive that into the ground come springtime (ground is too frozen for that now) but as of this weekend, I need to use the temporary strap-to-the-deck-post method.

Any suggestions on what I might do for a counterpoise in this odd situation? I know that counterpoises are something of a compromise, but this is my first HF antenna set-up and I'd like to do whatever I can to make it even a little more effective.

Thanks and 73-

Jackie KC0ODY

1546. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 03:45:00 UTC
From: richardharrison@webtv.net
Message-ID: <721-3E2CC23C-152@storefull-2318.public.lawson.webtv.net>
Source record: 126537

Art, KB9MZ wrote:
"Does anybody want to buy a Terman book?"

Don`t despair and dump your Terman books. I`ve used Terman for 56 years and the only mistake I ever found was MHz in place of KHz or vice versa, and this only one time. Terman is the most accurate book I know of.

Best regards, Richard Harrison, KB5WZI

1547. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 03:49:36 UTC
From: tdonaly@aol.com
Message-ID: <20030120224936.05802.00000167@mb-mh.aol.com>
Source record: 126533

Deacon Dave wrote,
>
>Isn't Linear really very simple?
>
>If I have V(t1) = Vp*Cos(wt + Theta),
>
>then any linear process produces:
>
> V(t2) = k*V(t1) = k*(Vp*Cos(wt + Theta). {amplitude scaling}.
>
>Any non-linear process produces:
>
> V(t3) = [k1* Vp*Cos(wt + theta)] + [k2*Vp*(Cos(2wt) + theta)] +

>[k3*Vp*Cos(3wt + theta)} ... ad infinity. {introduction of
harmonics}
>
>So, taking a non-symmetrical waveform as the output from a Class C
>amplifier [non -linear] and using it as the input to a tuned tank
>circuit [linear] results in a SYSTEM that optimizes the fundamental
>signal, k*Vp*Cos(wt+theta), and supresses the harmonic terms,
>k2*Vp*Cos(2wt+theta) etc. The circuit that performs the optimization and
>rejection is LINEAR in that it introduces NO HARMONIC terms.
>
>RE: Electronic Circuits 202 and 203 etc.
>
>Deacon Dave, W1MCE
>
That works for your example: a sine wave. What defines it for a wave of
arbitrary
shape, or even a pulse?
73,
Tom Donaly, KA6RUH

1548. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 03:52:25 UTC
From: tdonaly@aol.com
Message-ID: <20030120225225.05802.00000168@mb-mh.aol.com>
Source record: 126534

>
>I'm trying to make an honest effort to understand Walt's explanations,
>but am stuck with needing to understand the "dissipationless resistor".
>I need more information about how these behave before I can do any kind
>of circuit analysis to understand what's going on. Would someone who
>understands the concept of a "dissipationless resistor" please fill in
>the blanks for V and I below? It would really help me understand these
>things.
>
>Suppose we have two black boxes, A and B. Box A contains a 100 volt RMS
>single-frequency voltage source in series with a 50 ohm resistor. Box B
>contains the same kind of source, but it's in series with a 50 ohm
>dissipationless resistor. Each has a set of terminals connected to the
>ends of the series circuit (i.e., as a typical Thevenin source). I'll
>define positive current as flowing out of the box from the terminal
>connected to the resistor. It would be very helpful to me in
>understanding this device and its characteristics if you would fill in
>the blanks for box B:
>
>1. Terminals open circuited.
> Box A: V = 100, I = 0
> Box B: V = , I =
>2. Terminals short circuited.
> Box A: V = 0, I = 2
> Box B: V = , I =
>3. Terminals connected to a 50 ohm resistor.
> Box A: V = 50, I = 1
Roy wrote,
> Box B: V = I =
>4. Terminals connected to a +j50 ohm inductance.
> Box A: V = 50 + j50, I = 1 - j1
> Box B: V = , I =
>5. Terminals connected to a 100 volt voltage source (+ to +)
> Box A: V = 100, I = 0
> Box B: V = , I =
>6. Terminals connected to a 50 volt voltage source (+ to +)
> Box A: V = 50, I = 1
> Box B: V = , I =
>7. Terminals connected to a -2 amp current source (current in)
> Box A: V = 200, I = -2
> Box B: V = , I =
>8. Terminals connected to a 2 amp current source (current out)
> Box A: V = 0, I = 2
> Box B: V = , I =

>
>Any other examples you can come up with that illustrate the difference
>between the two boxes, as seen from the world outside the boxes, will be
>welcome.
>
>Thanks!
>Roy Lewallen, W7EL
>

I'd like to know, too.
73,
Tom Donaly, KA6RUH

1549. Re: 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 04:02:52 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2CC66C.1664865C@cwis.net>
Source record: 126536

Jackie,
You might try stapling a couple of counterpose to
the edge of your deck. Ought to be able to 'noodle'
them around to sort of stay out of sight till you
decide on a permanent mounting place.
'Doc

1550. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 04:38:26 UTC
From: richardharrison@webtv.net
Message-ID: <21464-3E2CCEC2-121@storefull-2315.public.lawson.webtv.net>
Source record: 126539

Doc wrote:
"What loop shield?"

Art wrote
"___then an aluminum skin ala a static shield---."

I remembered something from Terman:
"Precipitation static can be minimized by the use of antennas that are either insulated wires or shielded loops---." Art proposed both insulation and a shield around the insulation. It`s like the Faraday shielded loop on page 1048 of the 1955 Terman.

I can go the distance on Faraday shields and loops but I`m sick and tired of it after an interminable argument with Tom, W8JI. Tom finally just went away. I don`t want to waste so much time again.

Best regards, Richard Harrison, KB5WZI

1551. Re: lat/lon conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 04:46:53 UTC
From: bowman <bowman@montana.com>
Message-ID: <b0ij7i$p73ml$1@ID-159066.news.dfncis.de>
Source record: 126538

Ron McConnell wrote:

> Before it does the MUF,
> it pauses to let the user check the results so far
> and save them to a file, quit or continue on to MUF.
> It's here that only the g77 compiled version seems
> not to see the user prompted input, like carriage return
> to continue, and just quits before doing MUF.
> (I can suppy the few lines of code,
> or the whole source.)

If you have a snippet where the problem occurs, I could try in with g77. I don't profess to be a FORTRAN guru but I've hacked around with it while trying to get a C version going. f2c makes such a hideous mess, I'd rather do it by hand if I have to maintain it.

1552. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 04:50:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2CD19D.50706@ieee.org>
Source record: 126540

Tdonaly wrote:
> I know what you're saying, Cecil. Because you can get a sine wave out
> of a switch and a tank circuit, you contend your circuit can be replaced, for
> analysis,
> by a linear combination of a source and a "dissipationless resistor." You
> then reify this abstraction and use it to justify Walt Maxwell's conjugate
> match theorem for amplifiers.

No, no, no. I am not attempting to justify a conjugate match. I think
a conjugate match or the lack thereof is irrelevant. In a matched
system, no reflected energy is allowed to reach the source so the
source impedance is completely irrelevant in a matched system. I don't
care if it's ten ohms dissipative or 1000 ohms non-dissipative or what.
I fail to see the importance of proving whether a conjugate match
exists or not. What difference does it make in reality?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1553. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 06:11:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i1pp2vc7h6km0cjgo3cem6c9q1rsajot9t@4ax.com>
Source record: 126541

On Mon, 20 Jan 2003 16:46:51 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>
>Uh, how about an HP 8481 (or equivalent) thermistor power sensor? You
>put in watts at your choice of frequency (ies) and waveform, the
>thermistor gets hot and unbalances a bridge. The unbalance is
>measured and converted to a DC equivalent and displayed as a power
>reading.

Hi Wes,

Bolometers are not in the standard repertoire either. However, using
calorimetry is the only honest deal in town.

I also recall using a 1/100 A fuse as a power detector (and no, not
from noting it was blown). It was part of a detector head for a piece
of gear I've lost track of its nomenclature (but HP seems to come to
mind).

73's
Richard Clark, KB7QHC

1554. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 06:47:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9dpp2v8545549kvcmcg8scjk8je6lbg0ph@4ax.com>
Source record: 126542

On Tue, 21 Jan 2003 00:24:41 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>
>Be careful with blanket statements.

Bite your tongue, this is the internet.

>
>Most amateurs do not have the capability to measure true RMS. But, it
>has been done by some of us.
>
>73, Deacon Dave, W1MCE
>
>* 1959, BOMAC Microwave Devices, Beverly Massachusetts

Hi OM,

Sure it was a blanket statement. I know Wes has done this work, and
maybe two others beside myselfï¿½, and now you. The point of
instruction was that modern technology has its own artifices and
smooth talkin' ways.

I remember having to calibrate my first True RMS meter from Fluke.
That portion of the circuitry had a problem and every component had
been scrubbed of its markings. On the schematic there was a gozinta
and a comesoutta - black box in between. An early form of IP control.
Back then, you only got True RMS in an expensive meter that cost more
than a $100. Today's cheaper chips allowed me to go to Radio Shack
and buy one for $100.

Aside from calorimetric methods, RMS is intensely math driven:
Root
Mean
Square
if done in linear silicon with any dynamic range at any HF frequency
is brutally expensive.

The fastest 8 bit ADC's I've used (20nS) are pretty lame by today's
standards; but to perform a good RMS with one would require a
significant number of samples to obtain decent accuracy. Such a chip
as those I've designed with could manage to capture an HF sine wave
with 3 to 10 points. Pretty slim outline if you stray from an
undistorted sine wave.

73's
Richard Clark, KB7QHC

ï¿½ USAF Metrology School, Lowry AFB, Denver Colorado

1555. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 06:52:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2prgpocc6kpa9@corp.supernews.com>
Source record: 126543

I'm not sure exactly what you said, but I'll try again.

In any circuit we draw up, the total power supplied by the sources better equal the power dissipated by the resistances. This has to be true whether we use a Norton or Thevenin equivalent or not. It also has to be true if we put the equivalent (or any other part of the circuit) into a box and only look at the power going into or out of the box, considering it to be a load or source accordingly.

The reason I keep beating on this drum is that I've gotten the impression from some recent postings that some people think it's ok for power out of sources to not equal power dissipated by loads if a Thevenin or Norton equivalent is used. It's not ok. They've still got to add up. That's all I'm trying to say.

Roy Lewallen, W7EL

Richard Clark wrote:
> On Mon, 20 Jan 2003 15:10:05 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>Sorry to sound like a broken record, but it's important to always look
>>under the hood of an "equivalent" source, to make sure that all the
>>Joules you're playing with are accounted for. Again, the dissipation of
>>a Thevenin or Noron equivalent can't be depended upon to have any
>>particular relationship with the dissipation of the circuit it's
>>replacing. But conservation of energy still has to work, even with the
>>equivalent circuit. So the total energy delivered by all the sources,
>>including the ideal source of an equivalent circuit, has to equal the
>>total energy dissipated (and radiated) by all the load resistances,
>>including the equivalent circuit load resistances. If it doesn't, then
>>there's something wrong with the analysis.
>>
>>Roy Lewallen, W7EL
>>
>>Richard Clark wrote:
>>
>>>On Mon, 20 Jan 2003 14:49:56 -0600, OC_CAM's Razor
>>><Cecil.A.Moore@ieee.org> wrote:
>>>
>>>
>>>
>>>>Richard Clark wrote:
>>>>

>>>>
>>>>>So then, Thevinin has a seat next to Riley on the FCC board? Does the
>>>>>FCC now do field tests of Norton sources too?
>>>>
>>>>Speaking of Norton sources, the dissipation in the source of the QEX
>>>>brainteaser is completely different between the Thevenin and Norton
>>>>sources.
>>>
>>>
>>>Uh, Cecil,
>>>
>>>This is something I pointed out to Roy about a month ago. It is a
>>>classic example of why NO ONE should look beneath the hood of an
>>>"equivalent" source.
>>>
>>>73's
>>>Richard Clark, KB7QHC
>>
>
>
> Hi Roy,
>
> I don't see why you would want to balance the energy books when the
> Norton Equivalent and the Thevenin Equivalent are both Equivalent to
> the same thing (insofar as what power is available at the terminals)
> and both are so very far apart (internally) in power
> consumption/efficiency. They are not only equivalent to each other,
> but certainly what they replace (the whole point of the exercise) and
> each is more than likely to offer different outcomes.
>
> No. Equivalency was not offered to make life difficult or force
> tautologies.
>
> From outside the source, there is nothing to be upset about. Look
> under the hood and you will find the Norton Source is an energy pig.
> Sure, all the energy needs to be accounted for, but that came free
> with the equivalent source and may be freely assumed. That is the
> whole point of substitution methods. What lies outside of the hood is
> what is under investigation, and absolutely nothing from under the
> hood is going to change that.
>
> You don't have to introduce an equivalent source to foul up an energy
> budget - contrariwise, introducing an equivalent can have no effect
> but to prove you were fouling up already (which is to say it only
> confirms the error, and is never the source of it).
>
> The ultimate test of this concern is that you cannot distinguish
> between a Norton source and a Thevenin source in the first place to
> perform the energy balance by considering the power load under the
> hood. In other words, your rational demands we violate

> Thevenin/Norton to preserve Conservation of Energy. That is a poor
> trade which is not demanded.
>
> 73's
> Richard Clark, KB7QHC

1556. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 07:05:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2CF14E.6050604@ieee.org>
Source record: 126544

Roy Lewallen wrote:
> The reason I keep beating on this drum is that I've gotten the
> impression from some recent postings that some people think it's ok for
> power out of sources to not equal power dissipated by loads if a
> Thevenin or Norton equivalent is used. It's not ok. They've still got to
> add up. That's all I'm trying to say.

Hi Roy, try the QEX brainteaser on page 3 at

http://neoamateur.org/downloads/qex/lett0103a.pdf

using Norton equivalent sources and see what you get for power
dissipation in their internal resistances.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1557. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 07:08:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9isp2vodhi5a7nlmv8m51avpq5njfges6h@4ax.com>
Source record: 126545

On Tue, 21 Jan 2003 00:42:13 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>
>Now, do I presume that DARK Energy is Related to DARK Matter by the
>speed of DARK Light squared?? [De = Dm * Dc^2]
>
>Deacon Dave, W1MCE

Hi OM,

Well done!

Reminds me of one of the early posters for Light Emitting Diodes that
spoofed the technology by offering a Darkness Emitting Diode or DED.

73's
Richard Clark, KB7QHC

1558. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 07:14:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4vsp2v4fmoankpj31c0cckn2t30bhepcat@4ax.com>
Source record: 126546

On Mon, 20 Jan 2003 18:01:36 -0800, ryeburn@sfu.caz (David or Jo Anne Ryeburn) wrote:

>
>ï¿½
>ï¿½
>
>Can you Windows people receive them when a Mac sends them?

Hi David,

Nope can't tell at all. ;-)

Actually, the character set is ANSI defined I believe and perhaps a function of NNTP.

73's
Richard Clark, KB7QHC

1559. Re: Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 07:24:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mjtp2vkb254ncpvilflqlt30ij5rrc0lkk@4ax.com>
Source record: 126547

On Mon, 20 Jan 2003 23:26:35 GMT, in rec.radio.amateur.antenna you
wrote:
>I'm looking for a design to home-brew a clip-on (or clamp-on) wattmeter that
>can be used to measure common-mode current on a coaxial feedline
Hi Mont,
Split ferrite as others have mentioned;
One LED with leads shorted inside the center.
Very sensitive up to about 40mA. Or if you want to go Old Tech (and
still Low Tech) simply stick an NE-2 along side the coax.

73's
Richard Clark, KB7QHC

1560. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 07:37:23 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301202337.12ddda33@posting.google.com>
Source record: 126548

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<21466-3E2C5310-1@storefull-2315.public.lawson.webtv.net>...
> Mark, NM5K wrote:
> "At a non-resonant frequency, feeder losses are high. But there is no
> shortage of energy being received in this case."
>
> Unless the impediment of a high reactance is removed from an antenna, it
> won`t receive a large induced current. So the standing-wave type antenna
> must be resonant to get a large current. It is unfortunate that a myth
> is being promulgated that an antenna need not be resonant.
>
> I`ll give an example. The radio station where I worked had a pattern
> null monitoring point measure much too much signal. A scan of the
> horizon revealed a new grounded tower of about !/4-wave height at our
> frequency, not far distant from our station. We ended up hanging wires
> on the new tower to detune it. That robbed the new tower of its resonant
> current and our null signal strength was right back down to normal. It
> was as if the new tower did not exist.

I'm not sure if this totally applies to the main gist of this thread
though.
But I'm still of the opinion that "antenna resonance" is of no real
concern for good performance. Only the efficient transfer of power
from the radio to the antenna really matters. Take an extended double
zepp with .64 wave per leg. On it's design frequency, the antenna is
not resonant. You can feed it in many ways, but as long as the power
is not lost, the performance and pattern will be the same. You can
feed the antenna with open wire line with good results. No regard is
given to tuning out reactance, except at the rig end with the tuner,
or cut tuned line. But the "antenna" itself, is still not resonant.
You are matching the line to the rig at the radio end. And if the
feedline losses on all HF frequencies are low, there will be no
shortage of energy to the radio on any band. It could be used as an
all band SWL antenna with good results.
But you could take a different route and tune the legs themselves to
3/4 wave resonance which will give a good match to coax. This method
has just shifted the
matching to the antenna / feedline junction. The element length would
still not be a "resonant" length, but the radiator itself would be
resonant as 3/4 wave per leg, or a 1.5 wave total. Either way,
assuming equal line losses, the performance, gain, pattern will be the
same. But using coax, the antenna will not perform as well for all
band use due to higher losses with coax and high SWR. Nothing has
changed with element length.

Or you could take the "Cecil" route and use a tuned line....Still would be the same performance as the other two with equal line losses, and again, the antenna would not be resonant. Only the overall system. The bottom line is antenna resonance doesn't matter in this case. Only low loss feedlines and matching devices. Making an element "resonant", as in adding short coils to tune to 3/4 wave per leg adds no increase in gain over the non resonant elements of equal length. It's only needed to supply a good match to low Z coax.
Take a random wire shortwave listening antenna. It's not resonant at many of the frequencies it may be used on, but there is still no shortage of energy to the radio on any of those bands. But there are no feedline or feedline losses either. The only problem could be a severe mismatch to the radio itself in some cases. Well, anyway, this should add further confusement...:/ MK
MK

1561. Re: Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 07:37:27 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Cvy2C3F3iPL+EAbB@ifwtech.co.uk>
Source record: 126550

Mont O'Leary wrote:
>I'm looking for a design to home-brew a clip-on (or clamp-on) wattmeter that
>can be used to measure common-mode current on a coaxial feedline --
>something similar in function to the Amprobe used for measuring mains
>current.
>
As well as all the other good replies, there's a page at:
www.ifwtech.co.uk/g3sek/in-prac/clip-on.htm
(also available in Japanese!)

This is one of the most useful instruments you can build - and also one
of the simplest. For RFI work it's absolutely indispensable!

The downside is that you'll use it so much, the plastic hinge on the
split core will break (well, it never was meant for repeated use). It's
worth the trouble to build it a little better using a spring clamp.

>Something simple that could be used in conjunction with a digital voltmeter
>would be nice.

For many purposes such as RFI investigations, it's better to have a
small moving-coil meter built into the instrument, to give you
on-the-spot indications. For the occasional accurate measurement,
include a jack where you can plug in the DVM.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1562. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 07:50:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <10vp2vcakutfjp9a7hee861pcd40k728j2@4ax.com>
Source record: 126549

On Mon, 20 Jan 2003 17:05:15 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Any other examples you can come up with that illustrate the difference
>between the two boxes, as seen from the world outside the boxes, will be
>welcome.
>
>Thanks!
>Roy Lewallen, W7EL

Hi Roy,

Put your hand on it, the box with the dissipationless resistor is
cooler.

73's
Richard Clark, KB7QHC

1563. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 09:28:44 UTC
From: "Ron P." <rpackerii@neo.rr.com>
Message-ID: <gp8X9.30251$i73.7462989@twister.neo.rr.com>
Source record: 126551

Ok, quick update...

on Sunday, I was able to talk to K7PIG in AZ on the A99 (had to go to work, cut ragchewing out). Monday, talked to G0DKM in UK (I am in Ohio) on 28.500 USB for a bit. QSL in mail. Thanks alot folks, and as soon as our Hamfest is here (2 more weeks!!) I am hoping to get a tuner, paddles, and antenna for 160 (75/80 dipole on the way)!

73!
Ron - kc8ulu
"KB9TMP" <kb9tmp@juno.com> wrote in message
news:v2mgsjaq1pbv29@corp.supernews.com...
>
> "Ron P." <rpackerii@neo.rr.com> wrote in message
> news:jAjW9.25183$i73.4382336@twister.neo.rr.com...
> > I just passed my morse code/General exam and I was wondering if my old
> > pre-ham (for me) Antron 99 can be used for 10/12 meters? I don't have
any
> > extra spending money to buy a new antenna and was wondering if this
could
> be
> > tuned for these bands. Thanks!
> >
> > Ron - kc8ulu/ag
> >
> >
>
> Ron
> I'm using a A99 with a cheap MFJ-945E tuner
> and I can run 10-17 meters just fine. It really out
> does the G5RV that I use also on those frequencies.
> But for anything outside of 10m you have to use the
> tuner to make it work. Enjoy and congrats on the
> upgrade!!!
>
> --
> '73' From KB9TMP
> "The secret of life is honesty and fair dealing,
> if you can fake that, you've got it made."
> -Groucho Marx
>
>
>

1564. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 09:38:13 UTC
From: andy swiffin <a.l.swiffin@dundee.ac.uk>
Message-ID: <3e2d15e3$1@news1.tay.ac.uk>
Source record: 126552

"Richard Clark" <kb7qhc@attbi.com> wrote in message > >
>
> This is simply what you will get if you buy one (50:200).
> The number of turns exactly correlates to ability of the BalUn to
> present a high Z between the input and output (lacking that, you have
> a short, and certainly a useless BalUn).
>....
> 73's
> Richard Clark, KB7QHC

Hi,
Richard, thanks for that reply, I printed it off and have been studying it over the weekend, its good stuff. I think I now understand what I'm trying to do.

Am I right in thinking that if I've produced a balun correctly I should be able to take a 12.5 ohm resistance and place it across the end, when its energised with HF from a 50ohm source I should see a 1:1 SWR at the 50ohm end?

I tried a few rough mock ups at the weekend and that wasn't the case, but I only have some very cheap small (1.4 inch) toroids available and even for mock up I purposes I don't think they were up to much. I guess I just wasn't creating a high enough Z to isolate the output from the input?

Cheers
Andy

1565. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 09:52:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2q63koqmuma36@corp.supernews.com>
Source record: 126553

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> The reason I keep beating on this drum is that I've gotten the
>> impression from some recent postings that some people think it's ok
>> for power out of sources to not equal power dissipated by loads if a
>> Thevenin or Norton equivalent is used. It's not ok. They've still got
>> to add up. That's all I'm trying to say.
>
>
> Hi Roy, try the QEX brainteaser on page 3 at
>
> http://neoamateur.org/downloads/qex/lett0103a.pdf
>
> using Norton equivalent sources and see what you get for power
> dissipation in their internal resistances.

Sure.

I chose my two sources as follows:

The left hand source: An ideal current source of current 2*sqrt(P/R)
amps, in parallel with a resistor of R ohms.

The right hand source: An ideal current source of current
(4/3)*sqrt(P/R) volts, in parallel with a resistor of 3R ohms.

The requirement that the source impedances be R and 3R are satisfied by
inspection. You can easily calculate that when the sources are initially
turned on, each delivers P watts into the line, as required by the problem.

In steady state, conditions are:

The meter reading power to the right reads P watts.
The meter reading power to the left reads (9/4)P watts.
Consequently, there's a net power flow of (5/4)P watts to the left.

The left current source produces 5P watts.
The right current source produces (10/3)P watts.
The left source resistor dissipates (25/4)P watts.
The right source resistor dissipates (25/12) watts.

The total power produced by the sources = (25/3) watts.
The total power dissipated by the resistors = (25/3) watts.

All the power is accounted for.

The net current at each end of the cable is (1/2)*sqrt(P/R) to the left.
The voltage at each end of the cable is (5/2)*sqrt(PR).
The voltage of the wave traveling to the right is sqrt(PR).
The current of the wave traveling to the right is sqrt(P/R).
The voltage of the wave traveling to the left is (3/2)*sqrt(PR).
The current of the wave traveling to the left is (3/2)*sqrt(P/R).

Took about 20 minutes, and nothing other than Ohm's and Kirchoff's laws.
It's really a simple problem. Was there supposed to be some trick to it?

Thevenin sources were slightly little more interesting, since the
voltage source on the left dissipates rather than sources power in the
steady state. But it's basically the same problem, and of course the
powers are still all accounted for.

Roy Lewallen, W7EL

1566. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 09:57:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2q6bqduf8rcc3@corp.supernews.com>
Source record: 126554

Richard Clark wrote:
> On Mon, 20 Jan 2003 17:05:15 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>Any other examples you can come up with that illustrate the difference
>>between the two boxes, as seen from the world outside the boxes, will be
>>welcome.
>>
>>Thanks!
>>Roy Lewallen, W7EL
>
>
> Hi Roy,
>
> Put your hand on it, the box with the dissipationless resistor is
> cooler.
>
> 73's
> Richard Clark, KB7QHC

Is that the only difference? If I couldn't measure the temperatures of the boxes, is there any way I could tell which is which?

Roy Lewallen, W7EL

1567. Re: Clip-on RF Ammeter? correct link...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 11:34:44 UTC
From: Henrik <henrik>
Message-ID: <3e2d3052$0$208$edfadb0f@dread16.news.tele.dk>
Source record: 126555

This link works for me:

http://www.ifwtech.co.uk/g3sek/clip-on/clip-on.htm

H

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
> As well as all the other good replies, there's a page at:
> www.ifwtech.co.uk/g3sek/in-prac/clip-on.htm
> (also available in Japanese!)

1568. Re: 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 11:42:08 UTC
From: Henrik <henrik>
Message-ID: <3e2d320e$0$199$edfadb0f@dread16.news.tele.dk>
Source record: 126556

"Jackie" <no@address.given.com> wrote in message
news:Df3X9.765033$WL3.753902@rwcrnsc54...
> Hi there,
Snip:
> I know that verticals work best with a good radial system, but.....

True for 1/4 wave verticals, but as I understand, not necessarily so for 1/2 wave verticals....

H.

1569. Re: Clip-on RF Ammeter? correct link...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 11:56:57 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <nStv9wAJWTL+EAc8@ifwtech.co.uk>
Source record: 126557

Henrik wrote:
>
>This link works for me:
>
>http://www.ifwtech.co.uk/g3sek/clip-on/clip-on.htm

Sorry, I posted the wrong URL. Thanks, Henrik!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1570. Re: 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 14:15:13 UTC
From: Neil M Barrowman <rn822706@ntlworld.com>
Message-ID: <SBcX9.2096$Lm4.87003@newsfep2-win.server.ntli.net>
Source record: 126559

Im using "HUSTLER" 5band vertical--due to advanced age--"ME-NOT THE
ANTENNA"I have installed the antenna
at ground level--4 inches above the grass-- on my backyard lawn. clamped
onto 2" dia. galvanised pipe-- which was driven 4 feet into ground-- by
freindly neioghbour. It operates very well indeed with NO radials. outer
screen of co-ax is connected
to pipe in ground. swr is between 1.5--2.0. over all 5 bands ant was "tuned
up"on all bands by bringing my rig- ts2000--
outside onto a table about 20 feet away from ant- and using separate
power\swr meter- each band adjusted- for best swr
starting with highest freq band first. ant tuner in rig was disabled for
this test.Results so good and reception very good also
that Ihavent bothered with radials.I live in Scotland and regularly qso into
asia USA ,and VK on 100 watt ssb or 50 watts in PSK mode.So my advice would
be to go for the minimum effort\ cost scenario first, and if necessary -then
develop and extend. 73,s GM0LTQ. "Henrik" <henrik> wrote in
message news:3e2d320e$0$199$edfadb0f@dread16.news.tele.dk...
>
> "Jackie" <no@address.given.com> wrote in message
> news:Df3X9.765033$WL3.753902@rwcrnsc54...
> > Hi there,
> Snip:
> > I know that verticals work best with a good radial system, but.....
>
> True for 1/4 wave verticals, but as I understand, not necessarily so for
1/2
> wave verticals....
>
> H.
>
>

1571. Re: Half square for a beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 14:50:27 UTC
From: antswitch@tomochka.com
Message-ID: <47c89a30.0301210650.26fc545d@posting.google.com>
Source record: 126560

Thanks, that helped a great deal. 73, Casey

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:<571W9.11241$fK.1239998@news20.bellglobal.com>...
> Roscoe
> > Have you checked www.cebik.com for plots on halfsquares...
>
> "KS7J"
> > Is there an index or something on Mr. Cebik's site to find
> > such information quickly? He really needs a search engine
> > on that site, it is impossible to find such specific information
> > unless you want to brute force view each page. I didn't see
> > anything on a half square on his TOC. 73, Casey
>
> Use Google's advanced search page
> http://www.google.com/advanced_search
>
> Enter:
> exact phrase = half square
> Domain = www.cebik.com
>
> Precanned click per above:
> www.google.com/search?as_epq=half+square&as_sitesearch=www.cebik.com

1572. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 14:51:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2D5E54.8040806@ieee.org>
Source record: 126561

Mark Keith wrote:
> But I'm still of the opinion that "antenna resonance" is of no real
> concern for good performance. Only the efficient transfer of power
> from the radio to the antenna really matters. Take an extended double
> zepp with .64 wave per leg. On it's design frequency, the antenna is
> not resonant. You can feed it in many ways, but as long as the power
> is not lost, the performance and pattern will be the same. You can
> feed the antenna with open wire line with good results. No regard is
> given to tuning out reactance, except at the rig end with the tuner,
> or cut tuned line.

As an interesting exercise, hang a 0.2WL shorted stub in the center of
that EDZ. It neutralizes the reactance at the stub connection point.
Now replace the short at the end of the stub with a low impedance source.
You've changed the stub into a transmission line and not much changes.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1573. Re: resonant vs nonresonant antenna (again!)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 14:53:50 UTC
From: richardharrison@webtv.net
Message-ID: <29765-3E2D5EFE-176@storefull-2313.public.lawson.webtv.net>
Source record: 126566

Mark, NM5K wrote:
"Take a random wire shortwave listening antenna. It`s not resonant at many of the frequencies it may be used on, but there is still no shortage of energy to the radio on any of those bands."

Surplus or shortage is in the ear of the listener. There will be big swings in signal receptivity versus frequency using an untuned length of wire for an antenna.

Say you were able to impress a constant voltage at all frequencies across the antenna. Ohm`s law prevails. Current (I) equals (E) over (Z).

Reactance varies more rapidly and more often throughout the spectrum in most places than does radiation resistance In fact, these factors often move in opposite directions. It happens this way for the segment of spectrum between 0.1 and 0,6 wavelength for an antenna as shown in Fig. 26 on page 17-10 of the 1987 ARRL Handbook or any similar presentation of radiation resistance and antenna reactance versus physical wavelength in the wire.

As the phasor sum of the resistance and reactance makes up the impedance of the antenna, and this total has a serious variation with frequency, current in the antenna will vary widely with frequency.

We can fix this by tuning out the reactance. We can fix it better by also matching the antenna resistance for maximum power transfer to our receiver.

Best regards, Richard Harrison, KB5WZI

1574. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 15:03:05 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2D60CD.6070209@attbi.com>
Source record: 126562

If it DOES NOT introduce HARMONICS it is by definition LINEAR.

Deacon Dave, W1MCE

Tdonaly wrote:
> Deacon Dave wrote,
>
>>Isn't Linear really very simple?
>>
>>If I have V(t1) = Vp*Cos(wt + Theta),
>>
>>then any linear process produces:
>>
>> V(t2) = k*V(t1) = k*(Vp*Cos(wt + Theta). {amplitude scaling}.
>>
>>Any non-linear process produces:
>>
>> V(t3) = [k1* Vp*Cos(wt + theta)] + [k2*Vp*(Cos(2wt) + theta)] +
>
>
>
>>[k3*Vp*Cos(3wt + theta)} ... ad infinity. {introduction of
>
> harmonics}
>
>>So, taking a non-symmetrical waveform as the output from a Class C
>>amplifier [non -linear] and using it as the input to a tuned tank
>>circuit [linear] results in a SYSTEM that optimizes the fundamental
>>signal, k*Vp*Cos(wt+theta), and supresses the harmonic terms,
>>k2*Vp*Cos(2wt+theta) etc. The circuit that performs the optimization and
>>rejection is LINEAR in that it introduces NO HARMONIC terms.
>>
>>RE: Electronic Circuits 202 and 203 etc.
>>
>>Deacon Dave, W1MCE
>>
>
> That works for your example: a sine wave. What defines it for a wave of
> arbitrary
> shape, or even a pulse?
> 73,
> Tom Donaly, KA6RUH
>
>

1575. Re: Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 15:08:43 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <gdoq2vs28hn5ju7o9ijt1vgr87o9rp2a99@4ax.com>
Source record: 126563

On Tue, 21 Jan 2003 07:37:27 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

|Mont O'Leary wrote:
|>I'm looking for a design to home-brew a clip-on (or clamp-on) wattmeter that
|>can be used to measure common-mode current on a coaxial feedline --
|>something similar in function to the Amprobe used for measuring mains
|>current.
|>
|As well as all the other good replies, there's a page at:
|www.ifwtech.co.uk/g3sek/in-prac/clip-on.htm
|(also available in Japanese!)

Try:

http://www.ifwtech.co.uk/g3sek/clip-on/clip-on.htm

instead.

1576. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 15:10:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2D62E6.5060009@ieee.org>
Source record: 126564

Roy Lewallen wrote:
> OC_CAM's Razor wrote:
>
>> Roy Lewallen wrote:
>>
>>> The reason I keep beating on this drum is that I've gotten the
>>> impression from some recent postings that some people think it's ok
>>> for power out of sources to not equal power dissipated by loads if a
>>> Thevenin or Norton equivalent is used. It's not ok. They've still got
>>> to add up. That's all I'm trying to say.
>>
>>
>>
>> Hi Roy, try the QEX brainteaser on page 3 at
>>
>> http://neoamateur.org/downloads/qex/lett0103a.pdf
>>
>> using Norton equivalent sources and see what you get for power
>> dissipation in their internal resistances.
>
>
> Sure.
>
> I chose my two sources as follows:
>
> The left hand source: An ideal current source of current 2*sqrt(P/R)
> amps, in parallel with a resistor of R ohms.
>
> The right hand source: An ideal current source of current
> (4/3)*sqrt(P/R) volts, in parallel with a resistor of 3R ohms.
>
> The requirement that the source impedances be R and 3R are satisfied by
> inspection. You can easily calculate that when the sources are initially
> turned on, each delivers P watts into the line, as required by the problem.
>
> In steady state, conditions are:
>
> The meter reading power to the right reads P watts.
> The meter reading power to the left reads (9/4)P watts.
> Consequently, there's a net power flow of (5/4)P watts to the left.
>
> The left current source produces 5P watts.
> The right current source produces (10/3)P watts.
> The left source resistor dissipates (25/4)P watts.

> The right source resistor dissipates (25/12) watts.
>
> The total power produced by the sources = (25/3) watts.
> The total power dissipated by the resistors = (25/3) watts.
>
> All the power is accounted for.
>
> The net current at each end of the cable is (1/2)*sqrt(P/R) to the left.
> The voltage at each end of the cable is (5/2)*sqrt(PR).
> The voltage of the wave traveling to the right is sqrt(PR).
> The current of the wave traveling to the right is sqrt(P/R).
> The voltage of the wave traveling to the left is (3/2)*sqrt(PR).
> The current of the wave traveling to the left is (3/2)*sqrt(P/R).
>
> Took about 20 minutes, and nothing other than Ohm's and Kirchoff's laws.
> It's really a simple problem. Was there supposed to be some trick to it?

Well, let's see. Assuming P=100W, you have 625W steady-state dissipated
in the left source resistor. You have the wattmeter reading energy flow
to the left is 225W steady-state. What is supplying the additional power?
If something like this occurs in the middle of a transmission line far
away from any source, what is supplying the additional power?

> Thevenin sources were slightly little more interesting, since the
> voltage source on the left dissipates rather than sources power in the
> steady state. But it's basically the same problem, and of course the
> powers are still all accounted for.

All accounted for but completely different? The wattmeter readings are
identical. Both types of sources dissipate the same amount of power they
deliver if they are matched. Why are the Thevenin and Norton dissipations
so different in the brainteaser?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1577. Re: 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 15:13:13 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2D632D.4080800@attbi.com>
Source record: 126565

You have described my temporary setup to a TEE!

Hustler 4BTV strapped to a deck post next to the frozen pool. I use
three sets of radials just laying on the frozen snow. VSWR about 2:1 or
slightly less.

Good tuner and having fun.

Deacon Dave, W1MCE

PS: 60 foot tower and Log Periodic when the ground thaws.
++++++++++++++++++

Jackie wrote:
> Hi there,
>
> I'm getting a 4 band vertical antenna on loan from a friend this coming
> weekend, and the only place I can put it in my yard (due to the presence of
> trees, most of which are very near to powerlines) is to strap it to my deck-
> away from said trees (rest of the yard's off-limits as well, due to various
> reasons). I know that verticals work best with a good radial system, but
> this is obviously going to be a problem with the antenna strapped to a
> wooden deck.
>
> My question is this- what would work as a decent counterpoise for this type
> of set-up? I would be able to put the antenna on a 5' mast and drive that
> into the ground come springtime (ground is too frozen for that now) but as
> of this weekend, I need to use the temporary strap-to-the-deck-post method.
>
> Any suggestions on what I might do for a counterpoise in this odd situation?
> I know that counterpoises are something of a compromise, but this is my
> first HF antenna set-up and I'd like to do whatever I can to make it even a
> little more effective.
>
> Thanks and 73-
>
> Jackie KC0ODY
>
>

1578. Re: Sailboat Dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 15:29:55 UTC
From: richardharrison@webtv.net
Message-ID: <8227-3E2D6773-237@storefull-2311.public.lawson.webtv.net>
Source record: 126567

Dill, W2ET wrote:
"---you`ll need the material and method to somehow get to a keel bolt or some other ground with a lot of surface area."

Drag a copper wire in the water. You need very little surface area. The sea and copper have high conductivity. Contact loss will be small.

Depth of r-f penetration in metal and in sea water is small. If the boat is metal, a ground connection to the outside surface of the boat is better than a connection to the inside of the boat.

R-F can`t travel through a bolt. The bolt is like an insulator to r-f except for its outside surface. That outside surface must have plenty of airspace aroound it or it must be surrounded by plenty of other insulation to let the r-f squeeze through. Otherwise the r-f is trapped inside the metal hull and must find a route on the inside surface up and over the edge of the hull and down to the water`s surface. A connection deep under water is no good either.

I know from previous battles in this group that there are plenty of disbelievers in skin effect too, but that`s the way it is whether you believe it or not.

Best regards, Richard Harrison, KB5WZI

1579. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 16:04:13 UTC
From: tdonaly@aol.com
Message-ID: <20030121110413.12215.00000120@mb-da.aol.com>
Source record: 126568

Deacon Dave wrote,
>
>
>If it DOES NOT introduce HARMONICS it is by definition LINEAR.
>
>Deacon Dave, W1MCE
>
Try this definition of linear, Deacon: A system is linear if the input
c1f1(t)+c2f2(t)
produces an output c1g1(t)+c2g2(t) for all f1(t) and f2(t), when it is known
that an
input f1(t) produces an output g1(t) and an input f2(t) produces an output
g2(t). The
c1 and c2 are arbitrary constants but may be complex numbers.
This definition, which I plagiarized from Blinchikoff and Zveref's book
Filtering in the Time and Frequency Domains isn't as boring as your
definition which could apply equally well to any old filtered oscillator.
73,
Tom Donaly, KA6RUH

1580. Dual Yagi questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 17:16:32 UTC
From: Bill Grimwood <bill@grimwood.net>
Message-ID: <v2r3fa7i582a64@corp.supernews.com>
Source record: 126472

I plan to mount a 70cm and a 2 meter Yagi on the same mast oriented vertically. How far apart should the antennas be to work properly wiath out inteferring with each other? Is the distance measured from the booms or from the ends of the radiators?

Thanks

Bill Grimwood
K1WEG

1581. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 17:17:38 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v2tkj0pnsd2634@corp.supernews.com>
Source record: 126465

Amazing the number of people that are experts on things they don't know a darn thing about!

"NoName" <user@computer.net> wrote in message news:34gt2v4k42ki4lk22vn9mgj1b7fkjkcofq@4ax.com...

>
> What country allegedly performed these experiments.
>
> The closest to a pole would have been the Soviet tests at Novaya
> Zemlya. They did shoot a 50 megaton air burst over NZ.
>
> >
> >The detonations were supposed to affect the earth's magnetic fields and
> >disrupt communications worldwide.
>

1582. Yagi dual band antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 17:19:37 UTC
From: Bill Grimwood <bill@grimwood.net>
Message-ID: <v2r3l3dt9jrh00@corp.supernews.com>
Source record: 126473

Does anyone have the plans for or a commerically made yagi that will work for 2 meters and 70CM?

Bill Grimwood

K1WEG

1583. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 17:43:53 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gq1r2vsf0srn6cvc6ln4pj2nooltkbhgce@4ax.com>
Source record: 126469

On Tue, 21 Jan 2003 09:10:30 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Why are the Thevenin and Norton dissipations
>so different in the brainteaser?

Hi Cecil,

Why don't you spend the same 20 minutes in computation that Roy did
for you?

73's
Richard Clark, KB7QHC

1584. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 17:50:48 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E2D88C4.55F54867@att.net>
Source record: 126470

Cecil,

What everyone has ignored so far in this thread is that the energy source in the Thevenin or Norton box is undefined. (I am not suggesting this is not understood, only that it has not been considered here.)

The way this problem is posed, and the way most other equivalent source problems are defined, we simply have no idea how much energy is in the source box at the start of the problem.

It could be a watch battery or a nuclear reactor or anything in between.

There is no conflict caused by different internal dissipation for the Thevenin and Norton sources. If the initial energy in the source box is the same, then the equivalent source with lower internal dissipation will last longer. It is not possible to say much more without a better definition of the initial conditions.

One of the key reasons why one should be cautious about "looking under the hood" is that the problem is typically not fully defined. The utility of equivalent sources is based on how the source behaves at the terminals, not what goes on inside.

No Joules are harmed in the process.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Roy Lewallen wrote:

[Big Snip]

> > Took about 20 minutes, and nothing other than Ohm's and Kirchoff's laws.
> > It's really a simple problem. Was there supposed to be some trick to it?
>
> Well, let's see. Assuming P=100W, you have 625W steady-state dissipated
> in the left source resistor. You have the wattmeter reading energy flow
> to the left is 225W steady-state. What is supplying the additional power?
> If something like this occurs in the middle of a transmission line far
> away from any source, what is supplying the additional power?
>
> > Thevenin sources were slightly little more interesting, since the
> > voltage source on the left dissipates rather than sources power in the
> > steady state. But it's basically the same problem, and of course the

> > powers are still all accounted for.
>
> All accounted for but completely different? The wattmeter readings are
> identical. Both types of sources dissipate the same amount of power they
> deliver if they are matched. Why are the Thevenin and Norton dissipations
> so different in the brainteaser?
> --
> cheers, CAM http://www.qsl.net/w5dxp

1585. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 17:57:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <342r2v8dsup1us3jtqt3dkte321ik1s54g@4ax.com>
Source record: 126471

On Tue, 21 Jan 2003 01:57:06 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Richard Clark wrote:
>> On Mon, 20 Jan 2003 17:05:15 -0800, Roy Lewallen <w7el@eznec.com>
>> wrote:
>>
>>
>>>Any other examples you can come up with that illustrate the difference
>>>between the two boxes, as seen from the world outside the boxes, will be
>>>welcome.
>>>
>>>Thanks!
>>>Roy Lewallen, W7EL
>>
>>
>> Hi Roy,
>>
>> Put your hand on it, the box with the dissipationless resistor is
>> cooler.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Is that the only difference? If I couldn't measure the temperatures of
>the boxes, is there any way I could tell which is which?
>
>Roy Lewallen, W7EL

Hi Roy,

No. And by rights, you couldn't feel the box either without violating
Thevenin/Norton. Such a source that uses a resistor is obvious in
that regard.

The one overriding failure of this "dissipationless Resistance" is
that it is not required at all to construct a Thevenin/Norton source.
Thevenin's theorem states an IMPEDANCE not a resistance. Reactors
have been suitably non-dissipating for two centuries now and coining a
poor term like "dissipationless resistance" is lazy.

Too often this discussion gets intermixed with the Conjugate Match and
Thevenin gets forced into a proof by demanding a resistance that
corresponds to the radiation resistance. That we do this does not
relegate Thevenin to forever being forced to accept only resistances
under the hood.

73's
Richard Clark, KB7QHC

1586. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 18:29:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2D9199.8060200@ieee.org>
Source record: 126474

Richard Clark wrote:
> <Cecil.A.Moore@ieee.org> wrote:
>>Why are the Thevenin and Norton dissipations
>>so different in the brainteaser?
>
> Why don't you spend the same 20 minutes in computation that Roy did
> for you?

I have, Richard, that's why I asked the question. The Thevenin source A dissipates 25W and the Norton source A dissipates 625W while giving identical external results. What's wrong with that picture? My signal generator equipped with a perfect circulator load dissipates exactly the 225W value indicated by the reverse power wattmeter whether its source is Thevenin or Norton. What's right with that picture?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1587. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 18:32:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bq2r2vkk27o7f96hhdsjql70k6sjf463f8@4ax.com>
Source record: 126475

On Tue, 21 Jan 2003 09:38:13 -0000, "andy swiffin"
<a.l.swiffin@dundee.ac.uk> wrote:

>
>"Richard Clark" <kb7qhc@attbi.com> wrote in message > >
>>
>> This is simply what you will get if you buy one (50:200).
>> The number of turns exactly correlates to ability of the BalUn to
>> present a high Z between the input and output (lacking that, you have
>> a short, and certainly a useless BalUn).
>>....
>> 73's
>> Richard Clark, KB7QHC
>
>Hi,
>Richard, thanks for that reply, I printed it off and have been studying it
>over the weekend, its good stuff. I think I now understand what I'm trying
>to do.
>
>Am I right in thinking that if I've produced a balun correctly I should be
>able to take a 12.5 ohm resistance and place it across the end, when its
>energised with HF from a 50ohm source I should see a 1:1 SWR at the 50ohm
>end?

Perfectomundo!

>
>I tried a few rough mock ups at the weekend and that wasn't the case, but I
>only have some very cheap small (1.4 inch) toroids available and even for
>mock up I purposes I don't think they were up to much. I guess I just
>wasn't creating a high enough Z to isolate the output from the input?
>
>Cheers
>Andy
>

Hi Andy,

Isolation is a function of the source and load Z's. For you, this is
quite small as I pointed out in my earlier posting. 500 Ohms would be
more than enough so the question becomes: how do I get 500 Ohms of
resistance and/or reactance?

Several passes of transmission line through a ferrite of the correct
composition would do this handily (which suggests perhaps you have the
wrong formulation of ferrite, if in fact it is not powdered iron).

That accounts for what is possibly available for Resistance (again, this is a lengthy issue concerning an exotic, for hams, source of resistance). If you were to attempt this with a powdered iron core, your only advantage will be found in Reactance.

Here again the formulation has considerable sway on the computed/measured results for inductive reactance. However, if you took the characteristics of a family of different formulations (true for either a powdered-iron OR ferrite based measure) and ran them through the conventional formulas, then you should be able to determine how close to 500 Ohms Xl is available to you across that same spectrum.

Myself, I would simply go down the path Ric offered (I use ferrite beads galore - it's too simple). Use that as a sanity test for what you eventually build - it both tests your design, and it tests the test of your design.

Now to dwell on the obvious: You are winding these lines AS PAIRS I hope? You also have to observe POLARITY (or properly phase) and that has been omitted in the discussion unfortunately. It is fairly straightforward in the ASCII doodles Ric and I both provided, but when you get to drawings in books, you will note a small dot near one end of a winding. That is the phasing or polarity indicator. When we treat the individual transmission lines as isolated sources or loads (the ENTIRE PURPOSE of BalUns); we can freely connect them like sources and loads in parallel or series according to our transformation requirements. By freely, I mean we can proceed to do these connections in the face of apparent shorts that would result in absolute shorts if the core disappeared. By freely, unfortunately, I also mean you can also cross connect sources, short them out, and negate all the effort you went to to prevent just that.

In a nutshell: observe polarity/phase.

To the 12.5 Ohm load, it literally sees the outputs of TWO sources (ignore the cacophony that follows insisting they/it is the same source, of course it is, but the load cannot tell that). And on the other side of that isolation barrier, the source presumes it is driving TWO different loads. The source sees them in series, albeit, but still as separate and distinctly different loads.

This is the magic of BalUn construction and design: How do you transform one source into many so that on the other side of the isolation barrier you can reassemble the components back into a different beast supplying the same power? How do you transform one load into many so that you can reassemble those components back into a different load sinking the same power? Note that both pursuits must be engaged at the same time.

73's
Richard Clark, KB7QHC

1588. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 18:43:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2D94CD.3070807@ieee.org>
Source record: 126476

Gene Fuller wrote:
> One of the key reasons why one should be cautious about "looking under
> the hood" is that the problem is typically not fully defined.

Well Gene, do you think the brainteaser on page 3 of:

http://neoamateur.org/downloads/qex/lett0103a.pdf

is fully defined? Thevenin, Norton, or a signal generator equipped
with a perfect circulator load gives the correct answer for the
wattmeter readings which was the original question. Yet some unnamed
person went to great lengths to analyze the power dissipation in the
Thevenin source and accused me of something underhanded when he said:

"A source with a circulator. That was not part of the QEX brainteaser.
Everyone should see why having a rational discussion with you is pointless.
You set up whatever conditions suit your fancy and agenda."

Note that I only set up the conditions that would yield the correct
answer to the published problem.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1589. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:00:10 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301211100.681a594a@posting.google.com>
Source record: 126477

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<21464-3E2CCEC2-121@storefull-2315.public.lawson.webtv.net>...
> Doc wrote:
> "What loop shield?"
>
> Art wrote
> "___then an aluminum skin ala a static shield---."
>
> I remembered something from Terman:
> "Precipitation static can be minimized by the use of antennas that are
> either insulated wires or shielded loops---." Art proposed both
> insulation and a shield around the insulation. It`s like the Faraday
> shielded loop on page 1048 of the 1955 Terman.
>
> I can go the distance on Faraday shields and loops but I`m sick and
> tired of it after an interminable argument with Tom, W8JI. Tom finally
> just went away. I don`t want to waste so much time again.
>
> Best regards, Richard Harrison, KB5WZI

Thanks for that input Richard but I am not Tom who by the way I have
deep respect for. I will look at that Terman reference for pointers
but I suspect that the final answer will come only if I do it myself
to check.Since my primary element is so close the the secondary
antenna I suspect that it will not be necessary to ground as with the
loop antenna but one must take care to ensure the insulation ensures
that the shell doesn't short circuit. I am writing all this as if I
know something of what I am doing but at the present time I am looking
at the top bands and the loop survives well for listenning on those
frequencies

Thanks again
Art

1590. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:11:03 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E2D9B93.6BD20F84@att.net>
Source record: 126478

Cecil,

The brainteaser is defined adequately as long as one cares only what happens outside of the sources. (And that does appear to be the intended problem.)

It is possible to use circulators, Thevenin sources, Norton sources, and probably many other source configurations to solve the brainteaser.

However, if you "look under the hood", and try to understand the internal dissipation, then the problem is not fully defined.

I was responding to the complaint about 625 watts vs. 225 watts internal dissipation. These could be megawatts, but there would be no impact on the brainteaser solution.

There simply is not enough information to figure out what is going on inside the sources. The initial energy sources are not defined, other than "RF generators". You can use anything that gives the desired output behavior at the terminals. But this will only be useful to solve the brainteaser, not to determine the internal characteristics of the sources.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > One of the key reasons why one should be cautious about "looking under
> > the hood" is that the problem is typically not fully defined.
>
> Well Gene, do you think the brainteaser on page 3 of:
>
> http://neoamateur.org/downloads/qex/lett0103a.pdf
>
> is fully defined? Thevenin, Norton, or a signal generator equipped
> with a perfect circulator load gives the correct answer for the
> wattmeter readings which was the original question. Yet some unnamed
> person went to great lengths to analyze the power dissipation in the
> Thevenin source and accused me of something underhanded when he said:
>
> "A source with a circulator. That was not part of the QEX brainteaser.
> Everyone should see why having a rational discussion with you is pointless.
> You set up whatever conditions suit your fancy and agenda."

>
> Note that I only set up the conditions that would yield the correct
> answer to the published problem.
> --
> cheers, CAM http://www.qsl.net/w5dxp

1591. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:13:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2r6uvkcqs4dd2@corp.supernews.com>
Source record: 126479

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>>
>> I chose my two sources as follows:
>>
>> The left hand source: An ideal current source of current 2*sqrt(P/R)
>> amps, in parallel with a resistor of R ohms.
>>
>> The right hand source: An ideal current source of current
>> (4/3)*sqrt(P/R) volts, in parallel with a resistor of 3R ohms.
>>
>> The requirement that the source impedances be R and 3R are satisfied
>> by inspection. You can easily calculate that when the sources are
>> initially turned on, each delivers P watts into the line, as required
>> by the problem.
>>
>> In steady state, conditions are:
>>
>> The meter reading power to the right reads P watts.
>> The meter reading power to the left reads (9/4)P watts.
>> Consequently, there's a net power flow of (5/4)P watts to the left.
>>
>> The left current source produces 5P watts.
>> The right current source produces (10/3)P watts.
>> The left source resistor dissipates (25/4)P watts.
>> The right source resistor dissipates (25/12) watts.
>>
>> The total power produced by the sources = (25/3) watts.
>> The total power dissipated by the resistors = (25/3) watts.
>>
>> All the power is accounted for.
>>
>> The net current at each end of the cable is (1/2)*sqrt(P/R) to the left.
>> The voltage at each end of the cable is (5/2)*sqrt(PR).
>> The voltage of the wave traveling to the right is sqrt(PR).
>> The current of the wave traveling to the right is sqrt(P/R).
>> The voltage of the wave traveling to the left is (3/2)*sqrt(PR).
>> The current of the wave traveling to the left is (3/2)*sqrt(P/R).
>>
>> Took about 20 minutes, and nothing other than Ohm's and Kirchoff's
>> laws. It's really a simple problem. Was there supposed to be some
>> trick to it?
>
>

> Well, let's see. Assuming P=100W, you have 625W steady-state dissipated
> in the left source resistor. You have the wattmeter reading energy flow
> to the left is 225W steady-state. What is supplying the additional power?
> If something like this occurs in the middle of a transmission line far
> away from any source, what is supplying the additional power?

No, as I said in my analysis, the wattmeters are indicating a net power flow of (5/4)P to the left. That's 125 watts, not 225. (The net power, as I hope you know, is the difference between the indicated forward power and the idicated reverse power. You can, and should, calculate the forward and reverse powers from the voltages and currents of the forward and reverse traveling waves which you'll find in the quoted material above. Then take their difference if you want to know the net power flow.) Let me summarize, with P = 100 watts.

The source on the right supplies supplies 333.33 watts. The resistor on the right dissipates 208.33 watts. That leaves 333.33 - 208.33 = 125.00 watts to flow to the left. On the left side, the resistor dissipates 625 watts. The source on that side produces 500 watts, and the resistor gets the other 125 from the right side via the cable. All the watts are accounted for.

Before you get too hung up in what each wattmeter is reading, think about this: We can change the impedance of the transmission line without changing anything else in the circuit. Voltages and currents at the cable ends will be exactly the same. Source and load voltages, currents, and powers will all be exactly the same. Power supplied and dissipated by each component will be the same. Net power flow will be the same. But the two wattmeters will give different readings than they do in this example. However, their difference will still be 125 watts, the net power flowing from the right to the left. So, what readings would you like? Pick any two wattmeter readings, as long as they differ by 125 watts (net to the left), and I'll choose a Z0 that will give you those readings. That way, you can imagine just as much power as you'd like.

C'mon now, this isn't hard.

Roy Lewallen, W7EL

-- Corrections to my earlier posting:

The right source resistor dissipates (25/12) watts.

The total power produced by the sources = (25/3) watts.
The total power dissipated by the resistors = (25/3) watts.

should read:

The right source resistor dissipates (25/12)P watts.

The total power produced by the sources = (25/3)P watts.
The total power dissipated by the resistors = (25/3)P watts.

1592. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:23:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2k7r2v0k042gopc0ec6o0fnb07t4gbc2q7@4ax.com>
Source record: 126480

On Tue, 21 Jan 2003 12:29:45 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Why are the Thevenin and Norton dissipations
>>>so different in the brainteaser?
>>
>> Why don't you spend the same 20 minutes in computation that Roy did
>> for you?
>
>I have, Richard, that's why I asked the question. The Thevenin source A
>dissipates 25W and the Norton source A dissipates 625W while giving
>identical external results. What's wrong with that picture? My signal
>generator equipped with a perfect circulator load dissipates exactly
>the 225W value indicated by the reverse power wattmeter whether its
>source is Thevenin or Norton. What's right with that picture?

Hi Cecil,

Considering Roy's recent posting having to do that math yet once
again, I would speculate that perhaps you should have spent 21
minutes.

Cecil, it is honestly difficult to tell if you've put effort to these
matters, or if they are yet another ambush posting.

73's
Richard Clark, KB7QHC

1593. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:33:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2DA09E.6080808@ieee.org>
Source record: 126482

Gene Fuller wrote:
> There simply is not enough information to figure out what is going on
> inside the sources. The initial energy sources are not defined, other
> than "RF generators". You can use anything that gives the desired output
> behavior at the terminals. But this will only be useful to solve the
> brainteaser, not to determine the internal characteristics of the
> sources.

Hmmmmmm, that's exactly what I did and then got heavily chastised
for it. I apparently got the right answer in the wrong way.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1594. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:35:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2r87f7f3ri1c8@corp.supernews.com>
Source record: 126481

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
> . . .

>> Thevenin sources were slightly little more interesting, since the
>> voltage source on the left dissipates rather than sources power in the
>> steady state. But it's basically the same problem, and of course the
>> powers are still all accounted for.
>
>
> All accounted for but completely different? The wattmeter readings are
> identical. Both types of sources dissipate the same amount of power they
> deliver if they are matched. Why are the Thevenin and Norton dissipations
> so different in the brainteaser?

Sorry, I unintentionally clipped this portion off when making my last response.

When I replace the Norton equivalents with Thevenin ones, here's what happens. The Thevenin equivalents supply exactly the same amount of voltage, current, and power to the external system (i.e., the transmission line) as the Norton equivalents. Consequently, the power flowing out of or into each equivalent "box" (source + resistor) is the same for both cases. Within the "box", the amount of power furnished by the source and the amount dissipated by the resistor is different for the two models. However, as in all circuits, the total power furnished by the sources has to equal the total power consumed by the loads.

Here are the results for the Thevenin equivalents:

The left hand source: An ideal voltage source of 2*sqrt(PR) volts, in series with a resistor of R ohms.

The right hand source: An ideal voltage source of 4*sqrt(PR) volts, in series with a resistor of 3R ohms.

In steady state, conditions are:

The meter reading power to the right reads P watts.
The meter reading power to the left reads (9/4)P watts.
Consequently, there's a net power flow of (5/4)P watts to the left.

The left voltage source dissipates P watts (current flows into it).
The right voltage source produces 2P watts.
The left source resistor dissipates (1/4)P watts.
The right source resistor dissipates (3/4)P watts.

The total power produced by the sources = 2P watts.
The total power dissipated by the resistors and source = 2P watts.

The voltages and currents at the cable ends, forward and reverse voltages, currents, and powers, are the same as for the Norton model.

For people who won't look "under the hood" of their Norton or Thevenin models for fear that it'll show a violation in the law of conservation of energy which they'd just as soon not make obvious, here's an alternative. Put the equivalent circuit into a box an analyze it as a single component. Then you'll find:

The left side box consumes (5/4)P watts.
The right side box supplies (5/4)P watts.

Consequently, there's a power flow of (5/4)P watts from the right to the left, which, golly, is what we found for both models. The power supplied or consumed by each box will be the same for the Thevenin as for the Norton equivalent.

Roy Lewallen, W7EL

1595. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:38:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2DA1AE.2020107@ieee.org>
Source record: 126484

Roy Lewallen wrote:

> OC_CAM's Razor wrote:
>> If something like this occurs in the middle of a transmission line far
>> away from any source, what is supplying the additional power?

> C'mon now, this isn't hard.

Maybe because you didn't answer my question. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1596. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:39:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2r8fjs1dt664e@corp.supernews.com>
Source record: 126483

Do those others of you who like to use "dissipationless" resistors agree
-- that there would be no way we could distinguish between box A
(containing a voltage source and conventional resistor) and box B
(containing a voltage source and "dissipationless" resistor) by
measurements made at their terminals? Cecil?

Roy Lewallen, W7EL

Richard Clark wrote:
> On Tue, 21 Jan 2003 01:57:06 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>Richard Clark wrote:
>>
>>>On Mon, 20 Jan 2003 17:05:15 -0800, Roy Lewallen <w7el@eznec.com>
>>>wrote:
>>>
>>>
>>>
>>>>Any other examples you can come up with that illustrate the difference
>>>>between the two boxes, as seen from the world outside the boxes, will be
>>>>welcome.
>>>>
>>>>Thanks!
>>>>Roy Lewallen, W7EL
>>>
>>>
>>>Hi Roy,
>>>
>>>Put your hand on it, the box with the dissipationless resistor is
>>>cooler.
>>>
>>>73's
>>>Richard Clark, KB7QHC
>>
>>Is that the only difference? If I couldn't measure the temperatures of
>>the boxes, is there any way I could tell which is which?
>>
>>Roy Lewallen, W7EL
>
>
> Hi Roy,
>
> No. And by rights, you couldn't feel the box either without violating

> Thevenin/Norton. Such a source that uses a resistor is obvious in
> that regard.
>
> The one overriding failure of this "dissipationless Resistance" is
> that it is not required at all to construct a Thevenin/Norton source.
> Thevenin's theorem states an IMPEDANCE not a resistance. Reactors
> have been suitably non-dissipating for two centuries now and coining a
> poor term like "dissipationless resistance" is lazy.
>
> Too often this discussion gets intermixed with the Conjugate Match and
> Thevenin gets forced into a proof by demanding a resistance that
> corresponds to the radiation resistance. That we do this does not
> relegate Thevenin to forever being forced to accept only resistances
> under the hood.
>
> 73's
> Richard Clark, KB7QHC

1597. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:40:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2DA248.1010905@ieee.org>
Source record: 126485

Richard Clark wrote:
> Cecil, it is honestly difficult to tell if you've put effort to these
> matters, or if they are yet another ambush posting.

Hmmmmm, if everything is so clearly understood, why is an
ambush possible?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1598. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:43:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <du8r2v4v27pplnnkbb16o2pr1tb80aukgs@4ax.com>
Source record: 126486

On Tue, 21 Jan 2003 13:40:56 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Cecil, it is honestly difficult to tell if you've put effort to these
>> matters, or if they are yet another ambush posting.
>
>Hmmmmm, if everything is so clearly understood, why is an
>ambush possible?

Has us wondering too.

1599. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:49:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2DA444.9000806@ieee.org>
Source record: 126487

Roy Lewallen wrote:
> Consequently, there's a power flow of (5/4)P watts from the right to the
> left, which, golly, is what we found for both models. The power supplied
> or consumed by each box will be the same for the Thevenin as for the
> Norton equivalent.

Well, that's exactly what I got when I used signal generators with
circulator loads. Why was I chastised for it?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1600. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 19:50:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2DA49B.4010401@ieee.org>
Source record: 126488

Roy Lewallen wrote:
> Do those others of you who like to use "dissipationless" resistors agree
> -- that there would be no way we could distinguish between box A
> (containing a voltage source and conventional resistor) and box B
> (containing a voltage source and "dissipationless" resistor) by
> measurements made at their terminals? Cecil?

Temperature measurements made at their terminals? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1601. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:04:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2r9u18nh2g33d@corp.supernews.com>
Source record: 126489

Huh? I didn't answer it because it doesn't make sense. There's no "additional power" being supplied. I've accounted for every watt in my analysis. And I have no idea what you meant by "something like this". Something like what?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> OC_CAM's Razor wrote:
>>
>>> If something like this occurs in the middle of a transmission line far
>>> away from any source, what is supplying the additional power?
>>
>
>> C'mon now, this isn't hard.
>
>
> Maybe because you didn't answer my question. :-)

1602. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:07:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2DA87B.1070806@ieee.org>
Source record: 126490

Roy Lewallen wrote:
> Huh? I didn't answer it because it doesn't make sense. There's no
> "additional power" being supplied. I've accounted for every watt in my
> analysis. And I have no idea what you meant by "something like this".
> Something like what?

Something like 75W + 8.33W = 133.33W Why am I the only one questioning
that equation?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1603. FRITZEL FD-4 Off Center Fed Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:08:35 UTC
From: Barry <burro@chilitech.com>
Message-ID: <3E2DA8B7.10CF3A0@chilitech.com>
Source record: 126508

Does anyone have any specification information on this antenna..

I understand the designer Kurt Fritzel died some time ago and the antenna is no longer made.

I also know about the 6:1 balun but am looking for some info on the overall length and the point of fed also the angle and height of the ends of the antenna above ground.

One additional question if the elements of the antenna are not only inverted V config but because of the property and space if the ends were forming a V to the attachment points on available trees what do you think the effect might have?

I imagine that angle could be 80 to 90 deg.

Thanks for any and all info or any other.

Barry
WB6LDL
Panama City Florida

1604. subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:10:48 UTC
From: Bruce <noabcincowbay@ns.sympatico.ca>
Message-ID: <3E2DA943.5B5547F2@ns.sympatico.ca>
Source record: 126491

Just to let people know.. I subscribed to this site a few days
ago, and received a nice letter from the folks who run it.
I've since deleted it by accident. But, I enjoy reading the headers,
and opening up the interesting buts.

My point of this letter though is SPAM. Since I subscribed
to this site, I've been inundated by trash spam of all nature.
I was SPAM free previoulsly.

Live and learn I guess. Hopefully, those that run this site
aren't at fault.. just some evil predator type of computer
spawn.

So, be aware folks

rgds / Bruce / VE1NB

1605. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:15:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2raj79g30ff9f@corp.supernews.com>
Source record: 126492

Thanks, you guys are making things easy. Then I can use my Box A to represent a transmitter when doing transmission line analysis, and be confident that all the voltages, currents, and powers on the line will be correct.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Do those others of you who like to use "dissipationless" resistors
>> agree -- that there would be no way we could distinguish between box A
>> (containing a voltage source and conventional resistor) and box B
>> (containing a voltage source and "dissipationless" resistor) by
>> measurements made at their terminals? Cecil?
>
>
> Temperature measurements made at their terminals? :-)

1606. Re: subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:33:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2rblebiq5qi94@corp.supernews.com>
Source record: 126493

This isn't a "site", it's a Usenet Newsgroup. No one runs it, it's a public forum. Anyone posting to any newsgroup will get spammed unless you conceal or "munge" your return address when you make a posting. Spammers routinely gather email addresses from Usenet postings and many other public web sources.

Now, a word of advice -- don't respond to any of those "take me off your list" links. It's a ploy used by spammers to verify that an email address is valid, and responding is likely to get you on a list spammers sell to each other.

You can find a huge amount of information on spam and spam fighting on the Web. Welcome to the Internet!

Roy Lewallen, W7EL

Bruce wrote:
> Just to let people know.. I subscribed to this site a few days
> ago, and received a nice letter from the folks who run it.
> I've since deleted it by accident. But, I enjoy reading the headers,
> and opening up the interesting buts.
>
> My point of this letter though is SPAM. Since I subscribed
> to this site, I've been inundated by trash spam of all nature.
> I was SPAM free previoulsly.
>
> Live and learn I guess. Hopefully, those that run this site
> aren't at fault.. just some evil predator type of computer
> spawn.
>
> So, be aware folks
>
> rgds / Bruce / VE1NB
>

1607. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:33:52 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E2DAEB0.93592A94@uci.edu>
Source record: 126497

Richard Harrison wrote:
>
> Tom, KA6RUH wrote:
> "Tell us again, Richard, how a rapidly opening and closing switch is
> linear."

Yes, a step function is non-linear. But I'd like to hear how it's
possible to propagate one through a real circuit or transmission line.

1608. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:40:21 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <16cr2vscrduni4od3cekkgmvsgp8ei3r5d@4ax.com>
Source record: 126494

On Tue, 21 Jan 2003 14:07:23 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Roy Lewallen wrote:
>> Huh? I didn't answer it because it doesn't make sense. There's no
>> "additional power" being supplied. I've accounted for every watt in my
>> analysis. And I have no idea what you meant by "something like this".
>> Something like what?
>
>Something like 75W + 8.33W = 133.33W Why am I the only one questioning
>that equation?

Now why was my speculation about an ambush met with such wide-eyed
wonderment?

Cecil, you fulfill the cliche.

73's
Richard Clark, KB7QHC

1609. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:41:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <v9cr2v4avie6pt4bgvsn0lckub9h83p4v6@4ax.com>
Source record: 126495

On Tue, 21 Jan 2003 13:49:24 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Roy Lewallen wrote:
>> Consequently, there's a power flow of (5/4)P watts from the right to the
>> left, which, golly, is what we found for both models. The power supplied
>> or consumed by each box will be the same for the Thevenin as for the
>> Norton equivalent.
>
>Well, that's exactly what I got when I used signal generators with
>circulator loads. Why was I chastised for it?

Hi Cecil,

Because you were tinkering under the hood.

73's
Richard Clark, KB7QHC

1610. Re: subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:44:32 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E2DB17B.D689110D@att.net>
Source record: 126496

Bruce,

Uhhh, there are no "folks" who run this newsgroup ("site" as you call it). There is no spam generated directly by the RRAA newsgroup, although there may be bots that grab e-mail addresses from posted messages. There is no way for spammers to know who is reading the messages.

I do not believe an ordinary subscription through an ISP would generate spam. And it is unlikely your ISP would send a "nice letter" for subscribing to a newsgroup. It sounds like you signed up through some intermediate gateway. Those "folks" are likely to be the guilty ones.

By the way, if you have Javascript enabled for mail and newsgroups, turn it off. Every once in a while someone posts something that creates real or false alarms about viruses. If Javascript if off, you simply don't need to worry about it.

73,
Gene
W4SZ

Bruce wrote:
>
> Just to let people know.. I subscribed to this site a few days
> ago, and received a nice letter from the folks who run it.
> I've since deleted it by accident. But, I enjoy reading the headers,
> and opening up the interesting buts.
>
> My point of this letter though is SPAM. Since I subscribed
> to this site, I've been inundated by trash spam of all nature.
> I was SPAM free previoulsly.
>
> Live and learn I guess. Hopefully, those that run this site
> aren't at fault.. just some evil predator type of computer
> spawn.
>
> So, be aware folks
>
> rgds / Bruce / VE1NB

1611. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 20:50:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2rcl58pcokm8c@corp.supernews.com>
Source record: 126498

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Huh? I didn't answer it because it doesn't make sense. There's no
>> "additional power" being supplied. I've accounted for every watt in my
>> analysis. And I have no idea what you meant by "something like this".
>> Something like what?
>
>
> Something like 75W + 8.33W = 133.33W Why am I the only one questioning
> that equation?

It's probably because you're the only one writing that "equation". I don't have a clue what you're talking about. My analysis shows where every watt is coming from and where every watt is going. Nowhere in the analysis will you find anything that resembles your "equation". Cecil, you're not making any sense. Is there something about my analysis that you find to be incorrect? Or are you still grumbling about something Steve said, or you think Steve said?

Roy Lewallen, W7EL

1612. Re: subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 21:04:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ccdr2vopu07igco2ndbgc6aq9j8a9delv2@4ax.com>
Source record: 126499

On Tue, 21 Jan 2003 20:44:32 GMT, Gene Fuller <W4SZzzzzz@att.net>
wrote:

>And it is unlikely your ISP would send a "nice letter" for
>subscribing to a newsgroup.

Hi Gene, Roy,

There is a newsgroup representative that welcomes new posters to the
rec.radio newsgroups. He posts here about once or twice a year
stating the structure and intent of each of the groups. I got a
welcome notice a year back when @Home folded and forced the ATTBI
address onto me, giving me the appearance of a new participant.

This is an ad-hoc office, that I suppose is a legacy of the days when
resources were limited and netiquette was promulgated by volunteers
acting in its behalf. It may give the appearance of authority, but it
is only through cooperation.

73's
Richard Clark, KB7QHC

1613. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 21:08:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2rdmt3qee0m7c@corp.supernews.com>
Source record: 126500

A step propagates by means of exactly the same principles as any other time-varying waveform. In a common technique known as TDR, for Time-Domain Reflectometry, a step is applied to the circuit under test, and reflections of this step from discontinuities are observed to determine the location and nature of the discontinuities. I'm sure that a search of the web for TDR or Time-Domain Reflectometry will produce a multitude of examples and applications.

Roy Lewallen, W7EL

Jim Kelley wrote:
>
> Richard Harrison wrote:
>
>>Tom, KA6RUH wrote:
>>"Tell us again, Richard, how a rapidly opening and closing switch is
>>linear."
>
>
> Yes, a step function is non-linear. But I'd like to hear how it's
> possible to propagate one through a real circuit or transmission line.

1614. Re: subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 21:10:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2rdr1butnqpf4@corp.supernews.com>
Source record: 126501

Thanks for the info, I wasn't aware of that. I've posted on a dozen or so newsgroups from time to time and never received a response like that. Sounds like a nice idea.

Roy Lewallen, W7EL

Richard Clark wrote:
> On Tue, 21 Jan 2003 20:44:32 GMT, Gene Fuller <W4SZzzzzz@att.net>
> wrote:
>
>
>>And it is unlikely your ISP would send a "nice letter" for
>>subscribing to a newsgroup.
>
>
> Hi Gene, Roy,
>
> There is a newsgroup representative that welcomes new posters to the
> rec.radio newsgroups. He posts here about once or twice a year
> stating the structure and intent of each of the groups. I got a
> welcome notice a year back when @Home folded and forced the ATTBI
> address onto me, giving me the appearance of a new participant.
>
> This is an ad-hoc office, that I suppose is a legacy of the days when
> resources were limited and netiquette was promulgated by volunteers
> acting in its behalf. It may give the appearance of authority, but it
> is only through cooperation.
>
> 73's
> Richard Clark, KB7QHC

1615. Re: subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 21:25:33 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <SNiX9.65307$wQ1.36949@fe01>
Source record: 126502

Bruce wrote:
> Just to let people know.. I subscribed to this site a few days
> ago, and received a nice letter from the folks who run it.
> I've since deleted it by accident. But, I enjoy reading the headers,
> and opening up the interesting buts.
>
> My point of this letter though is SPAM. Since I subscribed
> to this site, I've been inundated by trash spam of all nature.
> I was SPAM free previoulsly.
>
> Live and learn I guess. Hopefully, those that run this site
> aren't at fault.. just some evil predator type of computer
> spawn.
>
> So, be aware folks
>
> rgds / Bruce / VE1NB

You received the SPAM because you made a post to a USENET (not a "site")
public newsgroup without disguising your email address, not because you
"subscribed" to the group. If you never made a post, then the spambots
could never obtain your email address.

73 de W6DKN

1616. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 21:42:25 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E2DBEC1.1B1634B7@uci.edu>
Source record: 126503

Hi Roy,

Thanks very much for your reply, but I think you may have missed the point I was trying to make. A step function, by definition, has zero rise time and zero fall time, with two values of Y for a single value of X. If a function has measureable rise and fall times, it's not a step function. It's not possible to generate or propagate a pulse with zero rise and fall times. Real pulses have finite rise and fall times. Tom seems to be assuming that a non-linear source will always produce a non-linear waveform. A make before break switch could indeed be such a source on paper. But any resulting wave would be constrained by its environment to having mearsureable rise and fall times. As a result, the wave that a switch produces is not a step function. If a waveform is a non-linear function, it's not by virtue of being a step function.

73, Jim AC6XG

Roy Lewallen wrote:
>
> A step propagates by means of exactly the same principles as any other
> time-varying waveform. In a common technique known as TDR, for
> Time-Domain Reflectometry, a step is applied to the circuit under test,
> and reflections of this step from discontinuities are observed to
> determine the location and nature of the discontinuities. I'm sure that
> a search of the web for TDR or Time-Domain Reflectometry will produce a
> multitude of examples and applications.
>
> Roy Lewallen, W7EL
>
> Jim Kelley wrote:
> >
> > Richard Harrison wrote:
> >
> >>Tom, KA6RUH wrote:
> >>"Tell us again, Richard, how a rapidly opening and closing switch is
> >>linear."
> >
> >
> > Yes, a step function is non-linear. But I'd like to hear how it's
> > possible to propagate one through a real circuit or transmission line.

1617. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 22:37:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2riti1f6b58f8@corp.supernews.com>
Source record: 126504

Thanks for the clarification. I apologize -- I was of course referring to real approximations of step functions, and didn't realize you were speaking only of the idealized waveform. I'll leave the discussion of the theoretical aspects of theoretical step functions to others.

Roy Lewallen, W7EL

Jim Kelley wrote:
> Hi Roy,
>
> Thanks very much for your reply, but I think you may have missed the
> point I was trying to make. A step function, by definition, has zero
> rise time and zero fall time, with two values of Y for a single value of
> X. If a function has measureable rise and fall times, it's not a step
> function. It's not possible to generate or propagate a pulse with zero
> rise and fall times. Real pulses have finite rise and fall times. Tom
> seems to be assuming that a non-linear source will always produce a
> non-linear waveform. A make before break switch could indeed be such a
> source on paper. But any resulting wave would be constrained by its
> environment to having mearsureable rise and fall times. As a result,
> the wave that a switch produces is not a step function. If a waveform is
> a non-linear function, it's not by virtue of being a step function.
>
> 73, Jim AC6XG

1618. Re: Decoupling 2m antenna feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 22:47:11 UTC
From: Mont O'Leary <k0ycn@arrl.net>
Message-ID: <P5kX9.1751$tZ4.541448252@newssvr12.news.prodigy.com>
Source record: 126505

Don, I suggest that you consider a ferrite choke at the feedpoint. You can make an inexpensive one yourself from beads available at Palomar Engineers (www.palomar-engineers.com) and they will help you with the "mix" and number required for your frequency. You just slip them over the line and then use a piece of shrink-wrap tubing to hold the beads in place. It's lightweight and looks decent too.

As far as the RG8 is concerned, have you looked at the loss of this old stuff versus Belden 9913 or Times Microwave LRM-400? If you have a very long run, this would be worth looking into.

I like the "liquid tape" that you can simply paint onto connectors and fittings. It is long-lasting and available at any decent hardware store or home improvement warehouse store.

73, Mont O'Leary - K0YCN

1619. Re: subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 22:51:37 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2rjnnjgbm1j40@corp.supernews.com>
Source record: 126506

Another. solution I have found effective is to bounce all the spam. It makes it appear that your address does not exist.

Go to www.mailwasher.net and pick up a free copy of mail washer. It allows you to preview your mail and bounce the spam.

A bonus if that same mail address sends you a second spam it is automatically bounced.

It is nice to read my mail with out all the messages urging me to see the teenager and her horse engaged in copulative behavior.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v2rblebiq5qi94@corp.supernews.com...
> This isn't a "site", it's a Usenet Newsgroup. No one runs it, it's a
> public forum. Anyone posting to any newsgroup will get spammed unless

1620. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 23:00:31 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2rk8cg1gi3b0f@corp.supernews.com>
Source record: 126507

In a word... YES!

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E2DA87B.1070806@ieee.org...

> Something like 75W + 8.33W = 133.33W Why am I the only one questioning
> that equation?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1621. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 23:05:46 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E2DD24A.EF3B92B7@uci.edu>
Source record: 126512

Roy Lewallen wrote:
>
> Thanks for the clarification. I apologize -- I was of course referring
> to real approximations of step functions, and didn't realize you were
> speaking only of the idealized waveform. I'll leave the discussion of
> the theoretical aspects of theoretical step functions to others.
>
> Roy Lewallen, W7EL

Perhaps you would agree that in some discussions of the approximation,
the fact that real pulses are a linear approximation of the theoretical
non-linear function is sometimes overlooked.

73, Jim AC6XG

1622. Re: FRITZEL FD-4 Off Center Fed Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 23:34:54 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b0klf8$ur2$1@slb9.atl.mindspring.net>
Source record: 126509

The antenna was basically a 'Windom'. Although not quite...hi. As I recall it was 130 ft long and fed at 33 feet from one end. I may not be exact on these figures but it will give you an idea.

The wire was made out of some sort of flexible junk. The antenna didn't work all that well. I got rid of it quite quickly.

Dan/W4NTI

"Barry" <burro@chilitech.com> wrote in message news:3E2DA8B7.10CF3A0@chilitech.com...
> Does anyone have any specification information on this antenna..
>
> I understand the designer Kurt Fritzel died some time ago and the
> antenna is no longer made.
>
> I also know about the 6:1 balun but am looking for some info on the
> overall length and the point of fed also the angle and height of the
> ends of the antenna above ground.
>
> One additional question if the elements of the antenna are not only
> inverted V config but because of the property and space if the ends were
> forming a V to the attachment points on available trees what do you
> think the effect might have?
>
> I imagine that angle could be 80 to 90 deg.
>
> Thanks for any and all info or any other.
>
> Barry
> WB6LDL
> Panama City Florida
>

1623. Re: 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 23:36:26 UTC
From: Jackie <no@address.given.com>
Message-ID: <_PkX9.775734$WL3.766736@rwcrnsc54>
Source record: 126510

"Neil M Barrowman" <rn822706@ntlworld.com> wrote in message
news:SBcX9.2096$Lm4.87003@newsfep2-win.server.ntli.net...
> Im using "HUSTLER" 5band vertical--

Hi Neil,

This is the antenna I'm planning on eventually ordering. Nice to know it works well for you without a million radials. There is hope for DX for my set-up yet!

Jackie
KC0ODY

1624. Re: 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 23:39:21 UTC
From: Jackie <no@address.given.com>
Message-ID: <JSkX9.776688$P31.575264@rwcrnsc53>
Source record: 126511

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E2D632D.4080800@attbi.com...
> You have described my temporary setup to a TEE!
>
> Hustler 4BTV strapped to a deck post next to the frozen pool. I use
> three sets of radials just laying on the frozen snow. VSWR about 2:1 or
> slightly less.
>
> Good tuner and having fun.

What are you using for radials?

> Deacon Dave, W1MCE
>
> PS: 60 foot tower and Log Periodic when the ground thaws.

Lucky you! I am glad my set-up is temporary, for I'm not all that sure I'm
going to be living in this place come summer. We'll see. I'm considering
getting into a townhouse, but you'd best believe I will be looking for an
association that allows SOME sort of an outdoor antenna...

Jackie KC0ODY

1625. Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 23:48:12 UTC
From: FM <radiovintage@hotmail.com>
Message-ID: <0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net>
Source record: 126513
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having purchased crystals in many years where is the best place to buy them ?? We will be using the repeater on 146.01/61.Also is there a site with the specs for the channel elements ?
Rcvr Channel Element : KXN 1086A
Xmtr Channel Element : KXN 1088A
THANKS.

1626. Re: subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-21 23:54:19 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <tanr2v0bojir7obtk5rc8lhd81jgpd0fb4@4ax.com>
Source record: 126514

On Tue, 21 Jan 2003 20:10:48 GMT, Bruce
<noabcincowbay@ns.sympatico.ca> wrote:

>Just to let people know.. I subscribed to this site a few days
>ago, and received a nice letter from the folks who run it.
>I've since deleted it by accident. But, I enjoy reading the headers,
>and opening up the interesting buts.
>
>My point of this letter though is SPAM. Since I subscribed
>to this site, I've been inundated by trash spam of all nature.
>I was SPAM free previoulsly.
>
>Live and learn I guess. Hopefully, those that run this site
>aren't at fault.. just some evil predator type of computer
>spawn.
>
>So, be aware folks
>
>rgds / Bruce / VE1NB

welcome, bruce. many spammers run little spybots called 'spiders'.
the aim of the spider is to prowl the newsgroups looking for e-mail
addresses. that's why you'll see many folks here using an altered
e-mail address (like mine). don't know how effective it is but it
can't hurt.

73,

rich, n9dko

1627. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 00:20:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2DE3CE.8090204@ieee.org>
Source record: 126515

Roy Lewallen wrote:
> It's probably because you're the only one writing that "equation". I
> don't have a clue what you're talking about. My analysis shows where
> every watt is coming from and where every watt is going. Nowhere in the
> analysis will you find anything that resembles your "equation". Cecil,
> you're not making any sense.

I'm sorry, I'll try to modify the brainteaser to illustrate my question.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1628. Re: Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 00:22:06 UTC
From: k1bqt@aol.com
Message-ID: <20030121192206.02295.00000149@mb-bk.aol.com>
Source record: 126516

>I'm looking for a design to home-brew a clip-on (or clamp-on) wattmeter that can be used to measure common-mode current on a coaxial feedline <

MFJ has two. For experimentation, I recommend the smaller low power one I designed when I worked for them. It is sensitive enough so you can use it with your MFJ antenna analyzer or a signal generator as a signal source.

Rick K1BQT

1629. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 00:23:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2rp4p9ib0n1f1@corp.supernews.com>
Source record: 126517

No.

Most of my discussion about TDR was either with fellow engineers at Tektronix in the group where we designed TDR equipment, or in the context of giving support to customers or designing and teaching classes on TDR concepts and applications. The risetime of the real step is paramount in understanding the limitations and responses of a TDR system, and the relationship between it and spectral bandwidth are also very important. So in our discussions it was never overlooked and always kept in mind. Risetime is the single most important specification for the kinds of high speed TDR system I'm most familiar with.

A "real" step can conceptually be generated by beginning with the theoretical infinitely fast step and passing it through a linear filter. And, in fact, this is frequently a very useful way of visualizing what's going on. (For example, the spectrum of the "real" step can be found by multiplying the frequency response of the filter by the easy-to-derive spectral content of the perfect step, or the time waveform by convolving the time response of the filter with the time waveform of the perfect step.) It's also a reasonable approximation to the actual physical generation of the step, with the "filter" being parasitic properties of the switching device. Instantaneously occurring steps and pulses, and even impulses of infinite amplitude, can be defined in such a way that they satisfy the requirements of linear circuit theory (basically, that they satisfy superposition). So they can be treated as linear waveforms, and linear circuit analysis techniques can be used to analyze them, including applying Kirchoff's and Ohm's laws. I sense a confusion between "linear" as applied to amplifiers (i.e., the output is a simple multiple of the input) and the properties required for linear circuit theory to be applicable and valid. As I've said, infinitely fast steps and infinitely high, infinitely narrow pulses (but having a finite area) satisfy linear circuit requirements and are often used in linear circuit analysis, so aren't at all "nonlinear" in that sense. See for example Pearson and Mahler, _Introductory Circuit Analysis_, section 9.3; or Van Valkenburg, _Network Analysis_, section 8-2. Or look in the index of any other circuit text for "Impulse".

Roy Lewallen, W7EL

Jim Kelley wrote:
> Roy Lewallen wrote:
>
>>Thanks for the clarification. I apologize -- I was of course referring
>>to real approximations of step functions, and didn't realize you were
>>speaking only of the idealized waveform. I'll leave the discussion of

>>the theoretical aspects of theoretical step functions to others.
>>
>>Roy Lewallen, W7EL
>
>
> Perhaps you would agree that in some discussions of the approximation,
> the fact that real pulses are a linear approximation of the theoretical
> non-linear function is sometimes overlooked.
>
> 73, Jim AC6XG

1630. Re: 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 00:37:12 UTC
From: k9sqg@aol.com
Message-ID: <20030121193712.07948.00000156@mb-fk.aol.com>
Source record: 126419

Jackie,

Well, might be best to improvise as best you can. Run the wires under the deck or wherever convenient. If you can mount the antenna high enough, say 8 or more feet above the ground, you could string out a counterpoise from there. In any case, you will work some stations. The better the radials/counterpoise, the better the radiation. Experimenting can be fun.

73s,

Evab

1631. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 00:40:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2rq3fisu9vd38@corp.supernews.com>
Source record: 126420

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> It's probably because you're the only one writing that "equation". I
>> don't have a clue what you're talking about. My analysis shows where
>> every watt is coming from and where every watt is going. Nowhere in
>> the analysis will you find anything that resembles your "equation".
>> Cecil, you're not making any sense.
>
>
> I'm sorry, I'll try to modify the brainteaser to illustrate my question.

Hold on a minute, there. You asked that I do the brainteaser with Norton equivalents, showing the powers in the source resistors. I did that, and quite a bit more. Do you or do you not find anything wrong with my analysis? If there's something wrong with it, what, specifically? I'm not going to waste my time chasing around one example after another until you've answered that.

Roy Lewallen, W7EL

1632. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 00:41:32 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <0NIX9.20148$8N.2003188@news1.east.cox.net>
Source record: 126421
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

International Crystal in Oklahoma City, OK. Don't screw around, send
them the channel elements for recrystaling, calibration, and aging.
You get exactly what you pay for, and ICM is first rate.

Pete

"FM" <radiovintage@hotmail.com> wrote in message
news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the
specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A
> THANKS.
>
>

1633. Re: 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 00:55:18 UTC
From: Jackie <buzzygirl@REMOVETHIS.attbi.com>
Message-ID: <WZlX9.37069$4u5.23422@rwcrnsc52.ops.asp.att.net>
Source record: 126422

"K9SQG" <k9sqg@aol.com> wrote in message
news:20030121193712.07948.00000156@mb-fk.aol.com...
> Well, might be best to improvise as best you can. Run the wires under the
deck
> or wherever convenient. If you can mount the antenna high enough, say 8
or
> more feet above the ground, you could string out a counterpoise from
there.

Yes, improvisation is the key to my current situation. Actually, the height of the antenna isn't going to be a problem, as I believe that it'll reach to at least 25' over the yard surface. I have a Comet GP-3 as my VHF/UHF antenna, and it's strapped to the chimney of the house. The top of it sits about 25' from the ground, and it regularily gets me out to repeaters in northwestern Wisconsin that're 80 miles from here, so I don't think that the height of my HF antenna will be a problem.

The main issue right now is that I won't have the HF antenna staked into the ground on a mast. That is a temporary situation, of course. When the ground thaws come March or so, I'll be able to put in at least a 5' mast and then strap an antenna to that (I will most likely have a Hustler 5 band vertical by that time) and attach it to a ground rod.

Right now, though, in the absence of putting down a bunch of radials (due to the fact that we've got kids that play in the yard and I don't want them tripping, and the landlord would probably have a fit with a bunch of wires strung all over her precious grass) I will probably just do something like just run a few wires from the antenna and either strap them to the deck, or maybe even use some spare sheets of chicken-wire under the deck as a counterpoise. I know it won't be the equivalent of a big-gun IOTA set-up, but if it gets me some mileage, I'll do it!

You are right, I think experimenting will be fun. At least the challenge of doing what I can with what I have, will be fun!

Jackie KC0ODY

1634. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 01:00:15 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18978cf5de5bd9969896f5@192.168.42.131>
Source record: 126423
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

In article <0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net>,
radiovintage@hotmail.com says...

> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A

Those are the same elements as used in Mitrek radios. You should
have little trouble finding them from ham swaps, or from International
Crystal.

If all else fails, contact me via E-mail. I may have some extras
that you could send to ICM for recrystaling.

FWIW: The MSR2000's a nice box. It should make you a fine repeater.

73 de KC7GR.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1635. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 01:05:48 UTC
From: "Bob M." <xxxxx@yyyy.zzz>
Message-ID: <0cSdnWAAw936c7CjXTWcqA@comcast.com>
Source record: 126424
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I agree that ICM is the place to send your elements to.

Check out www.batlabs.com however as they may have additional information.

Bob M.
======
"FM" <radiovintage@hotmail.com> wrote in message
news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the
specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A
> THANKS.
>
>

1636. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 01:06:17 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2rrk8nmviu427@corp.supernews.com>
Source record: 126425

Here is the reason those numbers never add up:

Let a=b.
Then a^2 = ab,
a^2 + a^2 = a^2 + ab,
2 a^2 = a^2 + ab,
2 a^2 - 2 ab = a^2 + ab - 2 ab,
and 2 a^2 - 2 ab = a^2 - ab.

This can be written as 2 (a^2 - a b) = 1 (a^2 - a b),
and canceling the (a^2 - ab) from both sides gives 1=2.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

> OC_CAM's Razor wrote:
> >
> >
> > I'm sorry, I'll try to modify the brainteaser to illustrate my question.
>
>

1637. New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 01:20:58 UTC
From: k3bu@aol.com
Message-ID: <20030121202058.29848.00000258@mb-mv.aol.com>
Source record: 126426

Check this out:

http://www.freerepublic.com/focus/news/826883/posts

anything to do with 2m (144) ?
new/old/mystery antenna?
or fractals predated?
or submerged new/old country?
or new potential lawsweet?
where is Phil?

Yuri

1638. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 01:32:02 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <mwmX9.64191$4j5.10074735@newssvr28.news.prodigy.com>
Source record: 126518

I'm not an expert on this, but I'll give it a shot. I too have bdoing some research on SAs recently on eBay and elsewhere. Here's what I've found...

The cheapest one generally available is the HP 141T mainframe with the 8552B IF plugin and the 8553B RF plugin. This system has a freq range of 1 KHz to 110 MHz, and useable BW of 10 Hz to 300 KHz, depending on freq. Has 70 db dynamic range and sensitivity of -140 dbm at the narrowest BW. You can find these for a few hundred dollars.

Next up is the 181T mainframe or it's storage scope alternative the 853A. The plugins would be the 8557A or 8558B. This is a much nicer instrument than the above. Freq range of 100 KHz to 1.5 GHz, and BW from 1 KHz to 3 MHz. Beware the /001 and /002 options. The /001 is 75 ohm input, and the /002 is 75 ohm plus the scale is calibrated in dbmV instead of dbm. A good 8558B based SA will set you back a grand or so.

The Tek 7000 series mainframes were very popular and there are a ton of plugins available for almost anything...including SA. They are available in upright or rackmount style, with three or four bays. There is a variable persistence storage version, and also a digital storage version. There are many different versions...check out Tek's website for a little history. 7000 series frames with a few standard plugins like dual input amps and dual time base plugins will set you back two or three hundred dollars.

The three SA plugins that are most useful to hams are the 7L12, 7L13 and 7L18. The 7L13 is the best for normal use. It has a freq range of 1 KHz to 1.8 GHz, and BW from 30 Hz to 3 MHz...but since it is phase locked the narraower bandwidths are more useable due to better stability. A good 7L13 will cost around $1000.

For $1500 upwards, you can get some really nice digital storage SAs like the Tek 492 and 496 and HP 8560 and 8590 series.

Hope this helps.

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"starsekr" <starsekr@aol.com> wrote in message
news:f2828edc.0301201557.48b31b4b@posting.google.com...
> With the price of SA's below $200 on ebay and at swap meets, I've been
> getting a bug to buy one of these. Does anyone want to offer pro's
> and cons on different types, such as the HP-140 or 141 systems or
> Tektronix 7000 series scopes with a SA plug-in?
> Both general observations or specific recommendations are welcome.

> Jim, KA6TPR

1639. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 01:40:38 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2rtkjjc24gv83@corp.supernews.com>
Source record: 126427

This may be the genetic antenna we have heard so much about. (C) (R) (Patent Pending) (Woe to those that copy)

In reality, it looks much like some special equipment we had on board in the navy. It was used to measure disturbances of the radio fields, caused by denotation of nuclear weapons at the South Pole.

The detonations were supposed to affect the earth's magnetic fields and disrupt communications worldwide.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030121202058.29848.00000258@mb-mv.aol.com...
> Check this out:
>
> http://www.freerepublic.com/focus/news/826883/posts
>
> anything to do with 2m (144) ?
> new/old/mystery antenna?
> or fractals predated?
> or submerged new/old country?
> or new potential lawsweet?
> where is Phil?
>
> Yuri

1640. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 01:58:54 UTC
From: k3bu@aol.com
Message-ID: <20030121205854.29848.00000259@mb-mv.aol.com>
Source record: 126428

>
>This may be the genetic antenna we have heard so much about. (C) (R) (Patent
>Pending) (Woe to those that copy)
>
>In reality, it looks much like some special equipment we had on board in the
>navy. It was used to measure disturbances of the radio fields, caused by
>denotation of nuclear weapons at the South Pole.
>

de-no-who?
does it fit the time frame?

>The detonations were supposed to affect the earth's magnetic fields and
>disrupt communications worldwide.
>--
>For Admiral Poindexter's folks:
>Bomb, anthrax, attack, acid, hijack, skyjack
>sniper, plutonium, nuclear, Big Mac, jihad
>Democrats, terror, Howdy Doody, Oprah
>

you better add "SWR, reflected, fractals, chip, phil, genetic, vegetarians,
..." :-)

> "Those that sacrifice freedom for security deserve neither"

Amen!
Live free, or die!

Yuri

1641. Re: subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 01:59:41 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-2101031759410001@bni030qny8kc.bc.hsia.telus.net>
Source record: 126429

In article <v2rjnnjgbm1j40@corp.supernews.com>, "Fred Hambrecht Sr." <w4jle@charter.net> wrote:

> Another. solution I have found effective is to bounce all the spam. It makes
> it appear that your address does not exist.

This procedure doesn't work very well with the larger SPAMmers. The only bounce messages that *may* be taken seriously by them are those which are sent almost instantly after the SPAM message is sent; those stand a chance of actually coming from the recipient's ISP, although even then the SPAMmer likely pays no attention. Something coming back a half hour later is clearly not coming from the recipient's ISP, never mind what the message headers may say. In fact it pretty well shows that the message *did* get delivered.

There are some additional problems with this bounce approach. Often the "Return-Path:" and "From:" headers in SPAM are forged; if you use either of those, your bounce message itself may bounce (if the addresses in question do not exist), or, worse yet, your bounce message may be received by an innocent third party. This has happened to me. My address was forged into the "From:" line of some pornographic SPAM sent to all SFU faculty members. I learned about this in two ways: (i) receiving it myself, and (ii) receiving the bounce messages for messages sent to non-existent or no-longer-existent faculty members. Fortunately the SFU computing facilities people know how to read headers correctly and my account wasn't terminated. But even if you look at the "Received: from" lines in the headers, these may be forged (although only some of them can be forged), so using them to construct a bounce message runs a slight risk of offending the innocent.

SFU now has a SPAM filter which marks, but does not censor, what it thinks is SPAM. It's about 99% accurate, but there are a few false negatives and, more important, false positives. So I glance at the messages thus marked, before tossing them out. Eudora allows one to set up filters so that messages marked as SPAM get sent to a special mailbox instead of the usual "IN" box; no doubt other e-mail programs can be similarly configured.

For what I think is an easy and relatively effective way to avoid harvesting of e-mail addresses from news postings, see my address at the top of this message and signature at the bottom. Messing up the last letter of the domain name this way is preferable to other variations, for two reasons: (i) People wanting to reply by e-mail merely have to remove the final "z", and (ii) Any SPAMmer using the whole address will get an immediate bounce because ".caz", unlike ".ca", does not exist. If I were to change "ryeburn" to "ryeburnz" or something like that, SPAM messages sent to the address would go all the way to SFU before bouncing, adding to

the work load of the SFU mail system, and everything in between the
SPAMmer and SFU.

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

1642. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 02:02:13 UTC
From: richardharrison@webtv.net
Message-ID: <27976-3E2DFBA5-299@storefull-2312.public.lawson.webtv.net>
Source record: 126430

Art, KB9MZ wrote:
"I suspect it will not be necessary to ground as with the loop antenna---."

Knew it! Here we go again. People seem to doubt Lenz`s law.

The purpose of a Faraday screen is to ground out electrostatic coupling while allowing magnetic coupling. So, the shield needs to be grounded if electrostatic coupling is to be thwarted. As I recall, Tom argued the shield was to preserve balance.

An unbroken grounded metal shield over an antenna can completely isolate the antenna. Capacitive coupling with the outside world ends at the surfaces of the shield. Electrostatic lines of force terminate on either the inside surface of the shield or the outside surface of the shield. Skin effect prevents penetration of the shield.

Magnetic lines of force on either side of the shield generate currents in the shield surfaces which nullify the fields which induce them in the first place. So, with the right material and construction the r-f shield can be very effective against both magnetic and electric h-f fields.

If we cut up our grounded screen with a slot or slots we can interupt tnduced current in the shield. Minimum opposing current in the shield means good magnetic coupling through the shield. Good grounding of the pieces of the shield remaining means minimum electrostatic coupling via the shield.

Well a lot more elaboration is possible, but I don`t want to do it all again.

Best regards, Richard Harrison, KB5WZI

1643. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 02:21:28 UTC
From: "Fred Hambrecht Sr." <w4jle@charter.net>
Message-ID: <v2s061gv5p6g6c@corp.supernews.com>
Source record: 126431

It does indeed fit the timeframe, being that the equipment was given the "float test" in late 50's or early 60's. Once the tests were done, all the equipment was deep sixed to preserve secrecy.

The word should have been detonate... My bad.

--
For Admiral Poindexter's folks:
Bomb, anthrax, attack, acid, hijack, skyjack
sniper, plutonium, nuclear, Big Mac, jihad
Democrats, terror, Howdy Doody, Oprah

"Those that sacrifice freedom for security deserve neither"

"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030121205854.29848.00000259@mb-mv.aol.com...
> >
> >This may be the genetic antenna we have heard so much about. (C) (R)
(Patent
> >Pending) (Woe to those that copy)
> >
> >In reality, it looks much like some special equipment we had on board in
the
> >navy. It was used to measure disturbances of the radio fields, caused by
> >denotation of nuclear weapons at the South Pole.
> >
>
> de-no-who?
> does it fit the time frame?
>
> >The detonations were supposed to affect the earth's magnetic fields and
> >disrupt communications worldwide.
> >--
> >For Admiral Poindexter's folks:
> >Bomb, anthrax, attack, acid, hijack, skyjack
> >sniper, plutonium, nuclear, Big Mac, jihad
> >Democrats, terror, Howdy Doody, Oprah
> >
>
> you better add "SWR, reflected, fractals, chip, phil, genetic,
vegetarians,
> ..." :-)
>
> > "Those that sacrifice freedom for security deserve neither"
>

> Amen!
> Live free, or die!
>
> Yuri

1644. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 02:34:29 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v2s0n0e9bcrmf8@corp.supernews.com>
Source record: 126432
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I too have used International Crystal for several decades. Whether it
is Motorola CEs or a crystal for the 40 Kw Colins we ran at Ohio State,
they do it right the first time. Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:0NlX9.20148$8N.2003188@news1.east.cox.net...
> International Crystal in Oklahoma City, OK. Don't screw around, send
> them the channel elements for recrystaling, calibration, and aging.
> You get exactly what you pay for, and ICM is first rate.
>
> Pete
>
> "FM" <radiovintage@hotmail.com> wrote in message
> news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not
having
> > purchased crystals in many years where is the best place to buy them
?? We
> > will be using the repeater on 146.01/61.Also is there a site with
the
> specs
> > for the channel elements ?
> > Rcvr Channel Element : KXN 1086A
> > Xmtr Channel Element : KXN 1088A
> > THANKS.

1645. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 02:47:32 UTC
From: aeonsciltd@ineedhits-mail.com
Message-ID: <36173532.0301211847.1b2e7e64@posting.google.com>
Source record: 126433
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Hi:

I would not recomend this but a crystals persent value is
measured in parts per million, if you get the largest value and
muliply by 10: the percent is now measured in parts per 10,000! I
order from supliers who advertise in popular electronics magazines,
are there any supliers who custom fit to the needs of the consumer?

aeonsciltd@ineedhits-mail.com

1646. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 02:52:57 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e2e084e_3@news1.prserv.net>
Source record: 126434

Larry, Jim and group:

A couple of minor corrections and additions. The HP 8556/8557/8558/8559 series has a fatal flaw. The rotary switches have construction which sheds fingers from the rotors and are near impossible to repair unless you happen to find the tiny fingers when you open the unit, which has plenty of vents in the case to let them out. Then you have to have the tools and dexterity of a jeweler to effect repairs, nevermind field stripping the unit. Be particularly cautious when it says "the time base skips steps", or "the trigger doesn't work on some positions", etc., as these are manifestations of rotor problems. The last 8558 I tracked on the Eplace had switch rotor problems. I helped a local ham who bought a 8558 which had 2 cards butchered endlessly, but was never repaired, because two wipers fell off the time base switch rotor, and they never looked there for the problem. The older stuff for the 141 does not have this problem, nor does the 8566/8568 and later stuff.

The mainframe options for the 8556/ etc. are 182C/182T big screen, 180(A?) standard size, and 181A CRT storage screen, and 853A digital storage display.

Don't confuse the Tek 7xxx scope series and the HP 70,000 series modular SA. The latter requires intimate knowledge to get the correct pieces together for a usable system.

I have had the opportunity to use almost all the HP and Tek spectrum analyzers, stretching back to the Nelson Ross jobs which Tek started with in the 50s, and I have been universally disappointed with all the Tek models. Some of the HPs are dogs also, but I never made a formal list. Because of their incoherent sampling techniques, the present plethora of digital jobs are worthless for non-stationary signals, which is what I have to deal with, and why I still use analog analyzers. Given the time and opportunity, I can show you innumerable examples of cases where the digital jobs are absolutely incorrect and misleading, and I am worried that many modern engineering decisions are being made based on this erroneous data.

--
Crazy George
Remove NO and SPAM from return address

1647. Re: 4 band vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 02:57:38 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2E0845.50802@attbi.com>
Source record: 126435

The radials are made of #14 AWG stranded [Home Depot 500' for $15].

Four radials, one each for 10, 15, 20 and 40 meters are cut to length [1/4 wavelength] and all soldered at one end. One wire is connected to the soldered end and connects to the 4 BTV mounting plate then fans out four radials, one radial for each band.

A total of three of the above are used [12 wires total ... 3 connections to 4BTV ground bracket].

And yes Spring is coming! I had a Log Periodic at previous QTH and look forward to getting it installed here. Rohn 25, four sections, are on the ground under 2 feet of frozen snow and the LP is in the box waiting to be assembled. Note: QTH is at 490 Feet ASL on a 510 foot hill with 250 feet above average terrain.

Once the LP is in place the 4BTV will be relocated and used as a 40 meter vertical [tuned for 7025 CW]. I will use 9 forty meter radials [1/4 wavelength] stretched over the ground but below the grass level. Mow the lawn but don't cut the wires.

Deacon Dave, W1MCE

Jackie wrote:
> "Dave Shrader" <david.shrader@attbi.com> wrote in message
> news:3E2D632D.4080800@attbi.com...
>
>>You have described my temporary setup to a TEE!
>>
>>Hustler 4BTV strapped to a deck post next to the frozen pool. I use
>>three sets of radials just laying on the frozen snow. VSWR about 2:1 or
>>slightly less.
>>
>>Good tuner and having fun.
>
>
> What are you using for radials?
>
>
>>Deacon Dave, W1MCE
>>
>>PS: 60 foot tower and Log Periodic when the ground thaws.
>
>
> Lucky you! I am glad my set-up is temporary, for I'm not all that sure I'm
> going to be living in this place come summer. We'll see. I'm considering

> getting into a townhouse, but you'd best believe I will be looking for an
> association that allows SOME sort of an outdoor antenna...
>
> Jackie KC0ODY
>
>

1648. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 03:13:03 UTC
From: richardharrison@webtv.net
Message-ID: <4831-3E2E0C3F-96@storefull-2316.public.lawson.webtv.net>
Source record: 126439

Fred, W4JE wrote:
"---and canceling the (a^2-ab) from both sides gives 1 = 2 ."

Oh mygosh! And, I`m still trying to figure out what Cecil`s done with the family Joules!

Best regards, Richard Harrison, KB5WZI

1649. Re: FRITZEL FD-4 Off Center Fed Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 03:28:45 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <ag8uPo99V9EF+2nXKPE35vvcgw7j@4ax.com>
Source record: 126437

Barry <burro@chilitech.com> wrote:

>Does anyone have any specification information on this antenna..

See http://www.cebik.com/gup/gup9.html for theory on the Windom. Go to
www.radioworks.com to buy one, ready made. Or just put up a dipole :-)

Bob
k5qwg

1650. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 03:43:44 UTC
From: microwavetechnology@yahoo.com
Message-ID: <9d3c8fdc.0301211943.5f8e2701@posting.google.com>
Source record: 126438
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

ICM

http://www.icmfg.com/

A little more, but worth it to save a trip to the hill to warp a CHEAP crystal.

1651. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 04:10:26 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <SQoX9.64215$4j5.10097559@newssvr28.news.prodigy.com>
Source record: 126436

Thanks for the feedback, George. I wasn't aware of the switch problem you mentioned...I have a friend with an 8557A and a 8558B and he hasn't had any problems...but now that you mention it, I have seen the line "trigger doesn't work on some positions" in some copy on eBay.

Aside from the age and frequency limitations, since the 140/8552/8553 systems don't have the mechanical problems, would you recommend them...or do they show their age in terms of performance? How about stability?

Since you're not impressed with Tek...for a similar price, ignoring the 8558 series for the moment, what else would you recommend? I was eyeing the 7L13 since it will plug into the 7000 series frame and is phase locked. What other options are there in the $1000 range?

I know that HP has the rep for SAs and Tek for scopes...but there's a big jump in price from the 8552/8553 to the 8566 series...and isn't the low end of the 8566 something like 10 MHz? That leaves out a lot of spectrum.

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message news:3e2e084e_3@news1.prserv.net...
> Larry, Jim and group:
>
> A couple of minor corrections and additions. The HP 8556/8557/8558/8559
> series has a fatal flaw. The rotary switches have construction which sheds
> fingers from the rotors and are near impossible to repair unless you happen
> to find the tiny fingers when you open the unit, which has plenty of vents
> in the case to let them out. Then you have to have the tools and dexterity
> of a jeweler to effect repairs, nevermind field stripping the unit. Be
> particularly cautious when it says "the time base skips steps", or "the
> trigger doesn't work on some positions", etc., as these are manifestations
> of rotor problems. The last 8558 I tracked on the Eplace had switch rotor
> problems. I helped a local ham who bought a 8558 which had 2 cards
> butchered endlessly, but was never repaired, because two wipers fell off the
> time base switch rotor, and they never looked there for the problem. The
> older stuff for the 141 does not have this problem, nor does the 8566/8568
> and later stuff.
>

> The mainframe options for the 8556/ etc. are 182C/182T big screen, 180(A?)
> standard size, and 181A CRT storage screen, and 853A digital storage
> display.
>
> Don't confuse the Tek 7xxx scope series and the HP 70,000 series modular
SA.
> The latter requires intimate knowledge to get the correct pieces together
> for a usable system.
>
> I have had the opportunity to use almost all the HP and Tek spectrum
> analyzers, stretching back to the Nelson Ross jobs which Tek started with
in
> the 50s, and I have been universally disappointed with all the Tek models.
> Some of the HPs are dogs also, but I never made a formal list. Because of
> their incoherent sampling techniques, the present plethora of digital jobs
> are worthless for non-stationary signals, which is what I have to deal
with,
> and why I still use analog analyzers. Given the time and opportunity, I
can
> show you innumerable examples of cases where the digital jobs are
absolutely
> incorrect and misleading, and I am worried that many modern engineering
> decisions are being made based on this erroneous data.
>
> --
> Crazy George
> Remove NO and SPAM from return address
>
>
>

1652. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 04:11:31 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2E19F3.10900@ieee.org>
Source record: 126440

Roy Lewallen wrote:
> Hold on a minute, there. You asked that I do the brainteaser with Norton
> equivalents, showing the powers in the source resistors. I did that, and
> quite a bit more. Do you or do you not find anything wrong with my
> analysis? If there's something wrong with it, what, specifically?

What is wrong is not with your analysis but that what happens at the
impedance discontinuity is hidden inside the source box. What I have
in mind doesn't change things very much but puts the impedance discontinuity
far away from the source boxes. Something like the following:

Source A(R)----1WL R0 feedline----x----1WL 3R0 feedline-----Source B(3R)

Everything is the same as the brainteaser except 1WL of 3R0
feedline has been added.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1653. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 04:18:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2E1BA5.8090809@ieee.org>
Source record: 126441

Fred Hambrecht Sr. wrote:
> Here is the reason those numbers never add up:
>
> Let a=b.
> Then a^2 = ab,
> a^2 + a^2 = a^2 + ab,
> 2 a^2 = a^2 + ab,
> 2 a^2 - 2 ab = a^2 + ab - 2 ab,
> and 2 a^2 - 2 ab = a^2 - ab.
>
> This can be written as 2 (a^2 - a b) = 1 (a^2 - a b),
> and canceling the (a^2 - ab) from both sides gives 1=2.

Instead of "canceling" let's say you are dividing each side
of the equation by (a^2 - ab) which is equal to zero.
2*0 = 1*0 and you are not allowed to divide by zero to get
rid of those zeros. Zero divided by zero is undefined, not
(usually) equal to one.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1654. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 04:20:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2E1C21.7070608@ieee.org>
Source record: 126442

Richard Harrison wrote:
> Fred, W4JE wrote:
> "---and canceling the (a^2-ab) from both sides gives 1 = 2 ."
>
> Oh mygosh! And, I`m still trying to figure out what Cecil`s done with
> the family Joules!

I didn't divide them by zero.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1655. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 04:37:10 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <kt7s2v46unu00k7cckavudgc5iioa7f2ab@4ax.com>
Source record: 126443

On Tue, 21 Jan 2003 20:06:17 -0500, "Fred Hambrecht Sr."
<w4jle@charter.net> wrote:

|Here is the reason those numbers never add up:
|
|Let a=b.
| Then a^2 = ab,
| a^2 + a^2 = a^2 + ab,
|2 a^2 = a^2 + ab,
| 2 a^2 - 2 ab = a^2 + ab - 2 ab,
| and 2 a^2 - 2 ab = a^2 - ab.
|
| This can be written as 2 (a^2 - a b) = 1 (a^2 - a b),
|and canceling the (a^2 - ab) from both sides gives 1=2.

Bingo! That's why I can't follow this thread.

What a relief.

Wes N7WS

1656. Re: Dual Yagi questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 04:57:16 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <FtWcnetAqf0BubOjXTWcog@comcast.com>
Source record: 126444

Bill,

I gather you want to mount vertically polarized antennas one above the other on a non metallic mast. Better to clamp a cross boom on to the mast so they are side by side. For this case 3 - 5 foot separation between booms is adequate for casual use. I have never seen them mounted vertically, but the same 3 -5 foot separation should work, but now between the element ends. Wait a few days, I suspect people are going to jump all over this.

Tam/WB2TT
"Bill Grimwood" <bill@grimwood.net> wrote in message
news:v2r3fa7i582a64@corp.supernews.com...
> I plan to mount a 70cm and a 2 meter Yagi on the same mast oriented
> vertically. How far apart should the antennas be to work properly wiath
out
> inteferring with each other? Is the distance measured from the booms or
> from the ends of the radiators?
>
>
> Thanks
>
> Bill Grimwood
> K1WEG
>
>

1657. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 05:09:20 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <h59s2vov4rbjqu97b0t423gk5jio32dj03@4ax.com>
Source record: 126445

On Wed, 22 Jan 2003 04:10:26 GMT, "Larry Phipps"
<larry@telepostinc.com> wrote:

[snip]
|I know that HP has the rep for SAs and Tek for scopes...but there's a big
|jump in price from the 8552/8553 to the 8566 series...and isn't the low end
|of the 8566 something like 10 MHz? That leaves out a lot of spectrum.

Yes but the 8566 is the best SA ever built. My humble opinion of
course.

Get one of them and an HP3585 to fill in 10Hz to 40 MHz and you're in
biz. Your bank account will be empty but you'll be in SA heaven.

Wes N7WS

1658. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 05:21:57 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <0pKcndXQhqX4t7OjXTWcoA@comcast.com>
Source record: 126446

Andy

Don't copy a 200:50 ohm balun that works at 80 meters. At 20 meters and above, you don't need as much inductance, and for the 12.5 ohms you need low leakage inductance which means tight coupling. Look at some of the ap notes I mentioned in my othe email. A toroid is not what they use. The web site has pictures of the kinds of cores you need.

If you want to try a toroid, you might try this: put two winding of a few turns of RG58 on the core. Interleave the two windings. Connect the shields of the two windings in parallel - that is your 12.5 ohm port. Connect the center conductors of the two windings in series - that is your 50 ohms. Don't know what kind of core you have, but if it is ferrite, 2 or 3 turns each should be enough.

If you go to these web sites, you will see a 1 turn secondary, with either a 2, 3, or 4 turn primary - wound THROUGH the primary winding, and a two hole core.

Tam/WB2TT
"andy swiffin" <a.l.swiffin@dundee.ac.uk> wrote in message
news:3e2d15e3$1@news1.tay.ac.uk...
>
> "Richard Clark" <kb7qhc@attbi.com> wrote in message > >
> >
> > This is simply what you will get if you buy one (50:200).
> > The number of turns exactly correlates to ability of the BalUn to
> > present a high Z between the input and output (lacking that, you have
> > a short, and certainly a useless BalUn).
> >....
> > 73's
> > Richard Clark, KB7QHC
>
> Hi,
> Richard, thanks for that reply, I printed it off and have been studying it
> over the weekend, its good stuff. I think I now understand what I'm
trying
> to do.
>
> Am I right in thinking that if I've produced a balun correctly I should be
> able to take a 12.5 ohm resistance and place it across the end, when its
> energised with HF from a 50ohm source I should see a 1:1 SWR at the 50ohm
> end?
>
> I tried a few rough mock ups at the weekend and that wasn't the case, but

I
> only have some very cheap small (1.4 inch) toroids available and even for
> mock up I purposes I don't think they were up to much. I guess I just
> wasn't creating a high enough Z to isolate the output from the input?
>
> Cheers
> Andy
>
>
>

1659. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 05:34:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2sbav61o7qec3@corp.supernews.com>
Source record: 126447

That's simple. The voltages and currents at both ends of the lines are exactly the same as before. Furthermore, the voltage and current at the junction of the two lines is the same as at the ends. Because the voltages and currents are the same on the ends of the Z0 = R line as before, the forward and reverse traveling voltage and current waves are the same as they were before, so the forward and reverse powers on the Z0 = R line are the same as before. All that's left is to calculate the traveling waves on the Z0 = 3R line. This can be done the same way as I did for the original problem, with Ohm's and Kirchoff's laws:

We know from the previous analysis that the voltage at both ends of the 3R line = (5/2)*sqrt(PR) = Vf + Vr. The current at both ends = (1/2)*sqrt(P/R) to the left = Ir - If (defining "forward" to be to the right). And If = Vf/3R, Ir = Vr/3R for the Z0 = 3R line. Solving these equations gives, for the Z0 = 3R line,

Vf = (1/2)*sqrt(PR)
Vr = 2*sqrt(PR)
If = (1/6)*sqrt(P/R)
Ir = (2/3)*sqrt(P/R)

from which we calculate the forward (to the right) and reverse (to the left) powers as:

Pf = Vf * If = (1/12)P
Pr = Vr * Ir = (4/3)P

The net power to the right is Pf - Pr = -(5/4)P. That is, there's (5/4)P watts flowing to the left, as there should be. Once again, all the power is accounted for: (5/4)P comes from the source "box" on the right, flows down the 3R line, flows down the R line, and is absorbed by the source "box" on the left. After, of course, a certain amount of bouncing around until steady state is reached. No energy is created or disappears.

All the other voltages, currents, dissipations, and powers are exactly the same as they were for the brain teaser.

This ain't, as they say, exactly rocket science. More like high school algebra.

And the point is. . . ?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>

>> Hold on a minute, there. You asked that I do the brainteaser with
>> Norton equivalents, showing the powers in the source resistors. I did
>> that, and quite a bit more. Do you or do you not find anything wrong
>> with my analysis? If there's something wrong with it, what, specifically?
>
>
> What is wrong is not with your analysis but that what happens at the
> impedance discontinuity is hidden inside the source box. What I have
> in mind doesn't change things very much but puts the impedance
> discontinuity
> far away from the source boxes. Something like the following:
>
> Source A(R)----1WL R0 feedline----x----1WL 3R0 feedline-----Source B(3R)
>
> Everything is the same as the brainteaser except 1WL of 3R0
> feedline has been added.

1660. Re: Balun 50ohm unbal to 12.5 ohm balanced

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 09:50:26 UTC
From: andy swiffin <a.l.swiffin@dundee.ac.uk>
Message-ID: <3e2e6a40$1@news1.tay.ac.uk>
Source record: 126448

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
> If you want to try a toroid, you might try this: put two winding of a few
> turns of RG58 on the core. Interleave the two windings. Connect the
shields
> of the two windings in parallel - that is your 12.5 ohm port. Connect the
> center conductors of the two windings in series - that is your 50 ohms.
> Don't know what kind of core you have, but if it is ferrite, 2 or 3 turns
> each should be enough.
>
>

Richard and Tam, thanks again. I had another play yesterday and found that I hadn't given my samples a fair trial. One thing I'd tried was connecting the actual aerial, but I hadn't thought about what I was doing (it's grotty wx here, not really conducive to playing with aerials...). With a t-gamma match the length is quite a bit longer than required with just the 4:1 balun, I shortened my 10m only aerial (I have 3 square aerials I'm currently playing with 10m only t-gamma, 10-15-20 folded dipole and 10-15-20 t-gamma), when I removed the t-gamma and shortened it to bring it into resonance I found that my baluns were in fact working fine. I got a 1.1:1 swr match at 28.5mhz interestingly the length was 5.06 m which is the number that pops out of the formula in the arrl handboook for a standard dipole at 28.7mhz , L(m)=143/f. I didn't have much time to play last night, but I tried a balun I'd built with 2 lengths of coax wound on 2 toroids and one wound with 20swg on my small toroid of dubious quality. Both gave a good swr match to the aerial.

I need to spend a bit more time playing, I'm amassing quite a collection of different 4:1 balun designs so if the wx is a ok next weekend I'll do some comparisons. I particularly want to check the 3 band aerial.

Thanks again for your input, putting me in the right direction.

Cheers
Andy (gm8oeg)

1661. Re: Yagi dual band antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 11:43:33 UTC
From: u127@hotmail.com
Message-ID: <299f8ff8.0301220343.599d0b38@posting.google.com>
Source record: 126449

The KMA 4113 VHF/UHF LOG PERIODIC seems to do a good job. See

http://www.eham.net/reviews/detail/1700

But I prefer separate antennas for each band: more gain and suits my
Kenwood TS-2000 better, as it is equipped with separate antenna
connectors for 50, 144, 432 and 1296 MHz respectively.

Jan

> Does anyone have the plans for or a commerically made yagi that will work
> for 2 meters and 70CM?

1662. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 12:18:24 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301220418.2edc69b2@posting.google.com>
Source record: 126450

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<27976-3E2DFBA5-299@storefull-2312.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "I suspect it will not be necessary to ground as with the loop
> antenna---."
>
> Knew it! Here we go again. People seem to doubt Lenz`s law.
>
> The purpose of a Faraday screen is to ground out electrostatic coupling
> while allowing magnetic coupling. So, the shield needs to be grounded if
> electrostatic coupling is to be thwarted. As I recall, Tom argued the
> shield was to preserve balance.
>

Richard ,
when reviewing all the Terman books that I have all show when and when
not to ground the electrostatic shield. In fact he provides four set
ups for a loop whith grounding methods. For one setup where link
coupling is used the shield is not grounded, the shield requirement in
that case is because of the voltage gradient across the inductance. An
unbalance occurs in the loop which affects its directive properties in
a similar way to when a capacitor is placed on one side of the loop .
But as I said these explanations are in the Terman books which now
come under suspicion for technical errors by the majority.
From my point of view the shielding could affect the coupling but not
to the point of crippling it, so until I try it for myself sometime
the jury is still out.
Regards
Art

> Best regards, Richard Harrison, KB5WZI

1663. Re: subscribe leading to SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 12:32:37 UTC
From: bggbflxben@gmx.ch
Message-ID: <3e2e8e33.10197368@news.bluewin.ch>
Source record: 126451

I think that it is simply not possible nowadays to subscribe to any newsgroup on any public newsserver which will not lead to spam. Therefore it is not possible to join a group under the real e-mail name.

Otto Sykora
bggbflxben@tzk.pu (ROT13)

1664. rubber ducky antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 12:45:17 UTC
From: bggbflxben@gmx.ch
Message-ID: <3e2e9103.10917048@news.bluewin.ch>
Source record: 126452

Hi folks.

I am searching for a quite generic item, a rubber ducky, helical whip
for vhf application.

OK check with the next ham shop is an answer, but I need it for desig
of a new communication unit. This is made of polyester housing and has
a steel groundplane in it. Onto this the rubber antenna should go and
will then pass through the cover of the box.
The final band to be covered is 137-151mhz.

I need for the dimensioning samples of such whip which are not precut
to a specific frequency, but delivered in an 'uncut' condition so I
can experiment and find out the correct legth of the whip.

Finaly I need someone who is manufacturing in fact such whips and can
produce them later in larger numbers like 2000pc.

Does someone know a manufacturer (not just a reseller) of such helical
whips?

Thanks

Otto Sykora

Otto Sykora
bggbflxben@tzk.pu (ROT13)

1665. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 13:58:25 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E2EA360.9A24987@shaw.ca>
Source record: 126453
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"J. McLaughlin" wrote:
>
> I too have used International Crystal for several decades. Whether it
> is Motorola CEs or a crystal for the 40 Kw Colins we ran at Ohio State,
> they do it right the first time. Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
> " Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
> news:0NlX9.20148$8N.2003188@news1.east.cox.net...
> > International Crystal in Oklahoma City, OK. Don't screw around, send
> > them the channel elements for recrystaling, calibration, and aging.
> > You get exactly what you pay for, and ICM is first rate.
> >
> > Pete
> >
> > "FM" <radiovintage@hotmail.com> wrote in message
> > news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> > > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not
> having
> > > purchased crystals in many years where is the best place to buy them
> ?? We
> > > will be using the repeater on 146.01/61.Also is there a site with
> the
> > specs
> > > for the channel elements ?
> > > Rcvr Channel Element : KXN 1086A
> > > Xmtr Channel Element : KXN 1088A
> > > THANKS.

You can order them directly over the phone with International. Make
sure to have the Equipment model number and the channel frequencies
handy. I've used them for many years with great satisfaction!
--
Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1666. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 14:19:41 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E2EA8CB.3E30E903@att.net>
Source record: 126454

Art,

I do not recall even one instance of anyone saying that Terman is under suspicion for technical errors. Certainly the "majority" have not done so.

What *has* been said on many occasions is that Terman has been mis-read or that Terman's words have been extended beyond what Terman intended. Even the absolute truth may not be correct if applied to the wrong problem.

73,
Gene
W4SZ

Art Unwin KB9MZ wrote:

> Richard ,
> when reviewing all the Terman books that I have all show when and when
> not to ground the electrostatic shield. In fact he provides four set
> ups for a loop whith grounding methods. For one setup where link
> coupling is used the shield is not grounded, the shield requirement in
> that case is because of the voltage gradient across the inductance. An
> unbalance occurs in the loop which affects its directive properties in
> a similar way to when a capacitor is placed on one side of the loop .
> But as I said these explanations are in the Terman books which now
> come under suspicion for technical errors by the majority.
> From my point of view the shielding could affect the coupling but not
> to the point of crippling it, so until I try it for myself sometime
> the jury is still out.
> Regards
> Art

1667. Discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 14:29:56 UTC
From: Michalkun <no.spam@nospam.com>
Message-ID: <Xns930B579086D66michalkunyahoocom@128.233.3.7>
Source record: 126455

Can anyone tell me how well should NOAA satellites be heart over discone antenna? I think my antenna isn't hooked up properly and I get no significant signal. Is there any way to test if antenna is hooked up well? I get the strong signals on it, like trunking nets but not the satellites.

1668. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 14:31:29 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E2EAB41.7070008@ieee.org>
Source record: 126456

Roy Lewallen wrote:
> All the other voltages, currents, dissipations, and powers are exactly
> the same as they were for the brain teaser.
>
> This ain't, as they say, exactly rocket science. More like high school
> algebra.
>
> And the point is. . . ?

The point is that the source is not sitting there instantly available
to deliver an infinite amount of energy as needed. All the energy
that is needed is already there. I apologize but I don't have time
to continue the discussion right now. My Dad died last night.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1669. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 14:43:32 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e2eaf27_3@news1.prserv.net>
Source record: 126457

Larry:

There are numerous variables, and, of course, is the application critical, or just looking around at RF. The optimum choice these days for a ham is the 8558B for general work. I have reason to believe there was a batch of bad rotors, and by now they have all shown themselves, so if the unit has been in use, and all the controls work properly, then you are OK. So, either buy in person and check the unit out, or get a return guarantee. My friend was fortunate in finding the rotor fingers still inside his 8558B, and was able to repair it using 00-96 screws. It took 3 weeks, between opening the unit, pulling all the front panel apart, repairing the rotor, and reassembling. He (we) also discovered the big HP manual is incomplete in reassembly instructions, and having an intact unit to compare was necessary to finish the job.

The 141 series stuff is larger, but directly comparable in sensitivity, stability and dynamic range. In fact, a tweaked 8553B (selected mixer diodes - don't ask where we get them) will outperform all but the rare hot 8557 or 8558 on HF. On the other hand, the mixer module used in the 8558B is identical to the digitally assisted 8568. If you intend to use the analyzer as it stands for accurate frequency measurement, then minimum, you need a 8568 or later. The 8566 is actually a poorer instrument at UHF and below, so unless you need coverage above 1.5 GHz, the 8568 is a better choice. But I ramble. That's what comes from so many years of using the dang things.

It has been too long since I played with any of the Tek 1L series. After the 491 input tuner cobble, the limited 492 span and bandwidth choices, and other problems, I was hoping the 494 would solve those problems, but, alas, no such luck. The designers were so impressed with microprocessor tricks, they forgot about the RF end. I literally would not carry home a free 49x Tek analyzer, I came to dislike them so much.

A sleeper in all this is the IFR 7550 and immediate successors, which numbers I no longer recall. I had some minor input in the design of the successors after we got a 7550 and found a couple of ridiculous oversights which their design guys made because of lack of field experience. But, that's been almost 20 years ago, and since I can't even remember what I had for lunch yesterday, I don't recall any details of those transactions.
--
Crazy George
Remove NO and SPAM from return address
"Larry Phipps" <larry@telepostinc.com> wrote in message
news:SQoX9.64215$4j5.10097559@newssvr28.news.prodigy.com...
>

> Thanks for the feedback, George. I wasn't aware of the switch problem you
> mentioned...I have a friend with an 8557A and a 8558B and he hasn't had
any
> problems...but now that you mention it, I have seen the line "trigger
> doesn't work on some positions" in some copy on eBay.
>
> Aside from the age and frequency limitations, since the 140/8552/8553
> systems don't have the mechanical problems, would you recommend them...or
do
> they show their age in terms of performance? How about stability?
>
> Since you're not impressed with Tek...for a similar price, ignoring the
8558
> series for the moment, what else would you recommend? I was eyeing the
7L13
> since it will plug into the 7000 series frame and is phase locked. What
> other options are there in the $1000 range?
>
> I know that HP has the rep for SAs and Tek for scopes...but there's a big
> jump in price from the 8552/8553 to the 8566 series...and isn't the low
end
> of the 8566 something like 10 MHz? That leaves out a lot of spectrum.
>
> --
> 73,
> Larry N8LP
> www.telepostinc.com/n8lp.html
>

1670. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 14:59:00 UTC
From: richardharrison@webtv.net
Message-ID: <26341-3E2EB1B4-4@storefull-2314.public.lawson.webtv.net>
Source record: 126459

Art, KB9MZ wrote:
"For one setup where link coupling is used the shield is not grounded."

I don`t remember that but if Terman shows it, it exists for a purpose and you can take what Terman says to the bank. Every time I`ve imagined something askew with Terman, investigation proved me wrong.

An ungrounded shield breaks a coupling capacitance in two. One from each side of the original capacitor to the inserted shield. So the original capacitance is not eliminated, only broken into two larger capacitors connected in series by the shield.

Grounding the shield is not necessary to its function as a counter-emf generator. Breaking the shield into pieces is required to stop its opposition to magnetic coupling.

So, an ungrounded metal shield, say between two adjacent coils, would have the opposite effect from the Faraday screen. The ungrounded shield would allow capacitive coupling between the coils while its unbroken surfaces would allow counter-emf generation which disallows magnetic coupling.

The Faraday screen of grounded metal bristles, teeth, or just a broken shield, does not allow capacitive coupling but does allow magnetic coupling.

Best regards, Richard Harrison, KB5WZI

1671. Re: Discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 15:01:38 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2EB199.7010205@attbi.com>
Source record: 126458

My understanding of discones is that they are vertically polarized and directional towards the HORIZON, not at an elevation significantly above the horizon.

I'll stand to be corrected.

Deacon DAve, W1MCE

Michalkun wrote:
> Can anyone tell me how well should NOAA satellites be heart over discone
> antenna? I think my antenna isn't hooked up properly and I get no
> significant signal. Is there any way to test if antenna is hooked up well?
> I get the strong signals on it, like trunking nets but not the satellites.

1672. Re: Discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 15:54:58 UTC
From: Dave Staples <dasflies1@comcast.net>
Message-ID: <_vedncTXIINPI7OjXTWcoA@comcast.com>
Source record: 126460

I get OK reception of NOAA satellites when they are directly over my
house.
Im assuming that you are using a satellite tracking program to track the
satellites, as they fly overhead. If so, you should be able to hear them.

Dave
dasflies1@comcast.net

"Michalkun" <no.spam@nospam.com> wrote in message
news:Xns930B579086D66michalkunyahoocom@128.233.3.7...
> Can anyone tell me how well should NOAA satellites be heart over discone
> antenna? I think my antenna isn't hooked up properly and I get no
> significant signal. Is there any way to test if antenna is hooked up
well?
> I get the strong signals on it, like trunking nets but not the satellites.

1673. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 16:10:00 UTC
From: NoName <user@computer.net>
Message-ID: <34gt2v4k42ki4lk22vn9mgj1b7fkjkcofq@4ax.com>
Source record: 126462

On Tue, 21 Jan 2003 20:40:38 -0500, "Fred Hambrecht Sr."
<w4jle@charter.net> wrote:

>This may be the genetic antenna we have heard so much about. (C) (R) (Patent
>Pending) (Woe to those that copy)
>
>In reality, it looks much like some special equipment we had on board in the
>navy. It was used to measure disturbances of the radio fields, caused by
>denotation of nuclear weapons at the South Pole.

Detonation of nuclear weapons at the South Pole--give me a break.

What country allegedly performed these experiments.

The closest to a pole would have been the Soviet tests at Novaya
Zemlya. They did shoot a 50 megaton air burst over NZ.

>
>The detonations were supposed to affect the earth's magnetic fields and
>disrupt communications worldwide.

1674. FS: GAP Titan DX amateur-radio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 16:16:26 UTC
From: BD <koogles1@hotmail.com>
Message-ID: <3e2ec3d0$1_1@newsfeed>
Source record: 126461
Cross-posted to: dfw.forsale,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.swap

It's in the backyard of a house I'm trying to sell. The coax got chopped in half while I've been gone, but that would be easy enough to fix, and I'm only wanting $150obo for it and all the stuff below...
I've still got the original instructions, a box full of parts, about 50ft & 25ft of "RG-U/8" (I thought it was RG-58 all this time, but that's what's printed on it) with connectors on one end of each, about 50ft of aluminum grounding-wire (and an 8ft ground-rod if you can pull it up.. HAHA), lots of guy-wire, etc. that you can have with the antenna..

1675. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 16:39:49 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2EC7CD.2040801@attbi.com>
Source record: 126463

I think the photograph of the Hockey gam is more interesting!!

DD, W1MCE

Yuri Blanarovich wrote:
> Check this out:
>
> http://www.freerepublic.com/focus/news/826883/posts
>
> anything to do with 2m (144) ?
> new/old/mystery antenna?
> or fractals predated?
> or submerged new/old country?
> or new potential lawsweet?
> where is Phil?
>
> Yuri

1676. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 16:44:51 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E2EC8F4.3010400@attbi.com>
Source record: 126464

The USA tested one about 700 miles from Hawaii [SW] and shut down a lot
of electrical systems.

The nuclear EMP caused a rotation of the earth's magnetic field
[approximately 0.4 gauss] by up to 90 degrees for over a minute. Well
documented in Gladstone, "The Effects of Nuclear Weapons" [just can't
get my hands on my copy right now].

Deacon Dave, W1MCE

NoName wrote:
> On Tue, 21 Jan 2003 20:40:38 -0500, "Fred Hambrecht Sr."
> <w4jle@charter.net> wrote:
>
>
>>This may be the genetic antenna we have heard so much about. (C) (R) (Patent
>>Pending) (Woe to those that copy)
>>
>>In reality, it looks much like some special equipment we had on board in the
>>navy. It was used to measure disturbances of the radio fields, caused by
>>denotation of nuclear weapons at the South Pole.
>
>
> Detonation of nuclear weapons at the South Pole--give me a break.
>
> What country allegedly performed these experiments.
>
> The closest to a pole would have been the Soviet tests at Novaya
> Zemlya. They did shoot a 50 megaton air burst over NZ.
>
>
>>The detonations were supposed to affect the earth's magnetic fields and
>>disrupt communications worldwide.
>
>

1677. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 17:40:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2tlsvoddmrlfc@corp.supernews.com>
Source record: 126466

I'm very sorry to hear about your father. We can continue the discussion at a better time for you.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> All the other voltages, currents, dissipations, and powers are exactly
>> the same as they were for the brain teaser.
>>
>> This ain't, as they say, exactly rocket science. More like high school
>> algebra.
>>
>> And the point is. . . ?
>
>
> The point is that the source is not sitting there instantly available
> to deliver an infinite amount of energy as needed. All the energy
> that is needed is already there. I apologize but I don't have time
> to continue the discussion right now. My Dad died last night.

1678. Caveat Lector ?? ATTN Steve

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 17:41:53 UTC
From: AC6V <contact99@ac6v.com>
Message-ID: <BJAX9.3840$yZ2.383522@news1.west.cox.net>
Source record: 126467

Love the Caveat Lector
Added to my signature

Now need Latin for Listener Beware -- to use on the repeaters when
dispensing advice (also free)

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

1679. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 18:39:56 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3E2EE57C.82673A36@raytheon.com>
Source record: 126369

Hi Jim,

Good question! I just got back from several days out in the field. I'll try to post a meaningful response once things settle down a bit.

Briefly, the power flowing through any point in the system, including boundaries, is equal to V(x,t) * I(x,t) for any time t, and position x. You can solve for both V(x,t) and I(x,t) using the method described in my previous post to this thread.

V(x,t) and I(x,t), the actual voltage and current, is the sum of one or more of the constituent waves. Only the voltage and current has any physical significance at any place and time. Once you have knowledge of V(x,t) and I(x,t), it is a simple matter to calculate the instantaneous power flow at any place in the system by multiplying V(x,t) * I(x,t). Average power is of course the time averaged value.

Consider the case of a Time Domain Reflectometer (TDR) connected to one end of a long transmission line terminated at the far end with a mismatch.

Prior to the application of the single pulse, the entire system is at rest. The voltage and current is zero everywhere.

When the pulse is applied to the input end of the transmission line, a voltage and current pulse will jointly begin propagating down the line. Now imagine what happens if you place a current and voltage probe at some arbitrary location mid-line. Initially both voltage and current will be zero. The arrival of the pulse is indicated by the voltage and current suddenly rising. The ratio of voltage to current, V(x,t)/I(x,t) = Zo when the pulse is 'present' at the instrumentation station.

The product of V(x,t) * I(x,t) is the rate of energy being transferred 'across' the measurement point.

So far, perfectly intuitive.

Imagine another measurement station located close to the far end mismatch. So close that the pulse 'spans' the space between the measurement station and mismatch. In fact, the separation is so close that the pulse, and it's reflection can both be present simultaneously.

Can you describe what the voltage and current waveform looks like at the measurement point? If so, how about the product V(x,t) * I(x,t)? Remember, V(x,t) * I(x,t) represents the rate of energy exchange between the two sides of the system divided by the measurement point.

Try thinking it through and then take a look at a previous post I made last August:

http://groups.google.com/groups?q=author:bhrowlett%40raytheon.com&hl=en&lr=&ie=UTF-8&selm=3D51EBD5.AC96D148%40raytheon.com&rnum=5

and it's follow up correction.

bart
wb6hqk

Jim Kelley wrote:

> Hi Bart,
>
> I agree with you that power is not a wave. Definitions in physics make
> that pretty clear. But why are you saying that foward and reverse waves
> are ficticious? They wouldn't be able to TDR without them.
>
> Thanks and 73,
>
> Jim AC6XG
>

1680. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 19:21:00 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <waCX9.64294$4j5.10153234@newssvr28.news.prodigy.com>
Source record: 126468

So what you're saying, George, is that the older stuff is a great instrument for the bucks...but it's kinda big...the 8558 is a nice all-round unit if you can check it out out first or return it...and forget Tek.

After looking at the specs of the 141T/8552B/8553B it does seem to do anything I need...and there are lots of spares/parts around. I had dismissed that unit, but I think I'll start paying attention to it now.

Thanks.

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message news:3e2eaf27_3@news1.prserv.net...
> Larry:
>
> There are numerous variables, and, of course, is the application critical,
> or just looking around at RF. The optimum choice these days for a ham is
> the 8558B for general work. I have reason to believe there was a batch of
> bad rotors, and by now they have all shown themselves, so if the unit has
> been in use, and all the controls work properly, then you are OK. So,
> either buy in person and check the unit out, or get a return guarantee.
My
> friend was fortunate in finding the rotor fingers still inside his 8558B,
> and was able to repair it using 00-96 screws. It took 3 weeks, between
> opening the unit, pulling all the front panel apart, repairing the rotor,
> and reassembling. He (we) also discovered the big HP manual is incomplete
> in reassembly instructions, and having an intact unit to compare was
> necessary to finish the job.
>
> The 141 series stuff is larger, but directly comparable in sensitivity,
> stability and dynamic range. In fact, a tweaked 8553B (selected mixer
> diodes - don't ask where we get them) will outperform all but the rare hot
> 8557 or 8558 on HF. On the other hand, the mixer module used in the 8558B
> is identical to the digitally assisted 8568. If you intend to use the
> analyzer as it stands for accurate frequency measurement, then minimum,
you
> need a 8568 or later. The 8566 is actually a poorer instrument at UHF and
> below, so unless you need coverage above 1.5 GHz, the 8568 is a better
> choice. But I ramble. That's what comes from so many years of using the
> dang things.
>

> It has been too long since I played with any of the Tek 1L series. After
> the 491 input tuner cobble, the limited 492 span and bandwidth choices,
and
> other problems, I was hoping the 494 would solve those problems, but,
alas,
> no such luck. The designers were so impressed with microprocessor tricks,
> they forgot about the RF end. I literally would not carry home a free 49x
> Tek analyzer, I came to dislike them so much.
>
> A sleeper in all this is the IFR 7550 and immediate successors, which
> numbers I no longer recall. I had some minor input in the design of the
> successors after we got a 7550 and found a couple of ridiculous oversights
> which their design guys made because of lack of field experience. But,
> that's been almost 20 years ago, and since I can't even remember what I
had
> for lunch yesterday, I don't recall any details of those transactions.
> --
> Crazy George
> Remove NO and SPAM from return address
> "Larry Phipps" <larry@telepostinc.com> wrote in message
> news:SQoX9.64215$4j5.10097559@newssvr28.news.prodigy.com...
> >
> > Thanks for the feedback, George. I wasn't aware of the switch problem
you
> > mentioned...I have a friend with an 8557A and a 8558B and he hasn't had
> any
> > problems...but now that you mention it, I have seen the line "trigger
> > doesn't work on some positions" in some copy on eBay.
> >
> > Aside from the age and frequency limitations, since the 140/8552/8553
> > systems don't have the mechanical problems, would you recommend
them...or
> do
> > they show their age in terms of performance? How about stability?
> >
> > Since you're not impressed with Tek...for a similar price, ignoring the
> 8558
> > series for the moment, what else would you recommend? I was eyeing the
> 7L13
> > since it will plug into the 7000 series frame and is phase locked. What
> > other options are there in the $1000 range?
> >
> > I know that HP has the rep for SAs and Tek for scopes...but there's a
big
> > jump in price from the 8552/8553 to the 8566 series...and isn't the low
> end
> > of the 8566 something like 10 MHz? That leaves out a lot of spectrum.
> >
> > --
> > 73,

> > Larry N8LP
> > www.telepostinc.com/n8lp.html
> >
>
>
>

1681. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 19:39:42 UTC
From: mike <mike@nospamforme.com>
Message-ID: <3E2EF37B.38098E6A@nospamforme.com>
Source record: 126370

I am going to build every one of those 'patented' antenna designs for evey band
I work.

As long as I do not sell them, I can build one for each patent.

Now I've got to find a plan for a Fractal REceiver and transmitter.

"Fred ." wrote:

> This may be the genetic antenna we have heard so much about. (C) (R) (Patent
> Pending) (Woe to those that copy)
>
> In reality, it looks much like some special equipment we had on board in the
> navy. It was used to measure disturbances of the radio fields, caused by
> denotation of nuclear weapons at the South Pole.
>
> The detonations were supposed to affect the earth's magnetic fields and
> disrupt communications worldwide.
>
> --
> For Admiral Poindexter's folks:
> Bomb, anthrax, attack, acid, hijack, skyjack
> sniper, plutonium, nuclear, Big Mac, jihad
> Democrats, terror, Howdy Doody, Oprah
>
> "Those that sacrifice freedom for security deserve neither"
>
> "Yuri Blanarovich" <k3bu@aol.com> wrote in message
> news:20030121202058.29848.00000258@mb-mv.aol.com...
> > Check this out:
> >
> > http://www.freerepublic.com/focus/news/826883/posts
> >
> > anything to do with 2m (144) ?
> > new/old/mystery antenna?
> > or fractals predated?
> > or submerged new/old country?
> > or new potential lawsweet?
> > where is Phil?
> >
> > Yuri

1682. Re: GAP Titan DX amateur-radio antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 19:40:06 UTC
From: Boyd <koogles1@hotmail.com>
Message-ID: <3e2ef396_3@newsfeed>
Source record: 126371
Cross-posted to: dfw.forsale,rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.swap

PS. I forgot to mention that the antenna's in the Dallas-Ft.Worth area.

"BD" <koogles1@hotmail.com> wrote in message news:3e2ec3d0$1_1@newsfeed...
> It's in the backyard of a house I'm trying to sell. The coax got chopped
in
> half while I've been gone, but that would be easy enough to fix, and I'm
> only wanting $150obo for it and all the stuff below...
> I've still got the original instructions, a box full of parts, about 50ft
&
> 25ft of "RG-U/8" (I thought it was RG-58 all this time, but that's what's
> printed on it) with connectors on one end of each, about 50ft of aluminum
> grounding-wire (and an 8ft ground-rod if you can pull it up.. HAHA), lots
of
> guy-wire, etc. that you can have with the antenna..

1683. Re: Radio interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 20:15:19 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301221215.612cd761@posting.google.com>
Source record: 126372

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<26341-3E2EB1B4-4@storefull-2314.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "For one setup where link coupling is used the shield is not grounded."
>
> I don`t remember that but if Terman shows it, it exists for a purpose
> and you can take what Terman says to the bank. Every time I`ve imagined
> something askew with Terman, investigation proved me wrong.
>
> An ungrounded shield breaks a coupling capacitance in two. One from each
> side of the original capacitor to the inserted shield. So the original
> capacitance is not eliminated, only broken into two larger capacitors
> connected in series by the shield.
>
> Grounding the shield is not necessary to its function as a counter-emf
> generator. Breaking the shield into pieces is required to stop its
> opposition to magnetic coupling.
>
> So, an ungrounded metal shield, say between two adjacent coils, would
> have the opposite effect from the Faraday screen. The ungrounded shield
> would allow capacitive coupling between the coils while its unbroken
> surfaces would allow counter-emf generation which disallows magnetic
> coupling.
>
> The Faraday screen of grounded metal bristles, teeth, or just a broken
> shield, does not allow capacitive coupling but does allow magnetic
> coupling.
>
> Best regards, Richard Harrison, KB5WZI

Richard, I don,t want to scare you but I the Dodo agree with you all
the way. Next week when I try such a set up we will know if it
provides deafness or not.
If it does what we think it will do I will put a check mark to that
particular portion of Terman despite what ARRL says
Thanks for checking things out
Regards
Art

1684. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 20:25:36 UTC
From: NoName <user@computer.net>
Message-ID: <ggut2v0j0s1mvsocdeeum20tjn4r4ku6r8@4ax.com>
Source record: 126373

On Tue, 21 Jan 2003 12:17:38 -0500, "Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>Amazing the number of people that are experts on things they don't know a
>darn thing about!

That's a pretty good description of you Fred. Tell us what country it
was you contend detonated a nuclear device at the South Pole.
While you're at it tell us how you came by these "facts" some
urban legend from some old military buddy perchance.

A lot of stuff was done in the South Pacific by the US, UK and
French but none close to the pole. When the Soviets broke the 1959
moratorium in 1961 they popped 20 in about 10 days in the North
Pacific but again nowhere the pole. The furthest North the US
tested was Amchitka but that was an underground test.

As to disrupting the Earth's magnetic field to disrupt communications
ROTFLMAO. Now if you want to discuss enhanced EMP devices
but then you would have to know what that meant.

>
>"NoName" <user@computer.net> wrote in message
>news:34gt2v4k42ki4lk22vn9mgj1b7fkjkcofq@4ax.com...
>
>>
>> What country allegedly performed these experiments.
>>
>> The closest to a pole would have been the Soviet tests at Novaya
>> Zemlya. They did shoot a 50 megaton air burst over NZ.
>>
>> >
>> >The detonations were supposed to affect the earth's magnetic fields and
>> >disrupt communications worldwide.
>>
>

1685. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 20:28:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2tvn02fjj01d1@corp.supernews.com>
Source record: 126374

It doesn't seem to be well known, but U.S. patent law forbids you to "make, use, or sell" a patented item without license. (See for example http://www.uspto.gov/web/offices/pac/doc/general/whatis.htm.) Of course, in practice it's impractical to pursue actions against users of individual home-made copies. But if a patent owner did choose to prosecute, you would be liable.

Roy Lewallen, W7EL

mike wrote:
> I am going to build every one of those 'patented' antenna designs for evey band
> I work.
>
> As long as I do not sell them, I can build one for each patent.
>
> Now I've got to find a plan for a Fractal REceiver and transmitter.

1686. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 20:30:50 UTC
From: NoName <user@computer.net>
Message-ID: <kivt2v40reaq5mkquar0o3am0q3unep7mv@4ax.com>
Source record: 126375

On Wed, 22 Jan 2003 16:44:51 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>The USA tested one about 700 miles from Hawaii [SW] and shut down a lot
>of electrical systems.
>
>The nuclear EMP caused a rotation of the earth's magnetic field
>[approximately 0.4 gauss] by up to 90 degrees for over a minute. Well
>documented in Gladstone, "The Effects of Nuclear Weapons" [just can't
>get my hands on my copy right now].

More like 1300 miles and they did take the Kawaii power grid down
temporarily. I forget the code name of the shot I'll post that later.
Still 700 or 1300 miles from Hawaii is far from the South Pole.
By International Treaty the Antarctic is shared and no military
testing or training is allowed there. There are some countries
past and present that wink at treaties but I assure you the US
does not.

>
>Deacon Dave, W1MCE
>
>NoName wrote:
>> On Tue, 21 Jan 2003 20:40:38 -0500, "Fred Hambrecht Sr."
>> <w4jle@charter.net> wrote:
>>
>>
>>>>This may be the genetic antenna we have heard so much about. (C) (R) (Patent
>>>>Pending) (Woe to those that copy)
>>>
>>>>In reality, it looks much like some special equipment we had on board in the
>>>>navy. It was used to measure disturbances of the radio fields, caused by
>>>>denotation of nuclear weapons at the South Pole.
>>
>>
>> Detonation of nuclear weapons at the South Pole--give me a break.
>>
>> What country allegedly performed these experiments.
>>
>> The closest to a pole would have been the Soviet tests at Novaya
>> Zemlya. They did shoot a 50 megaton air burst over NZ.
>>
>>
>>>>The detonations were supposed to affect the earth's magnetic fields and
>>>>disrupt communications worldwide.

>>
>>

1687. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 20:39:34 UTC
From: jwkelley@uci.edu
Message-ID: <5da85be.0301221239.61ab354d@posting.google.com>
Source record: 126376

Roy Lewallen <w7el@eznec.com> wrote in message news:<v2rp4p9ib0n1f1@corp.supernews.com>...

> Jim Kelley wrote:

> > Perhaps you would agree that in some discussions of the approximation,
> > the fact that real pulses are a linear approximation of the theoretical
> > non-linear function is sometimes overlooked.

> No.

So, you're saying either that real pulses are non-linear, or that
nobody has ever said they were.

> Most of my discussion about TDR was either with fellow engineers at
> Tektronix in the group where we designed TDR equipment, or in the
> context of giving support to customers or designing and teaching classes
> on TDR concepts and applications.

Again there seems to be some confusion. My statement above doesn't
refer to anything you have said, either here, or with engineers from
Tektronics. In fact, I think I referred specifically to something Tom
wrote here on rec.radio.amateur.antenna.

> A "real" step can conceptually be generated by beginning with the
> theoretical infinitely fast step and passing it through a linear filter.

Which is consistant with what I said above.

> And, in fact, this is frequently a very useful way of visualizing what's
> going on.

I agree. Expecially since that actually is what's going on. But it's
possible you'll remain inclined to disagree with me about this.

73, Jim AC6XG

1688. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 20:59:51 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <FLacnZCprLKqm7KjXTWc3A@comcast.com>
Source record: 126377

Any time somebody puts electronic type stuff on the bottom of the ocean, and it was not just dumped, I would suspect a submarine detection device. No antenna would work through a mile of seawater, but the knobs on those arms may be FracMicrophones. These would have been connected to a base through a FracCable.

Tam/WB2TT
"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030121202058.29848.00000258@mb-mv.aol.com...
> Check this out:
>
> http://www.freerepublic.com/focus/news/826883/posts
>
> anything to do with 2m (144) ?
> new/old/mystery antenna?
> or fractals predated?
> or submerged new/old country?
> or new potential lawsweet?
> where is Phil?
>
> Yuri

1689. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 21:19:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g81u2v4sjb9es4lbs6aqtnco4o2b1bcier@4ax.com>
Source record: 126378

On Wed, 22 Jan 2003 13:30:50 -0700, NoName <user@computer.net> wrote:

>There are some countries
>past and present that wink at treaties but I assure you the US
>does not.

From personal experience of having worked, eaten, slept, within 20 feet of 10's to 100 warheads; and having been intimately involved in their transport/exchange/storage as well; and having been a witness to un-reported mishaps; and having participated in radiation control drills, exercises and incidents; and having performed elemental measurements of a reactor core; the naive statement above is simply dreams and wishes. The only hope the author has is for independent agencies to confirm it (not always 100/80/50% reliable).

A Physics professor once impressed upon me the nature of secrecy is not in the fact, but the knowing of the fact. His example was that for years during 'Nam, the Bow and Arrow were classified as top secret weapons. Did the government bend over backwards to hide the fact of Bow and Arrow construction, or did they attempt to curtail its trade? No, they simply wanted the knowledge that they were considering the Bow and Arrow as weapons guarded as a secret.

As for the ironic content:
> I assure you
from an anonymous poster is self-invalidating and is a counter-information method straight out of the insurrectionist's handbook passed around in the communist cells of the 1950's. The Right Whiners have been mining that book for years and from that effort we now have the Office of Homeland Scrutiny (spelled KGB in russian).

73's
Richard Clark, KB7QHC

1690. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 21:24:01 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v2u2vftb6mr4e2@corp.supernews.com>
Source record: 126379

Jim Kelley wrote:
> Roy Lewallen <w7el@eznec.com> wrote in message
news:<v2rp4p9ib0n1f1@corp.supernews.com>...
>
>
>>Jim Kelley wrote:
>
>
>>>Perhaps you would agree that in some discussions of the approximation,
>>>the fact that real pulses are a linear approximation of the theoretical
>>>non-linear function is sometimes overlooked.
>>
>
>>No.
>
>
> So, you're saying either that real pulses are non-linear, or that
> nobody has ever said they were.

No, I'm saying that the theoretical, infinitely fast pulses aren't necessarily non-linear in the sense of linearity as defined for linear circuit analysis.

Roy Lewallen, W7EL

1691. Re: Parabolic Antenna Design and Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 21:29:47 UTC
From: jackpotcharters_com@envisiondevices.ws
Message-ID: <9d5983be.0301221329.405a07bc@posting.google.com>
Source record: 126380

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<taql2vsdhbg94su0uaajbv77pop9a44i9o@4ax.com>...
> On 19 Jan 2003 08:20:28 -0800, jackpotcharters_com@envisiondevices.ws
> (Gerry Mckinnon) wrote:
>
> things were going well until:
> >6 - The dish was cut from a prime focus dish of unknown
> > specifications but it was cut from the center (focal point) out
>
> We started with a checklist of an imaginary design and end up with
> what appears to be its present, physical implementation (no longer
> imaginary)?

It still is imaginary. This was an imaginary prime focus dish to
demonstrate that the imaginary offset dish was 'removed' from the
center out. It was not 'removed' from an arbitrary location somewhere
else on the parabola.

>
> >
> >Now if I run these specs through the hdl program they come out
> >different.
>
>Different from what?

When I use my equations and calculate the the focal length ect. they
always come out as expected, what I would consider to be correct. When
I utilize the software to assist me in the calculations the results
say for the focal length are not the same. I am unsure as to why. I am
reasonably sure that my manual calculations are right.

>
> >The F/D ratio is wrong and the focal length is wrong. I
> >don't see where I'm making a mistake here unless my equations are not
> >correct.
>
> Then that means the F/D ratio is right and the focal length is right.
> If as 6 above proves to be its actual, physical manifestation, simply
> try it and see.
>

I can see your point here. One is dependent on the other. But both are
inconsistant with my manual calcs and since all is imaginary at this
point it is not possible to verify this as of yet.

> I'm not particularly familiar with your equations (you did say you've
> spent a lot of time studying this, didn't you?); but I would suspect
> there may be a difference between optical focal points and radio focal
> points (the point of focus for RF is so much bigger than for Optics).
> This suspicion infers you may have the wrong equations (but
> tantalizingly close).

I can't say with certainty that I'm not in error but I can say the
equations themselves were obtained from several different sites where
people were involved in RF design. In fact one of them was a RF
engineer working for the US goverenment. Most of his stuff I couldn't
even follow it was that advanced. However my mathematics skills and
memory being what they are then who knows :-).

>
> >
> >What I still need (assuming all my numbers are right) is the parabolic
> >curve function so I can plot it's points manually and create a
> >template. I have no idea how to calculate the parabola based on the
> >info I have now. If someone could assist me with the function as well
> >as an explanation of how it was derived I would greatly appreciate it.
>
> Hi Gerry,
>
> Make a template from a large sheet of stiff paper, cardboard, foam
> board, or the like.
>
> Assign one edge of the template stock the role of the directrix line
> (a vertical line offset or at the Y axis of the plot you are about to
> construct). I presume you come to the table with a focus already in
> mind, so select a point halfway down the directrix, and measure a
> point, at 90ï¿½ out twice the focus distance. Mark this point as the
> focus of the Parabola.
>
> As a simple description, the parabola is thus the loci of all points
> that fall equal distance between the focus and any point emanating a
> line cast perpendicular from the directrix.
>
> For example, select any point along the directrix;
> draw a line perpendicular out across the template;
> choose a point along that line and through experimentation with a
> compass adjust it back and forth until its distance from the directrix
> is equal to is distance to the focus.
>
> Repeat the process above by selecting a lot of points along the
> directrix and discovering the equidistant point to the focus. Connect
> the dots. Cut the dots. You are holding your finished Template.
> Need I say that the resolution or "crispness" of focus are directly
> related to the smoothness of the surface your template describes. It
> is in your best interest to insure you select enough points to smooth
> the curve you plot.
> Example (use fixed, parabolic font:)

>
> X
> X-----------------P
> X
> X
> X--------------P
> X
> X
> X-----------P
> X
> X
> R----------P----------f
> X
> X
> X-----------P
> X
> X
> X--------------P
> X
> X
> X-----------------P
> X
>
> For anyone who needs a math fix, the equation for a parabola is:
> yï¿½ = 2 * p * x
> or
> xï¿½ = 2 * p * y
> for p being twice the focus (or the length of R---P---f above)
> for x and y in standard cartesian co-ordinates (the two formulas
> are 90ï¿½ translations, you can also use their negated value).
>
> 73's
> Richard Clark, KB7QHC

This is very interesting and well explained. Thanks for the math fix
as well as I like to understand the theory but when running
calculations it's much faster for me with the equation.

A new question however has developed. I know the focal to diameter
ratio of only the offset parabola (as this is the final number that I
wish to achieve).
When I design the parabola using the above example and equation as my
guide the parabolic curve that results will be based on my original
focal length on a prime focus curve. When I choose to utilize only an
offset section of said parabola then I believe that then end result
will be that my focal length and diameter will be different and
therefore my focal to diameter ratio will be incorrect. Incorrect
meaning it will not achieve the numbers I had apspired for to being
with. At least I believe my reasoning to be sound here.

Thanks again,

Gerry Mackinnon

1692. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 21:39:53 UTC
From: dplatt@radagast.org
Message-ID: <v2u3t9d4g28861@corp.supernews.com>
Source record: 126381

>I am going to build every one of those 'patented' antenna designs for evey band
>I work.
>
>As long as I do not sell them, I can build one for each patent.

Not strictly true. It's permissible to build a patented invention
(without the inventor's approval) for the purpose of research, so that
you can understand how it works, and so that you can try to develop
another invention which solves the same problem in a different way
which does not infringe on any of the patent claims.

However, U.S. law says that it _is_ an infringement of the patent, if
you build one for your own actual use. Selling it is not required for
an infringement to occur.

Granted, your chance of getting caught and prosecuted for this are
next to zero... and a lot of inventors would probably (if asked) say
"Sure, go ahead, just don't sell or commercialize".

>Now I've got to find a plan for a Fractal REceiver and transmitter.

Would it suffice to simply use an existing design, but just replace
all of the standard resistors with Vishay bulk metal foil types?
Their internal structure is somewhat fractal-like, at least on a
limited range of scales. [This would not be an inexpensive thing to
do, though... look at Vishay's prices and wince!]

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1693. Re: Discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 21:43:41 UTC
From: Helmut Wabnig <hXwabnig@aXon.at>
Message-ID: <sm3u2vkbvr63n0bh8lei6592a5bpc0ojmu@4ax.com>
Source record: 126382

On 22 Jan 2003 14:29:56 GMT, Michalkun <no.spam@nospam.com> wrote:

>Can anyone tell me how well should NOAA satellites be heart over discone
>antenna? I think my antenna isn't hooked up properly and I get no
>significant signal. Is there any way to test if antenna is hooked up well?
>I get the strong signals on it, like trunking nets but not the satellites.

A discone antenna is not suited for NOOA reception
because of several reasons:

It is vertically polarized, does not receive well from above,
and is not circular.

Look for a quadrifilar antenna for the 137 MHz range,
which is the best choice, or for any other right hand
circularly polarized antenna like the Turnstile antenna,
or a crossed dipol antenna.

BTW, discones are static sensitive, and do collect electrical
noise from nearby appliances much more than other type
broadband antennas, because they couple capacitively
to near fields.

w.
--
soc.culture.austria answering service
proposals and complaints to:
salzamt@nacl.at

1694. Looking for small HF tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 21:56:45 UTC
From: ts850_guy <ve3tmt@rac.ca>
Message-ID: <EsEX9.7090$5K5.608787@news20.bellglobal.com>
Source record: 126383

Like MFJ 901B or similar. Please state price, and your location. I'm in Ontario Canada.

Thanks,
Max

1695. Re: New Fractal publicity stunt? Or 'stint'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 22:09:00 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E2F167C.E6E468BD@cwis.net>
Source record: 126384

Tarmo,
Or, instead of a 'frac-cable' to a receiving station, why
not 'frac-tion' a drop of sea water into it's gassious components,
let it bubble to the surface where the 'frac-signal' would then
be released into the atmosphere and then to a 'frac-receiver'?
...supercali-'frac'-tualisticexpialadosious. Or whatever.
'Doc

1696. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 22:57:02 UTC
From: "Donnie (N4JZH)" <n4jzh@knology.net>
Message-ID: <288u2v0h8a9sp5no6l4sirnvl73i4p12g2@4ax.com>
Source record: 126385

On Wed, 22 Jan 2003 09:10:00 -0700, NoName <user@computer.net> wrote:

>On Tue, 21 Jan 2003 20:40:38 -0500, "Fred Hambrecht Sr."
><w4jle@charter.net> wrote:
>
>>This may be the genetic antenna we have heard so much about. (C) (R) (Patent
>>Pending) (Woe to those that copy)
>>
>>In reality, it looks much like some special equipment we had on board in the
>>navy. It was used to measure disturbances of the radio fields, caused by
>>denotation of nuclear weapons at the South Pole.
>
>Detonation of nuclear weapons at the South Pole--give me a break.
>
>What country allegedly performed these experiments.
>
>The closest to a pole would have been the Soviet tests at Novaya
>Zemlya. They did shoot a 50 megaton air burst over NZ.
>
>>
>>The detonations were supposed to affect the earth's magnetic fields and
>>disrupt communications worldwide.

Is the Fractal antenna being used at the Haarp site? possible black helicopter conspriracy.
Tune in tomorrow for ''As The Fractal Turns''

''Behold how good and pleasant it is for Brethren to dwell together in unity''
Donnie n4jzh@knology.net

1697. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 23:07:53 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <dvFX9.476$i3.52153@news1.east.cox.net>
Source record: 126386
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"Irv Finkleman" <finkirv@shaw.ca> wrote in message
news:3E2EA360.9A24987@shaw.ca...
> "J. McLaughlin" wrote:
> >
> > I too have used International Crystal for several decades. Whether it
> > is Motorola CEs or a crystal for the 40 Kw Colins we ran at Ohio State,
> > they do it right the first time. Mac N8TT
> >
> > --
> > J. Mc Laughlin - Michigan USA
> > Home: JCM@Power-Net.Net
> > " Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
> > news:0NlX9.20148$8N.2003188@news1.east.cox.net...
> > > International Crystal in Oklahoma City, OK. Don't screw around, send
> > > them the channel elements for recrystaling, calibration, and aging.
> > > You get exactly what you pay for, and ICM is first rate.
> > >
> > > Pete
> > >
> > > "FM" <radiovintage@hotmail.com> wrote in message
> > > news:0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net...
> > > > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not
> > having
> > > > purchased crystals in many years where is the best place to buy them
> > ?? We
> > > > will be using the repeater on 146.01/61.Also is there a site with
> > the
> > > > specs
> > > > for the channel elements ?
> > > > Rcvr Channel Element : KXN 1086A
> > > > Xmtr Channel Element : KXN 1088A
> > > > THANKS.
>
> You can order them directly over the phone with International. Make
> sure to have the Equipment model number and the channel frequencies
> handy. I've used them for many years with great satisfaction!
> --
> Diagnosed Type II Diabetes March 5 2001
> Beating it with diet and exercise!
> 297/215/210 (to be revised lower)
> 58"/43"(!)/44" (already lower too!)
> --------------------
> Visit my personal website at http://members.shaw.ca/finkirv/

> Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
> http://members.shaw.ca/finkirv5/
> --------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

You can probably get away with it on some elements, but for some of the more elaborate elements (KXN1019B) it's best to let ICM rechannel the device. There are internal series inductors and misc. fixed value ceramic caps. that vary across the operating frequency range of the set.

Peter

1698. Re: Parabolic Antenna Design and Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-22 23:14:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <509u2vo5j3desfg7mhch9iidmp2f2dusdl@4ax.com>
Source record: 126387

On 22 Jan 2003 13:29:47 -0800, jackpotcharters_com@envisiondevices.ws
(Gerry Mckinnon) wrote:

>
>A new question however has developed. I know the focal to diameter
>ratio of only the offset parabola (as this is the final number that I
>wish to achieve).
>When I design the parabola using the above example and equation as my
>guide the parabolic curve that results will be based on my original
>focal length on a prime focus curve. When I choose to utilize only an
>offset section of said parabola then I believe that then end result
>will be that my focal length and diameter will be different and
>therefore my focal to diameter ratio will be incorrect. Incorrect
>meaning it will not achieve the numbers I had apspired for to being
>with. At least I believe my reasoning to be sound here.
>
>Thanks again,
>
>Gerry Mackinnon

Hi Gerry,

This is outside of my experience (except for the SPS-10 radar and the
SPN-12 that hit our classroom every turn), so I rely on the geometry
alone. I barely follow the nature of your question, but it sounds
like you are probably concerned your numbers catch X amount of power
and the offset captures Y. Which numbers do you trust, or which power
do you need?

If we start with:
> Example (use fixed, parabolic font:)
>
> X
> X-----------------P
> X
> X
> X--------------P
> X
> X
> X-----------P
> X
> X
> R----------P----------f
> X
> X

> X-----------P
> X
> X
> X--------------P
> X
> X
> X-----------------P
> X

and we progress to:

> Example (use fixed, parabolic font:)
>
> X
> X-----------------P
> X
> X
> X--------------P
> X
> X
> X-----------P
> X
>
> f
>
>
>

You should be able to derive from these two examples a constant of proportionality. Compare the numbers from the software with your expectations and see if they don't exhibit that proportion too. If so, I suspect you will then appreciate what's going on. If not, I suspect it will still be productive and lead you to a satisfactory conclusion; perhaps more indirect, but still compelling.

73's
Richard Clark, KB7QHC

1699. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 00:13:08 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v2ucsleo49lh46@corp.supernews.com>
Source record: 126388

I bow to your obvious omnipotence, I hallucinated the whole thing.

"NoName" <user@computer.net> wrote in message
news:ggut2v0j0s1mvsocdeeum20tjn4r4ku6r8@4ax.com...
> On Tue, 21 Jan 2003 12:17:38 -0500, "Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> >Amazing the number of people that are experts on things they don't know a
> >darn thing about!
>
> That's a pretty good description of you Fred. Tell us what country it
> was you contend detonated a nuclear device at the South Pole.
> While you're at it tell us how you came by these "facts" some
> urban legend from some old military buddy perchance.
>
> A lot of stuff was done in the South Pacific by the US, UK and
> French but none close to the pole. When the Soviets broke the 1959
> moratorium in 1961 they popped 20 in about 10 days in the North
> Pacific but again nowhere the pole. The furthest North the US
> tested was Amchitka but that was an underground test.
>
> As to disrupting the Earth's magnetic field to disrupt communications
> ROTFLMAO. Now if you want to discuss enhanced EMP devices
> but then you would have to know what that meant.
>
>
>
> >
> >"NoName" <user@computer.net> wrote in message
> >news:34gt2v4k42ki4lk22vn9mgj1b7fkjkcofq@4ax.com...
> > >
> > >>
> > >> What country allegedly performed these experiments.
> > >>
> > >> The closest to a pole would have been the Soviet tests at Novaya
> > >> Zemlya. They did shoot a 50 megaton air burst over NZ.
> > >>
> > >> >
> > >> >The detonations were supposed to affect the earth's magnetic fields
and
> > >> >disrupt communications worldwide.
> > >>
> > > >
>

1700. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 00:20:48 UTC
From: jwkelley@uci.edu
Message-ID: <5da85be.0301221620.33a3ae5f@posting.google.com>
Source record: 126389

tdonaly@aol.com (Tdonaly) wrote in message
news:<20030120122806.21495.00000259@mb-mu.aol.com>...
> Cecil wrote,
> >
> >Last time Richard and I took the time to look, a pure sine wave is linear.
> >--
> >cheers, CAM http://www.qsl.net/w5dxp
> >
> >
>
> Would you like to explain that?
> 73,
> Tom Donaly, KA6RUH

Perhaps like a function with no exponential terms. I'm pretty sure
functions with higher order terms (e.g. x^2 or e^x) are generally
considered non-linear expressions.

ac6xg

1701. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 00:46:51 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <88eu2vka6biqg38ss6usnfd01gcfdfflcf@4ax.com>
Source record: 126391

On Wed, 22 Jan 2003 13:30:50 -0700, NoName <user@computer.net> wrote:

>On Wed, 22 Jan 2003 16:44:51 GMT, Dave Shrader
><david.shrader@attbi.com> wrote:
>
>>The USA tested one about 700 miles from Hawaii [SW] and shut down a lot
>>of electrical systems.
>>
>>The nuclear EMP caused a rotation of the earth's magnetic field
>>[approximately 0.4 gauss] by up to 90 degrees for over a minute. Well
>>documented in Gladstone, "The Effects of Nuclear Weapons" [just can't
>>get my hands on my copy right now].
>
>More like 1300 miles and they did take the Kawaii power grid down
>temporarily. I forget the code name of the shot I'll post that later.
>Still 700 or 1300 miles from Hawaii is far from the South Pole.
>By International Treaty the Antarctic is shared and no military
>testing or training is allowed there. There are some countries
>past and present that wink at treaties but I assure you the US
>does not.

Maybe the testing was done at the Nazi UFO base at the South Pole. You
know, near the opening to the Earth's hollow interior...

1702. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 00:46:52 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <kdeu2v85uantbphadmg0klneg62iktjehe@4ax.com>
Source record: 126390

On Wed, 22 Jan 2003 21:19:49 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>... we now have the Office of Homeland Scrutiny (spelled KGB in
>russian).
>
>73's
>Richard Clark, KB7QHC

Hi, Richard - -

We now have the OHS *and* the Department of Homeland Security.

http://www.dhs.gov/employees/index.cfm

(the former is part of the White House;

http://www.whitehouse.gov/homeland/).

1703. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 00:50:36 UTC
From: NoName <user@computer.net>
Message-ID: <fdcu2v0dlblhc8r3iphrmc2hft9rqr7b44@4ax.com>
Source record: 126392

On Wed, 22 Jan 2003 21:19:49 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Wed, 22 Jan 2003 13:30:50 -0700, NoName <user@computer.net> wrote:
>
>>There are some countries
>>past and present that wink at treaties but I assure you the US
>>does not.
>
>From personal experience of having worked, eaten, slept, within 20
>feet of 10's to 100 warheads; and having been intimately involved in
>their transport/exchange/storage as well; and having been a witness to
>un-reported mishaps;

An unreported nuclear detonation at the South Pole surely you jest.

Got Dolphins? If you have to ask what I mean you don't. If you do
Despite all that time at Idaho Falls and all of the wisdom ensconced
in "the notebook" and no matter where you slept you don't know exactly
how they work, how they were developed or how they were tested
you were on the wrong team to know any of that.

> and having participated in radiation control
>drills, exercises and incidents; and having performed elemental
>measurements of a reactor core; the naive statement above is simply
>dreams and wishes. The only hope the author has is for independent
>agencies to confirm it (not always 100/80/50% reliable).

What I do know is that I am not talking about accidents I'm talking
about premeditated treaty violations. From the time the TTBT went
into effect the yield was measured on EVERY US test to ensure
compliance with that agreement. Towards the end the Soviets came to
the Nevada Test Site and independently confirmed yield later
a US team went to the Semipalatinsk Test Site to confirm a
Soviet Test.

The US test was code named Kearsarge and was fired in Area 19
on the NTS the Soviet test did not have a name and the number
(they only used numbers) escapes me at the moment.

>
>A Physics professor once impressed upon me the nature of secrecy is
>not in the fact, but the knowing of the fact. His example was that
>for years during 'Nam, the Bow and Arrow were classified as top secret
>weapons.

Urban legend, you don't really believe crap like this, do you?

> Did the government bend over backwards to hide the fact of
>Bow and Arrow construction, or did they attempt to curtail its trade?
>No, they simply wanted the knowledge that they were considering the
>Bow and Arrow as weapons guarded as a secret.
>
>As for the ironic content:
>> I assure you
>from an anonymous poster

Only a fool leaves his name on the internet. If you can't figure out
from the content what credibility to give, you are not as smart
as you think you are.

Perhaps Fred could share with us just when antarctic test was
supposed to have happened.

> is self-invalidating and is a
>counter-information method straight out of the insurrectionist's
>handbook passed around in the communist cells of the 1950's. The
>Right Whiners have been mining that book for years and from that
>effort we now have the Office of Homeland Scrutiny (spelled KGB in
>russian).
>
>73's
>Richard Clark, KB7QHC

1704. Re: WTD:Motorola Software GM300

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 01:56:18 UTC
From: Dave Miller <aa4df@aa4df.com>
Message-ID: <3E2F4BC2.98C06A6C@aa4df.com>
Source record: 126393
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Did you get it? I'm a little confused by Motorola, as I had bought some assets from a radio/paging company that went out of business in Georgia that included programming software for about 60 Motorola Models (including the model you're looking for). I offered the CD I made of it all for $53.85 by Paypal, but Motorola made me take the offer down. Yet I see requests for this software all over the place, and if you do a hotbot search for "motorola programming software" you'll see at least a couple of overseas outfits openly distributing it over the internet! Anyway, I was just wondering if you got it, or got a threatening note from Motorola about it? I know I'm kinda peeved at sitting here with this stuff on this disk that's useless to me, that I paid money for, and I'm told I can't get my money back.

KC0EH wrote:
>
> I am in need of a hopefully ham version of Motorola GM 300 version 4 or
> version5 software for converting it to the 440 band for repeater use.
> THANKS,
> ...Charlie...KC0EH...

1705. Re: WTD:Motorola Software GM300

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 02:01:12 UTC
From: Dave Miller <aa4df@aa4df.com>
Message-ID: <3E2F4CE8.A1A95095@aa4df.com>
Source record: 126394
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Ah! Well, I should have kept reading.. that answers my question. I was a
little perturbed that Motorola would let everyone and their uncle freely
trade the stuff, but not me. Thanks for clearing that up! Now, for this
CD chock full of RSS.. anybody wanna buy a frisbee?

Bruce Lane wrote:
>
> In article <ruqE9.170$yy.144854@newsread1.prod.itd.earthlink.net>,
> okiemansc@yahoo.com says...
>
> > I am in need of a hopefully ham version of Motorola GM 300 version 4 or
> > version5 software for converting it to the 440 band for repeater use.
>
> <snip>
>
> Are you really sure you want to be asking about that sort of thing
> in a publicly-readable newsgroup? You obviously haven't seen Motorola's
> licensing agreement. Positively scary, and yes, they can and will
> prosecute anyone who they think they need to make an example of for
> copying or using unlicensed RSS.
>
> If you need programming service, I can help you (yes, I'm
> licensed). See http://www.bluefeathertech.com/rf.html
>
> Keep the peace(es).
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

1706. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 02:21:37 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v2ukdiq13940ef@corp.supernews.com>
Source record: 126395

I taught at Damneck, as a weapons instructor for 616 class FBM boats, I guess I know what dolphins are. If you went to Idaho, you were a snipe working in the engine room. That explains your knowledge of weapons shots.

Nuclear power and nuclear weapons have only the word nuclear in common.

Must have really upset you when you found out the easter bunny wasn't real.

> Got Dolphins? If you have to ask what I mean you don't. If you do
> Despite all that time at Idaho Falls and all of the wisdom ensconced
> in "the notebook" and no matter where you slept you don't know exactly
> how they work, how they were developed or how they were tested
> you were on the wrong team to know any of that.
>
> > and having participated in radiation control
> >drills, exercises and incidents; and having performed elemental
> >measurements of a reactor core; the naive statement above is simply
> >dreams and wishes.

1707. Johnson Matchbox

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 02:51:39 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <%MIX9.8477$zF6.691193@bgtnsc04-news.ops.worldnet.att.net>
Source record: 126396

I recently acquired a johnson viking matchbox-275.
At one time someone posted a site where one could
modify the above device to increase it's efficiency.
Anybody happen to know the url of that site?
Also where can i get a manual for the above?

Thank You

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03

1708. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 04:07:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <alou2vs6cg00fj8fqs9ib2ck5ufq5vndfv@4ax.com>
Source record: 126397

On Wed, 22 Jan 2003 17:50:36 -0700, NoName <user@computer.net> wrote:

>On Wed, 22 Jan 2003 21:19:49 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>
>>On Wed, 22 Jan 2003 13:30:50 -0700, NoName <user@computer.net> wrote:
>I mean
Who?
>What I do know
Who?
>I am not talking about
Who?
>I'm talking
Who?
>Only a fool
OK

>If you can't figure out from the content what credibility to give
Graffiti from a Right Whiner Commie wannabee is obvious on the face of
it: credibility zer0. You doing demo tapes for Ossama? Press
releases from Baghdad? You parrot any "fact" that a Pakistani student
could dredge up off an Alien Landing Web site. Impressive.

>premeditated treaty violations
This smells like a set-up that only Saddam could love. You could as
easily be crying crocodile tears for Indian treaties, bubba. You sure
as shit haven't a clue about anything nuke beyond the movie you saw.
The currency of your message speaks volumes more in support of Korea
and Iraq needing to paint us as unreliable than it does for feigned
angst for an ancient US - USSR struggle (what a stale wheeze).

Go back to your Homeland Scrutiny Office and think up another ruse
Bureaclown.

As for your anonymity, keep it - you need to.

Richard Clark, KB7QHC

1709. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 04:51:33 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e2f75f5_1@news1.prserv.net>
Source record: 126399

Larry:

I use the 141 in the field about as much as the 8558 and 8559, in spite of size and weight. It has room for some specialized mods which won't fit in the crowded 8558 series. With ANY analyzer, be very cautious about too much power into the front end, as that will kill one faster than anything else. I almost came to blows with a tech who insisted on connecting the antenna before running the attenuator to max, but finally threatened to take the repair costs out of his salary before he saw the light. Remember, since the SA front end is untuned, always look at full span to see that there isn't an unexpected strong signal somewhere outside the portion of the band you are looking at. Derate manufacturers max input specs by 10 dB to be sure. I am usually pretty careful, but was looking at a system which was supposed to contain band limiting filters to keep out strong stuff. Guess what - Some idiot removed the filters, and there was a +20 dBm signal outside my spectrum of interest, and it got the mixers before I knew what happened. So I got religion and always look, even when I know there is nothing there. The 8568 has a $250 fuse in the front end which works, I've had to replace one of those, too.

--
Crazy George
Remove NO and SPAM from return address
"Larry Phipps" <larry@telepostinc.com> wrote in message
news:waCX9.64294$4j5.10153234@newssvr28.news.prodigy.com...
> So what you're saying, George, is that the older stuff is a great
instrument
> for the bucks...but it's kinda big...the 8558 is a nice all-round unit if
> you can check it out out first or return it...and forget Tek.
>
> After looking at the specs of the 141T/8552B/8553B it does seem to do
> anything I need...and there are lots of spares/parts around. I had
> dismissed that unit, but I think I'll start paying attention to it now.
>
> Thanks.
>
> --
> 73,
> Larry N8LP
> www.telepostinc.com/n8lp.html
>

1710. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 04:55:34 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <oqru2v0rn1anrp2eutup8l5nqc588ajb5g@4ax.com>
Source record: 126398

On Wed, 22 Jan 2003 17:50:36 -0700, NoName <user@computer.net> wrote:

>
>Only a fool leaves his name on the internet. If you can't figure out
>from the content what credibility to give, you are not as smart
>as you think you are.

Hi Anton,

The greater fool is the one who presumes he's invisible when he goes
out into the street nude.

My research, not of the content, but of the provider proves what was
apparent in the content - no experience in the matter whatever:
>Data-processing M.Sc. (1992, Canada) -
>Electric B.Sc. Genius and Data processing (1988, Canada)
>Analyst in several fields of businesses (1996 to 98) -
>Development of software, field of telecommunications (1993 to 95) -
>Programmer and contractor (1991 to 93)
with a fluency in many european languages and naive in all.

Welcome to reality, would you like a robe?

73's
Richard Clark, KB7QHC

1711. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 05:17:21 UTC
From: NoName <user@computer.net>
Message-ID: <hguu2v06rtjrnsafsnmckpne56tg83pa1q@4ax.com>
Source record: 126400

On Wed, 22 Jan 2003 19:13:08 -0500, "Fred Hambrecht Sr"
<w4jle@charter.net> wrote

>I bow to your obvious omnipotence, I hallucinated the whole thing.
>

Just tell us when Fred FY and quarter. Tell us when
a nuclear device was detonated at the South Pole.

1712. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 05:35:16 UTC
From: NoName <user@computer.net>
Message-ID: <enuu2vcc2l18uuolpbf10kikvq4m7lojvn@4ax.com>
Source record: 126401

On Wed, 22 Jan 2003 21:21:37 -0500, "Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>I taught at Damneck, as a weapons instructor for 616 class FBM boats, I
>guess I know what dolphins are. If you went to Idaho, you were a snipe
>working in the engine room. That explains your knowledge of weapons shots.

Bzzzt sorry Fred I was never any form of squid but I did teach a few.
No military at all but I have been closely associated at times.
Now think real hard Fred--not a Rickover Ranger what could I be?

>
>Nuclear power and nuclear weapons have only the word nuclear in common.

Got to agree with you on that one reactors are way too slow and
boring never worked on one, we saved those for the 'C' students.

>
>Must have really upset you when you found out the easter bunny wasn't real.

Any time you want to stop with the personal attacks and spit out the
alleged dates of your fantasy Nuclear test at the South Pole I'm all
ears. Didn't happen Fred there were tests in the South Pacific but not
that far South, so sorry.

>
>> Got Dolphins? If you have to ask what I mean you don't. If you do
>> Despite all that time at Idaho Falls and all of the wisdom ensconced
>> in "the notebook" and no matter where you slept you don't know exactly
>> how they work, how they were developed or how they were tested
>> you were on the wrong team to know any of that.
>>
>> > and having participated in radiation control
>> >drills, exercises and incidents; and having performed elemental
>> >measurements of a reactor core; the naive statement above is simply
>> >dreams and wishes.
>

1713. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 05:38:54 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v2uvvgeku37df8@corp.supernews.com>
Source record: 126402

Never said at, I said over.

"NoName" <user@computer.net> wrote in message
news:hguu2v06rtjrnsafsnmckpne56tg83pa1q@4ax.com...
> On Wed, 22 Jan 2003 19:13:08 -0500, "Fred Hambrecht Sr"
> <w4jle@charter.net> wrote
>
> >I bow to your obvious omnipotence, I hallucinated the whole thing.
> >
>
> Just tell us when Fred FY and quarter. Tell us when
> a nuclear device was detonated at the South Pole.
>
>
>
>
>
>

1714. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 06:37:16 UTC
From: tdonaly@aol.com
Message-ID: <20030123013716.08211.00000222@mb-bj.aol.com>
Source record: 126403

Fred wrote,
>
>I bow to your obvious omnipotence, I hallucinated the whole thing.
>

Well, Fred, if you hallucinated the whole thing, so did a lot of other
people. Does Tristan da Cunha Island, Aug. 27, August 29, and
September 6, 1958 sound familiar? Project Argus? What about
July 31, 1958 over Johnston Island in the Pacific. Has the
NoName subhuman heard of the engineer Boris Cristofilos?
What about the 1.4 megaton thermonuclear bomb, codenamed
Starfish that was detonated over Johnston Island on July 9, 1962?
People sure have short memories. Anyone interested can read
the book Sun and Earth, By Herbert Friedman, an old Scientific
American book. There's nothing really secret about any of this
having happened. People bitched about it for years.
73,
Tom Donaly

1715. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 06:48:19 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v2v41khfa9vp56@corp.supernews.com>
Source record: 126404

I was just ready to send him a reply that I made it all up, just knowing there was some idiot with no name lurking in the weeds. I was ready to admit that I did it to allow him to how hi superior intelligence, and then you had to out me. :>)

Thanks for the project name, I racked my brain and could not come up with it. I could remember the names of all the ships involved, but not the project.

"Tdonaly" <tdonaly@aol.com> wrote in message news:20030123013716.08211.00000222@mb-bj.aol.com...
> Fred wrote,
> >
> >I bow to your obvious omnipotence, I hallucinated the whole thing.
> >
>
> Well, Fred, if you hallucinated the whole thing, so did a lot of other
> people. Does Tristan da Cunha Island, Aug. 27, August 29, and
> September 6, 1958 sound familiar? Project Argus? What about
> July 31, 1958 over Johnston Island in the Pacific. Has the
> NoName subhuman heard of the engineer Boris Cristofilos?
> What about the 1.4 megaton thermonuclear bomb, codenamed
> Starfish that was detonated over Johnston Island on July 9, 1962?
> People sure have short memories. Anyone interested can read
> the book Sun and Earth, By Herbert Friedman, an old Scientific
> American book. There's nothing really secret about any of this
> having happened. People bitched about it for years.
> 73,
> Tom Donaly
>
>

1716. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 07:00:09 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v2v4nr1eutdg19@corp.supernews.com>
Source record: 126405

Here is a link to both the dates as well as the location.

http://www.totse.com/en/politics/us_military/argus.html

Once Tom refreshed my memory as to the project name it was easy to locate
the data. Now back to the antenna on the ocean floor. I believe that it was
one used for taking measurements and then deep sixed to maintain secrecy.

"NoName" <user@computer.net> wrote in message
news:enuu2vcc2l18uuolpbf10kikvq4m7lojvn@4ax.com...
> On Wed, 22 Jan 2003 21:21:37 -0500, "Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> >I taught at Damneck, as a weapons instructor for 616 class FBM boats, I
> >guess I know what dolphins are. If you went to Idaho, you were a snipe
> >working in the engine room. That explains your knowledge of weapons
shots.
>
> Bzzzt sorry Fred I was never any form of squid but I did teach a few.
> No military at all but I have been closely associated at times.
> Now think real hard Fred--not a Rickover Ranger what could I be?
>
>
> >
> >Nuclear power and nuclear weapons have only the word nuclear in common.
>
> Got to agree with you on that one reactors are way too slow and
> boring never worked on one, we saved those for the 'C' students.
>
> >
> >Must have really upset you when you found out the easter bunny wasn't
real.
>
> Any time you want to stop with the personal attacks and spit out the
> alleged dates of your fantasy Nuclear test at the South Pole I'm all
> ears. Didn't happen Fred there were tests in the South Pacific but not
> that far South, so sorry.
>
>
> >
> >> Got Dolphins? If you have to ask what I mean you don't. If you do
> >> Despite all that time at Idaho Falls and all of the wisdom ensconced
> >> in "the notebook" and no matter where you slept you don't know exactly
> >> how they work, how they were developed or how they were tested
> >> you were on the wrong team to know any of that.

> >>
> >> > and having participated in radiation control
> >> >drills, exercises and incidents; and having performed elemental
> >> >measurements of a reactor core; the naive statement above is simply
> >> >dreams and wishes.
> >
>

1717. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 07:01:35 UTC
From: tdonaly@aol.com
Message-ID: <20030123020135.08211.00000223@mb-bj.aol.com>
Source record: 126406

Jim wrote,
>
>tdonaly@aol.com (Tdonaly) wrote in message
>news:<20030120122806.21495.00000259@mb-mu.aol.com>...
>> Cecil wrote,
>> >
>> >Last time Richard and I took the time to look, a pure sine wave is linear.
>> >--
>> >cheers, CAM http://www.qsl.net/w5dxp
>> >
>> >
>>
>> Would you like to explain that?
>> 73,
>> Tom Donaly, KA6RUH
>
>Perhaps like a function with no exponential terms. I'm pretty sure
>functions with higher order terms (e.g. x^2 or e^x) are generally
>considered non-linear expressions.
>
>ac6xg
>

Hi Jim,
equations of the form ax+b=0 are taught by the math books to be
linear. Math books, however, aren't the final word. Before discussing
linearity
with anyone, I think it's prudent to ask them what they mean by it. Linearity
means different things to different people. See my post quoting Blinchikoff
and
Zverev for an example.
73,
Tom Donaly, KA6RUH

1718. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 07:35:16 UTC
From: richardharrison@webtv.net
Message-ID: <8314-3E2F9B34-115@storefull-2316.public.lawson.webtv.net>
Source record: 126407

Tom, KA6RUH wrote:
"Equations of the form ax+b=0 are taught by the math books to be
linear."

I haven`t looked at math books for many decades but that formula can be rearranged as x=-b/a. I recall the definition of a line as something called the "point slope formula".
y=mx+b.

(b) is the offset from the origin of the line. (m) gives the line its slope. Then, you can plug in values of x and calculate y or vice versa.

Best regards, Richard Harrison, KB5WZI

1719. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 08:18:14 UTC
From: richardharrison@webtv.net
Message-ID: <26341-3E2FA546-144@storefull-2314.public.lawson.webtv.net>
Source record: 126408

Somebody wrote:
"So, you`re saying either that real pulses are non-linear, or that nobody has ever said they were."

This reminds me of angels dancing on a pinhead. Volts versus time can describe a straight line or it can make a crooked line. A function can repeat regularly or it can be non-repeatitive.

Many repetitive functions can be non-sinusoidal but described by an assemblage of sinusoids. An example: "The square wave consists of the fundamental and all odd harmonics."

A very linear amplifier is needed to accurately reproduce non-linear waveforms because it must faithfully pass the fundamental and all those harmonics in correct phase relationships for correct presentation on a CRT, for example.

This thread has wandered far from its title as threads should to best serve participants interests. The only cause for comment is that newcomers to the group should not fret that they see no connection between what they`re reading and the topic. The fault does not lie with their sets.

Best regards, Richard Harrison, KB5WZI

1720. Re: New Fractal publicity stunt?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 09:45:06 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v2ved58ibjv3f0@corp.supernews.com>
Source record: 126409

Here is another quote from military archives. 1800 Km SW of Cape Town South Africa. would put one in the neighborhood I alluded to.

"1958 Aug 27 - Launch Site: USS Norton Sound . Launch Complex: South At. Argus 1
The Argus series were the only clandestine nuclear tests ever conducted by the United States. The rocket-launched nuclear warheads were set off at very high altitudes over the South Atlantic, 1800 km south-west of Capetown, South Africa. The purpose was to determine the effects of nuclear explosions on the Earth's magnetic field and the impact to military radar, communications, satellites and ballistic missiles electronics. The earth's magnetic field is not only off-axis from the earth, but also off centre from the earth's core. This means the Van Allen Radiation belts are closest to the earth in the region known as the 'South Atlantic Anomaly'. This made the selected launch point the ideal place for launching a rocket into the lower belt where the particles and radiation from the explosion would be trapped.
"

"NoName" <user@computer.net> wrote in message
news:34gt2v4k42ki4lk22vn9mgj1b7fkjkcofq@4ax.com...
> On Tue, 21 Jan 2003 20:40:38 -0500, "Fred Hambrecht Sr."
> <w4jle@charter.net> wrote:
>
> >This may be the genetic antenna we have heard so much about. (C) (R)
(Patent
> >Pending) (Woe to those that copy)
> >
> >In reality, it looks much like some special equipment we had on board in
the
> >navy. It was used to measure disturbances of the radio fields, caused by
> >denotation of nuclear weapons at the South Pole.
>
> Detonation of nuclear weapons at the South Pole--give me a break.
>
> What country allegedly performed these experiments.
>
> The closest to a pole would have been the Soviet tests at Novaya
> Zemlya. They did shoot a 50 megaton air burst over NZ.
>
> >
> >The detonations were supposed to affect the earth's magnetic fields and
> >disrupt communications worldwide.
>

1721. Re: Parabolic Antenna Design and Calculations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 10:51:31 UTC
From: richardharrison@webtv.net
Message-ID: <8318-3E2FC933-3@storefull-2316.public.lawson.webtv.net>
Source record: 126411

Gerry Mackinnon wrote:
"At least I believe my reasoning tto be sound here."

Terman`s 1955 edition may demystify the parabolic reflector and its proper illumination. See page 910.

You recall that rays come in parallel to the axis of the parabola and pass through the focus. Reprocity prevails.

At any point on a plane perpendicular to the dish axis, the phase of the wave front is very nearly the same. This requires the distance traveled from the focus to the plane via the dish reflection be the same, so as to create no phase difference (equal travel, equal phase).

You could take a plane across the face of the dish (Terman calls this the mouth) and measure the distance from the focus to the dish and thence to the mouth plane. Thiis should be a constant.

Best regards, Richard Harrison, KB5WZI

1722. Re: Mr. Bluster

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 11:28:22 UTC
From: brianburke@juno.com
Message-ID: <f45722ac.0301230328.d21a657@posting.google.com>
Source record: 126410

kelly@dvol.com (Brian Kelly) wrote in message
news:<d22b54c3.0301201656.2132a360@posting.google.com>...
> brianburke@juno.com (Brian) wrote in message
news:<f45722ac.0301191317.7411f7a7@posting.google.com>...
> > richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18349-3E28385C-126@storefull-2314.public.lawson.webtv.net>...
> > > Art Unwin, KB9MZ wrote:
> > > "Please back off so that some decorum can return to this group."
> > >
> > > Beautifully said, Art. All the poster has done is agitate the group for
> > > no use.
> > >
> > > Best regards, Richard Harrison, KB5WZI
> >
> > Same stuff, different year. I'll check back with you guys in 2007.
>
> Izzat when you expect to finally figger out how to put up ANY antenna
> and actually get on the air?
>
> w3rv

Izzat how a reel collij ejakated injuneer tawks?

1723. Re: Johnson Matchbox

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 14:34:31 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <X3TX9.132$rq4.13887@bgtnsc05-news.ops.worldnet.att.net>
Source record: 126413

Mistake made: This is the model#250 (low power version)
"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:%MIX9.8477$zF6.691193@bgtnsc04-news.ops.worldnet.att.net...
> I recently acquired a johnson viking matchbox-275.
> At one time someone posted a site where one could
> modify the above device to increase it's efficiency.
> Anybody happen to know the url of that site?
> Also where can i get a manual for the above?
>
> Thank You
>
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03

1724. Quad?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 14:47:04 UTC
From: ardujenski@aol.com
Message-ID: <20030123094704.27866.00000231@mb-ml.aol.com>
Source record: 126414

I am interested in buying a 5 band, 2 element QUAD. I would like feedback regarding the ones commercially available addressing ease of assembly, tuning, and durability. I believe GEM QUAD, LIGHTNINGBOLT and CUBIX are the main sources
http://www.lightningboltantennas.com/
http://www.mts.net/~pb999287/
http://www.cubex.com/default.htm
Thanks...Alan KB7MBI in Woodinville, WA

1725. Re: Johnson Matchbox

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 15:06:04 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <EAMwPkDLG92wZJLIm8RUj2tY1=ue@4ax.com>
Source record: 126415

"marvin rosen" <raghead@worldnet.att.net> wrote:

>Mistake made: This is the model#250 (low power version)
>"marvin rosen" <raghead@worldnet.att.net> wrote in message
>news:%MIX9.8477$zF6.691193@bgtnsc04-news.ops.worldnet.att.net...
>> I recently acquired a johnson viking matchbox-275.
>> At one time someone posted a site where one could
>> modify the above device to increase it's efficiency.
>> Anybody happen to know the url of that site?
>> Also where can i get a manual for the above?

For a manual, see http://www.manualman.com or http://www.w7fg.com

Also, see http://www.cebik.com/radio.html and the articles on link-coupled
tuners, which includes commentary on matchboxes.

Bob
k5qwg
>>
>> Thank You
>>
>>
>>
>> ---
>> Outgoing mail is certified Virus Free.
>> Checked by AVG anti-virus system (http://www.grisoft.com).
>> Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03
>>
>>
>
>
>---
>Outgoing mail is certified Virus Free.
>Checked by AVG anti-virus system (http://www.grisoft.com).
>Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03
>

1726. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 15:27:09 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <hRTX9.64431$4j5.10261165@newssvr28.news.prodigy.com>
Source record: 126412

Thanks, George. I'll remember that. Nothing like experience to teach
lasting lessons ;-) I'll keep your address in my book in case I need any
advice after I get mine.

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3e2f75f5_1@news1.prserv.net...
> Larry:
>
> I use the 141 in the field about as much as the 8558 and 8559, in spite of
> size and weight. It has room for some specialized mods which won't fit in
> the crowded 8558 series. With ANY analyzer, be very cautious about too
much
> power into the front end, as that will kill one faster than anything else.
> I almost came to blows with a tech who insisted on connecting the antenna
> before running the attenuator to max, but finally threatened to take the
> repair costs out of his salary before he saw the light. Remember, since
the
> SA front end is untuned, always look at full span to see that there isn't
an
> unexpected strong signal somewhere outside the portion of the band you are
> looking at. Derate manufacturers max input specs by 10 dB to be sure. I
am
> usually pretty careful, but was looking at a system which was supposed to
> contain band limiting filters to keep out strong stuff. Guess what - Some
> idiot removed the filters, and there was a +20 dBm signal outside my
> spectrum of interest, and it got the mixers before I knew what happened.
So
> I got religion and always look, even when I know there is nothing there.
> The 8568 has a $250 fuse in the front end which works, I've had to replace
> one of those, too.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> "Larry Phipps" <larry@telepostinc.com> wrote in message
> news:waCX9.64294$4j5.10153234@newssvr28.news.prodigy.com...
> > So what you're saying, George, is that the older stuff is a great
> instrument
> > for the bucks...but it's kinda big...the 8558 is a nice all-round unit
if

> > you can check it out out first or return it...and forget Tek.
> >
> > After looking at the specs of the 141T/8552B/8553B it does seem to do
> > anything I need...and there are lots of spares/parts around. I had
> > dismissed that unit, but I think I'll start paying attention to it now.
> >
> > Thanks.
> >
> > --
> > 73,
> > Larry N8LP
> > www.telepostinc.com/n8lp.html
> >
>
>
>

1727. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 16:39:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E301ABC.75FEAA9C@uci.edu>
Source record: 126417

Tdonaly wrote:
>
> Jim wrote,
> >Perhaps like a function with no exponential terms. I'm pretty sure
> >functions with higher order terms (e.g. x^2 or e^x) are generally
> >considered non-linear expressions.
>
> Hi Jim,
> equations of the form ax+b=0 are taught by the math books to be
> linear.

Roger. But what's non-linear about y = a(sin(x)) + b?

73, Jim AC6XG

1728. Re: Discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 17:19:11 UTC
From: Michalkun <no.spam@nospam.com>
Message-ID: <Xns930C743E9A03Dmichalkunyahoocom@128.233.3.7>
Source record: 126416

"Dave Staples" <dasflies1@comcast.net> wrote in
news:_vedncTXIINPI7OjXTWcoA@comcast.com:

> I get OK reception of NOAA satellites when they are directly over
> my
> house.
> Im assuming that you are using a satellite tracking program to
> track the
> satellites, as they fly overhead. If so, you should be able to hear
> them.
>
> Dave
> dasflies1@comcast.net
>
> "Michalkun" <no.spam@nospam.com> wrote in message
> news:Xns930B579086D66michalkunyahoocom@128.233.3.7...
>> Can anyone tell me how well should NOAA satellites be heart over
>> discone antenna? I think my antenna isn't hooked up properly and I
>> get no significant signal. Is there any way to test if antenna is
>> hooked up
> well?
>> I get the strong signals on it, like trunking nets but not the
>> satellites.
>
>
>

I better check my cables when the temperature drops down. Not it's over -
40C and no fun going up the roof in such conditions.

1729. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 17:52:24 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3E302BD8.48B7E83@raytheon.com>
Source record: 126418

Roy Lewallen wrote:

> Jim Kelley wrote:
> > Roy Lewallen <w7el@eznec.com> wrote in message
news:<v2rp4p9ib0n1f1@corp.supernews.com>...
> >
> >
> >>Jim Kelley wrote:
> >
> >
> >>>Perhaps you would agree that in some discussions of the approximation,
> >>>the fact that real pulses are a linear approximation of the theoretical
> >>>non-linear function is sometimes overlooked.
> >>No.
> > So, you're saying either that real pulses are non-linear, or that
> > nobody has ever said they were.
>
> No, I'm saying that the theoretical, infinitely fast pulses aren't
> necessarily non-linear in the sense of linearity as defined for linear
> circuit analysis.

Why does it matter? The pulse, whatever it's characteristics, is simply a signal. Linearity
of
the _system_ is the property which allows linear decomposition of the signal into arbitrary
basis functions.

bart
wb6hqk

1730. Re: Quad?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 19:06:12 UTC
From: KA9CAR <notarealaddress@nospam.com>
Message-ID: <b0pef3$1dqs$1@news1.tribune.com>
Source record: 126319

I like my Cubix.
Quads are a beast to assemble, If I had realized how annoying it would be to get it up on the tower I never would have bought it. But having had it for 2 years I am glad I have it. Yes I would do it again.

The Cubix kit and the Cubix "assembled" are essentially the same antenna. The only differences are the price, that the kit uses telescoping arms so they can be shipped UPS, and you have to measure and drill the holes, and cut the wire to length yourself.

As for tuning , they warn you not to change the length of the elements to adjust tuning, but they do give you a few inches of adjustment at the attachment point so you can pick which end of the band you want to work. Because mine is only 35 feet to the boom, and my aluminum sided garage which the tower is side mounted to is 13 feet tall, I stand on the garage roof to work on the 20 meter element. The 20 meter SWR changes based on which way it is pointed, due to being so close to the aluminum siding.

I am using the remote switch and one feedline, then appropriate lengths of coax from the switch to each element. They tell you which bands to use 75 ohm coax and which to use 50. I could not get a good match on 20 until I used a 75 ohm 1/4 wave stub on the 20 element, although they said it was not needed. I have talked to other hams where they had the same issue, and also attributed it to the low mounting hieght.

I am not a perfectionist on swr. I find it is not below 1.5 in many places, nor is it over 2 in many.

Good luck
KA9CAR

"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20030123094704.27866.00000231@mb-ml.aol.com...
> I am interested in buying a 5 band, 2 element QUAD. I would like feedback
> regarding the ones commercially available addressing ease of assembly,
tuning,
> and durability. I believe GEM QUAD, LIGHTNINGBOLT and CUBIX are the main
> sources
> http://www.lightningboltantennas.com/
> http://www.mts.net/~pb999287/
> http://www.cubex.com/default.htm
> Thanks...Alan KB7MBI in Woodinville, WA

1731. How to find the resonant frequency of an antenna trap.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 19:11:40 UTC
From: nat.gurumoorthy@ubicom.com
Message-ID: <41325e56.0301231111.8a39fec@posting.google.com>
Source record: 126320

Hi,
I have a trap and I need to find its renonant frequency. I do not have access to a grid dip meter or an antenna analyzer. I do have access to the following tools:

1. A 1KHz to 30 Mhz Sine wave generator with digital frequency readout.

2. A 4 channel Tektronix TDS3034 Scope with FFT module.

Regards
Nat AB6SJ.

1732. Re: Johnson Matchbox

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 19:16:11 UTC
From: KA9CAR <notarealaddress@nospam.com>
Message-ID: <b0pf1r$1ebv$1@news1.tribune.com>
Source record: 126321

W4RNL has some articles on the matchbox.
http://www.cebik.com/radio.html
http://www.cebik.com/link/link.html
http://www.cebik.com/link/link0.html

The mods increase its range, but not the efficiency. Recently my new balanced antenna would not tune on a couple of bands. Rather than play with feed line length, I made the mods to the input circuit, with both a tap switch and a variable cap. It tunes very nicely now. I have seen photos of matchboxes with just the extra capacitor. I could probably get by that way, but I used a simple spdt toggle switch to select between the taps that worked best.

I lifted the ground on the input coil, and put a variable cap in series with it. The cap body and shaft are then at ground potential and easy to mount. I played with the tap point for the input, and found that with two taps on the "upper" surface of the coil I could match what I needed to.

To find the values that work for you, just take the cover off the matchbox and run it open for a while. This makes it easy to experiment with tap values.

I did this to a previously butchered matchbox. If it is not already cut up, you may find changing the feedline length a better approach.

Last field day we had a little difficulty matching one of our antennas on 15. I changed the length of the feedline by 1/4 wave on 15 and that problem was solved. This was not enough of a change to make the other bands "unmatched".

KA9CAR

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:%MIX9.8477$zF6.691193@bgtnsc04-news.ops.worldnet.att.net...
> I recently acquired a johnson viking matchbox-275.
> At one time someone posted a site where one could
> modify the above device to increase it's efficiency.
> Anybody happen to know the url of that site?
> Also where can i get a manual for the above?
>
> Thank You
>
>
>
> ---
> Outgoing mail is certified Virus Free.

> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.443 / Virus Database: 248 - Release Date: 1/10/03
>
>

1733. Re: Quad?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 19:26:00 UTC
From: Gordon Pritchard <gordonp@sfu.ca>
Message-ID: <m3of67y8fr.fsf@localhost.localdomain>
Source record: 126323

>>>>> "Alan" == ARDUJENSKI <ardujenski@aol.com> writes:

Alan> I am interested in buying a 5 band, 2 element QUAD. I
Alan> would like feedback regarding the ones commercially
Alan> available addressing ease of assembly, tuning, and
Alan> durability. I believe GEM QUAD, LIGHTNINGBOLT and CUBIX
Alan> are the main sources

I have a Gem Quad, which has been up now ~7 years without
trouble. I generally don't have ice/snow/really high wind to
deal with, though.

Performance is fine, empirically on a par with my friends'
3-el Yagi. It's survived 100mph gusts, and sits on top of a 48'
Delhi self-supporting tower. I turn it with a Yaesu rotor.

Although performance is fine, assembly and getting it on top
of your tower is a hassle. I had to build it on top of my 14'
step-ladder. Then, I had to install the tie-backs (stabilizer
rods that run fore/aft, between the "arms") once the Quad was
moved next to the tower.

Doing it today, I would probably lean towards a Yagi, simply
for the ease of assembly, and straightforward mounting. My West
Coast weather is generally gentle on antennas, but I also feel
that a well-built Yagi is *much* more mechanically robust than a
Quad.

That's my $0.02,
-Gord

--
Gordon Pritchard, P.Eng. | Institute of Electrical and
Research Labs Manager | Electronics Engineers
Simon Fraser University, Surrey | Quarter Century Wireless Ass'n
gordonp@sfu.ca | Telephone Pioneers of America
phone: 604.586.6186

1734. Re: How to find the resonant frequency of an antenna trap.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 19:29:19 UTC
From: jgboyles@aol.com
Message-ID: <20030123142919.21544.00000273@mb-mu.aol.com>
Source record: 126322

>I have a trap and I need to find its renonant frequency. I do not
>have access to a grid dip meter or an antenna analyzer.

Hi Nat, Try hooking a 1/4 watt carbon resistor about 100 ohms in series with the trap. Hook your signal generator to the series combination of resistor and trap and apply some rf. With your scope you should be able to see part of the voltage produced by the generator dropped across the resistor, and part dropped across the trap.
Tune the generator until the voltage peaks across the trap. Read the resonant frequency on the generator. Play around with the value of the resistor if 100 ohms doesn't give good results.

73 Gary N4AST

1735. Re: How to find the resonant frequency of an antenna trap.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 20:36:28 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v30kif43padu88@corp.supernews.com>
Source record: 126324

putting the scope across the resistor and looking for the dip is also an
option!
hank wd5jfr
"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20030123142919.21544.00000273@mb-mu.aol.com...
> >I have a trap and I need to find its renonant frequency. I do not
> >have access to a grid dip meter or an antenna analyzer.
>
> Hi Nat, Try hooking a 1/4 watt carbon resistor about 100 ohms in series
with
> the trap. Hook your signal generator to the series combination of
resistor and
> trap and apply some rf. With your scope you should be able to see part of
the
> voltage produced by the generator dropped across the resistor, and part
> dropped across the trap.
> Tune the generator until the voltage peaks across the trap. Read the
resonant
> frequency on the generator. Play around with the value of the resistor
if 100
> ohms doesn't give good results.
>
>
> 73 Gary N4AST

1736. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 20:43:46 UTC
From: tdonaly@aol.com
Message-ID: <20030123154346.07415.00000216@mb-mg.aol.com>
Source record: 126325

Jim wrote,
>
>Roger. But what's non-linear about y = a(sin(x)) + b?
>
>73, Jim AC6XG
>

What's linear about it other than a(something) + b? By the way,
you're liable to get in trouble with this if you try and apply it
to Zverev's definition of linearity.
There is a lot more to this
subject. What are the consequences of the fact that the
wave equation on a string is a second-order linear ordinary
differential equation, for instance? And a related question:
why should anyone care whether a particular signal can
be characterized by a linear equation or not? If I want to put
a signal characterized by random current variations through
an amplifier, who's going to stop me? I used to see people
using large Ling amplifiers do just that. And they were sober,
God-fearing, straight-minded test engineers, too.
73,
Tom Donaly, KA6RUH

1737. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 21:19:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E305C7D.6060707@ieee.org>
Source record: 126326

Roy Lewallen wrote:
> That's simple. The voltages and currents at both ends of the lines are
> exactly the same as before..

> All the other voltages, currents, dissipations, and powers are exactly
> the same as they were for the brain teaser.
>
> This ain't, as they say, exactly rocket science. More like high school
> algebra.
>
> And the point is. . . ?

I have some spare time this afternoon so will respond. Roy, above, is responding to my slightly different example of the QEX brainteaser:

Source A---1WL Z0=R feedline----x----1WL Z0=3R-----Source B(3R ohms)
(R ohms)

In the Z0=R feedline, Source A is furnishing P watts forward traveling power and Source B is furnishing P watts of rearward traveling power. For the purists, that's P watts of traveling energy measured at a point as joules/sec passing that point.

Let's hang some values on the example. P=100W, R=50 ohms, Rho = 0.5

Source A---1WL 50 ohm feedline---x---1WL 150 ohm feedline---Source B

Roy, you have a copy of my potential QEX article and the following energy analysis will be based on that article. And let me say that your analysis results and my analysis results agree 100%.

Source A is providing 100 watts of forward power on the 50 ohm feedline and Source B is providing 100 watts of rearward power on the 50 ohm feedline. That was given in the QEX brainteaser. Using the superposition theorem we can consider the two sources separately and superpose the resulting voltages and currents. Note that I don't need to know anything about the sources except their respective power (joules/sec) contributions. I do not need to know their impedances or internal dissipations.

So considering Source A only, The following analysis results at the impedance discontinuity (ID) point:

Source A provides 100W, 70.71V at zero deg and 1.414A at zero deg. This was given and the assignment of phase angle is arbitrary so this will be our reference.

The impedance discontinuity causes 75W to pass through the ID point and 25W to be reflected since Rho^2=0.25

75W in a 150 ohm environment is 106.066V at zero deg and 0.707A at zero deg
which flows toward Source B.

25W in a 50 ohm environment is 35.355V at zero deg and 0.707A at 180 deg
which flows toward Source A.

Now considering Source B only, the conditions at the ID point are:

Source B provides 100W, 70.71V at zero deg and 1.414A at 180 deg in the
50 ohm feedline. This was given.

That means that 133.33W must be provided on the right side of the ID.
That's 141.4V at zero deg and 0.943A at 180 deg.

33.33W is reflected from the ID back toward Source B. That's 70.71V
at 180 deg and 0.471A at 180 deg.

Now we can superpose the voltages and currents on the left side of the
ID to obtain the total voltage and current flowing back toward Source A.
70.71V at zero deg + 35.355V at zero deg = 106.066V at zero deg.
1.414A at 180 deg + 0.707A at 180 deg = 2.121A at 180 deg.
Total power flowing toward Source A is 106.066V*2.121A = 225W.
Note that since the phase angles are equal for both voltages and currents
there exists constructive interference on the left side of the ID.

Superposing voltages and currents on the right side of the ID yields:
70.71V at 180 deg + 106.066V at zero deg = 35.355V at zero deg
0.471A at 180 deg + 0.707A at zero deg = 0.236A at zero deg.
Total power flowing toward Source B is 35.355V*0.236A = 8.33W
Note that since the phase angles are opposite for both voltages and
currents there exists destructive interference on the right side of
the ID.

There is 100W of constructive interference on the left side and 100W
of destructive interference on the right side.

On the left side, we have 100W flowing to the right and 225W flowing
to the left for a net power flow of 125W toward Source A.

On the right side, we have 8.33W flowing to the right and 133.33W
flowing to the left for a net power flow of 125W toward Source A.

This energy analysis works like a charm. We don't need to know the
source impedances or the source dissipations. All we need to know
is that constructive interference on one side of the impedance
discontinuity equals the destructive interference on the other side.
That's the thrust of my potential QEX article. Please don't dismiss
it just because it is complicated.

My approach completely divorces the question of what happens at an
impedance discontinuity from the question of what happens inside
a source so I simply do not care about source impedances or conjugate
matches.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1738. Re: Quad?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 21:54:38 UTC
From: G&R <spam@limbo.hell>
Message-ID: <xwZX9.7934$5K5.810642@news20.bellglobal.com>
Source record: 126327

You also have the option otpion of going to a true mini quad.

www.degendesigns.com

Mind you this antenna is designed as a tri-bander but it will tune up on 6, 12, and 17m with the help of a tuner. Additionally, the antenna is easy to erect as it factory built just open bolt and install (we suggest two people about 1-1/2 to 2 hours) to install on the tower and hook up (depending on the what size tower you have :-)).

If you have any questions, please contact me at info@degendesigns.com and I will gladly answer your questions.

73,

Guenther Schweigl VE3 CVS
info@degendesigns.com

"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20030123094704.27866.00000231@mb-ml.aol.com...
> I am interested in buying a 5 band, 2 element QUAD. I would like feedback
> regarding the ones commercially available addressing ease of assembly,
tuning,
> and durability. I believe GEM QUAD, LIGHTNINGBOLT and CUBIX are the main
> sources
> http://www.lightningboltantennas.com/
> http://www.mts.net/~pb999287/
> http://www.cubex.com/default.htm
> Thanks...Alan KB7MBI in Woodinville, WA

1739. Info Needed to Make ADF Antenna for Marine ADF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 22:02:56 UTC
From: courir26@yahoo.com
Message-ID: <a0dd5fc9.0301231402.11c93939@posting.google.com>
Source record: 126328

Hi group,

Looking for a good reference to use for construction of a crossed loop
antenna for a marine automatic direction finder.

I have the radio coming (Si-Tex 511A) and would like to construct an
ant to make it work in ADF mode.

Thanks
Tom

1740. FA Antenna Rotator, Heavy Duty

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 22:42:11 UTC
From: edge3431@aol.comnospam
Message-ID: <20030123174211.08956.00000194@mb-mf.aol.com>
Source record: 126329

For Stockton/Sacramento CA area. No shipping. Heavy duty rotator with CDE controller. Buyer must pick up in Stockton, CA.
If clicking on the below URL doesn't work, copy it and paste in the keyword/address box.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3002897727

Thanks,
Ed Whitney
edge4two@valleysurf.com

1741. FA Antenna Rotator, Heavy Duty

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 22:49:45 UTC
From: edge3431@aol.comnospam
Message-ID: <20030123174945.08956.00000195@mb-mf.aol.com>
Source record: 126330

For Stockton/Sacramento CA area. No shipping. Heavy duty rotator with CDE controller. Buyer must pick up in Stockton, CA.
If clicking on the below URL doesn't work, copy it and paste in the keyword/address box.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3002897727

Thanks,
Ed Whitney
edge4two@valleysurf.com

1742. VHF/UHF J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 22:57:44 UTC
From: Jerry Cross <jcross43@optonline.net>
Message-ID: <Ir_X9.337312$FT6.64322897@news4.srv.hcvlny.cv.net>
Source record: 126331

I'm looking to see if any one has plans for the construction of a VHF/UHF J pole?

Thanks in Advance

73
Jerry KC2INK

1743. Need Capacitor:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 23:49:04 UTC
From: jackinariz@webtv.net
Message-ID: <16366-3E307F70-2@storefull-2136.public.lawson.webtv.net>
Source record: 126333

I live in small town Arizona so my options are limited.....I can't even find this "rare" cap on the web......Looking for air or vacuum capacitor 0...20 pF,variable...Anyone know? Thanks.

1744. Re: what is the difference between a transceiver and transmitter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-23 23:57:58 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <83013vo6tflfk6qi63vapsjdrg2ada3sj8@4ax.com>
Source record: 126332

My 1975 printing of The Living Webster Encyclopedic Dictionary also
defines transceiver as, "a combined transmitter and receiver in one
radio device." Doesn't limit it to any specific circuitry being
combined to meet that definition.

Dick - W6CCD

On Thu, 23 Jan 2003 21:56:48 GMT, jfields@texas.net (John Fields)
wrote:

>On Sun, 19 Jan 2003 14:23:44 +0800, "Laplace"
><Laplace@tranforms.org> wrote:
>
>>what is the difference between a transceiver and transmitter?
>---
>According to the 1996 ARRL "Handbook for Radio Amateurs", its "A
>radio transmitter and receiver combined in one unit."
>

1745. Re: Need Capacitor:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 00:24:36 UTC
From: jgboyles@aol.com
Message-ID: <20030123192436.10354.00000186@mb-fl.aol.com>
Source record: 126334

>I live in small town Arizona so my options are limited.....I can't even
>find this "rare" cap on the web......Looking for air or vacuum capacitor
>0...20 pF,variable...Anyone know? Thanks.

Surplus Sales of Nebraska, or Fair Radio Sales should have what you are looking for. Both have web sites, do a google search to find them. Prepare to be shocked at prices.
73 Gary N4AST

1746. Re: VHF/UHF J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 00:48:20 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b0q2k1jvt1@slb6.atl.mindspring.net>
Source record: 126335

February issue 2003 of QST has one. Made from twinlead.

Dan/W4NTI

"Jerry Cross" <jcross43@optonline.net> wrote in message
news:Ir_X9.337312$FT6.64322897@news4.srv.hcvlny.cv.net...
> I'm looking to see if any one has plans for the construction of a VHF/UHF
J
> pole?
>
> Thanks in Advance
>
> 73
> Jerry KC2INK
>
>

1747. Re: Johnson Matchbox

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 01:03:37 UTC
From: k9sqg@aol.com
Message-ID: <20030123200337.28129.00000159@mb-cm.aol.com>
Source record: 126336

The tuner as is has excellent efficiency considering it is multiband. Altering the tuner will certainly lower the resale value as indicated by Ebay pricing...

1748. Re: VHF/UHF J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 01:06:44 UTC
From: arrow146@aol.com
Message-ID: <20030123200644.19219.00000118@mb-fs.aol.com>
Source record: 126337

<< I'm looking to see if any one has plans for the construction of a VHF/UHF J pole?

Thanks in Advance

73
Jerry KC2INK >>

<A HREF="http://arrowantennas.com/inst/ijpole.html">J-Pole Instructions</A>
Construction Plans for the Model J146/440 Dual Band Solid Aluminum J-Pole

Parts Needed:

Radio Shack # 21-961   3/8”-24/SO239 Mount (Mobile CB Antenna) Radio Shack # 15-826   TV Mast U-Bolt Clamp Assembly
About 90 inches of 3/8” diameter Solid Aluminum Rod.
5 1/2 inch piece of strut angle Aluminum 1 1/2” X 1 1/2” X 3/16” Thick.
4 Stainless Jam Nuts 3/8-24 thread

Tools needed:

Drill Press with drill Bits up to 1/2”.
Tap & Die for 3/8-24 thread.
Sander or file to de-burr the cut edges.
2 9/16 wrenches & a 3/4 wrench. Vice-grips

Make sure the piece of angle Aluminum is exactly 5 1/2 inches long. Drill 2 1/4” holes on one side, centered to fit the U-Bolt for mounting. On the other surface of the angle From the left side measure in 1/2” and drill a 1/4” pilot hole. From the left side measure in 1 15/16” and drill a 1/4” pilot hole. From the left side measure in 5” and drill a 1/4” pilot hole. This should give you 1 7/16” from center to center of the first 2 holes. This should give you 4 1/2” from center to center of the two outside holes. Redrill the left pilot hole to 1/2” Redrill the other 2 pilot holes to 11/32” Then tap the hole with a 3/8-24 Tap. Finish as required.

Cut a piece of the 3/8” Aluminum rod to about 21”. Attach a vice-grip to one end. Using a 3/8-24 Die cut in about 8 threads in the other end. Screw on the Coupling Nut that came with the SO239 Mount Tighten as much as you can. Measure the rod & coupling nut & cut to exactly 19 1/4”

Cut a piece of the 3/8” Aluminum rod to about 59” Cut another piece about 8” Attach a vice-grip to one end. Using a 3/8-24 Die cut in about 15 threads in the other end. repeat for the 8” rod. (If you don’t have jam nuts, cut enough threads for 2 nuts & the thickness of the angle bracket.) Screw on one of the Jam nuts & tighten as much as you can. Measure from the bottom of the nut and cut the rod to exactly 57 1/2” Measure from the bottom of the nut and

cut the other rod to exactly 6 1/4" (Remember the nut must be included in the Measurement.) (Put a small amount of grease on the threads) Screw the elements into the threaded hole of the angle bracket and tighten. Screw on the other nut and tighten it.
Attach the 19 1/4" element in the 1/2" hole using the rest of the SO239 Mount. Mount & test your new antenna.

SWR should be 1.1:1 at 146 MHz and about 1.2:1 at 144 &148 MHz.

SWR should be 1.1:1 at 443 MHz. and about 1.2:1 at 437 & 450 MHz.

Arrow Antenna J-Poles Also has drawings in the instructions.

73   Allen Lowe NØIMW

ArrowAntenna.com
604 West 17th Street
Cheyenne, WY 82001

307-638-2369
Fax 307-638-3521

1749. Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 01:07:17 UTC
From: No Name <NoName@mycomputer.net>
Message-ID: <is213v4ueseksb0u34ep2i57h6rf5tejte@4ax.com>
Source record: 126338

Ok Gents.

The facts first project Argus/Task Force 88 USS Norton Sound.
High altitude studies in the effect of small nuclear detonations in
the VanAllen Belts. Since the South Atlantic Anomaly is where
the belts make their closest approach to the earth the
experiments were conducted there.

The peanut whistle W-25s fired in the upper atmosphere.

First event 27aug58 position 38.5S by 11.5W 5737KM from the
South Pole to be exact my heavens that's closer to the equator
than the South Pole

Second event 30aug58 49.5S by 8.2W at least this one is closer
only 4500KM as the albatross soars.

Third and final event 48.5S by 9.7W at bit further at 4600KM

A pretty far piece from the South Pole or even above the
South Pole.

I continue to take exception to your slander of us who did/do
this work by stating that we violated the Antarctic Compact.

For all of you who apparently cannot read what Fred said and
what I take exception to.

Fred claimed we did nuclear test at, above or near the South Pole.
The U.S. did not do that and Fred is full of crap. The experiments
her refers to were 1/4 of the Earth away.

Oh for your learned friend below it was Starfish prime not Starfish
that put the lights out in Kawaii.

Adios time for a fresh name and a new set of folks.

On Thu, 23 Jan 2003 01:48:19 -0500, "Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>I was just ready to send him a reply that I made it all up, just knowing
>there was some idiot with no name lurking in the weeds. I was ready to admit
>that I did it to allow him to how hi superior intelligence, and then you had
>to out me. :>)
>
>Thanks for the project name, I racked my brain and could not come up with
>it. I could remember the names of all the ships involved, but not the
>project.

>
>
>"Tdonaly" <tdonaly@aol.com> wrote in message
>news:20030123013716.08211.00000222@mb-bj.aol.com...
>> Fred wrote,
>> >
>> >I bow to your obvious omnipotence, I hallucinated the whole thing.
>> >
>>
>> Well, Fred, if you hallucinated the whole thing, so did a lot of other
>> people. Does Tristan da Cunha Island, Aug. 27, August 29, and
>> September 6, 1958 sound familiar? Project Argus? What about
>> July 31, 1958 over Johnston Island in the Pacific. Has the
>> NoName subhuman heard of the engineer Boris Cristofilos?
>> What about the 1.4 megaton thermonuclear bomb, codenamed
>> Starfish that was detonated over Johnston Island on July 9, 1962?
>> People sure have short memories. Anyone interested can read
>> the book Sun and Earth, By Herbert Friedman, an old Scientific
>> American book. There's nothing really secret about any of this
>> having happened. People bitched about it for years.
>> 73,
>> Tom Donaly
>>
>>
>

1750. CliffDweller Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 01:28:09 UTC
From: perplexed <abuch88@hotmail.com>
Message-ID: <JE0Y9.61662$yi6.9598233@twister.nyc.rr.com>
Source record: 126340

Has anyone tried this indoor transmit and receive antenna?

I'm interested in its receiving quality.

1751. Re: Need Capacitor:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 01:30:16 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ik513v44oqaac885mmtt2ed55pagpp2ept@4ax.com>
Source record: 126339

On Thu, 23 Jan 2003 16:49:04 -0700 (MST), jackinariz@webtv.net (jack
D) wrote:

|I live in small town Arizona so my options are limited.....I can't even
|find this "rare" cap on the web......Looking for air or vacuum capacitor
|0...20 pF,variable...Anyone know? Thanks.

I live in a big town in AZ and my options are limited too.

Need more info. No cap goes to zero pF. What voltage requirement?
Are you really after a vacuum cap or just a piston trimmer?

Wes N7WS

1752. Re: Johnson Matchbox

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 01:40:00 UTC
From: robrk <robrkx@nidhog.net>
Message-ID: <3E309970.CD215ADA@nidhog.net>
Source record: 126341

http://bama.sbc.edu/

1753. Re: Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 01:45:22 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v316lifj55j87c@corp.supernews.com>
Source record: 126342

With all due respect, you quoted launch positions, not detonation positions.
You seem to be hell bent on proving that we never violated a treaty. We
would all be in agreement that the government has never violated any
treaties they were a party to.... ;>(Hell! how would I know anything.? I
was only there, you on the other hand have the advantage of being in Idaho.

And they were the only clandestine launches because?

All this has nothing to do with my original post as to identification of the
device seen on the ocean floor.

You have done your job as a loyal "guvmint" minion and I applaud you.

"No Name" <NoName@mycomputer.net> wrote in message
news:is213v4ueseksb0u34ep2i57h6rf5tejte@4ax.com...
>
> Ok Gents.
>
> The facts first project Argus/Task Force 88 USS Norton Sound.
> High altitude studies in the effect of small nuclear detonations in
> the VanAllen Belts. Since the South Atlantic Anomaly is where
> the belts make their closest approach to the earth the
> experiments were conducted there.
>
> The peanut whistle W-25s fired in the upper atmosphere.
>
> First event 27aug58 position 38.5S by 11.5W 5737KM from the
> South Pole to be exact my heavens that's closer to the equator
> than the South Pole
>
> Second event 30aug58 49.5S by 8.2W at least this one is closer
> only 4500KM as the albatross soars.
>
> Third and final event 48.5S by 9.7W at bit further at 4600KM
>
> A pretty far piece from the South Pole or even above the
> South Pole.
>
> I continue to take exception to your slander of us who did/do
> this work by stating that we violated the Antarctic Compact.
>
> For all of you who apparently cannot read what Fred said and
> what I take exception to.
>
> Fred claimed we did nuclear test at, above or near the South Pole.

> The U.S. did not do that and Fred is full of crap. The experiments
> her refers to were 1/4 of the Earth away.
>
> Oh for your learned friend below it was Starfish prime not Starfish
> that put the lights out in Kawaii.
>
> Adios time for a fresh name and a new set of folks.
>
>
> On Thu, 23 Jan 2003 01:48:19 -0500, "Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> >I was just ready to send him a reply that I made it all up, just knowing
> >there was some idiot with no name lurking in the weeds. I was ready to
admit
> >that I did it to allow him to how hi superior intelligence, and then you
had
> >to out me. :>)
> >
> >Thanks for the project name, I racked my brain and could not come up with
> >it. I could remember the names of all the ships involved, but not the
> >project.
> >
> >
> >"Tdonaly" <tdonaly@aol.com> wrote in message
> >news:20030123013716.08211.00000222@mb-bj.aol.com...
> >> Fred wrote,
> >> >
> >> >I bow to your obvious omnipotence, I hallucinated the whole thing.
> >> >
> >>
> >> Well, Fred, if you hallucinated the whole thing, so did a lot of other
> >> people. Does Tristan da Cunha Island, Aug. 27, August 29, and
> >> September 6, 1958 sound familiar? Project Argus? What about
> >> July 31, 1958 over Johnston Island in the Pacific. Has the
> >> NoName subhuman heard of the engineer Boris Cristofilos?
> >> What about the 1.4 megaton thermonuclear bomb, codenamed
> >> Starfish that was detonated over Johnston Island on July 9, 1962?
> >> People sure have short memories. Anyone interested can read
> >> the book Sun and Earth, By Herbert Friedman, an old Scientific
> >> American book. There's nothing really secret about any of this
> >> having happened. People bitched about it for years.
> >> 73,
> >> Tom Donaly
> >>
> >>
> >
>

1754. Re: Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 02:58:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <h3613v4qprqvltlqjad84jj4phgl0ag5an@4ax.com>
Source record: 126343

On Thu, 23 Jan 2003 18:07:17 -0700, No Name <NoName@mycomputer.net>
wrote:

>Adios time for a fresh name and a new set of folks.
>
Hello Anton,

Do you hear the Raelians calling?

Sorry to have penetrated the veil, but, as you said, it was all a
matter of intelligence. It probably took a total of 5 minutes; your
mileage may vary, obviously.

73's
Richard Clark, KB7QHC

1755. Re: Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 03:06:09 UTC
From: No Name <NoName@mycomputer.net>
Message-ID: <jja13vkaif57eo27e01dliucveiln029am@4ax.com>
Source record: 126344

On Thu, 23 Jan 2003 20:45:22 -0500, "Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>With all due respect, you quoted launch positions, not detonation positions.

With all due respect what was the range of the modified VX-15 a couple
of hundred KM on its best day wit the wind behind? Give me a break you
have no idea what you are talking about. Pretty much what I would
expect from a sea lawyer type.

>You seem to be hell bent on proving that we never violated a treaty.

We sure didn't violate the one you claim we did.

> We
>would all be in agreement that the government has never violated any
>treaties they were a party to.... ;>(Hell! how would I know anything.? I
>was only there, you on the other hand have the advantage of being in Idaho.

I'm not in Idaho never been employed there but I did go snowmobiling a
couple of times.
>
>And they were the only clandestine launches because?

They were clandestine because of the science not because of the
location. They also were not clandestine long either. There might
have been more clandestine launches but then you wouldn't know that
would you?
>
>All this has nothing to do with my original post as to identification of the
>device seen on the ocean floor.

No, now it has to do with a pig headed old Navy enlisted squid with no
idea what he was working on making accusations based in either
the depths of ignorance or abject stupidity.

>
>You have done your job as a loyal "guvmint" minion and I applaud you.

And you sir are either dumb as a post or a lying sack of dog poop.
Or perhaps I am being to harsh you might just be some poor nothing
whose only chance to be a big shot is to bluster on the internet. May
I call you Chip jr. no I won't do that it isn't fair to Chip after all
he at least doesn't slander his country.

>
>
>"No Name" <NoName@mycomputer.net> wrote in message

>news:is213v4ueseksb0u34ep2i57h6rf5tejte@4ax.com...
>>
>> Ok Gents.
>>
>> The facts first project Argus/Task Force 88 USS Norton Sound.
>> High altitude studies in the effect of small nuclear detonations in
>> the VanAllen Belts. Since the South Atlantic Anomaly is where
>> the belts make their closest approach to the earth the
>> experiments were conducted there.
>>
>> The peanut whistle W-25s fired in the upper atmosphere.
>>
>> First event 27aug58 position 38.5S by 11.5W 5737KM from the
>> South Pole to be exact my heavens that's closer to the equator
>> than the South Pole
>>
>> Second event 30aug58 49.5S by 8.2W at least this one is closer
>> only 4500KM as the albatross soars.
>>
>> Third and final event 48.5S by 9.7W at bit further at 4600KM
>>
>> A pretty far piece from the South Pole or even above the
>> South Pole.
>>
>> I continue to take exception to your slander of us who did/do
>> this work by stating that we violated the Antarctic Compact.
>>
>> For all of you who apparently cannot read what Fred said and
>> what I take exception to.
>>
>> Fred claimed we did nuclear test at, above or near the South Pole.
>> The U.S. did not do that and Fred is full of crap. The experiments
>> her refers to were 1/4 of the Earth away.
>>
>> Oh for your learned friend below it was Starfish prime not Starfish
>> that put the lights out in Kawaii.
>>
>> Adios time for a fresh name and a new set of folks.
>>
>>
>> On Thu, 23 Jan 2003 01:48:19 -0500, "Fred Hambrecht Sr"
>> <w4jle@charter.net> wrote:
>>
>> >I was just ready to send him a reply that I made it all up, just knowing
>> >there was some idiot with no name lurking in the weeds. I was ready to
>admit
>> >that I did it to allow him to how hi superior intelligence, and then you
>had
>> >to out me. :>)
>> >

>> >Thanks for the project name, I racked my brain and could not come up with
>> >it. I could remember the names of all the ships involved, but not the
>> >project.
>> >
>> >
>> >"Tdonaly" <tdonaly@aol.com> wrote in message
>> >news:20030123013716.08211.00000222@mb-bj.aol.com...
>> >> Fred wrote,
>> >> >
>> >> >I bow to your obvious omnipotence, I hallucinated the whole thing.
>> >> >
>> >>
>> >> Well, Fred, if you hallucinated the whole thing, so did a lot of other
>> >> people. Does Tristan da Cunha Island, Aug. 27, August 29, and
>> >> September 6, 1958 sound familiar? Project Argus? What about
>> >> July 31, 1958 over Johnston Island in the Pacific. Has the
>> >> NoName subhuman heard of the engineer Boris Cristofilos?
>> >> What about the 1.4 megaton thermonuclear bomb, codenamed
>> >> Starfish that was detonated over Johnston Island on July 9, 1962?
>> >> People sure have short memories. Anyone interested can read
>> >> the book Sun and Earth, By Herbert Friedman, an old Scientific
>> >> American book. There's nothing really secret about any of this
>> >> having happened. People bitched about it for years.
>> >> 73,
>> >> Tom Donaly
>> >>
>> >>
>> >
>>
>

1756. Re: Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 03:35:57 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v31d4tt392tne8@corp.supernews.com>
Source record: 126345

How can I possibly argue with such flawless logic? Your absolutely correct
on all accounts. You win pick up the marbles.

"No Name" <NoName@mycomputer.net> wrote in message
news:jja13vkaif57eo27e01dliucveiln029am@4ax.com...
> On Thu, 23 Jan 2003 20:45:22 -0500, "Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> >With all due respect, you quoted launch positions, not detonation
positions.
>
> With all due respect what was the range of the modified VX-15 a couple
> of hundred KM on its best day wit the wind behind? Give me a break you
> have no idea what you are talking about. Pretty much what I would
> expect from a sea lawyer type.
>
>
> >You seem to be hell bent on proving that we never violated a treaty.
>
> We sure didn't violate the one you claim we did.
>
> > We
> >would all be in agreement that the government has never violated any
> >treaties they were a party to.... ;>(Hell! how would I know anything.?
I
> >was only there, you on the other hand have the advantage of being in
Idaho.
>
> I'm not in Idaho never been employed there but I did go snowmobiling a
> couple of times.
> >
> >And they were the only clandestine launches because?
>
> They were clandestine because of the science not because of the
> location. They also were not clandestine long either. There might
> have been more clandestine launches but then you wouldn't know that
> would you?
> >
> >All this has nothing to do with my original post as to identification of
the
> >device seen on the ocean floor.
>
> No, now it has to do with a pig headed old Navy enlisted squid with no
> idea what he was working on making accusations based in either

> the depths of ignorance or abject stupidity.
>
> >
> >You have done your job as a loyal "guvmint" minion and I applaud you.
>
> And you sir are either dumb as a post or a lying sack of dog poop.
> Or perhaps I am being to harsh you might just be some poor nothing
> whose only chance to be a big shot is to bluster on the internet. May
> I call you Chip jr. no I won't do that it isn't fair to Chip after all
> he at least doesn't slander his country.
>
>
> >
> >
> >"No Name" <NoName@mycomputer.net> wrote in message
> >news:is213v4ueseksb0u34ep2i57h6rf5tejte@4ax.com...
> >>
> >> Ok Gents.
> >>
> >> The facts first project Argus/Task Force 88 USS Norton Sound.
> >> High altitude studies in the effect of small nuclear detonations in
> >> the VanAllen Belts. Since the South Atlantic Anomaly is where
> >> the belts make their closest approach to the earth the
> >> experiments were conducted there.
> >>
> >> The peanut whistle W-25s fired in the upper atmosphere.
> >>
> >> First event 27aug58 position 38.5S by 11.5W 5737KM from the
> >> South Pole to be exact my heavens that's closer to the equator
> >> than the South Pole
> >>
> >> Second event 30aug58 49.5S by 8.2W at least this one is closer
> >> only 4500KM as the albatross soars.
> >>
> >> Third and final event 48.5S by 9.7W at bit further at 4600KM
> >>
> >> A pretty far piece from the South Pole or even above the
> >> South Pole.
> >>
> >> I continue to take exception to your slander of us who did/do
> >> this work by stating that we violated the Antarctic Compact.
> >>
> >> For all of you who apparently cannot read what Fred said and
> >> what I take exception to.
> >>
> >> Fred claimed we did nuclear test at, above or near the South Pole.
> >> The U.S. did not do that and Fred is full of crap. The experiments
> >> her refers to were 1/4 of the Earth away.
> >>
> >> Oh for your learned friend below it was Starfish prime not Starfish

> >> that put the lights out in Kawaii.
> >>
> >> Adios time for a fresh name and a new set of folks.
> >>
> >>
> >> On Thu, 23 Jan 2003 01:48:19 -0500, "Fred Hambrecht Sr"
> >> <w4jle@charter.net> wrote:
> >>
> >> >I was just ready to send him a reply that I made it all up, just
knowing
> >> >there was some idiot with no name lurking in the weeds. I was ready to
> >admit
> >> >that I did it to allow him to how hi superior intelligence, and then
you
> >had
> >> >to out me. :>)
> >> >
> >> >Thanks for the project name, I racked my brain and could not come up
with
> >> >it. I could remember the names of all the ships involved, but not the
> >> >project.
> >> >
> >> >
> >> >"Tdonaly" <tdonaly@aol.com> wrote in message
> >> >news:20030123013716.08211.00000222@mb-bj.aol.com...
> >> >> Fred wrote,
> >> >> >
> >> >> >I bow to your obvious omnipotence, I hallucinated the whole thing.
> >> >> >
> >> >>
> >> >> Well, Fred, if you hallucinated the whole thing, so did a lot of
other
> >> >> people. Does Tristan da Cunha Island, Aug. 27, August 29, and
> >> >> September 6, 1958 sound familiar? Project Argus? What about
> >> >> July 31, 1958 over Johnston Island in the Pacific. Has the
> >> >> NoName subhuman heard of the engineer Boris Cristofilos?
> >> >> What about the 1.4 megaton thermonuclear bomb, codenamed
> >> >> Starfish that was detonated over Johnston Island on July 9, 1962?
> >> >> People sure have short memories. Anyone interested can read
> >> >> the book Sun and Earth, By Herbert Friedman, an old Scientific
> >> >> American book. There's nothing really secret about any of this
> >> >> having happened. People bitched about it for years.
> >> >> 73,
> >> >> Tom Donaly
> >> >>
> >> >>
> >> >
> >>
> >
>

1757. Re: Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 03:42:09 UTC
From: tdonaly@aol.com
Message-ID: <20030123224209.27607.00000151@mb-mj.aol.com>
Source record: 126346

Richard Clark wrote,
>
>
>>Adios time for a fresh name and a new set of folks.
>>
>Hello Anton,
>
>Do you hear the Raelians calling?
>
>Sorry to have penetrated the veil, but, as you said, it was all a
>matter of intelligence. It probably took a total of 5 minutes; your
>mileage may vary, obviously.
>
>73's
>Richard Clark, KB7QHC
>

Hi Richard,
does Poindexter know about this guy?
73,
Tom Donaly, KA6RUH

1758. Re: Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 03:44:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <59b13vs8sa3ocerpijb83q7hckkrdf709i@4ax.com>
Source record: 126347

On Thu, 23 Jan 2003 20:45:22 -0500, "Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>, you on the other hand have the advantage of being in Idaho.

Hi Fred,

I doubt that Anton has even visited the west coast, much less Idaho.
Montreal can not be an easy commute unless he's got business in
Vancouver. Anyway, what would a slacker know about these things
except through third hand knowledge?

I like the amateur acting though. Like my buddy's 8 year old boy
strutting around. Especially amusing was his talkin' dolphins when he
couldn't pass the first round of initiation. (Anton, ever hear of a
blanket party? You've never experienced the social requirements of
being part of a team and this would no doubt have been your
pre-initiation fate.) We truly live in an age of wannabee heroes who
shun to carry a rifle. Washington seems to be run by them. Just the
other day one of our glorious leaders offered that the 20,000 draftees
that died in Viet Nam contributed nothing except to serve as a drain
on our resources. This epitome of the Right Whiners was undoubtedly
one of those effete drifters (a deferred student no less) that spit on
me in uniform; a mark of respect from him for a volunteer, I ponder my
fate if I had been a draftee.

Anton,
you, my boy, are going to be the first wide-eyed innocent against the
wall. It takes very little intelligence to string up an association
of facts that trail you:
A specific interest in nuclear weapons;
a recent interest in electronic gizmos;
a problem with border crossing;
a history of seeking european positions without any particular
interest in where;
certainly an avid interest in the Palestinian problem (there are
probably some there looking for your skin too).
Like I said, no particular intelligence at all to make a case how one
of the graduates of McDonald's burger academy now manning a console
and sifting the net for the office of homeland scrutiny will nail your
butt. Would you like to super-size that?

So long and drop us a note from that caribbean gulag.

73's
Richard Clark, KB7QHC

1759. Re: Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 03:52:05 UTC
From: tdonaly@aol.com
Message-ID: <20030123225205.27607.00000152@mb-mj.aol.com>
Source record: 126348

Whatsisface wrote,
>(snip)
>I continue to take exception to your slander of us who did/do
>this work by stating that we violated the Antarctic Compact.
>(snip)

Who are you trying to kid? I've seen twenty-somethings
begging on the streets with signs that say "Vietnam Vet,"
but this takes the cake.
Tom Donaly, KA6RUH

1760. Re: Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 03:54:14 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <90e13vs9ei3t9ag9gjprb0nq9pkc33c3q7@4ax.com>
Source record: 126349

On 24 Jan 2003 03:42:09 GMT, tdonaly@aol.com (Tdonaly) wrote:

>Richard Clark wrote,
>>
>>
>>>Adios time for a fresh name and a new set of folks.
>>>
>>Hello Anton,
>>
>>Do you hear the Raelians calling?
>>
>>Sorry to have penetrated the veil, but, as you said, it was all a
>>matter of intelligence. It probably took a total of 5 minutes; your
>>mileage may vary, obviously.
>>
>>73's
>>Richard Clark, KB7QHC
>>
>
>Hi Richard,
> does Poindexter know about this guy?
>73,
>Tom Donaly, KA6RUH
>

Hi Tom,

You anticipated me by 2 minutes. Anton is probably struggling for
air.

73's
Richard Clark, KB7QHC

1761. Re: what is the difference between a transceiver and transmitter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 05:50:48 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <8gk13vkuuljm4t7vgrja54di7tf3g3raon@4ax.com>
Source record: 126350

I believe the word transceiver with respect to amateur radio equipment started with the Collins KWM-1 in 1957. Walky-Talkies back then were primarily crystal controlled, and usually on one frequency. Even those used separate crystals for transmit and receive. The word transceiver to most of us licensed in those days meant that there was a common variable frequency control for both the transmitter and receiver circuits. That's what the KWM-1 brought to amateur radio. It was no longer necessary to "zero-beat" the transmitter's vfo with the receiver to be on the same frequency.

Dick - W6CCD

On 24 Jan 2003 05:37:18 GMT, rstevew@deeptht.armory.com (Richard Steven Walz) wrote:

>>Where is the "original definition of a transceiver" kept?
>--------------------------------
>The obvious:
>Back in the 1960's where someone advertised a walkie-talkie that:
>It's a transmitter AND a receiver, a "Trans-Ceiver!!"
>
>You see, "Re-Mitter" was already taken!
>-Steve

1762. If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 06:04:59 UTC
From: uthrashit@hotmail.con
Message-ID: <3e30d34a.8235391@news.state.ak.us>
Source record: 126351

I live in SE Alaska I have a MFJ Versa Tuner II, plenty of wire and ladder line. I also am very fortunate to have 2 trees approximately 200' apart and both of the trees are around 125-150' high. Beautiful Sitka Spruce! The trees are situated East / West. A wire strung between the two would give me a signal into the South Pacific and over the Pole into Europe and Africa, assuming the lobes were broadside to the antenna.

I would like a SINGLE antenna for multiband use, 80-10 Meters. So far I'm considering;

An Extended ZEP 89' per side
http://www.qrpworld.com/40_meter_zepp_antenna.htm

A Sturba Curtain
http://www.hamuniverse.com/sturba.html

A Lazy-H
http://www.cebik.com/lh.html

G5RV - without the matching stub & coax.
Fed with 450 ohm Ladder line directly to the tuner.

If you were in my situation, what would you put up and why?

I'm open to any suggestions for other antennas as well.....

1763. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 06:13:32 UTC
From: whagen6@cs.com
Message-ID: <20030124011332.27950.00000176@mb-ml.news.cs.com>
Source record: 126352

an 80 meter dipole, fed with 450 ohm line, which is cut 1/2 wavelength for 80 meters. I would then either use a tuner, or for the other bands, set up the Cecil system of switching in lengths of line from 1 foot to 16 feet to use the line to transform the impedance on the other bands. The swr line loss is very low, and the system is very simple. You can either use the switching system, or just put a junction in your line and insert the line pieces one at a time if you dont switch bands too often.
If you dont like the line transformation method, use the tuner. it is the same idea as the G5RV, but a full half wave antenna.

1764. Re: Argus truth and the South Pole.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 09:35:42 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <f4223volig3lc70f35ek2ng9da96dpgiuo@4ax.com>
Source record: 126353

On Thu, 23 Jan 2003 20:06:09 -0700, No Name <NoName@mycomputer.net>
wrote:

>. May
>I call you Chip jr. no I won't do that it isn't fair to Chip after all
>he at least doesn't slander his country.

He has slandered our friend Yuri, whom I consider to be an American
patriot.

1765. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 12:06:38 UTC
From: Bruce <noabcincowbay@ns.sympatico.ca>
Message-ID: <3E312C38.354DA66E@ns.sympatico.ca>
Source record: 126354

Gid-day:
For simplicity, try the ZEPP first. Later, you might
want to try the Sturba Curtain. But for an all round antenna
with a simple construction... the Zepp is the one.
rgds / VE1NB

1766. Want Ant and Manual, Si-Tex KODEN DF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 12:44:48 UTC
From: courir26@yahoo.com
Message-ID: <a0dd5fc9.0301240444.69a2d050@posting.google.com>
Source record: 126355

Looking for a manual and a loop antenna for a Koden Si-Tex 511A or similar direction finder.

Thanks
Tom N5OFF

1767. Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 13:19:17 UTC
From: Rickie / KC2KQQ <rickiev@hotmail.com>
Message-ID: <b0re8b$smlal$1@ID-89515.news.dfncis.de>
Source record: 126357

The management in my building doesn't allow anyone to place an antenna on the roof, but doesn't not explain why. I was told that there is a way to get a building management to allow an antenna but I dont know how..

any help will be great!

Rickie / KC2KQQ

1768. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 13:20:20 UTC
From: Joe O <jenjoeo@zianet.com>
Message-ID: <3e313e85@news.zianet.com>
Source record: 126356

I suggest that you use ladder line with 6 inch spacing to minimize the
detuning that snow/rain causes on the 1 inch window type of ladder line.
Expect the weight of the feedline to cause the center to sag. If the sag is
too great, try a bottom fed triangular (vertical) loop.

Joe O, KI5FJ

"Norm" <uthrashit@hotmail.con> wrote in message
news:3e30d34a.8235391@news.state.ak.us...
> I live in SE Alaska I have a MFJ Versa Tuner II, plenty of wire and
> ladder line. I also am very fortunate to have 2 trees approximately
> 200' apart and both of the trees are around 125-150' high. Beautiful
> Sitka Spruce! The trees are situated East / West. A wire strung
> between the two would give me a signal into the South Pacific and over
> the Pole into Europe and Africa, assuming the lobes were broadside to
> the antenna.
>
> I would like a SINGLE antenna for multiband use, 80-10 Meters. So far
> I'm considering;
>
> An Extended ZEP 89' per side
> http://www.qrpworld.com/40_meter_zepp_antenna.htm
>
> A Sturba Curtain
> http://www.hamuniverse.com/sturba.html
>
> A Lazy-H
> http://www.cebik.com/lh.html
>
> G5RV - without the matching stub & coax.
> Fed with 450 ohm Ladder line directly to the tuner.
>
> If you were in my situation, what would you put up and why?
>
> I'm open to any suggestions for other antennas as well.....

1769. Re: Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 13:44:06 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E314306.2020005@tampabay.rr.com>
Source record: 126358

more than likely they dont want you up there for legal reasons if you
went up there and fell off you could sue them not to mention they
probably dont want a bunch of holes put into there roof or the look of
a bunch of antennas sticking out the top
so you might as well get use to the fact that you will have to work with
an indoor antenna or you will need to move if you move make sure its in
a house and area that does NOT have any restrictions on antennas

Rickie / KC2KQQ wrote:
> The management in my building doesn't allow anyone to place an antenna on
> the roof, but doesn't not explain why. I was told that there is a way to
> get a building management to allow an antenna but I dont know how..
>
> any help will be great!
>
> Rickie / KC2KQQ
>
>
>

1770. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 13:58:23 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <3EbY9.11404$zF6.880285@bgtnsc04-news.ops.worldnet.att.net>
Source record: 126359

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E305C7D.6060707@ieee.org...

> Now we can superpose the voltages and currents on the left side of the
> ID to obtain the total voltage and current flowing back toward Source A.
> 70.71V at zero deg + 35.355V at zero deg = 106.066V at zero deg.
> 1.414A at 180 deg + 0.707A at 180 deg = 2.121A at 180 deg.
> Total power flowing toward Source A is 106.066V*2.121A = 225W.
> Note that since the phase angles are equal for both voltages and currents
> there exists constructive interference on the left side of the ID.
>
> Superposing voltages and currents on the right side of the ID yields:
> 70.71V at 180 deg + 106.066V at zero deg = 35.355V at zero deg
> 0.471A at 180 deg + 0.707A at zero deg = 0.236A at zero deg.
> Total power flowing toward Source B is 35.355V*0.236A = 8.33W
> Note that since the phase angles are opposite for both voltages and
> currents there exists destructive interference on the right side of
> the ID.
>
> There is 100W of constructive interference on the left side and 100W
> of destructive interference on the right side.
>
> On the left side, we have 100W flowing to the right and 225W flowing
> to the left for a net power flow of 125W toward Source A.
>
> On the right side, we have 8.33W flowing to the right and 133.33W
> flowing to the left for a net power flow of 125W toward Source A.
>
> This energy analysis works like a charm.

[You performed a voltage and current superposition analysis, not an "energy
analysis". You can only determine, examine, or interpret the steady state
powers (energy) *after* the voltage and current superposition analysis is
complete. Decompose all of the forward and rearward waves into their
individual power values and then try to determine (using only these
individual powers) the steady state values of forward and rearward power
(without already knowing some portion of the steady state answer). If you
think you can do that, without considering the individual voltages and
currents, change the phase of source B.]

>We don't need to know the
> source impedances or the source dissipations. All we need to know
> is that constructive interference on one side of the impedance
> discontinuity equals the destructive interference on the other side.

[You didn't really know that until you completed the voltage and current superposition analysis. Although, examining the boundary conditions at the junction would lead you to conclude that these processes must balance. However, only the voltage and current superposition analysis will allow you to correctly determine the steady state values of power. Consider this: You know that the destructive and constructive interference processes balance at the junction. This, in and of itself, provides no insight into what the steady state values of forward and rearward power are unless you already know some portion of the answer. Only the voltage and current superposition analysis can give you the steady state values of voltage, current and power. Knowing that the destructive and constructive interference processes balance cannot be used to determine the total solution, unless you already know some portion of the answer.]

> That's the thrust of my potential QEX article. Please don't dismiss
> it just because it is complicated.
>

Cecil,

I hope things are well with you considering the difficult time you're going through. Our thoughts are with you.

Thank you for the superposition analysis. I don't think anyone on the NG would dismiss it. It is correct but it is not complicated. As Roy said, this is not rocket science.

What you presented is a simple voltage and current superposition analysis. In fact, it is *exactly* the same voltage and current superposition analysis that I use in my QEX articles that you've been criticizing for the last two years. To determine the steady state conditions, you've correctly demonstrated that it is necessary to superimpose the individual voltages and currents, not the individual powers.

As indicated in my QEX articles, the total forward voltage and current are determined from the superposition of the individual forward voltages and currents. The total forward power cannot be determined from the addition of the individual forward powers. The total rearward voltage and current are determined from the superposition of the individual rearward voltages and currents. The total rearward power cannot be determined from the addition of the individual rearward powers. Superposition of voltages and currents works. Superposition of powers does not.

We both agree that the destructive and constructive interference processes balance at the junction. The fact that the destructive and constructive interference processes balance is a direct function of the boundary conditions at the junction. Other examples can be presented where the boundary conditions do not require that these processes balance or even occur at the same time.

Where we would disagree at this point, is if you come back and tell me that the "100 W" of forward traveling power "lost" in the destructive interference process somehow reverses direction and becomes a rearward traveling power in the 50 ohm line, such that it "joins" or "adds" to the

"100 W and 25 W" of power already there to become the total 225 W of rearward traveling power.

Note that at this point that we do not disagree on the superposition analysis.

The question now is whether or not we agree or disagree on the interpretation of the steady state results, the relationship between the steady state conditions and the superposition analysis, or the relationship between the destructive and constructive interference processes.

Considering our previous discussions and the fact that we still probably disagree on this aspect of the discussion, I may end my response here.

Regards,

Steve VE9SRB

1771. Re: Need Capacitor:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 14:23:13 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301240623.32c8b0b2@posting.google.com>
Source record: 126360

jackinariz@webtv.net (jack D) wrote in message
news:<16366-3E307F70-2@storefull-2136.public.lawson.webtv.net>...
> I live in small town Arizona so my options are limited.....I can't even
> find this "rare" cap on the web......Looking for air or vacuum capacitor
> 0...20 pF,variable...Anyone know? Thanks.
>
>
> --

I think I would aproach this problem with a homebrew form,
some thing like the use of a glass tube and aluminum tape
in a plunger format which allows for creative inductive
balancing. This aproach would help to provide HV use
as implied by the vacuum variable comment.Flourescent light
tubes can be a source for tubing if all else fails.
Regards
Art

1772. Re: Hollow Vs. Solid aluminum: Differences

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 14:49:44 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E315288.3BB12A92@cwis.net>
Source record: 126361

Craig wrote:
>
> I'm putting together a list of materials for a 3-el 6m yagi and the
> aluminum factory offers a choice of 9.5mm solid rod, or hollow tube.
>
> Is there any particular advantage (or disadvantage) that one has over
> the other?

**** Tubing doesn't weight as much as a rod of comparable diameter

> Can solid rod be safely bent to make a folded dipole, or will it
> simply snap?

**** Like handling any material, there are ways to do it and ways
not to do it.

> And finally, what's a desirable wall thickness for 9.5mm tubing
> necessary to support the weight of an approximately 3 metre length of
> aluminum forming part of a diploe?

**** I don't have the slightest idea.

> Thanks for all suggestions!
> Craig

Your welcome,
'Doc

1773. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 14:59:23 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3154CB.9B09EFCF@cwis.net>
Source record: 126362

Norm,
Since your 'one' antenna won't necessarily be resonant
any where, I would use as much of the 200 foot span as I
could. Feed the thing with ladder line and a tuner, and
just not worry about it. It'll work just fine.
'Doc

1774. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 15:02:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E31559C.90800@ieee.org>
Source record: 126363

VE9SRB wrote:
> [You performed a voltage and current superposition analysis, not an "energy
> analysis".

There you go again. I have told you about 20 times that I am performing
the energy analysis ***AFTER*** the normal superposition analysis and
that you should do the same.

> You can only determine, examine, or interpret the steady state
> powers (energy) *after* the voltage and current superposition analysis is
> complete.

That's EXACTLY what I have been telling you for a year and a half. You
must perform an energy analysis after your superposition analysis to
keep from violating the conservation of energy principle.

> Decompose all of the forward and rearward waves into their
> individual power values and then try to determine (using only these
> individual powers) the steady state values of forward and rearward power
> (without already knowing some portion of the steady state answer). If you
> think you can do that, without considering the individual voltages and
> currents, change the phase of source B.]

I NEVER said I could do that, Steve. That's just another one of your
numerous straw men. I am performing a conservation of energy analysis
AFTER the superposition analysis, something that you neglected to do.

>>We don't need to know the
>>source impedances or the source dissipations. All we need to know
>>is that constructive interference on one side of the impedance
>>discontinuity equals the destructive interference on the other side.
>
> [You didn't really know that until you completed the voltage and current
> superposition analysis. Although, examining the boundary conditions at the
> junction would lead you to conclude that these processes must balance.
> However, only the voltage and current superposition analysis will allow you
> to correctly determine the steady state values of power.

Yes, yes, yes, you are beginning to get it.

> Consider this:
> You know that the destructive and constructive interference processes
> balance at the junction.

I know that, Steve, but it's clear from your QEX article that you did
not know that when you wrote the article.

> This, in and of itself, provides no insight into
> what the steady state values of forward and rearward power are unless you
> already know some portion of the answer. Only the voltage and current
> superposition analysis can give you the steady state values of voltage,
> current and power. Knowing that the destructive and constructive
> interference processes balance cannot be used to determine the total
> solution, unless you already know some portion of the answer.]

Why do you keep stating the obvious? The energy analysis is done after
the superposition process to see where the energy came from and goes.
Your QEX article indicates that you were completely ignorant of where
the energy comes from and goes.

> Thank you for the superposition analysis. I don't think anyone on the NG
> would dismiss it. It is correct but it is not complicated.

Steve, you know and I know that if my superposition/energy analysis is
correct, then about a dozen of the statements in your QEX article are
false.

> What you presented is a simple voltage and current superposition analysis.

Not JUST a superposition analysis, Steve. I presented the answer to the
question as to what happens to the energy in your canceled "rearward-
traveling waves 1 and 2" at a match point. That energy is re-reflected
through wave cancellation. Your statement that it is not re-reflected
is obviously false.

> In fact, it is *exactly* the same voltage and current superposition analysis
> that I use in my QEX articles that you've been criticizing for the last two
> years.

I have NEVER criticized your superposition analysis. All I have ever done
is criticize your mistreatment of energy. Anyone is free to access Google
history to verify that fact. In May of 2001, I was telling you that the
constructive/destructive interference energy must balance at an isolated
impedance discontinuity. You dismissed my assertion. Now you agree with
it. In the meantime, you published falsehoods in your QEX article.

> To determine the steady state conditions, you've correctly
> demonstrated that it is necessary to superimpose the individual voltages and
> currents, not the individual powers.

That's what I have been telling you for a year and a half, Steve. The
energy analysis happens AFTER the superposition analysis. I've done it
and you never have.

> As indicated in my QEX articles, the total forward voltage and current are
> determined from the superposition of the individual forward voltages and
> currents. The total forward power cannot be determined from the addition of
> the individual forward powers.

I certainly have NEVER said otherwise. You are the one who super-superposes
powers to get 133.33 joules/sec from two waves of 75 joules/sec anc 8.33
joules/sec. Have your forgotten that silly energy equation of yours?

> The total rearward voltage and current are
> determined from the superposition of the individual rearward voltages and
> currents. The total rearward power cannot be determined from the addition
> of the individual rearward powers. Superposition of voltages and currents
> works. Superposition of powers does not.

I know that but you obviously do not, Steve. If you knew superposing of
powers didn't work, you would never have said that 75W+8.33W = 133.33W

> We both agree that the destructive and constructive interference processes
> balance at the junction.

Give me a break, Steve. Here's what you said a few days ago:

> The total forward power increases as a direct result of the vector
> superposition of forward voltage and current. This DOES NOT require a
> corresponding destructive interference process (reduction of power
> elsewhere) to balance the law of conservation of power ...

You have completely changed your mind about interference but you
have not admitted that you were wrong or that your QEX article
contains false statements.

> The fact that the destructive and constructive
> interference processes balance is a direct function of the boundary
> conditions at the junction. Other examples can be presented where the
> boundary conditions do not require that these processes balance or even
> occur at the same time.

That's where you are absolutely wrong, Steve. This discussion is about
an isolated impedance discontinuity in the middle of a transmission line.
The sources are not close and therefore cannot supply additional energy.
Please give an example of an isolated impedance discontinuity point far
removed from any source that doesn't satisfy the destructive=constructive
interference energy principle.

> Where we would disagree at this point, is if you come back and tell me that
> the "100 W" of forward traveling power "lost" in the destructive
> interference process somehow reverses direction and becomes a rearward
> traveling power in the 50 ohm line, such that it "joins" or "adds" to the
> "100 W and 25 W" of power already there to become the total 225 W of
> rearward traveling power.

Why would I say that? It's just another one of your straw men. You incessantly
quote the 99 times that you have been right and completely ignore the one time
that you have been wrong.

> Note that at this point that we do not disagree on the superposition
> analysis.

We never have. What I said was that both your voltage analysis and
your energy analysis could not possibly be right at the same time
as one contradicts the other. Perhaps you misunderstood that statement
to mean I was arguing with your superposition treatment. I was not.
I was arguing with your mistreatment of energy.

> The question now is whether or not we agree or disagree on the
> interpretation of the steady state results, the relationship between the
> steady state conditions and the superposition analysis, or the relationship
> between the destructive and constructive interference processes.
>
> Considering our previous discussions and the fact that we still probably
> disagree on this aspect of the discussion, I may end my response here.

Of course, you would have to end the discussion here. If you proceed with
any further admissions of agreement with me, you will be forced to admit
that you made a dozen false statements in your QEX article.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1775. Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 15:19:53 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E315999.3DB4C6C2@netscape.net>
Source record: 126364
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins 3 and 4 to get some line level audio from the rig. I could not believe my eyes when I got the 13 pin DIN - is there some trick to soldering to those pins? Or am I missing something here? Thanks - Scott.

1776. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 15:52:30 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E31613E.B2D2B75B@cwis.net>
Source record: 126365
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

Scott,
It'll certainly make you 'bone up' on your soldering!
If you only intend to use certain pins, one option is to
cut off the pins you won't be using, near the pins you
will be using. Don't try to use 14ga. wire! (LOL)
Have fun...
'Doc

1777. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 15:59:52 UTC
From: ts850_guy <ve3tmt@rac.ca>
Message-ID: <LpdY9.12490$5K5.955106@news20.bellglobal.com>
Source record: 126366
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

"Scott" <scott2rp789@netscape.net> wrote in message
news:3E315999.3DB4C6C2@netscape.net...
> Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
> 3 and 4 to get some line level audio from the rig. I could not believe
> my eyes when I got the 13 pin DIN - is there some trick to soldering to
> those pins? Or am I missing something here? Thanks - Scott.

Scott,

I use a pair of Vise-Grips and gently hold the connector in them when
soldering. Grab the thickest pair of glasses you can find (2.50x) and go to
town. Take your time and it will be smooth sailing.

1778. Re: VHF/UHF J Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 16:04:53 UTC
From: Hawkeye <aa1339@nospamyahoo.com>
Message-ID: <5uo23vk5mpvviq4dhgptjrc2m3nrff0q62@4ax.com>
Source record: 126367

>I'm looking to see if any one has plans for the construction of a VHF/UHF J
>pole?

The Feb. QST has plans for a simple VHF-UHF J-pole built from
300 ohm twinlead and a coax stub. You could use that as-is or enclose
it in PVC pipe for outdoor use.

1779. 2m Mag Mount

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 16:06:59 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <DwdY9.667$hP2.638@nwrddc04.gnilink.net>
Source record: 126368

Hi all,

I've just inherited a Diamond mag mount for use with VHF/UHF antennas not exceeding 50 inches. It appears to have a SO-239 connector as the point of attachment for the actual antenna element, rather than the usual 3/8 x 24 threaded receptacle. Can anybody recomend a good mate  for this mount? Thanks. :-)

--
73 de Bert
WA2SI

1780. Stealth base antenna for Yaesu FT100

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 16:58:38 UTC
From: fstop@ispchannel.com
Message-ID: <174453a8.0301240858.7902e6a8@posting.google.com>
Source record: 126269

I have a FT100 and live in a deed restricted area. No antennas allowed. I have a small JPole out back for 144/440. Looking for antenna suggestions for the remaining bands. The antenna needs to be fairly short, and preferrably mounted at ground level. I have other homes surrounding me, and some landscaping. I can also do something in the attic. Attic is 8ft high, 60ft long and stretches North/South. I'm in South Florida.
Your suggestions will be very much appreciated.

Thanks

1781. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 17:00:12 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <wieY9.11618$zF6.894089@bgtnsc04-news.ops.worldnet.att.net>
Source record: 126270

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E31559C.90800@ieee.org...

> > Consider this:
> > You know that the destructive and constructive interference processes
> > balance at the junction.
>
> I know that, Steve, but it's clear from your QEX article that you did
> not know that when you wrote the article.
>

That's not true. It is just not as significant an issue for me as it is for you. The QEX articles were focused on determining the forward and rearward voltage, current and power from the superposition of the forward and rearward waves. Superposition of voltage and current provides all of the information we need to understand what physically happens in the system. It is you who needs to take it one step further with your "energy analysis".

> > This, in and of itself, provides no insight into
> > what the steady state values of forward and rearward power are unless
you
> > already know some portion of the answer. Only the voltage and current
> > superposition analysis can give you the steady state values of voltage,
> > current and power. Knowing that the destructive and constructive
> > interference processes balance cannot be used to determine the total
> > solution, unless you already know some portion of the answer.]
>
> Why do you keep stating the obvious? The energy analysis is done after
> the superposition process to see where the energy came from and goes.
> Your QEX article indicates that you were completely ignorant of where
> the energy comes from and goes.
>
>

Now this is the fundamental point upon which we disagree.

There is no need to do your "energy analysis".

The superposition of voltage and current explain everything about energy in the system, otherwise it would not give the correct steady state answer.

The problem is that you don't seem to fully understand superposition theory. You understand that to determine the total forward voltage and current you add the individual forward voltages and currents. This gives the correct answer for total forward voltage and current from which the total forward power can correctly be determined. Superposition gives the correct answer.

There in no further "energy interpretation" needed.

The problem arises when you look at the individual powers and see that they don't "add" up to the correct value of total forward power. They're NOT supposed to - superposition of power does not work. The relationship between voltage and power is not linear. At this point, you think that the law of conservation of energy or power is somehow violated because the individual powers don't add up correctly in the superposition process. This is an incorrect interpretation of the law of conservation of power.

So now, you have to somehow find additional power to make your interpretation of the law of conservation of power work.

In my opinion, your interpretation of the problem is fundamentally incorrect.

So, we will continue to disagree.

>
> I know that but you obviously do not, Steve. If you knew superposing of
> powers didn't work, you would never have said that 75W+8.33W = 133.33W
>

This is really getting old. Give it a rest.

All I said is that the voltage and current associated with a wave of 75 W (determined when the wave exists individually) adds in phase with the voltage and current associated with a wave of 8.33 W (determined when the wave exists individually) resulting in a wave having a total voltage and current such that the resulting total power is 133.33 W. This statement is a correct interpretation of superposition theory. Add the voltages and currents.

> > We both agree that the destructive and constructive interference
processes
> > balance at the junction.
>
> Give me a break, Steve. Here's what you said a few days ago:
>
> > The total forward power increases as a direct result of the vector
> > superposition of forward voltage and current. This DOES NOT require a
> > corresponding destructive interference process (reduction of power
> > elsewhere) to balance the law of conservation of power ...
>
> You have completely changed your mind about interference but you
> have not admitted that you were wrong or that your QEX article
> contains false statements.
>

Wait a minute here on this. You're taking my statements entirely out of context again.

Those statements were made in direct reference to a specific example where there is not a destructive interference process occurring in the rearward direction when there is a constructive interference process occuring in the forward direction.

You don't like any of those examples, so you always go back to the junction of transmission line examples where you think your "energy math" works. You just did the same thing with Roy and the QEX brainteaser. He gave a perfect analysis of the brainteaser problem but you were uncomfortable with it so you had to change it by adding a transmission line junction to the problem and then ignore what happens everywhere else.

> > The fact that the destructive and constructive
> > interference processes balance is a direct function of the boundary
> > conditions at the junction. Other examples can be presented where the
> > boundary conditions do not require that these processes balance or even
> > occur at the same time.
>
> That's where you are absolutely wrong, Steve. This discussion is about
> an isolated impedance discontinuity in the middle of a transmission line.

Because that's one of the few examples where your "energy math" seems to support your assumptions. Anytime someone wants to talk about a different example, you ignore and disregard it and go right back to the transmission line junction problem.

>
> We never have. What I said was that both your voltage analysis and
> your energy analysis could not possibly be right at the same time
> as one contradicts the other.

How? The energy's always work out correctly in my superposition examples, so where's the problem? All energy is accounted for and the law of conservation of energy is satisfied in that the total power dissipation in the system equals the total power delivered by the source(s).

>
> Of course, you would have to end the discussion here. If you proceed with
> any further admissions of agreement with me, you will be forced to admit
> that you made a dozen false statements in your QEX article.
> --

No Cecil, there are no false statements in the QEX articles that I am aware of. You've simply misunderstood them or misinterpreted them.

I won't continue the discussion because its absolutely pointless.

Steve VE9SRB

1782. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 17:42:07 UTC
From: davearea51@aol.com
Message-ID: <20030124124207.09836.00000168@mb-cd.aol.com>
Source record: 126271

The 8566A/B is, bar NONE, the best SA ever made and marketed!

That having been stated: The 141T et. al. have another gotcha. If the BWO, Backwave Oscillator, should ever cease functioning AND you can find a replacement, the entire instrument must be realigned professionally for big $$$! Agilent no longer does this so you are at the mercy of after-market labs. In addition, the variable persistance screen is only too easy to burn.

Another "modern" SA to stay clear of is the HP 8590. The LO is NOT phase locked and drifts BADLY even after warmup and cal. In addition, the amplitude accuracy is not stable, even after warmup and complete cal. Of course, these are the reasons the 8590's are no-bid or low-bid on ebay. They're junk. I had one that moved between groups. No one wanted to use it for these reasons. It say on the shelf and gathered dust.

Once you have used the 8566B or the 8568B, the Tektronix SA, either stand-alone or plug-in, are also out of the running. They have always been clumsy to operate and are aimed more at the TV cable service industry than at bench testing. Also, virtually ALL of the functions commonly used in design/test are burried three layers deep and run with a snail-paced microprocessor = very frustrating to use.

Personally, I'd go for the HP 8558 (to 1.5 GHz) or the 8559A (to 21 GHz). The latter is not preselected above 3.6 GHz, but is a true analog SA and VERY capable for the money. It has a relatively quiet LO and a better noise figure than those using the tuned preselector filter. I recently got the 8559A and am tickled pink with it (10 MHz to 21 GHz). However, if anyone has the 853A display mainframe, PLEASE let me know its condition and what you want for it.

Now to find a VECTOR network analyzer to 6 GHz for the price of the 8559A !?

Dave - W0LEV

1783. Fold-over Base, 18HT Hygain Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 17:44:51 UTC
From: Doug <doug@ycsi.net>
Message-ID: <b0ru2jjlm0@63.90.193.143>
Source record: 126272

I'm looking for the fold-over base plate for the Hygain
18HT Vertical. Got the complete antenna, just no base
piece. Could make one I guess, but would like to have
the original if it's worth using here in the Windy Country.

Thanks

Doug, K7YD
Livingston, MT

1784. Re: How to design Wilkinson divider-combiner

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 17:51:04 UTC
From: davearea51@aol.com
Message-ID: <20030124125104.09836.00000169@mb-cd.aol.com>
Source record: 126273

I used a Wilkinson power divider to split the LO in the 1296 MHz transverter published in the 1985 Handbook for the Radio Amateur (ARRL Handbook). It's basically two 1/4-wavelength lines of 72-ohm Zo with a 100-ohm NON-inductive resistor at the split end to equalize unbalance between the split ports. At lower frequencies, the 1/4-wavelength lines can be the lumped equivalent L-network of similar Zo at the frequency of interest. Remember, Zo = (L/C)^1/2. This technique is used in many solid state amps in the 50 to 500 MHz range. I've also had excellent results up to 300 MHz using toroidal bi- and tri-filar wound splitters.

Good luck:

Dave - W0LEV

1785. Re: Need Capacitor:(Thanks)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 18:25:05 UTC
From: jackinariz@webtv.net
Message-ID: <16362-3E318501-471@storefull-2136.public.lawson.webtv.net>
Source record: 126275

I want to thank you all for your helpful advice..This is for a
"homebrew" project.....A VHF Magnetic Loop..That can be seen at....
http://users.skynet.be/on1dht/homebrew.htm
Thanks All.....Jack D.

1786. 160m Hamstick, PHF-160

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 18:42:31 UTC
From: n1kk@netzero.net
Message-ID: <d7adbb57.0301241042.ba19233@posting.google.com>
Source record: 126274

I read a few older posted articles stating
owners where happy.

I was thinking about mounting it in place of
my top whip on my 80-10m screwdriver antenna and
try some 160 meter mobile. By adjusting
the lower coil I should be able to
tune an area of the 160m band.

Has anyone tried this?

Are all the 160m Hamstick type antennas
the same?

thanks,

Ken
N1KK

1787. Re: Hollow Vs. Solid aluminum: Differences

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 19:32:14 UTC
From: richardharrison@webtv.net
Message-ID: <9539-3E3194BE-386@storefull-2317.public.lawson.webtv.net>
Source record: 126276

Craig wrote:
"I`m putting together a list of materials for a 3-el 6m yagi and the aluminum factory offers a choice of 9.5 mm solid rod, or hollow tube."

Solid tube is no more conductive at 6m and very little stiffer than a hollow tube. It weighs more. TV antennas are a clue as to what you can get away with on the frequencies above 50 MHz.

The ARRL Antenna Book, 19th edition, says on page 20-11:
"Antennas for 50MHz need not have elements larger than 1/2-inch diameter, although up to 1 inch is used occasionally". At 2.54 cm per inch, that`s 1.27 cm or 12.7 mm diameter tube. You can get away with even less for a 1.5-mtr length of aluminum tubing that withstands almost any stress it`s likely to encounter as an antenna element.

1/2-inch diameter tubes are available in 5 thicknesses in the U.S. Strength varies with alloy and wall thickness. For 6m-band antennas, thin-wall tubing should be adequate.

For a boom, the ARRL Antenna Book says:
"Tubing of 1.25-inch diameter can easily support three element 28-MHz arrays---."
You can get away with slightly less at 50 MHz.

Best regards, Richard Harrison, KB5WZI

1788. Re: Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 19:46:55 UTC
From: dplatt@radagast.org
Message-ID: <v3361f9dla3fd8@corp.supernews.com>
Source record: 126277

>The management in my building doesn't allow anyone to place an antenna on
>the roof, but doesn't not explain why. I was told that there is a way to
>get a building management to allow an antenna but I dont know how..
>
>any help will be great!

Unless you're very fortunate, the roof area is probably not part of your "exclusive use" area under the terms of your rental agreement or lease. All of the Federal "you can install an antenna" rules I know of (e.g. the OTARD rules, and PRB-1) apply only to areas over which you, the tenant, have exclusive use - they don't apply to shared areas.

So, it's likely to be that you can only succeed by:

[1] Putting the antenna in an exclusive-use area (e.g. on a balcony, or indoors), or

[2] Using your powers of persuasion to negotiate with the landlord (possibly offering additional payment for use of the roof), paying for an electrician to design / perform / check the installation to avoid any possible electrical-code violations or safety hazards, etc.).

If you _do_ have exclusive-use rights to a portion of the roof, and a pathway or conduit which allow a coax to be run, then you might be able to take advantage of the OTARD rules. These say that you have the right to install a TV antenna (no more than 12 feet high) or a satellite dish (no more than one meter), and that zoning rules or rental agreements to the contrary are unenforceable. You might be able to put up some sort of dual-use antenna (e.g. Force 12 makes a multi-band vertical HF dipole which falls within the 12-foot limit, and which actually does operate as an over-the-air TV antenna).

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

1789. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 19:49:55 UTC
From: dplatt@radagast.org
Message-ID: <v33673658q0p37@corp.supernews.com>
Source record: 126278
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

>Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
>3 and 4 to get some line level audio from the rig. I could not believe
>my eyes when I got the 13 pin DIN - is there some trick to soldering to
>those pins? Or am I missing something here? Thanks - Scott.

Well, when I wired up a RASCAL to my Kenwood, I just took a small pair
of diagonal cutters / wire nippers, and carefully trimmed back all of
the pins I didn't need until they were flush with the plastic
headshell. [Look twice or thrice, cut once!]

Aside from that, it helps to have a soldering pen with a small tip, a
steady hand, small-gauge solder, and one of those magnet-and-alligator-
clip-and-articulated-arms "third hand" holders to keep the plug in a
convenient, stable position during soldering.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1790. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 20:06:59 UTC
From: Skipp can be found through sonic <notrealemail@yahoo.com>
Message-ID: <b0s6d3isj3@woodrow.ucdavis.edu>
Source record: 126279
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I too used International for many years, but they've become so expensive
that I sought out an alternative. I'm also a skeptic and had to verify
what I found would be a real fix.
A friend uses Bomar and gave me their number, I called and paid $10 per
crystal if I re-rocked the element myself. So I've done just that since
receiving my first order in.

I've now re-crystaled over 30 pairs of MSR channel elements on both UHF
and VHF using the Bomar units... very cost effective and so far, not one
bad rock. I use the recrystaled elements in my commercial (trunking and
conventional) dual mode and amateur repeaters.

I've had great service with International and only one receive element
(which they did) go just out of spec. But their prices have gotten way out
of line.

So consider Bomar as a real option, I've placed very large orders with
them in the last two years and everything received has been spec, on
time and cost effective.

I can also field MSR-2000 questions if you have any... I have over 50 in
service in many modes (including trunking) and have about worked out every
issue you could think up.

I have a conversion to an external controller (ham) work up on the
http://sonic.ucdavis.edu Amateur Radio page. You can Email me from any
of the web pages if you have questions. I've also done tone panel
connections and repairs of which I'll provide help as practical.

cheers
skipp
http://sonic.ucdavis.edu

: In rec.radio.amateur.homebrew FM <radiovintage@hotmail.com> wrote:
: Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
: purchased crystals in many years where is the best place to buy them ?? We
: will be using the repeater on 146.01/61.Also is there a site with the specs
: for the channel elements ?
: Rcvr Channel Element : KXN 1086A
: Xmtr Channel Element : KXN 1088A
: THANKS.

1791. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 20:48:05 UTC
From: richardharrison@webtv.net
Message-ID: <3028-3E31A685-481@storefull-2312.public.lawson.webtv.net>
Source record: 126281

Steve, VE9SRB wrote:
"The problem arises when you look at the individual powers and see they don`t "add" up to the correct value of total forward power. They`re NOT supposed to - superposition of power does not work."

In the instruction book for the Bird Model 43 RF Directional "Thruline" Wattmeter, copyright 1984, at the top of page 7 is written:
Power delivered to and dissipated in a load is given by:
WL = Watts into Loads = Wf - Wr."

The above is simple arithmetic in transmission lines which enforce a resistive relationship between volts and amps, the kind of 50-ohm coax we use. There are thousands of Bird wattmeters which have proved W = Wf - Wr
on millions of occasions.

Best regards, Richard Harrison, KB5WZI

1792. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 20:54:31 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E31A806.5000403@ieee.org>
Source record: 126280

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> That's not true. It is just not as significant an issue for me as it is for
> you. The QEX articles were focused on determining the forward and rearward
> voltage, current and power from the superposition of the forward and
> rearward waves. Superposition of voltage and current provides all of the
> information we need to understand what physically happens in the system. It
> is you who needs to take it one step further with your "energy analysis".

It is you who should have taken it one step further before asserting the
following:

"The misconception is that a total re-reflection of the reflected power
occurs at a matching network or match point as a result of an impedance
match being established there."

An energy analysis around an isolated impedance discontinuity at a
match point in a transmission line PROVES the only misconception to be
yours. The above is only one of about a dozen false statements you made
in your QEX article because you failed to perform and understand any sort
of energy analysis. The rest of your falsehoods are covered on my web page.

> There is no need to do your "energy analysis".

The need to do the energy analysis is to keep you from making false assertions
in your QEX article. In your QEX article, you violate the conservation of
energy principle. Many other engineers have noticed the same violation as I.

> The superposition of voltage and current explain everything about energy in
> the system, otherwise it would not give the correct steady state answer.

Apparently, the superposition of voltage and current does NOT explain where
the re-reflections are occurring because you totally missed it and made many
false assertions as a result. In a matched system, all the reflected power
is re-reflected. There is simply no other possibility.

> The problem is that you don't seem to fully understand superposition theory.
> You understand that to determine the total forward voltage and current you
> add the individual forward voltages and currents. This gives the correct
> answer for total forward voltage and current from which the total forward
> power can correctly be determined. Superposition gives the correct answer.
> There in no further "energy interpretation" needed.

Your above statement is simply false, Steve. Apparently, superposition theory
did not yield the truth about re-reflections for you. You should have done
the energy analysis.

> The problem arises when you look at the individual powers and see that they
> don't "add" up to the correct value of total forward power. They're NOT
> supposed to - superposition of power does not work.

But your super-superposition of power, i.e. your 75W+8.33W = 133.33W "equation" certainly doesn't work. That's my whole complaint about your lack of an energy analysis. You assumed that the energy in "rearward-traveling waves 1 and 2" is canceled, i.e. destroyed. It can't be destroyed and it doesn't reach the source, so where does it go? It's a simple question, Steve, which you have refused to answer for almost two years. How much longer until you answer?

> The relationship
> between voltage and power is not linear. At this point, you think that the
> law of conservation of energy or power is somehow violated because the
> individual powers don't add up correctly in the superposition process. This
> is an incorrect interpretation of the law of conservation of power.

I wish you would argue from a position of good will, Steve. You know I have made absolutely no such argument. This is about the 20th time you have set up that tired old straw man so you could knock it down. I'm wise to your diversions. I don't see how anyone could not be wise to your diversions by now.

> So now, you have to somehow find additional power to make your
> interpretation of the law of conservation of power work.

It is you who has omitted the interference power from your energy equations, Steve. 75W + 8.33W does not equal 133.33W. It takes another 50W of constructive interference to balance the energy equation. Not balancing the energy equation is a violation of the conservation of energy principle which you don't seem to mind at all.

> In my opinion, your interpretation of the problem is fundamentally
> incorrect.

Of course, you cannot say anything else without admitting that you were wrong and you will never do that.

> So, we will continue to disagree.

Our disagreement is over the conservation of energy principle. I say it has to be honored and you willy-nilly violate it anytime it satisfies your fancy.

> This is really getting old. Give it a rest.

When you admit that there is not enough energy in two, and only two, waves of 75 joules/sec and 8.33 joules/sec to create a wave containing 133.33 joules/sec. 75 joules plus 8.33 joules simply does NOT equal 133.33 joules.

> All I said is that the voltage and current associated with a wave of 75 W
> (determined when the wave exists individually) adds in phase with the
> voltage and current associated with a wave of 8.33 W (determined when the
> wave exists individually) resulting in a wave having a total voltage and
> current such that the resulting total power is 133.33 W. This statement is

> a correct interpretation of superposition theory. Add the voltages and
> currents.

But that is simply not true, Steve. There is an injection of constructive interference energy or else those two waves would NEVER superpose to the proper values. You are continuing to violate the conservation of energy principle. There is more energy available than exists in those two, and only two, waves. Without the constructive interference, that 133.33W wave would NEVER materialize.

> Wait a minute here on this. You're taking my statements entirely out of
> context again.

BS, Steve.

> Because that's one of the few examples where your "energy math" seems to
> support your assumptions. Anytime someone wants to talk about a different
> example, you ignore and disregard it and go right back to the transmission
> line junction problem.

Here is the original example, Steve, you know the one you have been arguing for a year and a half that destructive/constructive interference doesn't exist.

100W----50 ohm feedline---x----1/2WL 150 ohm feedline----50 ohm load

Please prove that you can get that 133.33W forward wave without the help of constructive interference. I'll bet you $100 that you cannot. Wouldn't you like to pick up a cool $100?

> The energy's always work out correctly in my superposition examples,
> so where's the problem?

They obviously don't, Steve. You say in a matched system all the reflected power is NOT re-reflected. I have proved that it is. Your energy's didn't always work out correctly in all examples so your above statement is false.

> No Cecil, there are no false statements in the QEX articles that I am aware
> of. You've simply misunderstood them or misinterpreted them.

More BS. I have proven that all the reflected power at a matched system impedance discontinuity is re-reflected. You say it is not all re-reflected but after a year and a half, you have yet to tell us where that energy goes. Here's the question again: In a matched system, the reflected power:
A. Flows into the source
B. Stands still
C. Disappears
D. Is re-reflected back toward the load

Why have you refused to answer that simple question for almost two years? When are you going to answer it?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1793. Re: Quad?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 21:21:50 UTC
From: Gordon Pritchard <gordonp@sfu.ca>
Message-ID: <m3of66ckgh.fsf@localhost.localdomain>
Source record: 126282

>>>>> "Guenther" == G&R <spam@limbo.hell> writes:

Guenther> You also have the option otpion of going to a true
Guenther> mini quad. www.degendesigns.com

Guenther> Mind you this antenna is designed as a tri-bander

Not singling out this antenna, but it's a handy example of
something that bugs me...

WARC-79 bands were added, surprisingly, in 1979! I do have
some older Heath gear that doesn't cover these bands, but for the
life of me, I would never spend money for gear (transceivers or
antennas) that won't support a 23-year-old standard. Sheesh -
that's nearly a quarter of a century!

Of course, if there are enough others that *do* spend the
$$$ on this sort of gear, then I'm happy that the free market is
working. I just won't be among the buyers...

Gord

--
Gordon Pritchard, P.Eng. | Institute of Electrical and
Research Labs Manager | Electronics Engineers
Simon Fraser University, Surrey | Quarter Century Wireless Ass'n
gordonp@sfu.ca | Telephone Pioneers of America
phone: 604.586.6186

1794. Re: 160m Hamstick, PHF-160

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 22:01:04 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E31B7A0.DC9B55F@cwis.net>
Source record: 126283

Ken,
I think you would be better off using an 80 meter
Hamstick. You will also want to make sure the coil
of the antenna goes in the same direction as the coil
in the 'screwdriver', otherwise they cancel...
'Doc

1795. FA: ICOM AG-35 UHF Pre-Amp

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 22:04:07 UTC
From: Headhamster <headhamster@earthlink.net>
Message-ID: <rLiY9.1053$d66.119728@newsread1.prod.itd.earthlink.net>
Source record: 126284
Cross-posted to: alt.ham-radio.marketplace,alt.satellite,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.swap

I have the Icom AG-35 UHF Pre-Amp for auction on ebay. This is a mast mounted pre-amp which is powered by DC on the coax. It works with most all of the Icom UHF multi-mode and satellite radios.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3002140831
Please take a look! Auction ends 01-26-03 1639 PST

1796. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 22:17:37 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <X7GdnWt9T8KBV6yjXTWcow@ctc.net>
Source record: 126290
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

> Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
> 3 and 4 to get some line level audio from the rig. I could not believe
> my eyes when I got the 13 pin DIN - is there some trick to soldering to
> those pins? Or am I missing something here? Thanks - Scott.
>

Strip the insulation of the wire to a length slightly longer than needed. Tin the wire. Cut the wire to the correct length. Go to the plug and put it in a holder of some kind (maybe a small vise) with the pins up. With some very fine solder try to just fill the little cup with solder. Let it cool. Then heat the pin back up. When the solder melts insert the wire in the connector, remove the iron and let cool. There will be enough wire in the cup and on the wire to make a good connection if done properly. That way you only have two things in the hands at one time, wire or solder while trying to deal with the plug.

1797. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 22:24:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E31BD0B.3010205@ieee.org>
Source record: 126285

Richard Harrison wrote:
> Steve, VE9SRB wrote:
> "The problem arises when you look at the individual powers and see they
> don`t "add" up to the correct value of total forward power. They`re NOT
> supposed to - superposition of power does not work."
>
> In the instruction book for the Bird Model 43 RF Directional "Thruline"
> Wattmeter, copyright 1984, at the top of page 7 is written:
> Power delivered to and dissipated in a load is given by:
> WL = Watts into Loads = Wf - Wr."
>
> The above is simple arithmetic in transmission lines which enforce a
> resistive relationship between volts and amps, the kind of 50-ohm coax
> we use. There are thousands of Bird wattmeters which have proved W = Wf
> - Wr
> on millions of occasions.

Simple scalar addition of energy does work. One simply cannot add
75 joules/sec and 8.33 joules/sec and obtain 133.33 joules/sec. If one
could do that, one could run the power companies out of business and
give away free energy to the third world nations. When Steve "combines"
75 joules/sec and 8.33 joules/sec to obtain 133.33 joules/sec, that is
not just superposing - that is *super-superposing*.

In Steve's energy "equation", he lacks 50 joules/sec. There is 50 joules/sec
in the canceled "rearward-traveling waves 1 and 2". Steve seems to think
that is just a coincidence and has absolutely refused to answer the
question: What happens to the 50 joules/sec in the canceled "rearward-
traveling waves 1 and 2". He cannot stand to admit that energy is re-
reflected as constructive interference back toward the load.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1798. Re: Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 22:35:28 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E31C000.88CED562@att.net>
Source record: 126286

Dave and Rickie,

I believe that OTARD rules specifically exclude amateur radio. I took a quick look at the FCC website and found the following in the OTARD FAQ.

Covered services include TV (satellite, local broadcast, wireless cable) and "fixed wireless". [Fixed wireless] does not include, among other things, AM/FM radio, amateur ("HAM") radio, Citizens Band ("CB") radio, and Digital Audio Radio Services ("DARS") signals. [This is an exact quote.]

Rickie did not say what type of antenna he wanted to install, but if it is an amateur radio antenna it is not covered by OTARD. The clauses about "exclusive use areas" simply do not apply.

On the other hand, PRB-1 puts limits only on municipal zoning restrictions. It does not even apply to deed restrictions. It provides no support for renters in disagreement with property owners.

(Lots of people are trying to get PRB-1 to look more like OTARD, but it has not happened yet.)

Bottom line: If Ricky wants to install an amateur radio antenna it may be necessary to use an inside antenna, convince the landlord, go stealth in some fashion, or move.

73,
Gene
W4SZ

Dave Platt wrote:
>
> >The management in my building doesn't allow anyone to place an antenna on
> >the roof, but doesn't not explain why. I was told that there is a way to
> >get a building management to allow an antenna but I dont know how..
> >
> >any help will be great!
>
> Unless you're very fortunate, the roof area is probably not part of
> your "exclusive use" area under the terms of your rental agreement or
> lease. All of the Federal "you can install an antenna" rules I know
> of (e.g. the OTARD rules, and PRB-1) apply only to areas over which
> you, the tenant, have exclusive use - they don't apply to shared areas.
>
> So, it's likely to be that you can only succeed by:
>
> [1] Putting the antenna in an exclusive-use area (e.g. on a balcony,

> or indoors), or
>
> [2] Using your powers of persuasion to negotiate with the landlord
> (possibly offering additional payment for use of the roof),
> paying for an electrician to design / perform / check the
> installation to avoid any possible electrical-code violations or
> safety hazards, etc.).
>
> If you _do_ have exclusive-use rights to a portion of the roof, and a
> pathway or conduit which allow a coax to be run, then you might be
> able to take advantage of the OTARD rules. These say that you have
> the right to install a TV antenna (no more than 12 feet high) or a
> satellite dish (no more than one meter), and that zoning rules or
> rental agreements to the contrary are unenforceable. You might be
> able to put up some sort of dual-use antenna (e.g. Force 12 makes a
> multi-band vertical HF dipole which falls within the 12-foot limit,
> and which actually does operate as an over-the-air TV antenna).
>
> --

1799. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 23:03:35 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <bDjY9.1574$am4.115@nwrddc01.gnilink.net>
Source record: 126287

No Question in my opinion.. it should be 2 wavelength 80 meter loop fed
with ladder line. It should be fed between the two trees you have, then the
other skyhooks should be whatever is available. You may thank me in
advance!

'73 KI4Z (AKA Loopy)

"Norm" <uthrashit@hotmail.con> wrote in message
news:3e30d34a.8235391@news.state.ak.us...
> I live in SE Alaska I have a MFJ Versa Tuner II, plenty of wire and
> ladder line. I also am very fortunate to have 2 trees approximately
> 200' apart and both of the trees are around 125-150' high. Beautiful
> Sitka Spruce! The trees are situated East / West. A wire strung
> between the two would give me a signal into the South Pacific and over
> the Pole into Europe and Africa, assuming the lobes were broadside to
> the antenna.
>
> I would like a SINGLE antenna for multiband use, 80-10 Meters. So far
> I'm considering;
>
> An Extended ZEP 89' per side
> http://www.qrpworld.com/40_meter_zepp_antenna.htm
>
> A Sturba Curtain
> http://www.hamuniverse.com/sturba.html
>
> A Lazy-H
> http://www.cebik.com/lh.html
>
> G5RV - without the matching stub & coax.
> Fed with 450 ohm Ladder line directly to the tuner.
>
> If you were in my situation, what would you put up and why?
>
> I'm open to any suggestions for other antennas as well.....

1800. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 23:03:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E31C65D.8000905@ieee.org>
Source record: 126289

VE9SRB wrote:
> The problem arises when you look at the individual powers and see that they
> don't "add" up to the correct value of total forward power.

You are partially correct. The problem arises when you look at the individual energy components and they don't add up to the correct value of energy in the system. If you simply paid more than lip service to the conservation of energy principle, you wouldn't be in this bind. Your failure to admit your false statements leaves me no choice but to keep pounding until the truth comes out. Wouldn't it just be easier to admit you made a mistake instead of being hounded by the truth?

> Those statements were made in direct reference to a specific example where
> there is not a destructive interference process occurring in the rearward
> direction when there is a constructive interference process occuring in the
> forward direction.

Translation: I have chosen to hide half of the interference inside a source black box. You seem to love to hide the truth inside your many black boxes and switch models from the reflection model to the circuit model at the black box terminals. Every sophomore EE student knows not to switch models in mid-stream yet you do it willy-nilly hoping no one will notice.

> You don't like any of those examples, so you always go back to the junction
> of transmission line examples where you think your "energy math" works. You
> just did the same thing with Roy and the QEX brainteaser. He gave a perfect
> analysis of the brainteaser problem but you were uncomfortable with it so
> you had to change it by adding a transmission line junction to the problem
> and then ignore what happens everywhere else.

I wasn't at all uncomfortable with it, Steve. In fact, Roy's analysis supports my arguments 100% and discredits yours. He said adding that one-wavelength of Z0=3R feedline didn't change anything. But it did change something. It allowed your hoax to be exposed out in the middle of the transmission line for everyone to see.

When something is being hidden inside a source black box, a one-wavelength of feedline with a Z0 equal to the Zg of the source box doesn't change anything. Why are you so afraid of adding that one-wavelength of feedline?

You don't have to answer - I think everyone knows why. Little by little, the truth is coming out. I'm sorry the truth puts you between a rock and a hard place but I warned you about that exact result almost two years ago.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1801. Re: Quad?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 23:05:52 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <kFjY9.1596$am4.983@nwrddc01.gnilink.net>
Source record: 126288

No Question in my mind: Go for a Spider Quad such as the Gem Quad, and use
a remote antenna switch with choke baluns at each feed point.

'73 KI4Z

"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20030123094704.27866.00000231@mb-ml.aol.com...
> I am interested in buying a 5 band, 2 element QUAD. I would like feedback
> regarding the ones commercially available addressing ease of assembly,
tuning,
> and durability. I believe GEM QUAD, LIGHTNINGBOLT and CUBIX are the main
> sources
> http://www.lightningboltantennas.com/
> http://www.mts.net/~pb999287/
> http://www.cubex.com/default.htm
> Thanks...Alan KB7MBI in Woodinville, WA

1802. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-24 23:37:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <flj33v0rllvd4okpeopnvi0078269s54r1@4ax.com>
Source record: 126291

On Fri, 24 Jan 2003 17:03:57 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Wouldn't it just be easier to
>admit you made a mistake instead of being hounded by the truth?

Hi Cecil,

Given you still OWE Roy a sign-off on the validity of his analysis,
this is more than hypocritical.

73's
Richard Clark, KB7QHC

1803. Re: Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 00:10:20 UTC
From: dplatt@radagast.org
Message-ID: <v33lfc1dsec8af@corp.supernews.com>
Source record: 126292

>Dave and Rickie,
>
>I believe that OTARD rules specifically exclude amateur radio. I took a
>quick look at the FCC website and found the following in the OTARD FAQ.
>
>Covered services include TV (satellite, local broadcast, wireless cable)
>and "fixed wireless". [Fixed wireless] does not include, among other
>things, AM/FM radio, amateur ("HAM") radio, Citizens Band ("CB") radio,
>and Digital Audio Radio Services ("DARS") signals. [This is an exact
>quote.]

Quite correct. I mentioned it because it's one of the "... get a
building management to allow an antenna" techniques which is often
discussed - it might have been what Rickie had heard about. You're
right, though, in that it doesn't apply to amateur radio antennas per
se and wouldn't be of much help.

That's why I mentioned a dual-use antenna such as the new Force 12,
since it _does_ qualify as an over-the-air broadcast television
antenna. As I read the situation, it would probably qualify for the
OTARD rule, as long as it's actually hooked up to a TV set from time
to time. [Memo - be very very sure to disconnect it from the TV set,
before hooking it to an HF rig and keying up! Could be really
expensive otherwise!]

>Rickie did not say what type of antenna he wanted to install, but if it
>is an amateur radio antenna it is not covered by OTARD. The clauses
>about "exclusive use areas" simply do not apply.

True... unless he can figure out some sort of dual-use antenna.

Depending on the band, there might be a number of possible approaches.
A good TV/FM log-periodic antenna would probably work decently well on
2 meters (for horizontal polarization on SSB, at least), and if you
stuck a couple of half-meter vertical elements onto the L/P you might
be able to get some vertically-polarized signal out for 2-meter FM.
I suppose that one might figure out a way of adding an additional
"reflector" at the back which was actually a 6- or 10-meter dipole
(perhaps with loading coils at the base to shorten it).

I've heard of people shunt-feeding the TV antenna mast, or insulating
the base of the mast from its support and running a few radial wires
out... in either case you've got a vertical. Run a second coax up the
mast, feed one of the guy-lines (perhaps through a coil) and ground
the coax to the mast, and you've got a sort-of-sloper.

>On the other hand, PRB-1 puts limits only on municipal zoning
>restrictions. It does not even apply to deed restrictions. It provides
>no support for renters in disagreement with property owners.
>
>(Lots of people are trying to get PRB-1 to look more like OTARD, but it
>has not happened yet.)

Understood and agreed.

>Bottom line: If Ricky wants to install an amateur radio antenna it may
>be necessary to use an inside antenna, convince the landlord, go stealth
>in some fashion, or move.

Yup. Those do, indeed, seem like the most probable alternatives.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1804. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 00:14:32 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E31D6E8.70700@ieee.org>
Source record: 126294

Richard Clark wrote:
> Hi Cecil,
> Given you still OWE Roy a sign-off on the validity of his analysis,
> this is more than hypocritical.

Huh???? What is it about my following previous statement that you
didn't understand?

"Roy, you have a copy of my potential QEX article and the following
energy analysis will be based on that article. And let me say that
your analysis results and my analysis results agree 100%."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1805. Re: 160m Hamstick, PHF-160

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 00:22:23 UTC
From: jgboyles@aol.com
Message-ID: <20030124192223.05145.00000200@mb-cn.aol.com>
Source record: 126295

> I think you would be better off using an 80 meter
>Hamstick. You will also want to make sure the coil
>of the antenna goes in the same direction as the coil
>in the 'screwdriver', otherwise they cancel...

Hi Doc., In this application, I don't think they will cancel, at least not much. What you are doing is adding two inductors in series to try and cancel the capacitive reactance of the short antenna. With the inductors in the same axis and fairly small diameter, there won't be much mutual coupling. The only time you should get cancellation is if there is transformer action, i.e. mutual coupling.
Get as much inductance as you can.
73 Gary N4AST

1806. Re: Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 00:47:21 UTC
From: Rickie / KC2KQQ <RickieV@hotmail.com>
Message-ID: <b0smnh$skjns$1@ID-89515.news.dfncis.de>
Source record: 126296

Hi Gene and Dave,
Thanks for replying to the posting. I want to set up a j-pole on the roof. Currently, its on the outside of my window and could hit 8 out of 10 repeaters that I program. Though, the repeater I want to hit, I can't reach.

Does landlord/management have to give a reason as to why they dont want an antenna or they could just say NO and thats it.

Thanks again guys!!

Rickie

"Gene Fuller" <W4SZzzzzz@att.net> wrote in message news:3E31C000.88CED562@att.net...
> Dave and Rickie,
>
> I believe that OTARD rules specifically exclude amateur radio. I took a
> quick look at the FCC website and found the following in the OTARD FAQ.
>
> Covered services include TV (satellite, local broadcast, wireless cable)
> and "fixed wireless". [Fixed wireless] does not include, among other
> things, AM/FM radio, amateur ("HAM") radio, Citizens Band ("CB") radio,
> and Digital Audio Radio Services ("DARS") signals. [This is an exact
> quote.]
>
> Rickie did not say what type of antenna he wanted to install, but if it
> is an amateur radio antenna it is not covered by OTARD. The clauses
> about "exclusive use areas" simply do not apply.
>
> On the other hand, PRB-1 puts limits only on municipal zoning
> restrictions. It does not even apply to deed restrictions. It provides
> no support for renters in disagreement with property owners.
>
> (Lots of people are trying to get PRB-1 to look more like OTARD, but it
> has not happened yet.)
>
> Bottom line: If Ricky wants to install an amateur radio antenna it may
> be necessary to use an inside antenna, convince the landlord, go stealth
> in some fashion, or move.
>
> 73,
> Gene
> W4SZ
>
> Dave Platt wrote:

> >
> > >The management in my building doesn't allow anyone to place an antenna
on
> > >the roof, but doesn't not explain why. I was told that there is a way
to
> > >get a building management to allow an antenna but I dont know how..
> > >
> > >any help will be great!
> >
> > Unless you're very fortunate, the roof area is probably not part of
> > your "exclusive use" area under the terms of your rental agreement or
> > lease. All of the Federal "you can install an antenna" rules I know
> > of (e.g. the OTARD rules, and PRB-1) apply only to areas over which
> > you, the tenant, have exclusive use - they don't apply to shared areas.
> >
> > So, it's likely to be that you can only succeed by:
> >
> > [1] Putting the antenna in an exclusive-use area (e.g. on a balcony,
> > or indoors), or
> >
> > [2] Using your powers of persuasion to negotiate with the landlord
> > (possibly offering additional payment for use of the roof),
> > paying for an electrician to design / perform / check the
> > installation to avoid any possible electrical-code violations or
> > safety hazards, etc.).
> >
> > If you _do_ have exclusive-use rights to a portion of the roof, and a
> > pathway or conduit which allow a coax to be run, then you might be
> > able to take advantage of the OTARD rules. These say that you have
> > the right to install a TV antenna (no more than 12 feet high) or a
> > satellite dish (no more than one meter), and that zoning rules or
> > rental agreements to the contrary are unenforceable. You might be
> > able to put up some sort of dual-use antenna (e.g. Force 12 makes a
> > multi-band vertical HF dipole which falls within the 12-foot limit,
> > and which actually does operate as an over-the-air TV antenna).
> >
> > --

1807. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 00:48:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v33nms5eevrp99@corp.supernews.com>
Source record: 126297

OC_CAM's Razor wrote:
> . . .
> . . . And let me say that
> your analysis results and my analysis results agree 100%.
> . . .

With the flurry of postings on this thread, it's easy to lose track of the sub-plots. For me, the whole thing started three days ago with:

Roy Lewallen wrote:
The reason I keep beating on this drum is that I've gotten the impression from some recent postings that some people think it's ok for power out of sources to not equal power dissipated by loads if a Thevenin or Norton equivalent is used. It's not ok. They've still got to add up. That's all I'm trying to say.

------

which brought the response

OC_CAM's Razor wrote:
Hi Roy, try the QEX brainteaser on page 3 at
http://neoamateur.org/downloads/qex/lett0103a.pdf
using Norton equivalent sources and see what you get for power dissipation in their internal resistances.

I did that analysis as asked, and showed that the power from the sources does indeed add up to the power dissipated by the loads, and Cecil agreed. Following that were some questions about where "extra power" came from and why some pseudo-equation isn't correct. I couldn't answer these because they made no sense -- there was no "extra power", and no basis for the pseudo-equation. Then Cecil suggested that an additional transmission line be added to illustrate whatever it was that he was trying to show. So I did that analysis also. The powers in the sources still add up to the powers in the loads. All power is still accounted for, and there's still no "extra power". Cecil has said he agrees completely with the analysis. Q.E.D.

I stand by my original statement that started this whole sub-plot.

I did my analyses without separately considering forward and reverse power; the analysis was done using some simple and well known

relationships between forward and reverse traveling voltage and current waves. Forward and reverse powers didn't need to be calculated at all; I just did so after the fact because they seem central to the shrill arguing going on here and elsewhere. As fun as it may be (for some folks) to argue about which of the various calculated power components have to add up with each other to equal which other components, it's not necessary to consider them at all in order to completely determine the steady state solution to transmission line problems. This is true even when the problem includes lossy lines and/or networks. Only ordinary linear circuit analysis is required, and this can always, or nearly always, be done without calculating power.

I'd like to point out that the Norton or Thevenin circuits I used at the ends of the cables could be replaced by boxes containing *any* circuitry -- you can put as many sources, resistors, inductors, transformers, capacitors, transmission lines, or whatever you want in either or both boxes, with only a single requirement -- that the terminal V and I are correct -- and you'll get exactly the same results (external to the boxes) for the steady state analysis. You'll find that (5/4)P watts always leaves the right hand box (as dictated by the V and I at its terminals) and (5/4)P is always absorbed by the left hand box (again as dictated by the V and I). *But* if you open one of the boxes, the internal power sources and dissipations have to come out right. In the box on the left, for example, if you add up all the power from all the sources and subtract the power dissipated in all the components, it had better add up to a negative (5/4)P watts. If the box contains only a perfect voltage source and a "dissipationless" resistor that doesn't dissipate any power, well, then, the source dang well better be absorbing (5/4)P watts. Note, however, that choosing different internal configurations for the boxes *will* modify the conditions immediately after the sources are turned on. Although various choices of box internals have the same V and I for steady state conditions (the requirement I imposed), they'll likely have different V and I characteristics during the transient period between startup and steady state. Consequently, there will be varying amplitudes of initial waves and re-reflections depending on the contents of the boxes. All will, however, reach the same steady state condition provided that the terminal V and I are correct at steady state. (I acknowledge that steady state will theoretically never be reached unless at least one end is matched; but I'm an engineer, not a mathematician, and regard it as being reached when the re-reflections have become negligibly small. It can be shown mathematically, however, that exactly the same steady state condition is reached after an infinite number of reflections occur, regardless of the box contents.)

I now return you to your regularly scheduled programming.

Roy Lewallen, W7EL

1808. Re: Hollow Vs. Solid aluminum: Differences

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 00:49:42 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301241649.6f20c632@posting.google.com>
Source record: 126298

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<9539-3E3194BE-386@storefull-2317.public.lawson.webtv.net>...
> Craig wrote:
> "I`m putting together a list of materials for a 3-el 6m yagi and the
> aluminum factory offers a choice of 9.5 mm solid rod, or hollow tube."
>
> Solid tube is no more conductive at 6m and very little stiffer than a
> hollow tube. It weighs more. TV antennas are a clue as to what you can
> get away with on the frequencies above 50 MHz.
>
> The ARRL Antenna Book, 19th edition, says on page 20-11:
> "Antennas for 50MHz need not have elements larger than 1/2-inch
> diameter, although up to 1 inch is used occasionally". At 2.54 cm per
> inch, that`s 1.27 cm or 12.7 mm diameter tube. You can get away with
> even less for a 1.5-mtr length of aluminum tubing that withstands almost
> any stress it`s likely to encounter as an antenna element.
>
> 1/2-inch diameter tubes are available in 5 thicknesses in the U.S.
> Strength varies with alloy and wall thickness. For 6m-band antennas,
> thin-wall tubing should be adequate.

Richard that now leaves the bending problem. I have just bent some
alum tubing 0.25" dia over a 3" diameter tube by hand without kinking
occuring. If one when beyond these ratios ie.0.5" dia tubing I suspect
special precautions would have to be taken to avoid kinking.
Regards
Art
>
> For a boom, the ARRL Antenna Book says:
> "Tubing of 1.25-inch diameter can easily support three element 28-MHz
> arrays---."
> You can get away with slightly less at 50 MHz.
>
> Best regards, Richard Harrison, KB5WZI

1809. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 00:51:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v33ns0mjh3mn19@corp.supernews.com>
Source record: 126299

I consider that to be full and unambiguous acknowlegement.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Richard Clark wrote:
>
>> Hi Cecil, Given you still OWE Roy a sign-off on the validity of his
>> analysis,
>> this is more than hypocritical.
>
>
> Huh???? What is it about my following previous statement that you
> didn't understand?
>
> "Roy, you have a copy of my potential QEX article and the following
> energy analysis will be based on that article. And let me say that
> your analysis results and my analysis results agree 100%."

1810. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 01:00:16 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <GSCdnTL_o_gMfKyjXTWc3w@comcast.com>
Source record: 126300

Norm,

Keep in mind that if you put up 100-200 feet of wire, propagation at the higher frequencies won't necassarily be broadside to the antenna. The pattern could be a clover leaf with most of the gain towards the ends. I think you don't want the antenna to be resonant on the even harmonics of any band, to make life for the Versa Tuner simpler. As I recall, the ARRL manual suggests 108 feet for an all band antenna.

Tam/WB2TT

"Norm" <uthrashit@hotmail.con> wrote in message
news:3e30d34a.8235391@news.state.ak.us...
> I live in SE Alaska I have a MFJ Versa Tuner II, plenty of wire and
> ladder line. I also am very fortunate to have 2 trees approximately
> 200' apart and both of the trees are around 125-150' high. Beautiful
> Sitka Spruce! The trees are situated East / West. A wire strung
> between the two would give me a signal into the South Pacific and over
> the Pole into Europe and Africa, assuming the lobes were broadside to
> the antenna.
>
> I would like a SINGLE antenna for multiband use, 80-10 Meters. So far
> I'm considering;
>
> An Extended ZEP 89' per side
> http://www.qrpworld.com/40_meter_zepp_antenna.htm
>
> A Sturba Curtain
> http://www.hamuniverse.com/sturba.html
>
> A Lazy-H
> http://www.cebik.com/lh.html
>
> G5RV - without the matching stub & coax.
> Fed with 450 ohm Ladder line directly to the tuner.
>
> If you were in my situation, what would you put up and why?
>
> I'm open to any suggestions for other antennas as well.....

1811. Re: How to find the resonant frequency of an antenna trap.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 01:06:07 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <aAqdnRJGvI9sf6yjXTWcow@comcast.com>
Source record: 126301

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v30kif43padu88@corp.supernews.com...
> putting the scope across the resistor and looking for the dip is also an
> option!
> hank wd5jfr

Probably a better idea, as you are not detuning the trap with extra
capacitance. I'd try 10 ohms first if there is enough sensitivity.

Tam/WB2TT
.....

1812. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 01:13:27 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <XwIY9.64684$4j5.10436036@newssvr28.news.prodigy.com>
Source record: 126293

Dave, I'm getting the impression that they all have some expensive hidden maintenance possibilities, but it seems like both the 8552/8553 series and the 8558/8559 are good bets at a reasonable price.

Looking at the specs, it doesn't look like the 8558 has phase locking and the older 8552/8553 does. Does that mean that the older series are more useful at narrow bandwidths, or is it two different ways to get to the same place?

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"DaveArea51" <davearea51@aol.com> wrote in message
news:20030124124207.09836.00000168@mb-cd.aol.com...
> The 8566A/B is, bar NONE, the best SA ever made and marketed!
>
> That having been stated: The 141T et. al. have another gotcha. If the
BWO,
> Backwave Oscillator, should ever cease functioning AND you can find a
> replacement, the entire instrument must be realigned professionally for
big
> $$$! Agilent no longer does this so you are at the mercy of after-market
labs.
> In addition, the variable persistance screen is only too easy to burn.
>
> Another "modern" SA to stay clear of is the HP 8590. The LO is NOT phase
> locked and drifts BADLY even after warmup and cal. In addition, the
amplitude
> accuracy is not stable, even after warmup and complete cal. Of course,
these
> are the reasons the 8590's are no-bid or low-bid on ebay. They're junk.
I had
> one that moved between groups. No one wanted to use it for these reasons.
It
> say on the shelf and gathered dust.
>
> Once you have used the 8566B or the 8568B, the Tektronix SA, either
stand-alone
> or plug-in, are also out of the running. They have always been clumsy to
> operate and are aimed more at the TV cable service industry than at bench
> testing. Also, virtually ALL of the functions commonly used in design/test
are
> burried three layers deep and run with a snail-paced microprocessor = very

> frustrating to use.
>
> Personally, I'd go for the HP 8558 (to 1.5 GHz) or the 8559A (to 21 GHz).
The
> latter is not preselected above 3.6 GHz, but is a true analog SA and VERY
> capable for the money. It has a relatively quiet LO and a better noise
figure
> than those using the tuned preselector filter. I recently got the 8559A
and
> am tickled pink with it (10 MHz to 21 GHz). However, if anyone has the
853A
> display mainframe, PLEASE let me know its condition and what you want for
it.
>
> Now to find a VECTOR network analyzer to 6 GHz for the price of the 8559A
!?
>
> Dave - W0LEV

1813. Re: Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 01:59:10 UTC
From: dplatt@radagast.org
Message-ID: <v33rreh6an55c6@corp.supernews.com>
Source record: 126302

In article <b0smnh$skjns$1@ID-89515.news.dfncis.de>,
Rickie / KC2KQQ <RickieV@hotmail.com> wrote:

>Hi Gene and Dave,
>Thanks for replying to the posting. I want to set up a j-pole on the roof.
>Currently, its on the outside of my window and could hit 8 out of 10
>repeaters that I program. Though, the repeater I want to hit, I can't reach.

Sounds as if the other one's probably on the far side of the building.

You _might_ be able to work it if you were able to aim a directional
antenna (log-periodic or Yagi) away from it, and bounce the signal off
of a hill or building. It works, sometimes.

Or, try reaching out the window with an HT (careful, don't drop it!)
tuned to the repeater frequency, ask somebody else to key it up, and
move the HT around to find the spot with the strongest signal. Your
J-pole might just be sitting in a reflective null, and moving it a
foot or three in some direction might give you enough signal
reinforcement to let you work the repeater.

>Does landlord/management have to give a reason as to why they dont want an
>antenna or they could just say NO and thats it.

The latter, most likely. It's their property, there's nothing in your
rental/lease agreement which says anything about it, and so they're
entirely within their rights to just say "Nah."

Their actual reason might be any or all or none of: concern with
building aesthetics, worry about legal liability, worry about the risk
of a lightning strike, the presence of local building codes which
discourage outdoor antennas, concern that people would be freaked out
by the possibility of exposure to RF, reluctance to make special
exceptions for one tenant because "then everybody will want t special
treatment", or maybe the owner just had a bad day or was a bit
hung-over and was feeling grumpy.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1814. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 02:15:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1ro33v4d0u3oa12mrr9ob0bcfdp0915t9f@4ax.com>
Source record: 126303

On Fri, 24 Jan 2003 18:14:32 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>
>Huh???? What is it about my following previous statement that you
>didn't understand?
>
>"Roy, you have a copy of my potential QEX article and the following
>energy analysis will be based on that article. And let me say that
>your analysis results and my analysis results agree 100%."

Hi Cecil,

What I DO SEE is:
> Roy's analysis supports
>my arguments 100% and discredits yours. He said adding that one-wavelength of
>Z0=3R feedline didn't change anything. But it did change something. It allowed
>your hoax to be exposed out in the middle of the transmission line for everyone
>to see.
Which is the standard bluff and twist common to this topic.

As for this
>He said
Roy in fact went further, 96 more lines in fact, and none of it
musters with your agenda. In that length I see no where any mention
of a hoax (so Roy certainly never passed judgement, he simply offered
facts). Even more I see not one iota of evidence that CHANGING the
problem to suit you has done anything to accomplish what you set out
to do.

In short, what I hear from you was you were wrong (a noble admission)
and that in being wrong you were vindicated and smashed the hoax
(whatever that was) and as a consequence you were right all along.
Should I ask the White Rabbit to pass you some tea?

I suppose you could respond with "Gee Richard, it all fits together,
you just have to add up the pieces." Uh-huh, I suppose you cannot tip
your hand directly because of the Editors once again. If the
"Editors" couldn't catch the original error (shoddy editorial work)
then your contribution will shine in the same environment (passes
under the same shoddy scrutiny doesn't it?) with equal illumination.
OR if you look at it the other way: the Editors were content to
publish nonsense the first time - and they will be content to do it
again. Now there's a truth we all understand and makes perfect sense.
It is also a win-win proposition where you truly triumph in being
wrong (nobility squared - that is non-linear by the way so don't try

to superpose it ;-).

Frankly, these so-called "thought problems" that pass through the pages of QEX (or other comic book) are techno-pornography. At least with published hardware projects the TRUTH is evident with the toss of a switch.

73's
Richard Clark, KB7QHC

1815. Re: Stealth base antenna for Yaesu FT100

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 02:16:34 UTC
From: Bob Miller <bxmillerSpamNot@texas.net>
Message-ID: <0PIxPuRtLG6BCEAWTfAYhmklzfDY@4ax.com>
Source record: 126304

fstop@ispchannel.com (fstop) wrote:

>I have a FT100 and live in a deed restricted area. No antennas
>allowed. I have a small JPole out back for 144/440. Looking for
>antenna suggestions for the remaining bands. The antenna needs to be
>fairly short, and preferrably mounted at ground level. I have other
>homes surrounding me, and some landscaping. I can also do something in
>the attic. Attic is 8ft high, 60ft long and stretches North/South. I'm
>in South Florida.
>Your suggestions will be very much appreciated.
>
>Thanks

If flag poles are allowed, Force 12 has an inexpensive flag pole antenna that would be good for the higher HF bands. See their web site.

Otherwise, see the ARRL web site, their book section, for book(s) on stealth antennas.

Bob
k5qwg

1816. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 02:45:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E31FA35.70206@ieee.org>
Source record: 126305

Roy Lewallen wrote:

> Cecil has said he agrees completely with the analysis. Q.E.D.

Wonder why some people missed that fact?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1817. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 02:46:59 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E31FAA3.2010704@ieee.org>
Source record: 126306

Roy Lewallen wrote:
> I consider that to be full and unambiguous acknowlegement.

And that's exactly right.

> OC_CAM's Razor wrote:
>> "Roy, you have a copy of my potential QEX article and the following
>> energy analysis will be based on that article. And let me say that
>> your analysis results and my analysis results agree 100%."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1818. Re: 160m Hamstick, PHF-160

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 03:11:14 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E320052.FC131456@cwis.net>
Source record: 126307

Gary,
You might be suprized at the amount of 'cancelation'
you'll get. Try it and see (LOL).
'Doc

1819. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 03:18:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E320202.3030005@ieee.org>
Source record: 126308

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Roy's analysis supports
>>my arguments 100% and discredits yours. He said adding that one-wavelength of
>>Z0=3R feedline didn't change anything. But it did change something. It allowed
>>your hoax to be exposed out in the middle of the transmission line for everyone
>>to see.
>
> Which is the standard bluff and twist common to this topic.

Have you read Dr. Best's latest postings? He objects to adding that one wavelength of feedline even though it changes nothing. Don't you wonder why he objects if it changes nothing? What is he afraid of?

Dr. Best made a lot of assertions in his QEX article. He has to defend those assertions against *ALL* examples. OTOH, I only have to find *ONE* example that proves him wrong. That's the way science works. Any example with an impedance discontinuity located a distance from a source proves Dr. Best's assertions to be wrong. One is all it takes. That's why he objects to my example of which there are an infinite number.

Here's my statement with which Dr. Best disagrees: In an antenna system with reflections and a match point, all reflected energy is re-reflected back toward the load at the match point. Maybe you can help me out here, Richard. We know that, in a matched system, no reflected energy reaches the source. Dr. Best says it is not re-reflected back toward the load. So exactly where does that reflected energy go? Dr. Best refuses to answer. How about you? Where does the energy in Dr. Best's canceled "rearward-traveling waves 1 and 2" go?

> Roy in fact went further, 96 more lines in fact, and none of it
> musters with your agenda. In that length I see no where any mention
> of a hoax ...

Of course not. Roy has not read Dr. Best's article. He is certainly not going to take my word for what Dr. Best said in his article. And please note: Roy did not make any of the assertions that Dr. Best has made, i.e. destructive/constructive interference doesn't need to exist at an impedance discontinuity in order to achieve a match. Roy, would you like to join Dr. Best in making that assertion?

> In short, what I hear from you was you were wrong ...

Wrong about what? If Roy's results had been different from mine, I was ready to disagree with him and try to prove him wrong. But his results and mine agree so there's nothing to argue about. And

please note that we were using different methods of analysis and
got the same results.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1820. Re: Caveat Lector ?? ATTN Steve

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 03:23:04 UTC
From: Herbert Khaury <Herbert@tiptoe.tp>
Message-ID: <zWKdnWquqrMkn6-jXTWcoQ@comcast.com>
Source record: 126309

Caveat Auscultatoris?

"AC6V" <contact99@ac6v.com> wrote in message
news:BJAX9.3840$yZ2.383522@news1.west.cox.net...
> Love the Caveat Lector
> Added to my signature
>
> Now need Latin for Listener Beware -- to use on the repeaters when
> dispensing advice (also free)
>
> --
> Caveat Lector - Ya All
> I Doubt, Therefore I Might Be
> 73 From AC6V, who is QBF most of the time !!
> Rod In Oceanside, CA
> Home Page http://ac6v.com
> DX Book http://ac6v.com/DXSAMPLE.htm
>
>

1821. Re: Caveat Lector ?? ATTN Steve

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 04:09:50 UTC
From: AC6V <contact99@ac6v.com>
Message-ID: <i6oY9.13828$LA4.983522@news1.west.cox.net>
Source record: 126310

Thanks Herb -- I finally found an english to latin dictionary -- it agrees
with you and also Caveat Audiens
My new repeater blurb when solicted for advice.

--

"Herbert Khaury" <Herbert@tiptoe.tp> wrote in message
news:zWKdnWquqrMkn6-jXTWcoQ@comcast.com...
> Caveat Auscultatoris?
>
>
> "AC6V" <contact99@ac6v.com> wrote in message
> news:BJAX9.3840$yZ2.383522@news1.west.cox.net...
> > Love the Caveat Lector
> > Added to my signature
> >
> > Now need Latin for Listener Beware -- to use on the repeaters when
> > dispensing advice (also free)
> >
> >>

1822. Re: Variable inductance ideas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 04:22:57 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301242022.351016d1@posting.google.com>
Source record: 126311

Larry I finaly decided to keep the single large diameter coiled form
with the coil to coil scraper with either the addition of a capacitor
trimmer or the insertion of a brass rod equal to one coil change as a
trimmer"
Thanks for the cap trimmer idea, which ever trimmer I finally decide
upon the complexity of binary additions via several relays can now be
avoided
Regards
Art

Larry Phipps" <larry@telepostinc.com> wrote in message
news:<1QyU9.58254$4j5.8818616@newssvr28.news.prodigy.com>...
> Only as far as the inductance switching works, Doc, in fact that's where I
> got the idea.
>
> But adding the series C is something that I have not seen before. The
> effective inductance of a series LC network can be easily adjusted by the
> variable C by making the L slightly larger than needed, and using the series
> C to back off the inductive reactance. If you have enough steps of L...then
> only a slight amount of extra L need be used, and a small range of C, since
> you only need the "analog" variability for "fine tuning" between digital
> steps. I have found this simple solution to be a cheaper, reliable
> alternative to a rotary inductor, and has no more loss if done right.
>
> --
> 73,
> Larry N8LP
> www.telepostinc.com/n8lp.html
>
> "'Doc" <w5lz@cwis.net> wrote in message news:3E2241FB.3D75A441@cwis.net...
> >
> >
> > Larry,
> > And it's also how most 'auto-tuners' are made...
> > 'Doc

1823. Re: Fold-over Base, 18HT Hygain Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 05:01:34 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E321A2E.383B40BD@cwis.net>
Source record: 126312

Doug,
I'm not sure there was ever a 'tilt-over' base for
the HY-Tower. The insulator would prevent that because
they aren't that strong. I could certainly be mistaken
though.
'Doc

1824. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 05:15:46 UTC
From: Richard Miles <richamil@charter.net>
Message-ID: <3E321D82.1000101@charter.net>
Source record: 126313

You might have problems with overload of audio amplifiers and the cheap phones of today. I can operate with 100W however when I kick on the SB-200 amplifier the phones pick me up and the answering machine goes nuts. The sound comes out the tv speakers even when the set is switched off.
The only way to find out is to run a test with high power. I really doubt if spectral purity fits into your question. Harmonic radiation causes TVI and interference with other services.

73's..Dick K7RNZ

Uncle Peter wrote:
> One point everyone missed: it depends a lot on the spectral
> purity of the solid state amplifier! In other words, how good
> are the low-pass filters for each band?
>
> Peter
>
> "BICisfag" <ll@jj.com> wrote in message news:3E10BB04.B7DC9780@jj.com...
>
>>I want to get a 500 w solid state amp for HF.
>>
>>I don't seem to have any interference problems with
>>neighbors now with 100 w.
>>
>>I have dipoles for 80 and 40 and a vertical and inv. L.
>>
>>Am I asking for trouble with 500 w?
>>
>>
>>
>
>
>

1825. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 07:21:31 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5p143vgufv5f6scn456c4tc5os7t9f08dq@4ax.com>
Source record: 126314

On Fri, 24 Jan 2003 21:18:26 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Roy's analysis supports
>>>my arguments 100% and discredits yours. He said adding that one-wavelength of
>>>Z0=3R feedline didn't change anything. But it did change something. It allowed
>>>your hoax to be exposed out in the middle of the transmission line for everyone
>>>to see.
>>
>> Which is the standard bluff and twist common to this topic.
>
>Have you read Dr. Best's latest postings? He objects to adding that one
>wavelength of feedline even though it changes nothing. Don't you wonder
>why he objects if it changes nothing? What is he afraid of?

Hi Cecil,

It is more than obvious that your agenda is personal one - not
technical, and your arguments are contorted to match the results you
demand to support that agenda.

Do you really feel that your argument requires a vendetta component?
Is your logic so weak that you cannot support it otherwise? Are your
exhortations so feeble as to provoke this clamor in a yellow
journalism technique of asking the defendant when he stopped beating
his wife?

Your expression of wonderment and fear are obviously your only line of
defense and sufficiently underlines my statement quoted above.

>
>Dr. Best made a lot of assertions in his QEX article. He has to defend
>those assertions against *ALL* examples. OTOH, I only have to find *ONE*
>example that proves him wrong. That's the way science works. Any example
>with an impedance discontinuity located a distance from a source proves
>Dr. Best's assertions to be wrong. One is all it takes. That's why he
>objects to my example of which there are an infinite number.

And yet I've found you out on a number of occasions when science
must've been asleep. In that sense, your article must be a shoo-in
for the slumbering Editors.

>
>Here's my statement with which Dr. Best disagrees

Again the personal vendetta, a scientist (I don't know why we attempt
to elevate this) would simply offer the statement sans
editorializations of personalities.

>> Roy in fact went further, 96 more lines in fact, and none of it
>> musters with your agenda. In that length I see no where any mention
>> of a hoax ...
>
>Roy did not make any of the assertions that Dr. Best has made, i.e.

Neither has Roy made your assertions, and this observation of yours is
a contrived point any way you look at it - i.e. So What? If you
cannot argue the problem, you instead argue personality?

>destructive/constructive interference doesn't need to exist at an impedance
>discontinuity in order to achieve a match. Roy, would you like to join Dr.
>Best in making that assertion?
>
Can't resist forcing me into associations can you? This really gives
the impression of desperation tactics, Cecil, and to me simply
confirms your poverty of idea behind a vacant argument. You really
don't offer any new analysis to respond to issues, you instead spin
this into a guilt-trip which amounts to nothing in my regard.

But in your inimitable fashion, this decline is of no consequence to
you, you have to make a substantive response or advance, and no doubt
you will deny those same facts you've found in agreement with Roy for
the heady thrust of a facile attack bound to that personal agenda
which has no truck with dialog. Lest you are under some impression
your correspondence constitutes a dialog; it arises only through the
enforcement of postings in the linear order of arrival. You certainly
have never responded to my questions. I wonder what importance you
put in my coming around, then, with this display of such little regard
as you obviously have for me? Your courting, too, smacks of a
pathetic scrabbling for any allies you can muster into your vendetta.
You are a very poor recruiter and your posting here is painful
evidence of it.

As far as this topic goes, you are confirming daily you think you've
lost the argument by the sheer weight of desperation, numbing
repetition, and abandonment of originality. In the originality
department, Steve has trounced you six times over like a past
challenge (your hopeful manuscript is in obvious reaction to him -
that personal vendetta again; not leading him - he stole that march
long ago). You've offered that you have proven him wrong with ONE
inscrutable example from a spectrum of an infinite population. On the
other hand, he has offered dozens of examples you have shunned, mute
without response or technical rebut; but always yipping along with
x + y doesn't equal z (an embarrassed commemoration to when you got
KO'ed with a sucker punch - like I said, you are always following,
never leading).

So, perhaps you can understand now why no one is behind you:
You are not in front.

Surprise me with something original. Take a lead. Answer my
questions if you want support.

73's
Richard Clark, KB7QHC

1826. Re: Hollow Vs. Solid aluminum: Differences

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 08:37:04 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <R1ESk6BwykM+EARI@ifwtech.co.uk>
Source record: 126315

Art Unwin KB9MZ wrote:

>Richard that now leaves the bending problem. I have just bent some
>alum tubing 0.25" dia over a 3" diameter tube by hand without kinking
>occuring. If one when beyond these ratios ie.0.5" dia tubing I suspect
>special precautions would have to be taken to avoid kinking.

There is detailed information on bending the 'trombone' ends of VHF/UHF folded dipoles on my web site, in the 'VHF/UHF Long Yagi Workshop'. You can easily do it yourself, if you make a simple bending jig from bits of wood and plastic, and soften the tubing before bending.

However, that information only covers tubing - I have no experience of bending solid.

There's absolutely no point in using solid unless the element diameter is so small that solid becomes more convenient than tube, and that doesn't happen at frequencies much below 1GHz. Otherwise, tubing offers the best combination of strength and light weight.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1827. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 12:25:26 UTC
From: Henrik <henrik>
Message-ID: <3e328238$0$181$edfadb0f@dread15.news.tele.dk>
Source record: 126316

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
>As I recall, the ARRL manual
> suggests 108 feet for an all band antenna.
>
> Tam/WB2TT
Hi,
Just for the record, the ARRL Antenna Book, 19th edition suggests in chapter
7.3:
135-feet, 80 to 10-meter dipole at a height of 50 feet or higher...and has a
good discussion of flat versus inverted-V configuration.

H.

1828. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 13:54:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E329704.9090908@ieee.org>
Source record: 126317

Richard Clark wrote:
> It is more than obvious that your agenda is personal one - not
> technical, and your arguments are contorted to match the results you
> demand to support that agenda.

The fact that you have not found a single technical thing wrong with
my argument should indicate to everyone why you are forced to mount so
many ad hominem attacks. From what little technical content you have
allowed to slip out, I would say you tend to agree with me. My article
has been under review at QEX for a couple of weeks and nobody has reported
anything technically wrong with it except a couple of typos.

> You certainly have never responded to my questions.

I am not aware of any of your questions that have gone unanswered
except for the rhetorical ones which require no answer. You refuse
to tell me what questions have not been answered. What's up with that?

> In the originality
> department, Steve has trounced you six times over like a past
> challenge ...

I would be no match for Slick Willy either. Doesn't mean the
ability to lie under oath is a good thing.

> So, perhaps you can understand now why no one is behind you:
> You are not in front.

I'm a dark horse Texas Aggie up against a PhD and his minions.
The challenge is more political than technical. Your posting
is a good example - all personal attacks - no technical content.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1829. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 14:30:20 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <0cxY9.40937$ui1.633600@news1.east.cox.net>
Source record: 126318
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Best of both worlds: MSR2000 PA deck running on a Micor repeater
base.

I love the Micor RX and squelch system over the Mitrek. With a little
work the 110 watt PA and control system can be retrofitted to an
existing Micor base. Solves the obsolete PNP RF transistor replacement
problems as well.

Cheers

Pete

"Skipp can be found through sonic" <notrealemail@yahoo.com> wrote in message
news:b0s6d3isj3@woodrow.ucdavis.edu...
> I too used International for many years, but they've become so expensive
> that I sought out an alternative. I'm also a skeptic and had to verify
> what I found would be a real fix.
> A friend uses Bomar and gave me their number, I called and paid $10 per
> crystal if I re-rocked the element myself. So I've done just that since
> receiving my first order in.
>
> I've now re-crystaled over 30 pairs of MSR channel elements on both UHF
> and VHF using the Bomar units... very cost effective and so far, not one
> bad rock. I use the recrystaled elements in my commercial (trunking and
> conventional) dual mode and amateur repeaters.
>
> I've had great service with International and only one receive element
> (which they did) go just out of spec. But their prices have gotten way out
> of line.
>
> So consider Bomar as a real option, I've placed very large orders with
> them in the last two years and everything received has been spec, on
> time and cost effective.
>
> I can also field MSR-2000 questions if you have any... I have over 50 in
> service in many modes (including trunking) and have about worked out every
> issue you could think up.
>
> I have a conversion to an external controller (ham) work up on the
> http://sonic.ucdavis.edu Amateur Radio page. You can Email me from any
> of the web pages if you have questions. I've also done tone panel
> connections and repairs of which I'll provide help as practical.
>
> cheers

> skipp
> http://sonic.ucdavis.edu
>
> : In rec.radio.amateur.homebrew FM <radiovintage@hotmail.com> wrote:
> : Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> : purchased crystals in many years where is the best place to buy them ??
We
> : will be using the repeater on 146.01/61.Also is there a site with the
specs
> : for the channel elements ?
> : Rcvr Channel Element : KXN 1086A
> : Xmtr Channel Element : KXN 1088A
> : THANKS.
>
>

1830. FS Yaesu FC-102 KW Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 14:41:14 UTC
From: Joe Ship <ve2js@joeship.com>
Message-ID: <3E32A20A.BA4A46EA@joeship.com>
Source record: 126169

FS Yaesu FC-102 Kilowatt Antenna Tuner with the
FAS-1-4R remote
antenna selector switch installed.
Click to see details.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4671&item=3002113347

~~~~~~~~~~~~~~~~
Joe Ship
ve2js@joeship.com
http://www.joeship.com
~~~~~~~~~~~~~~~~

1831. Re: Fold-over Base, 18HT Hygain Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 15:48:54 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <vEqdnSckpMzNI6-jXTWc3Q@comcast.com>
Source record: 126171

Doug,

The bottom end of the 18HT is a Rohn HBX24 tower. You could check with Rohn as to whether a tilt base exists. As Doc mentioned, you would have to be careful not to over stress the glass insulators. They would for sure have to be on the top side of the tilt base.

Tam/WB2TT
"Doug" <doug@ycsi.net> wrote in message news:b0ru2jjlm0@63.90.193.143...
> I'm looking for the fold-over base plate for the Hygain
> 18HT Vertical. Got the complete antenna, just no base
> piece. Could make one I guess, but would like to have
> the original if it's worth using here in the Windy Country.
>
> Thanks
>
> Doug, K7YD
> Livingston, MT
>

1832. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 16:22:21 UTC
From: richardharrison@webtv.net
Message-ID: <29561-3E32B9BD-70@storefull-2316.public.lawson.webtv.net>
Source record: 126172

Richard Clark, KB7QHC wrote:
"Again the personal vendetta, a scientist (I don`t know why we attempt to elevate this) would simply offer the statement sans editorializations of personalities."

Let`s eschew obfuscation. We certainly are keeping our objectivity and excercisibg care to not impugn or criticize, aren`t we?

There is no magic multiplication anywhere in a transmission line. It`s a passive device. If 100 watts travel from a lone source through a line, you can have no more than 100 watts anywhere in the line. Standing waves increase and decrease volts and amps periodically (in synch but not coincident with each other) along a mismatched line. This variation does not include power. Proof is in power measurement. The Bird wattmeter for practical purposes measures the same power at any place along a transmission line. Steve`s statement that a+b > a+b is mistaken.

Best regards, Richard Harrison, KB5WZI

1833. Re: Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 16:36:02 UTC
From: Thierry Lombry <lombryt@hotmail.com>
Message-ID: <3e32bcf6$1_1@news.vo.lu>
Source record: 126170

"Dave Platt" <dplatt@radagast.org> a crit dans le message de news:
v3361f9dla3fd8@corp.supernews.com...
> >The management in my building doesn't allow anyone to place an antenna on
> >the roof, but doesn't not explain why. I was told that there is a way to
> >get a building management to allow an antenna but I dont know how..
> >
> >any help will be great!
>
> Unless you're very fortunate, the roof area is probably not part of
> your "exclusive use" area under the terms of your rental agreement or
> lease. All of the Federal "you can install an antenna" rules I know
> of (e.g. the OTARD rules, and PRB-1) apply only to areas over which
> you, the tenant, have exclusive use - they don't apply to shared areas.
>
> So, it's likely to be that you can only succeed by:
>
> [1] Putting the antenna in an exclusive-use area (e.g. on a balcony,
> or indoors), or
>
> [2] Using your powers of persuasion to negotiate with the landlord
> (possibly offering additional payment for use of the roof),
> paying for an electrician to design / perform / check the
> installation to avoid any possible electrical-code violations or
> safety hazards, etc.).
>
> If you _do_ have exclusive-use rights to a portion of the roof, and a
> pathway or conduit which allow a coax to be run, then you might be
> able to take advantage of the OTARD rules. These say that you have
> the right to install a TV antenna (no more than 12 feet high) or a
> satellite dish (no more than one meter), and that zoning rules or
> rental agreements to the contrary are unenforceable. You might be
> able to put up some sort of dual-use antenna (e.g. Force 12 makes a
> multi-band vertical HF dipole which falls within the 12-foot limit,
> and which actually does operate as an over-the-air TV antenna).
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

1834. Re: Fold-over Base, 18HT Hygain Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 16:49:09 UTC
From: Doug <doug@ycsi.net>
Message-ID: <b0uf65voo0@63.90.193.217>
Source record: 126173

Hi Doc: thanks for the reply. I was under the same
impression as you, but guess they are now produced by
MFJ/Hygain and have a "fold over" base plate. I live
in a truly stormy area, and sometimes it's nice to be
able to tip over the antenna when we are expecting
90+ mph winds for a few days. Sooooo.....guess
I'll just pull out the ole' Smoke-wrench.

73

Doug, K7YD

'Doc wrote:
>
> Doug,
> I'm not sure there was ever a 'tilt-over' base for
> the HY-Tower. The insulator would prevent that because
> they aren't that strong. I could certainly be mistaken
> though.
> 'Doc

1835. Re: Fold-over Base, 18HT Hygain Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 16:53:03 UTC
From: Doug <doug@ycsi.net>
Message-ID: <b0ufdfid0@63.90.193.217>
Source record: 126174

Hi Tam: Yes, I agree. The insulators on this particular
18HT are the blue, Hygain fiberglass cones and I'd think
are pretty stout. But, the idea is to be able to get it
down to protect it from our high winds.

I'll come up with a plan and if it's workable, I'll put
some pix on here.

Even thought of building an equivalent antenna from Rohn
25G. Should be possible.

Thanks

Doug

Tarmo Tammaru wrote:
> Doug,
>
> The bottom end of the 18HT is a Rohn HBX24 tower. You could check with Rohn
> as to whether a tilt base exists. As Doc mentioned, you would have to be
> careful not to over stress the glass insulators. They would for sure have to
> be on the top side of the tilt base.
>
> Tam/WB2TT
> "Doug" <doug@ycsi.net> wrote in message news:b0ru2jjlm0@63.90.193.143...
>
>>I'm looking for the fold-over base plate for the Hygain
>>18HT Vertical. Got the complete antenna, just no base
>>piece. Could make one I guess, but would like to have
>>the original if it's worth using here in the Windy Country.
>>
>>Thanks
>>
>>Doug, K7YD
>>Livingston, MT
>>
>
>
>

1836. Re: Fold-over Base, 18HT Hygain Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 17:12:53 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <11h53v4kfdg0iedohndki7sgf6iublf3qn@4ax.com>
Source record: 126175

The base design of the 18HT Hy-Tower has changed since the original
design. It now uses a tilt-over base assembly that sits on top of the
insulators. It is now called the AV-18HT. The installation manual is
available here http://www.hy-gain.com/manuals.php which lists every
part number of the Hy-Tower. Should be able to order the parts
directly from Hy-Gain http://www.hy-gain.com/contact.php

73, Dick - W6CCD

On Sat, 25 Jan 2003 10:48:54 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:

>Doug,
>
>The bottom end of the 18HT is a Rohn HBX24 tower. You could check with Rohn
>as to whether a tilt base exists. As Doc mentioned, you would have to be
>careful not to over stress the glass insulators. They would for sure have to
>be on the top side of the tilt base.
>
>Tam/WB2TT
>"Doug" <doug@ycsi.net> wrote in message news:b0ru2jjlm0@63.90.193.143...
>> I'm looking for the fold-over base plate for the Hygain
>> 18HT Vertical. Got the complete antenna, just no base
>> piece. Could make one I guess, but would like to have
>> the original if it's worth using here in the Windy Country.
>>
>> Thanks
>>
>> Doug, K7YD
>> Livingston, MT
>>
>

1837. Re: Fold-over Base, 18HT Hygain Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 18:03:20 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <oFqdnVEaubbETK-jXTWc3Q@comcast.com>
Source record: 126176

"Dick" <rhughes33@cableone.net> wrote in message
news:11h53v4kfdg0iedohndki7sgf6iublf3qn@4ax.com...
> The base design of the 18HT Hy-Tower has changed since the original
> design. It now uses a tilt-over base assembly that sits on top of the
> insulators. It is now called the AV-18HT. ....

Live and learn. The only thing I would be concerned about is whether putting the new base on an old antenna would detune it. The tilt assembly is now a part of the antenna.

Tam/WB2TT

1838. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 18:20:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E32D584.7010904@ieee.org>
Source record: 126177

Richard Harrison wrote:
> Steve`s statement that a+b > a+b is mistaken.

Was it Ben Franklin who said it first?
Something about blood out of a turnip? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1839. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 18:49:02 UTC
From: davearea51@aol.com
Message-ID: <20030125134902.05355.00000167@mb-fz.aol.com>
Source record: 126178

Not necessarily. The 8559A has 1 kHz as the narrowest bandwidth. Its been so long since I've used the 141T that I don't remember that one. The one thing I didn't like about the 141T is that there is another plug-in needed above 110 MHz. I do not use mine much for HF, so that always seemed rather awkward to me. However, the performance-to-$$$ ratio for the 141T can't be beaten. Also, I never looked at the noise characteristics of the 141T.
Phase locking can be a doubled-edged blessing. Certainly the LO is more stable but the down side is that many times a phase locked oscillator is not as clean as a free-running oscillator. That's due to the digital noise and jitter introduced by the servo circuitry. For our purposes, however, any of the modern, ANALOG, SA's are relatively good. There is no doubt the 8559A drifts, especially on the narrower spans. However, its not much of an issue for me as I'm usually looking at modulation characteristics in the narrow bandwidth/span modes. The signal doesn't need to remain at screen center for hours on end. Everything is a trade-off, but there are some good ones to be had at affordable prices. I still would stay clear of the 8590, though.

Dave - W0LEV

1840. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 20:37:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <49s53vk247eu05id87hoc397jbr8f5lma7@4ax.com>
Source record: 126179

On Sat, 25 Jan 2003 07:54:12 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>
>The fact that you have not found a single technical thing wrong with
>my argument should indicate to everyone why you are forced to mount so
>many ad hominem attacks. From what little technical content you have
>allowed to slip out, I would say you tend to agree with me. My article
>has been under review at QEX for a couple of weeks and nobody has reported
>anything technically wrong with it except a couple of typos.

Hi Cecil,

Still forcing associations on me I see. I will label statements so as
to not confuse you.

You truly must be digging at the bottom of the barrel for support to
accept such a scum-bag as me as a subscriber to your theory - and you
condemned to do it by presumption to boot. That's pretty low indeed.
Surely there are others here of greater intellect. Am I the only
private conscripted into your army of two? (rhetorical)

No doubt you will find ways to quote me in support as well. I am
looking forward to hearing what I had to say. Obviously I wasn't
listening too closely at the time, or I would have come around.
(pathetic ferreting on my part to ingratiate myself with the master
who so lovingly clutches me to his bosom).

I especially enjoyed your last comment above. The same referees who
found nothing wrong with Steve's will hardly find anything wrong with
yours would they? (rhetorical) Such attention to detail as they offer
in technical assessment makes my heart race with the thrill of cutting
edge technology. (sardonic irony)

I know you will respond, but I don't know why. The illusion of dialog
no doubt. Remember, it is only an accident enforced by the linear
arrival of postings - nothing else.

73's
Richard Clark, KB7QHC

1841. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 20:40:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pkt53vku8qqfvo3640jl869bflp1cksu5a@4ax.com>
Source record: 126180

On Sat, 25 Jan 2003 10:22:21 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>Let`s eschew obfuscation. We certainly are keeping our objectivity and
>excercisibg care to not impugn or criticize, aren`t we?
>

Hi Richard,

I do see a lesson in self contradiction through passive aggression.

Where do you stand, with Cecil, Steve, or in between?

Is there any in between left, or is that a no man's land where both
sides can shoot the wounded?

73's
Richard Clark, KB7QHC

1842. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 21:03:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E32FB98.4010708@ieee.org>
Source record: 126181

Richard Clark wrote:
> I know you will respond, but I don't know why.

Well, the why is to correct an earlier response of mine. The posting
has disappeared from my server but it was a part of this thread.

> Dr. Best said:
>> Where we would disagree at this point, is if you come back and tell me that
>> the "100 W" of forward traveling power "lost" in the destructive
>> interference process somehow reverses direction and becomes a rearward
>> traveling power in the 50 ohm line, such that it "joins" or "adds" to the
>> "100 W and 25 W" of power already there to become the total 225 W of
>> rearward traveling power.

I replied:
"Why would I say that? It's just another one of your straw men. You incessantly
quote the 99 times that you have been right and completely ignore the one time
that you have been wrong."

I misread what Dr. Best said. The 100 joules/sec of forward traveling energy
lost in the destructive interference process does indeed become a rearward
traveling 100w energy component in the 50 ohm line. There is simply no other
choice of directions in a one dimensional transmission line. It indeed does
join the 100 joules/sec and 25 joules/sec predicted by the reflection model
to become 225 joules/sec of total energy. Funny how that works. Would you believe
that 100 joules/sec + 25 joules/sec + 100 joules/sec = 225 joules/sec? That's
not superposition. That's scalar addition of scalar values of energy passing a
point in a second. (End of any reference to Dr. Best.)
****
Here's a technical statement for you to chew on:
When two coherent waves traveling in the same direction in a lossless transmission
line undergo destructive interference at an impedance discontinuity in the transmission
line (distant from any source), nothing else is possible except for the destructive
interference
energy to reverse direction and become constructive interference energy in the opposite
direction,
i.e. be reflected. In the example we were discussing, 100 joules/sec of destructive
interference
on the right hand side of the impedance discontinuity does indeed become 100 joules/sec of
constructive interference on the left side traveling in the opposite direction.

I have known this for almost 50 years. Does anyone except you-know-who disagree with it?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1843. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 21:05:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E32FC05.7040803@ieee.org>
Source record: 126182

Richard Clark wrote:
> Where do you stand, with Cecil, Steve, or in between?

The question is: Why would anyone stand against the truth?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1844. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 21:18:27 UTC
From: zoran <zkorolje@inet.hr>
Message-ID: <b0uuudije1@bagan.srce.hr>
Source record: 126184
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

IC 706MKIIG - Powiekszenie

czesc tylna urzadzenia

ICOM - 706 MKIIG

Czestotliwosc:
RX: 0.030 - 199.999MHz, 400 - 470MHz
TX:
1.8 - 1.999 MHz*
3.5 - 3.999 MHz*
7.0 - 7.300MHz
10.1 - 10.150MHz
14.0 - 14.350MHz
18.068 - 18.168MHz
21.0 - 21.450MHz
24.89 - 24.990MHz
28.0 - 29.700MHz
50.0 - 54.000MHz
144.0 - 148.000MHz
430.0 - 450.000MHz
Emisje: USB, LSB, CW, RTTY (FSK), AM, FM, WFM (RX tylko)
Ilosc kom�rek pamieci:107
Impedancja anteny:50Ohm
Napiecie: 13.8V �15%
Stabilnosc czestotliwosci: �7ppm dla 1 min. do 60 min.
Pob�r pradu: TX max.20A; RX:1.8A, max. audio 2.0A
Temperatura otoczenia: -10�C do 60�C
Moc wyjsciowa: 100W/KF, 50W/2m, 20W/70cm.
Ciezar: 2.45kg
Wymiary: 16.7 x 5.8 x 20cm

Czulosc odbiornika (przedwzmacniacz wlaczony,
z wyjatkiem zakres�w 4 - 4.5MHz i 8 - 9MHz)

SSB/CW
10 dB S/N AM
10 dB S/N FM
12 dB SINAD WFM
12 dB SINAD
0.5 - 1.8 MHz - 13 �V - -
1.8 - 28 MHz 0.15 �V 2.0 �V - -
28 - 29.7 MHz 0.15 �V 2.0 �V 0.5 �V -
50 MHz band 0.12 �V 1.0 �V 0.25 �V -

76 - 108 MHz - - - 10.0 &#65533;V
144/440 MHz band 0.11 &#65533;V 1.0 &#65533;V 0.18 &#65533;V -

(Squelch) Czulosc:

SSB Less than 5.6 &#65533;V
FM Less than 0.3 &#65533;V

Selektywnosc:

SSB, CW, RTTY More than 2.4 kHz/- 6 dB
Less than 4.8 kHz/ -60 dB
AM/FM-N More than 8.0 kHz/-6 dB
Less than 30 kHz/-36 dB
FM More than 12 kHz/-6 dB
Less than 30 kHz/-60 dB

"Scott" <scott2rp789@netscape.net> wrote in message
news:3E315999.3DB4C6C2@netscape.net...
> Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
> 3 and 4 to get some line level audio from the rig. I could not believe
> my eyes when I got the 13 pin DIN - is there some trick to soldering to
> those pins? Or am I missing something here? Thanks - Scott.
>

1845. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 21:22:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <s1063vssoavejgtlr0b3t7oc5brthm8q2p@4ax.com>
Source record: 126183

On Sat, 25 Jan 2003 15:05:09 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Where do you stand, with Cecil, Steve, or in between?
>
>The question is: Why would anyone stand against the truth?

Hi Cecil,

So you intercept Richard's question to offer a loyalty oath?
-whoops another round over my head. Its a tough life out here in
between.

73's
Richard Clark, KB7QHC

1846. 75/80 meter dipole mounting?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 22:12:10 UTC
From: "Ron P." <rpackerii@neo.rr.com>
Message-ID: <_YDY9.53893$i73.12504085@twister.neo.rr.com>
Source record: 126185

I just bought a dipole for 75/80 meters, and I was wondering if I can put this up on a 30 foot tower (all I have available), and run one end to a garage (with a rope on an insulator) and the other end to the edge of my house. Will it matter if it is laying across the roof? It will be at about a 130 degree angle instead of a 180 degree. Any suggestions will be appreciated. Thanks!

Ron - kc8ulu

1847. Re: Dual Yagi questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 22:18:36 UTC
From: u127@hotmail.com
Message-ID: <299f8ff8.0301251418.19ae4cd1@posting.google.com>
Source record: 126186

Shall both Yagis be oriented vertically in order to give vertical polarization? And one mounted over the other on a common vertical mast tube?

Or shall both Yagis be oriented horisontally in order to give horisontal polarization? And one mounted over the other on a common vertical mast tube?

In any case, I have a 9 el Yagi for 2 m at a vertical distance of 70 cm above a 6 el Yagi for 70 cm. Both antennas are horizontally oriented and mounted on a common metal mast tube (DC grounding is important for lightning, electrostatic noisy rain, etc).

The vertical distance was chosen as a result of several exciting simulations I did using both Mininec and NEC-2 based simulation programs (there are several free NEC-2 based progs available, e.g. at http://www.qsl.net/wb6tpu/swindex.html). Using this vertical distance of 1.0 wavelenght for the highest frequency Yagi, I saw no impact on either

- gain
- F/B ratio
- VSWR

for any of the two Yagis.

But reducing the vertical distance to about 0.75 wavelengths (53 cm), the 70 cm Yagi performance was slightly affected in the simulations. Gain dropped about 1 dB, F/B ratio dropped about 5 dB (radiation diagram was distorted) and VSWR was degraded from 1.2 to about 1.4. The performance of the 2 m Yagi was unaffected, as the elements of the 70 cm Yagi is much smaller compared with the wavelength of the 2 m Yagi. I.e. the 70 cm 'sees' or 'senses' the presence of the 2 m Yagi, but the 70 cm Yagi is more or less 'invisible' to the 2 m Yagi. At least at this separation distance.

Just for fun, I further reduced the vertical distance in the simulations, just to find the performance of the 2 m Yagi started to degrade as well.

> I plan to mount a 70cm and a 2 meter Yagi on the same mast oriented
> vertically. How far apart should the antennas be to work properly wiath out
> inteferring with each other? Is the distance measured from the booms or
> from the ends of the radiators?

1848. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 22:24:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E330E85.2020602@ieee.org>
Source record: 126187

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>The question is: Why would anyone stand against the truth?
>
> So you intercept Richard's question to offer a loyalty oath?

Of course, a loyalty oath to the truth. Am I delusional to
assume that we all have taken a loyalty oath to the truth?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1849. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 23:29:58 UTC
From: tdonaly@aol.com
Message-ID: <20030125182958.03028.00000140@mb-mn.aol.com>
Source record: 126188

>
>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>The question is: Why would anyone stand against the truth?
>>
>> So you intercept Richard's question to offer a loyalty oath?
>
>Of course, a loyalty oath to the truth. Am I delusional to
>assume that we all have taken a loyalty oath to the truth?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

How can you guys argue theology in this fine, 68 degree
weather?
73,
Tom Donaly, KA6RUH

1850. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 23:56:58 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <r4863vka6ehbvnhi7fbbif6ni8r9monggu@4ax.com>
Source record: 126190

On Sat, 25 Jan 2003 15:03:20 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> I know you will respond, but I don't know why.
>
>Well, the why is to correct an earlier response of mine.

Hi Cecil,

So now I suppose I should know; but you've forgotten that for me to conform to the poltroon that you've painted me, that is a very high achievement that you would offer I am incapable of performing. (rhetorical) And having to fulfill the base ignorance required of a private in this army of two - why you would wonder or ask of me about these matters is a source of amazement. (rhetorical) I don't recall getting a promotion to corporal; alas, another failure of attention no doubt. (rhetorical)

My last glimmer of intelligence (it's slipping fast to allow for unmeaningful dialog here) is spent in my own self criticism for having not marked the passage above as rhetorical too (wan't a question in the first place - it was a statement of fact that remains in full force). (rhetorical) Live and learn. (rhetorical)

I am glad to see that I serve some useful purpose beyond latrine duty. (rhetorical) Please post through me to batter Steve any time. (rhetorical)

73's (rhetorically)
Richard Clark, KB7QHC (rhetor)

1851. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-25 23:59:27 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <rt863vg548qllas0qnn6e428lfvid7lj0k@4ax.com>
Source record: 126191

On 25 Jan 2003 23:29:58 GMT, tdonaly@aol.com (Tdonaly) wrote:

|>
|>Richard Clark wrote:
|>
|>> <Cecil.A.Moore@ieee.org> wrote:
|>>>The question is: Why would anyone stand against the truth?
|>>
|>> So you intercept Richard's question to offer a loyalty oath?
|>
|>Of course, a loyalty oath to the truth. Am I delusional to
|>assume that we all have taken a loyalty oath to the truth?
|>--
|>cheers, CAM http://www.qsl.net/w5dxp
|>
|
|How can you guys argue theology in this fine, 68 degree
|weather?

It's 79 in Tucson and the nubile females are already out in their
shorts and halter-tops. Life is good.

1852. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 00:04:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pa963vgsqgnc2pl20dob54qllkh1ju9h88@4ax.com>
Source record: 126192

On Sat, 25 Jan 2003 16:24:05 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>The question is: Why would anyone stand against the truth?
>>
>> So you intercept Richard's question to offer a loyalty oath?
>
>Of course, a loyalty oath to the truth. Am I delusional to
>assume that we all have taken a loyalty oath to the truth?

Hi Cecil,

Sounds good to me, Generalissimo, you sending me a replacement out
here in no-man's-land? - whoops another round off my helmet....

Medic!

That was no good, he got nailed too. Life is tough in between.

73's
Richard Clark, KB7QHC

1853. Re: 160m Hamstick, PHF-160

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 00:11:59 UTC
From: jgboyles@aol.com
Message-ID: <20030125191159.19807.00000305@mb-cj.aol.com>
Source record: 126193

>Gary,
> You might be suprized at the amount of 'cancelation'
>you'll get. Try it and see (LOL).
> 'Doc

That's true, I have tried it. 160M mobile antennas have a lot of signal loss due to extremely low efficiency. I don't know if one can tell if the loss is from poor efficiency, or different wound loading coils causing 'cancelation'.
:-)
73 Gary N4AST

1854. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 00:24:44 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E332B1D.DBD59492@att.net>
Source record: 126194

Cecil,

I disagree with your chewy statement.

The obvious reason for my disagreement is that your statement is meaningless. How do two coherent waves traveling in the same direction in a lossless transmission line suddenly decide to undergo destructive interference? What is there about a discontinuity that causes the two waves to decide to interfere?

You have said many times that this is a one dimensional problem. If the two waves are traveling together in the same direction, as posed below, then they are already combined through linear superposition. It is utter nonsense to say that somehow these two waves remember their respective histories when they encounter the discontinuity.

Don't bother to try to explain interference. Interference is a real phenomenon. It simply is meaningless in your example.

Bart said it exactly correctly the other day. The only way one can deal with energy in a transmission line is when the total vector sum voltage and the total vector sum current at a point are considered. Bart called the subcomponents of voltage and current "imaginary", although perhaps a better word might be "arbitrary". It does not make sense to try to assign energy to these subcomponents, since they are only mathematical, not physical.

73,
Gene
W4SZ

OC_CAM's Razor wrote:

> Here's a technical statement for you to chew on:
> When two coherent waves traveling in the same direction in a lossless transmission
> line undergo destructive interference at an impedance discontinuity in the transmission
> line (distant from any source), nothing else is possible except for the destructive
interference
> energy to reverse direction and become constructive interference energy in the opposite
direction,
> i.e. be reflected. In the example we were discussing, 100 joules/sec of destructive
interference
> on the right hand side of the impedance discontinuity does indeed become 100 joules/sec
of
> constructive interference on the left side traveling in the opposite direction.
>
> I have known this for almost 50 years. Does anyone except you-know-who disagree with it?

> --
> cheers, CAM http://www.qsl.net/w5dxp

1855. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 00:30:14 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <e5b63vo2li6tdl08g0m2qhshu9vqe2vmpg@4ax.com>
Source record: 126195

On 25 Jan 2003 23:29:58 GMT, tdonaly@aol.com (Tdonaly) wrote:

>>
>>Richard Clark wrote:
>>
>>> <Cecil.A.Moore@ieee.org> wrote:
>>>>The question is: Why would anyone stand against the truth?
>>>
>>> So you intercept Richard's question to offer a loyalty oath?
>>
>>Of course, a loyalty oath to the truth. Am I delusional to
>>assume that we all have taken a loyalty oath to the truth?
>>--
>>cheers, CAM http://www.qsl.net/w5dxp
>>
>
>How can you guys argue theology in this fine, 68 degree
>weather?
>73,
>Tom Donaly, KA6RUH

Hi Tom,

I shouldn't have to repeat this from Seattle: Raining. Duh.

73's
Richard Clark, KB7QHC

1856. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 00:35:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E332D60.4090601@ieee.org>
Source record: 126196

Tdonaly wrote:
> How can you guys argue theology in this fine, 68 degree
> weather?

Where the heck are you, Tom? It's freezing here in
East Texas.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1857. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 00:40:36 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <88GY9.65345$4j5.10560403@newssvr28.news.prodigy.com>
Source record: 126189

I see what you mean, Dave. It's kind of a moot point since the 141 is easily in my price range (<$1000) and the others really aren't...and I don't need portability. There is a plugin for the 141 series that looks like a good bet...the 8554B covers 100 KHz to 1250 MHz...but it is much rarer to find than the 8553B. I'm not too concerned about audio freqs, but I could always get the plugin for that if I needed it.

73,
Larry N8LP
www.telepostinc.com/n8lp.html

"DaveArea51" <davearea51@aol.com> wrote in message
news:20030125134902.05355.00000167@mb-fz.aol.com...
> Not necessarily. The 8559A has 1 kHz as the narrowest bandwidth. Its
been so
> long since I've used the 141T that I don't remember that one. The one
thing I
> didn't like about the 141T is that there is another plug-in needed above
110
> MHz. I do not use mine much for HF, so that always seemed rather awkward
to
> me. However, the performance-to-$$$ ratio for the 141T can't be beaten.
Also,
> I never looked at the noise characteristics of the 141T.
> Phase locking can be a doubled-edged blessing. Certainly the LO is more
stable
> but the down side is that many times a phase locked oscillator is not as
clean
> as a free-running oscillator. That's due to the digital noise and jitter
> introduced by the servo circuitry. For our purposes, however, any of the
> modern, ANALOG, SA's are relatively good. There is no doubt the 8559A
drifts,
> especially on the narrower spans. However, its not much of an issue for
me as
> I'm usually looking at modulation characteristics in the narrow
bandwidth/span
> modes. The signal doesn't need to remain at screen center for hours on
end.
> Everything is a trade-off, but there are some good ones to be had at
affordable
> prices. I still would stay clear of the 8590, though.
>
> Dave - W0LEV

1858. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 00:52:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <adb63v4212lqukpurelljmeub2dva3j2i2@4ax.com>
Source record: 126197

On Sun, 26 Jan 2003 00:40:36 GMT, "Larry Phipps"
<larry@telepostinc.com> wrote:

>
>I see what you mean, Dave. It's kind of a moot point since the 141 is
>easily in my price range (<$1000) and the others really aren't...and I don't
>need portability. There is a plugin for the 141 series that looks like a
>good bet...the 8554B covers 100 KHz to 1250 MHz...but it is much rarer to
>find than the 8553B. I'm not too concerned about audio freqs, but I could
>always get the plugin for that if I needed it.
>
>---
>73,
>Larry N8LP
>www.telepostinc.com/n8lp.html
>

Hi guys,

The H.P. 3562 Audio Spectrum Analyzer is far more suitable for AF
(stereo even). Although, having worked on it only 17-16 years ago, it
is probably too dear (I don't see it offered at ebay for instance).
Or it may be used as ballast seeing that sound cards and FFT software
has pretty much collapsed that market.

1,000,000 lines of Pascal code in that machine.

10 years before that, I saw many HP, Tek, Cushman, Marconi, B&K, and
other spectrum analyzers come across my bench for calibration. Never
saw one that couldn't be pulled into spec. as far as HP or Tek went.
The others were variable and generally limping along on off-the-shelf
components at the time. Woe unto those who have to fix anything.
It's like that same generation of Tek scopes that took 4 hours to
change a knob scale light bulb.

Also reminds me of my visit to WESCON in 'Frisco back in '69 where the
darling equipment was color O'scopes. They were everywhere on display
(them and hugely expensive samples of LEDs), now they are nowhere (and
LEDs are everywhere).

73's
Richard Clark, KB7QHC

1859. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 00:53:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E333199.7060806@ieee.org>
Source record: 126198

Gene Fuller wrote:
> Cecil,
>
> I disagree with your chewy statement.
>
> The obvious reason for my disagreement is that your statement is
> meaningless. How do two coherent waves traveling in the same direction
> in a lossless transmission line suddenly decide to undergo destructive
> interference? What is there about a discontinuity that causes the two
> waves to decide to interfere?

These are the two waves described in Dr. Best's article as "rearward-traveling waves 1 and 2". In that example, they are Pfwd1(Rho^2) and Pref2(1-Rho^2) which are equal in magnitude and opposite in phase. Dr. Best says those waves are canceled. That's just another name for destructive interference. Those two waves originate at the impedance discontinuity and are immediately canceled.

> You have said many times that this is a one dimensional problem. If the
> two waves are traveling together in the same direction, as posed below,
> then they are already combined through linear superposition. It is utter
> nonsense to say that somehow these two waves remember their respective
> histories when they encounter the discontinuity.

These waves were invented by Dr. Best and described in his QEX article. Have you read the article? They are Pfwd1(Rho^2) superposed with Pref2(1-Rho^2). If you reject those waves, you are rejecting Dr. Best's transmission line model.

> Don't bother to try to explain interference. Interference is a real
> phenomenon. It simply is meaningless in your example.

Given Dr. Best's wave reflection model, I think I can convince you otherwise.

> It does not make sense to try to
> assign energy to these subcomponents, since they are only mathematical,
> not physical.

In Dr. Best's QEX article, his P1 and P2 are *calculated* power values, i.e. mathematical, not physical.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1860. Re: Clip-on RF Ammeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 01:20:17 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <Kc2cncnS9Opcqq6jXTWcpQ@comcast.com>
Source record: 126199

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v2p87m2d500df0@corp.supernews.com...
> Begin with a high-permeability (Fair-Rite/Amidon type 43 or 70 series or
> equivalent) split ferrite core. ....

BTW, Surplus Sales of Nebraka has .5 in hinged 43 type beads. There was an earlier posting on this where somebody was having trouble finding cores big enough for RG8 type coax.

Tam/WB2TT

1861. Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 01:24:23 UTC
From: Jeremy Taylor <ng@NOpounamuSPAM.com>
Message-ID: <dJGY9.1969$7O1.379681@news02.tsnz.net>
Source record: 126200

Hi there
I am trying to find some information on velocity factors as they relate to various metals as used in antenna construction - not in coax.

Is this directly related to resistivity? I think there is also a relationship to thickness of conductor?

I'm trying to figure out the optimal dimensions for elements in some antenna designs with different materials, 1/8" ss, 6.25mm al rod, 9mm al tube, 12 AWG copper, and so on - especially so I can translate some designs as I find them on the internet so as to apply them to materials I have ready to hand.

Can anyone provide some advice in this regard, so I can figure out how long a 1/4 wave (for instance) is in various materials?

Regards
Jeremy

1862. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 01:37:57 UTC
From: davearea51@aol.com
Message-ID: <20030125203757.03197.00000242@mb-cr.aol.com>
Source record: 126201

Hey, Richard, since you worked on the 3562, did you know anyone who worked on the 3585, the "DC" to 40 MHz, unit in Loveland? One specifically, Bob Scheib, WA0EYJ, who I worked with until me and Carly had a "mutual parting" of the ways.

Dave - W0LEV

1863. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 02:07:51 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8sg63vgg943ef4g81kg5mc33pvrs2gl6io@4ax.com>
Source record: 126202

On 26 Jan 2003 01:37:57 GMT, davearea51@aol.com (DaveArea51) wrote:

>Hey, Richard, since you worked on the 3562, did you know anyone who worked on
>the 3585, the "DC" to 40 MHz, unit in Loveland? One specifically, Bob Scheib,
>WA0EYJ, who I worked with until me and Carly had a "mutual parting" of the
>ways.
>
>Dave - W0LEV

Hi Dave,

The 3562 was designed and built in Marysville/Lake Stevens Washington.

73's
Richard Clark, KB7QHC

1864. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 02:09:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b0vfvu$r1u$1@helle.btinternet.com>
Source record: 126203

In the whole of my experience I have never heard or read such a load of ridiculous so-called technical gobbledegook generated by so-called professionals of one sort and another.

It puts old-wives' tales into the shade.

If any of you should manage to make a living out of such poppycock then you should be sued in the law courts for dishonestly obtaining money under false pretences.

Kids living in the sewers, selling heroin in the streets of American cities, make more sense.

Shame on the lot of you !

--
==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E333199.7060806@ieee.org...
> Gene Fuller wrote:
> > Cecil,
> >
> > I disagree with your chewy statement.
> >
> > The obvious reason for my disagreement is that your statement is
> > meaningless. How do two coherent waves traveling in the same direction
> > in a lossless transmission line suddenly decide to undergo destructive
> > interference? What is there about a discontinuity that causes the two
> > waves to decide to interfere?
>
> These are the two waves described in Dr. Best's article as "rearward-
> traveling waves 1 and 2". In that example, they are Pfwd1(Rho^2) and
> Pref2(1-Rho^2) which are equal in magnitude and opposite in phase. Dr.
> Best says those waves are canceled. That's just another name for
> destructive interference. Those two waves originate at the impedance
> discontinuity and are immediately canceled.
>
> > You have said many times that this is a one dimensional problem. If the
> > two waves are traveling together in the same direction, as posed below,
> > then they are already combined through linear superposition. It is utter
> > nonsense to say that somehow these two waves remember their respective
> > histories when they encounter the discontinuity.

>
> These waves were invented by Dr. Best and described in his QEX article.
> Have you read the article? They are Pfwd1(Rho^2) superposed with
> Pref2(1-Rho^2). If you reject those waves, you are rejecting Dr. Best's
> transmission line model.
>
> > Don't bother to try to explain interference. Interference is a real
> > phenomenon. It simply is meaningless in your example.
>
> Given Dr. Best's wave reflection model, I think I can convince you
> otherwise.
>
> > It does not make sense to try to
> > assign energy to these subcomponents, since they are only mathematical,
> > not physical.
>
> In Dr. Best's QEX article, his P1 and P2 are *calculated* power values,
> i.e. mathematical, not physical.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1865. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 02:25:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E334734.3010600@ieee.org>
Source record: 126204

Reg Edwards wrote:
> In the whole of my experience I have never heard or read such a load of
> ridiculous so-called technical gobbledegook generated by so-called
> professionals of one sort and another.
>
> It puts old-wives' tales into the shade.
>
> If any of you should manage to make a living out of such poppycock then you
> should be sued in the law courts for dishonestly obtaining money under false
> pretences.

So Reg, how would you go about producing a rebuttal of a 24 page article published by the ARRL in QEX? I don't think they would accept "technical gobbledygook" as a rebuttal.

The QEX article is based on the wave reflection model and the superposition theorem. Are you ready and able to discredit the wave reflection model and the superposition theorem?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1866. Re: 75/80 meter dipole mounting?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 02:50:24 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E334CF0.A9726943@cwis.net>
Source record: 126205

Ron,
The only part of that which would not be the 'best'
idea in the world is where part of the antenna lays
on the roof. If there were some way of preventing
that, I think it would work out better. Since mounting
a 80 meter antenna is a 'compromise' for the majority
of people, yours shouldn't be any worse than most others.
'Doc

1867. Re: 160m Hamstick, PHF-160

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 02:54:40 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E334DF0.3734AB52@cwis.net>
Source record: 126206

Gary,
It's pretty easy to tell, just use an upper 'whip'
that's wound in the same direction as the 'screwdriver'
coil. Makes a huge difference, and not just on 160m.
'Doc

1868. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 03:00:44 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rri63vctskf9p88hna8oa9k1am76o4jdjk@4ax.com>
Source record: 126207

On Sat, 25 Jan 2003 20:25:56 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>QEX? I don't think they would accept "technical
>gobbledygook" as a rebuttal.

Hi Cecil,

How could they tell the difference? According to you, repeatedly,
that is just how you started this when they did just that. :-)

The appraisals come rolling in from the hinterlands:
>>Kids living in the sewers, selling heroin in the streets of American cities,
which is not to far off the mark of my original comment to the
technical competency of a vanity rag. What did they do in between
(whoops another round singing by), fire the staff to replace them with
higher calibre technical referees to usher your magnum opus in?

You dance around this like Fred Astaire. Clearly, even you act like
neither merit nor accuracy are their hallmark. Perhaps you can invite
one of those editors (apparently a polite term or artifice like the
era when whores were called seamstresses) to offer some insight into
their selection process. Or perhaps this evokes outrage at having
slighted your favorite editor with a heart of gold. Nothing like the
fulfillment of a good cliche.

73's
Richard Clark, KB7QHC

1869. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 04:02:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b0vmkg$4cd$1@helle.btinternet.com>
Source record: 126208

> So Reg, how would you go about producing a rebuttal of a 24 page article
> published by the ARRL in QEX?
==========

Dear Cecil,

If you insist on continueing with a sensible logical argument then perhaps you should go back to square one and define precisely who or what or why is ARRL and QEX. Otherwise it must be assumed the poppycock propagating through this newsgroup originates from these sources.

Or do you think another page, making 25 pages, would have clinched the matter ?

Cheers, Reg.

1870. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 04:20:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E33620E.7040801@ieee.org>
Source record: 126209

Reg Edwards wrote:
> Otherwise it must be assumed the poppycock propagating
> through this newsgroup originates from these sources.

Well, the canceled "rearward-traveling waves 1 and 2" indeed do originate from the QEX article as does the following statement: "... the forward source power of 92.831 W combines in-phase with the re-reflected power of 0.55 W, resulting in a total forward-traveling power of 107.736 W." Also: "A total re-reflection of power at the match point is not necessary for the impedance match to occur."

Does that sound like poppycock to you?

> Or do you think another page, making 25 pages, would have clinched the
> matter ?

Actually, the first two installments of about 16 pages were superb.
I have never read a better explanation of the wave reflection model.
All my objections involve "Part 3"
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1871. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 04:52:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E33699F.5080303@ieee.org>
Source record: 126210

Gene Fuller wrote:
> Cecil,
>
> I disagree with your chewy statement.
>
> The obvious reason for my disagreement is that your statement is
> meaningless. How do two coherent waves traveling in the same direction
> in a lossless transmission line suddenly decide to undergo destructive
> interference? What is there about a discontinuity that causes the two
> waves to decide to interfere?

And Gene, I forgot to add this. What I described earlier is exactly what happens at the thin film coating on non-glare glass. Two coherent waves traveling in the same direction undergo destructive interference because they are 180 degrees out of phase. The same thing happens at a match point in a transmission line where the E and H fields ideally go to zero. Hope this helps you understand what I was saying earlier.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1872. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 05:24:49 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b0vrf0$63l$1@venus.btinternet.com>
Source record: 126212

Cecil, please consider the reference to Fred Astair to be a compliment. That he was the finest male dancer ever produced by Hollywood is beyond dispute. He was there during Hollywood's finest years. Amongst his leading ladies my favourite was and still is Ginger Rogers.

I didn't realise at the time the film directors made the performers repeat, repeat again and again, complete dancing scenes till perfect - a complete performance without the slightest error - the cameras must not stop - so perfect a performance the blisters inside their dancing shoes burst and blood overflowed to the floor. When watching the old films - "Top Hat" for example - the perfection of performance brings tears to my eyes.

Our own exports to Hollywood were Charlie Chaplin, Laurel & Hardy, and that interminable fellow who didn't wear tight underpants.

In his later years Cary Grant received a telegram from a fan asking "HOW OLD CARY GRANT STOP".

He replied "OLD CARY GRANT FINE STOP HOW YOU.

Reg.

1873. Re: 75/80 meter dipole mounting?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 05:27:20 UTC
From: kd1jt@arrl.net
Message-ID: <3e3370f6.189159650@news.mindspring.com>
Source record: 126211

On Sat, 25 Jan 2003 22:12:10 GMT, "Ron P." <rpackerii@neo.rr.com>
wrote:

>I just bought a dipole for 75/80 meters, and I was wondering if I can put
>this up on a 30 foot tower (all I have available), and run one end to a
>garage (with a rope on an insulator) and the other end to the edge of my
>house. Will it matter if it is laying across the roof? It will be at about a
>130 degree angle instead of a 180 degree. Any suggestions will be
>appreciated. Thanks!

The angle is fine, and might even get gain in some unexpected
directions (grin!). I don't think I'd like to have the antenna
touching the roof, but if you mean just going *over* the roof (not
touching) that would be fine.

Dennis
FLHR

1874. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 05:36:08 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E337419.3CA5D2B2@att.net>
Source record: 126213

Cecil,

I spent my entire career in R&D and applications of advanced optical systems. I am quite familiar with optical phenomena.

Your explanation of non-glare glass is interesting handwaving, but it is basically gobbledygook.

I suggest you take a look at something like Born and Wolf "Principles of Optics" instead of the "Golden Book of Science" if you really want to understand this stuff. Born and Wolf go through an extensive treatment of wave propagation in layered dielectrics, including "non-glare glass". Never once is interference mentioned, as it is not needed. Interference is great for simple explanations, but it does not help in the detailed analysis.

And yes, I did read the QEX articles, all three of them. And I agree with Steve. Since the unruly components are merely mathematical niceties it is not necessary that the truly fictitious energy content in these mathematical subcomponents somehow follows Cecil's enhanced law of energy conservation.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Cecil,
> >
> > I disagree with your chewy statement.
> >
> > The obvious reason for my disagreement is that your statement is
> > meaningless. How do two coherent waves traveling in the same direction
> > in a lossless transmission line suddenly decide to undergo destructive
> > interference? What is there about a discontinuity that causes the two
> > waves to decide to interfere?
>
> And Gene, I forgot to add this. What I described earlier is exactly what
> happens at the thin film coating on non-glare glass. Two coherent waves
> traveling in the same direction undergo destructive interference because
> they are 180 degrees out of phase. The same thing happens at a match point
> in a transmission line where the E and H fields ideally go to zero. Hope
> this helps you understand what I was saying earlier.
> --

> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1875. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 06:28:12 UTC
From: richardharrison@webtv.net
Message-ID: <27287-3E337FFC-75@storefull-2312.public.lawson.webtv.net>
Source record: 126214

Reg Edwards wrote:
"That he (Fred Astaire) was the finest dancer ever produced by Hollywood is beyond dispute."

Yes, but Fred did have competition. Gene Kelly and several others weren`t bad. Fred wanted to sing and did well at it.

Hollywood has always been full of Brits. Most famed male has to be Bob Hope. Most well known female in every sense must be Liz Taylor. Hope was a dancer but won fame as a comedian.

We are fortunate that the people who made the great movies often had many talents.

Best regards, Richard Harrison, KB5WZI

1876. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 09:03:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o6773vkgkgfdd096a2rlqqafil30p26l30@4ax.com>
Source record: 126215

On Sun, 26 Jan 2003 00:28:12 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>Yes, but Fred did have competition. Gene Kelly and several others
>weren`t bad. Fred wanted to sing and did well at it.
>
>Hollywood has always been full of Brits.

Hi Richard,

This must include Donald O'Connor, or Jimmy Cagney too.

As for Brits in Hollywood, they contributed much, but were hardly the
only expats to make a success. Russians, Germans, Austrians (Hedy
Lamar, co-inventor of Spread Spectrum), French, Spanish, Italian,
Polish, etc. just to cover one continent without adequate depth.

to make up for that international short fall, at:
http://home.attbi.com/~film-reviews/SIFF95/index.htm
I offer a short review of some several dozen movies that played here
one month for our local Film Festival (the largest in the world, with
at least 160 titles each shown twice through a varied schedule in 5
theaters over a spread of 5 to 6 weeks in late Spring).
At a related page:
http://home.attbi.com/~film-reviews/salon/Genres/index.htm
I go to cover the genres of film common to that era (WWII and before)
or at:
http://home.attbi.com/~film-reviews/salon/Director/index.htm
offering critical comments of directors with selected titles of
interest; or if reading is more your taste (and it happens to find its
way to the screen, thus converging on my two degrees) I have:
http://home.attbi.com/~film-reviews/salon/Writer/index.htm
As my taste in this venue runs to rather gritty detective novels often
considered the trash of their time, it may not suit most tastes here.
I don't offer much here except a suggested reading list which I will
impart slightly (all books in my library):
Fredric Brown, "His Name Was Death." "Murder Can Be Fun," "The
Lenient Beast" (La Bï¿½te de misï¿½ricorde, Jean-Pierre Mocky, 2001), "The
Fabulous Clipjoint", "The Far Cry," "The Screaming Mimi "(L'Uccello
dalle piume di cristallo)

David Goodis, "The Burglar," "Black Friday" (Renï¿½ Clï¿½ment, La Course
du liï¿½vre ï¿½ travers les champs) "Cassidy's Girl." "Nightfall,"
"Night Squad," "Shoot the Piano Player" (Francois Truffaut)

Peter Rabe, "Kill the Boss Good-Bye"

Roger Torrey, "42 Days for Murder"

B. Traven, "The Treasure of the Sierra Madre"

Armitage Trail, "Scarface"

Most serendipitous to have just finished viewing Fellini's "Juliet of the Spirits" before posting this. This is a most interesting film, dense in symbolism (allows me to follow such folderol as this reflected "power" silliness) and definitely NOT for the average American (nor Brit, I would ponder) taste, which in this day and age is rather bland if it doesn't run to cloying saccharine.

73's
Richard Clark, KB7QHC, past President of the Seattle Film Society

1877. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 09:58:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v37c9tl2suhe8f@corp.supernews.com>
Source record: 126216

The E and H fields go to zero at a match point? It's easy to show that anywhere along a (lossless, for simplicity) flat line, including at its ends (where a match point can occur), I = V/Z0, and V^2/Z0 = P, where P is the net power. So neither I nor V is zero at the match point. Where I come from, you can't have V and I without E and H. So how can E and H be zero at a match point when V and I clearly aren't?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:

>. . .
> . . . The same thing happens at a match point
> in a transmission line where the E and H fields ideally go to zero. Hope
> this helps you understand what I was saying earlier.

1878. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 10:01:41 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <W65j3NCFI7M+EAgV@ifwtech.co.uk>
Source record: 126217

OC_CAM's Razor wrote:
>Well, the canceled "rearward-traveling waves 1 and 2" indeed do originate
>from the QEX article as does the following statement: "... the forward
>source power of 92.831 W combines in-phase with the re-reflected power
>of 0.55 W, resulting in a total forward-traveling power of 107.736 W."

I just went into the QEX CD-ROM to find the exact quotation from
VE9SRB's article. Here is the *full* quotation (copied and pasted
directly):

"In this case, the forward source power of 92.831 W combines in-phase
with the re-reflected power of 0.555 W, resulting in a total
forward-traveling power of 107.736 W. Again, it is significant to notice
that this "addition" of power is determined entirely from the vector
addition of forward voltage and current. It must be understood that it
is really the two forward voltages and currents
that combine, rather than the two forward powers."

CAM's quotation is 'partial' in every sense.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1879. MA5V

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 11:26:41 UTC
From: David Hawkins <dthawk@attbi.com.NOSPAM>
Message-ID: <RBPY9.39985$VU6.35107@rwcrnsc52.ops.asp.att.net>
Source record: 126218

Anyone using the Cushcraft MA5V ?

I thinking of getting one for my small backyard. I hear it requires NO ground radials. How does it perform? I like to get back on HF and this seems to be the ideal choice.

David
KB5WK

1880. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 12:18:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E33D204.6060000@ieee.org>
Source record: 126219

Reg Edwards wrote:
> Cecil, please consider the reference to Fred Astair to be a compliment. That
> he was the finest male dancer ever produced by Hollywood is beyond dispute.

Thanks Reg, but I'll bet Fred didn't have torn ACL's like I do.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1881. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 12:47:16 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E33D8D4.5040404@ieee.org>
Source record: 126220

Gene Fuller wrote:
> Never once is interference mentioned, as it is not needed. Interference
> is great for simple explanations, but it does not help in the detailed
> analysis.

So how do they obtain the non-glare wave cancellation without destructive interference? Isn't the goal to collapse the reflected E and H fields to zero? Isn't that destructive interference of EM waves? "A rose by any other name ..."

> And yes, I did read the QEX articles, all three of them. And I agree
> with Steve.

Too bad. How did you resolve the following contradiction from the article?

> The article ends with:
>> A total re-reflection of power at the match point is not necessary
>> for the impedance match to occur.

If a total re-reflection of reflected energy at the match point doesn't occur, reflected energy will be incident upon the source and the system is therefore NOT matched, by definition. By definition, a necessary prerequisite for the existence of a match is the absence of reflected energy incident upon the source. If the reflected energy is not incident upon the source and is not incident upon the load, where did those microjoules of energy go after they were delivered to the transmission line by the source and rejected by the unmatched load?

The QEX article relied extensively on the validity of the wave reflection model. If the wave reflection model is not valid, then neither is the QEX article.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1882. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 12:57:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E33DB27.9090006@ieee.org>
Source record: 126221

Roy Lewallen wrote:
> The E and H fields go to zero at a match point?

Roy, the context was the "rearward-traveling waves 1 and 2" from
the QEX article and the rearward-traveling reflected waves from
non-glare glass.

THE E AND H FIELDS OF THE REARWARD-TRAVELING WAVES GO TO ZERO AT
A MATCH POINT, BY DEFINITION. If they don't go to zero, reflected
energy is incident upon the source and the system is mismatched,
by definition. How exactly, can you have the rearward-traveling
E and H waves not go to zero without having reflected energy
incident upon the source?

> OC_CAM's Razor wrote:
>> . . . The same thing happens at a match point
>> in a transmission line where the E and H fields ideally go to zero. Hope
>> this helps you understand what I was saying earlier.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1883. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 13:32:44 UTC
From: richardharrison@webtv.net
Message-ID: <4703-3E33E37C-92@storefull-2311.public.lawson.webtv.net>
Source record: 126222

Richard Clark, KB7QHC wrote:
"Where do you stand, with Cecil, Steve, or in between?"

Why of course like the Lone Ranger, I stand on the side of "Truth and Justice".

Best regards, Richard Harrison, KB5WZI

1884. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 13:46:59 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E33E6D3.20907@ieee.org>
Source record: 126223

Ian White, G3SEK wrote:
> OC_CAM's Razor wrote:
>> Well, the canceled "rearward-traveling waves 1 and 2" indeed do originate
>> from the QEX article as does the following statement: "... the forward
>> source power of 92.831 W combines in-phase with the re-reflected power
>> of 0.55 W, resulting in a total forward-traveling power of 107.736 W."
>
> I just went into the QEX CD-ROM to find the exact quotation from
> VE9SRB's article. Here is the *full* quotation (copied and pasted
> directly):

Ian, I resent the implication that I misquoted the article. The additional quotation adds absolutely nothing to explain or justify the violation of the conservation of energy principle.

> "In this case, the forward source power of 92.831 W combines in-phase
> with the re-reflected power of 0.555 W, resulting in a total
> forward-traveling power of 107.736 W. Again, it is significant to notice
> that this "addition" of power is determined entirely from the vector
> addition of forward voltage and current. It must be understood that it
> is really the two forward voltages and currents
> that combine, rather than the two forward powers."

Thanks for publishing that contradiction. How do you and the author justify the following:

1. "The forward source power ... combines in-phase with the re-reflected power ..."

2. "... it is really the two forward voltages and currents that combine, rather than the two forward powers."

So do the powers combine or don't they? You guys simply cannot have it both ways.

Again, this just illustrates the author's violation of the conservation of energy principle. Never mind that it is impossible to "combine power in-phase" since power is a scalar and doesn't possess phase. He is saying that two *and only two* waves combine to achieve an energy level greater that the sum of the energy components in the two *and only two* waves. That is obviously a violation of the conservation of energy principle.

You simply cannot take two *and only two* energy components and obtain a summed energy greater than the sum of the energy components. If you can do that, you can supply free energy to the entire world with perpetual motion left over.

Additional energy is being supplied to the combination of those two waves
and that energy is from constructive interference. When the phase angle
between two superposed voltage phasors is less than 90 degrees, there
exists constructive interference, by definition. When the phase angle
between two superposed voltage phasors is greater than 90 degrees, there
exists destructive interference, by definition. Isn't that taught in EE
anymore? If the two voltages being superposed on one side of the impedance
discontinuity have a phase angle of theta between them, the two voltages
on the other side will have a phase angle of theta minus 180 degrees.
If there is constructive interference on one side, there will be an equal
magnitude of destructive interference on the other side (assuming the
impedance discontinuity is separated from the source by a transmission
line.)

The energy components indeed do combine as scalar values and in the QEX
article, they just don't add up. Additional energy is required from a source
other than the two waves being superposed. Where does the additional energy
come from?

In the above quote from the QEX article, there is 14.35 joules/sec being
supplied as constructive interference energy from the 14.35 joules/sec
of destructive interference occurring on the other side of the impedance
discontinuity. Why does the QEX author completely ignore what is happening
on the other side of the impedance discontinuity? The laws of physics
require that energy must be conserved across that junction.

> CAM's quotation is 'partial' in every sense.

There was no attempt to disguise anything. As you can see, the additional
material you quoted just strengthens my energy conservation case. Thanks
for providing that glaring contradiction above.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1885. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 13:56:35 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <hORY9.27$Xq4.14420@news20.bellglobal.com>
Source record: 126224

"Jeremy Taylor"
> ...velocity factors as they relate
> to various metals...

The velocity factor of any medium is related to its inductance and capacitance per unit length. I don't believe that resistance enters into it (although perhaps the R could replace the L somewhat, you would still need to account for the C). Even a pure vacuum (good insulator) has a velocity factor: 'c', usually normalized to one for Vf.

For your purposes, you don't need to account for the conductivity of various metals.

Interesting question. I predict that this thread will be 1.2m long before it is done.

1886. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 14:02:19 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Cfy2ObBrp+M+EAQM@ifwtech.co.uk>
Source record: 126241

OC_CAM's Razor wrote:
>Ian White, G3SEK wrote:
>> OC_CAM's Razor wrote:
>>> Well, the canceled "rearward-traveling waves 1 and 2" indeed do originate
>>> from the QEX article as does the following statement: "... the forward
>>> source power of 92.831 W combines in-phase with the re-reflected power
>>> of 0.55 W, resulting in a total forward-traveling power of 107.736 W."
>> I just went into the QEX CD-ROM to find the exact quotation from
>>VE9SRB's article. Here is the *full* quotation (copied and pasted
>>directly):
>
>Ian, I resent the implication that I misquoted the article. The additional
>quotation adds absolutely nothing to explain or justify the violation
>of
>the conservation of energy principle.
>
>> "In this case, the forward source power of 92.831 W combines in-phase
>>with the re-reflected power of 0.555 W, resulting in a total
>>forward-traveling power of 107.736 W. Again, it is significant to
>>notice that this "addition" of power is determined entirely from the
>>vector addition of forward voltage and current. It must be understood
>>that it is really the two forward voltages and currents
>> that combine, rather than the two forward powers."

You repeatedly quote only the part that looks wrong, and repeatedly omit
his next sentence that explains why.

In my book, that's deliberate misquotation, and it does you no credit.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1887. Re: 75/80 meter dipole mounting?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 14:46:02 UTC
From: "Ron P." <rpackerii@neo.rr.com>
Message-ID: <KwSY9.55598$i73.13313502@twister.neo.rr.com>
Source record: 126225

Unfourtunately, my tower is at the front/side of the house, so I don't have anything to tie it to in front. I "eye-ball" measured 66.5 feet and it would either A: lay on the roof or B: have to have something to stand it off from the front of the house. with little to no slope. To the rear, it would have to go straight over the roof (same problem, tower is 35 feet, house is 30) and then angle down to the tie-off from there. I wonder if I could hang it from the corner of the house, where I would have a clear shot to 2 points. Only problem is, it would run directly beside aluminum siding and part of the 2nd floor (RFI). Sheesh...back to the drawing board.....

Ron - kc8ulu
"Dennis" <kd1jt@arrl.net> wrote in message
news:3e3370f6.189159650@news.mindspring.com...
> On Sat, 25 Jan 2003 22:12:10 GMT, "Ron P." <rpackerii@neo.rr.com>
> wrote:
>
> >I just bought a dipole for 75/80 meters, and I was wondering if I can put
> >this up on a 30 foot tower (all I have available), and run one end to a
> >garage (with a rope on an insulator) and the other end to the edge of my
> >house. Will it matter if it is laying across the roof? It will be at
about a
> >130 degree angle instead of a 180 degree. Any suggestions will be
> >appreciated. Thanks!
>
> The angle is fine, and might even get gain in some unexpected
> directions (grin!). I don't think I'd like to have the antenna
> *touching* the roof, but if you mean just going *over* the roof (not
> touching) that would be fine.
>
>
> ------
> Dennis
> FLHR

1888. Re: 75/80 meter dipole mounting?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 15:23:55 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <zfacnUsuZonhYK6jXTWcqA@comcast.com>
Source record: 126226

Ron,

Can you strap a 6 foot piece, or so, of plastic water pipe to your chimney
or a vent pipe to keep the antenna off the roof?

Tam/WB2TT
"Ron P." <rpackerii@neo.rr.com> wrote in message
news:_YDY9.53893$i73.12504085@twister.neo.rr.com...
> I just bought a dipole for 75/80 meters, and I was wondering if I can put
> this up on a 30 foot tower (all I have available), and run one end to a
> garage (with a rope on an insulator) and the other end to the edge of my
> house. Will it matter if it is laying across the roof? It will be at about
a
> 130 degree angle instead of a 180 degree. Any suggestions will be
> appreciated. Thanks!
>
> Ron - kc8ulu
>
>

1889. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 15:27:44 UTC
From: Rik van Riel <riel@surriel.com>
Message-ID: <pan.2003.01.26.15.27.43.621957@msgid.surriel.com>
Source record: 126228

On Fri, 24 Jan 2003 06:04:59 +0000, Norm wrote:

> A Sturba Curtain
> http://www.hamuniverse.com/sturba.html

Looks like yet another site with a "differently wired" sterba curtain ;)))
This schematic seems to be just a very wide dipole...

Real sterba curtains short out DC current from both sides of the feed
point, so broadcasters can melt the ice off the antennas in winter.

Here you can find some info on the sterba:
http://www.qsl.net/we6w/projects/Sterba_ant.txt

cheers,

Rik
--
Bravely reimplemented by the knights who say "NIH".
http://www.surriel.com/ http://distro.conectiva.com/
Spam goes to october@surriel.com

1890. Re: Stealth base antenna for Yaesu FT100

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 15:30:52 UTC
From: "jpaunovic.pefpu" <zkorolje@inet.hr>
Message-ID: <b10v0dpqn1@bagan.srce.hr>
Source record: 126229

dsdvsdv
fstop <fstop@ispchannel.com> wrote in message
news:174453a8.0301240858.7902e6a8@posting.google.com...
> I have a FT100 and live in a deed restricted area. No antennas
> allowed. I have a small JPole out back for 144/440. Looking for
> antenna suggestions for the remaining bands. The antenna needs to be
> fairly short, and preferrably mounted at ground level. I have other
> homes surrounding me, and some landscaping. I can also do something in
> the attic. Attic is 8ft high, 60ft long and stretches North/South. I'm
> in South Florida.
> Your suggestions will be very much appreciated.
>
> Thanks

1891. Re: 75/80 meter dipole mounting?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 15:37:23 UTC
From: "Ron P." <rpackerii@neo.rr.com>
Message-ID: <TgTY9.55970$i73.13361390@twister.neo.rr.com>
Source record: 126227

The chimney is on the West side of the house, and the neighbors house is about 6 feet away. The tower is on the east side of the house. I have thought about using the chimney before, but the same problems pop-up. Nowhere to tie it to. Thanks for the suggestion though.

Ron - kc8ulu
"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:zfacnUsuZonhYK6jXTWcqA@comcast.com...
> Ron,
>
> Can you strap a 6 foot piece, or so, of plastic water pipe to your chimney
> or a vent pipe to keep the antenna off the roof?
>
> Tam/WB2TT
> "Ron P." <rpackerii@neo.rr.com> wrote in message
> news:_YDY9.53893$i73.12504085@twister.neo.rr.com...
> > I just bought a dipole for 75/80 meters, and I was wondering if I can
put
> > this up on a 30 foot tower (all I have available), and run one end to a
> > garage (with a rope on an insulator) and the other end to the edge of my
> > house. Will it matter if it is laying across the roof? It will be at
about
> a
> > 130 degree angle instead of a 180 degree. Any suggestions will be
> > appreciated. Thanks!
> >
> > Ron - kc8ulu
> >
> >
>
>

1892. Re: Stealth base antenna for Yaesu FT100

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 16:33:28 UTC
From: Josh Rovero <provero@myeastern.com>
Message-ID: <3e340d65_3@corp.newsgroups.com>
Source record: 126230

I'd suggest a dipole in the attic. Had basically the same
situation in my grad school days (aeons ago).

With a slightly bent 40m full size dipole, twin lead fed,
was able to operate 80 - 10 (reduced efficiency on 80/75)
with a small tuner. Antenna was invisible from outside.

Josh KK1D

> fstop@ispchannel.com (fstop) wrote:
>>I have a FT100 and live in a deed restricted area. No antennas
>>allowed. ....

>>Attic is 8ft high, 60ft long and stretches North/South. I'm
>>in South Florida.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1893. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 16:43:04 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <fp383vo7f6mv99vd875bl3103387f1urvk@4ax.com>
Source record: 126231

On Sun, 26 Jan 2003 00:28:12 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Reg Edwards wrote:
>"That he (Fred Astaire) was the finest dancer ever produced by Hollywood
>is beyond dispute."
>
Ms. Rodgers was quoted once as saying "I did everything Fred did but
backwards, in high heels and a gown." They were both wonderful
atheletes. Bob Hope and James Cagney were dancers too and both also
danced in the "squared circle" (boxing ring).

Russ

>Yes, but Fred did have competition. Gene Kelly and several others
>weren`t bad. Fred wanted to sing and did well at it.
>
>Hollywood has always been full of Brits. Most famed male has to be Bob
>Hope. Most well known female in every sense must be Liz Taylor. Hope was
>a dancer but won fame as a comedian.
>
>We are fortunate that the people who made the great movies often had
>many talents.
>
>Best regards, Richard Harrison, KB5WZI

1894. Re: 160m Hamstick, PHF-160

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 16:54:55 UTC
From: n1kk@netzero.net
Message-ID: <d7adbb57.0301260854.3e35d472@posting.google.com>
Source record: 126232

Hi Doc,

I thought about the 80 meter Hamstick. I don't know the exact
value of inductance but even the combo of the screwdriver
antenna set to 80 meters and the 80 meter hamstick
would not offer enough inductance for 160 meters.

As an experiment I added a 80 meter Hustler Resonator
on top of my screwdriver antenna. I could go to about 2.9 Mhz.

Ken
N1KK

'Doc <w5lz@cwis.net> wrote in message news:<3E31B7A0.DC9B55F@cwis.net>...
> Ken,
> I think you would be better off using an 80 meter
> Hamstick. You will also want to make sure the coil
> of the antenna goes in the same direction as the coil
> in the 'screwdriver', otherwise they cancel...
> 'Doc

1895. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 17:35:09 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <aq683v0udbn7lre5lrerf8kquee92kbvaa@4ax.com>
Source record: 126233

On Sun, 26 Jan 2003 13:27:44 -0200, "Rik van Riel" <riel@surriel.com>
wrote:

>On Fri, 24 Jan 2003 06:04:59 +0000, Norm wrote:
>
>> A Sturba Curtain
>> http://www.hamuniverse.com/sturba.html
>
>Looks like yet another site with a "differently wired" sterba curtain ;)))
>This schematic seems to be just a very wide dipole...
>
>Real sterba curtains short out DC current from both sides of the feed
>point, so broadcasters can melt the ice off the antennas in winter.
>
>Here you can find some info on the sterba:
>http://www.qsl.net/we6w/projects/Sterba_ant.txt
>
>cheers,
>
>Rik

Shouldn't that be fed at one corner or at the bottom of one of the
phasing lines? This is according to w4rnl's web page.

Russ - kf4wxd

1896. Re: what is the difference between a transceiver and transmitter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 17:46:23 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <OKadnRci8eZ9g6mjXTWc3g@comcast.com>
Source record: 126234

Dick,

I think you are the first one to get it righ. Oddly, some rigs like the
Drake twins had "transceive capability" even though they used two boxes.

Tam/WB2TT
"Dick" <rhughes33@cableone.net> wrote in message
news:8gk13vkuuljm4t7vgrja54di7tf3g3raon@4ax.com...
> I believe the word transceiver with respect to amateur radio equipment
> started with the Collins KWM-1 in 1957. Walky-Talkies back then were
> primarily crystal controlled, and usually on one frequency. Even
> those used separate crystals for transmit and receive. The word
> transceiver to most of us licensed in those days meant that there was
> a common variable frequency control for both the transmitter and
> receiver circuits. That's what the KWM-1 brought to amateur radio.
> It was no longer necessary to "zero-beat" the transmitter's vfo with
> the receiver to be on the same frequency.
>
> Dick - W6CCD

1897. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 18:04:05 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301261004.66e1c7b3@posting.google.com>
Source record: 126235

Jeremy Taylor <ng@NOpounamuSPAM.com> wrote in message
news:<dJGY9.1969$7O1.379681@news02.tsnz.net>...
> Hi there
> I am trying to find some information on velocity factors as they relate
> to various metals as used in antenna construction - not in coax.
>
> Is this directly related to resistivity? I think there is also a
> relationship to thickness of conductor?
>
> I'm trying to figure out the optimal dimensions for elements in some
> antenna designs with different materials, 1/8" ss, 6.25mm al rod, 9mm al
> tube, 12 AWG copper, and so on - especially so I can translate some
> designs as I find them on the internet so as to apply them to materials
> I have ready to hand.
>
> Can anyone provide some advice in this regard, so I can figure out how
> long a 1/4 wave (for instance) is in various materials?
>
> Regards
> Jeremy

Jeremy, the A.O computor program by Beezely allows you to enter
the material of your choice when creating antennas
Art

1898. Re: FRITZEL FD-4 Off Center Fed Windom

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 18:12:04 UTC
From: Tad Danley <tdanley@nospamatearthlink.net>
Message-ID: <3E3424E5.487F8D22@earthlink.net>
Source record: 126236

Barry wrote:

> Does anyone have any specification information on this antenna..
>
> I understand the designer Kurt Fritzel died some time ago and the
> antenna is no longer made.
>
> I also know about the 6:1 balun but am looking for some info on the
> overall length and the point of fed also the angle and height of the
> ends of the antenna above ground.
>
> One additional question if the elements of the antenna are not only
> inverted V config but because of the property and space if the ends were
> forming a V to the attachment points on available trees what do you
> think the effect might have?
>
> I imagine that angle could be 80 to 90 deg.
>
> Thanks for any and all info or any other.

I used a higher power version of this antenna from Fritzel for about 9 years in Atlanta and Boston. Mine was installed pretty much horizontally between two trees. In spite of the fact that it was about 25' off the ground at the highest point (the end of the short leg) and the short leg ran over the my house in Atlanta about 5' above the roof, it did a very good job for me on 75/80, 40, 20, 17, 12 and 10 meters. It was my primary antenna among a few wire antennas that I had up at various time. It worked significantly better than a G5RV at the same height that it replaced and is the best multi-band wire antenna fed with coax that I have ever used. The tuners in my IC-765 and IC-756 were all I needed, although the combination did not work on 160 or 30 meters and marginally on 15 meters (the antenna is not designed to work on any of those bands).

Good luck and 73,

--
Tad Danley, K3TD
mailto:tdanley@earthlink.net

Caution!
Anti-SPAM e-mail return address in use.

1899. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 18:15:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rj983vg33q1iu765n1173is3hlicf1sp92@4ax.com>
Source record: 126237

On Sun, 26 Jan 2003 06:57:11 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>BY DEFINITION

Hi Cecil,

When, exactly will QEX be publishing your new dictionary? (not
rhetorical)

73's
Richard Clark, KB7QHC

1900. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 18:19:24 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E3426FB.10AFC1D2@att.net>
Source record: 126238

Cecil,

OK, one last post for me on this topic, and I will try to be as straight up as possible.

The standard treatment for wave propagation in any material or combination of materials is through the application of Maxwell's equations. The general solutions are well documented in any number of books.

The tricky part in any problem of this sort is the definition of the appropriate boundary conditions. Consider the basic case of two semi-infinite media, air and glass, separated by a single thin layer of a third material, the anti-reflective coating. In this case the establishment of the boundary conditions and the final solution are quite readily done. The only physical entities that are used in the equations are the field variables and the material properties. This analysis is shown in many optics textbooks. Extension to multiple layers can be done through matrix methods.

When the solution is complete it can be enlightening to look at it in terms of interference phenomena. However, this is for visualization only. The "interference effect" is of no real use in developing the exact numerical solution to the problem.

There is nothing magic in interference. It is simply the straightforward result from superposition of linear field components. Interference is "constructive" or "destructive" merely through one's definition of the terms. It is common to refer to complete cancellation as destructive, but there is no requirement to do so.

It can also be enlightening to look at the energy balance after the solution is complete. Again, there are no surprises, and advanced knowledge of the energy behavior is not really needed to achieve the correct solution.

The important item is that all of these wave problems are analyzed entirely by the correct manipulation of the field variables. Voltage and current are not exactly field variables, but they are directly related to E and H. No product terms, specifically power, come into play in the traditional analysis methods.

Maxwell's equations do not violate conservation of energy. Kirchhoff's equations do not violate conservation of energy. Superposition of voltages in a linear system does not violate conservation of energy.

Sure, it is possible to set up a problem incorrectly with improper
boundary conditions. But that does not appear to be the issue here.
Everyone seems to agree that the problem is set up correctly and the
final result is correct.

The use of field variables is the standard way of solving such problems.
Trying to insert conservation of energy into the middle of the analysis
simply leads to a muddle.

Lest anyone think this is the final word (Ha! Ha! Ha!), there is an
entire branch of advanced analysis that solves problems through energy
consideration. The so-called Hamiltonian formulation is often used for
relativistic and quantum problems, but is not typically used for
ordinary classical systems.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Never once is interference mentioned, as it is not needed. Interference
> > is great for simple explanations, but it does not help in the detailed
> > analysis.
>
> So how do they obtain the non-glare wave cancellation without destructive
> interference? Isn't the goal to collapse the reflected E and H fields to
> zero? Isn't that destructive interference of EM waves? "A rose by any
> other name ..."
>
> > And yes, I did read the QEX articles, all three of them. And I agree
> > with Steve.
>
> Too bad. How did you resolve the following contradiction from the article?
>
> > The article ends with:
> >> A total re-reflection of power at the match point is not necessary
> >> for the impedance match to occur.
>
> If a total re-reflection of reflected energy at the match point doesn't
> occur, reflected energy will be incident upon the source and the system
> is therefore NOT matched, by definition. By definition, a necessary
> prerequisite for the existence of a match is the absence of reflected
> energy incident upon the source. If the reflected energy is not incident
> upon the source and is not incident upon the load, where did those
> microjoules of energy go after they were delivered to the transmission
> line by the source and rejected by the unmatched load?
>
> The QEX article relied extensively on the validity of the wave reflection
> model. If the wave reflection model is not valid, then neither is the QEX
> article.

> --
> cheers, CAM http://www.qsl.net/w5dxp

1901. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 18:26:34 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kn983v8vm6a1bonhkljl43a9n2l3ug2beh@4ax.com>
Source record: 126239

On Sun, 26 Jan 2003 07:46:59 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>> CAM's quotation is 'partial' in every sense.
>
>There was no attempt to disguise anything. As you can see, the additional
>material you quoted just strengthens my energy conservation case. Thanks
>for providing that glaring contradiction above.

Hi Cecil,

More and more it seems you have to patch cracks in your theory. The statement above is a clear admission that you had not done your homework in the first place - how did you miss this gaff, and why did Ian have to do it for you? (rhetorical) Seems like Roy has been doing your math for quite some time now and your recruitment is forced to rummange through the trash heap to find me, a conscript to your cause.

Aren't there enough clowns, bozos, and derelict engineers such as myself to populate your army? (rhetorical). When do I get see what I said that so convinced you that I stand with you? (rhetorical)

When, when, when are you going to answer my questions? (rhetorical)

73's
Richard Clark, KB7QHC private last class in an army of two

1902. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 18:30:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9ba83vc61vij7kco2ovbeu7v93k4t2a5r2@4ax.com>
Source record: 126240

On Sun, 26 Jan 2003 07:32:44 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark, KB7QHC wrote:
>"Where do you stand, with Cecil, Steve, or in between?"
>
>
>Why of course like the Lone Ranger, I stand on the side of "Truth and
>Justice".
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Yes, as identified, it is a comic book affair. ;-)

73's
Richard Clark, KB7QHC

1903. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 18:47:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E342D3C.7040503@ieee.org>
Source record: 126242

Richard Clark wrote:
> On Sun, 26 Jan 2003 06:57:11 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>>BY DEFINITION
>
> When, exactly will QEX be publishing your new dictionary? (not
> rhetorical)

Richard, it is by the definition of there being zero reflected energy flowing toward the source. Zero reflected power in that direction produce zero E and H fields in that direction, by definition. If the E or H fields flowing in the source direction were not zero, there wouldn't be zero reflected power.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1904. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 18:59:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E343015.8050905@ieee.org>
Source record: 126243

Richard Clark wrote:
> More and more it seems you have to patch cracks in your theory. The
> statement above is a clear admission that you had not done your
> homework in the first place - how did you miss this gaff, and why did
> Ian have to do it for you? (rhetorical)

I didn't miss that gaf, Richard. It is documented on my web page.
There are simply so many gafs in the QEX article that one r.r.a.a
posting cannot hold them all.

> Seems like Roy has been doing your math for quite some time now ...

Roy was kind enough to do that for me while my Dad was dying and
being buried.

Question for you: Why do you attack me on a personal ad hominem
basis instead of finding something technically wrong with what
I'm saying?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1905. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 19:13:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bic83vgt6ihq3qgoj6e7kokkfhpk9a484c@4ax.com>
Source record: 126244

On Sun, 26 Jan 2003 12:47:24 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> On Sun, 26 Jan 2003 06:57:11 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>>BY DEFINITION
>>
>> When, exactly will QEX be publishing your new dictionary? (not
>> rhetorical)
>
>Richard, it is by the definition of there being zero reflected
>energy flowing toward the source. Zero reflected power in that
>direction produce zero E and H fields in that direction, by
>definition. If the E or H fields flowing in the source direction
>were not zero, there wouldn't be zero reflected power.

Hi Cecil,

You've been good about differentiating between my rhetorical questions
and non-rhetorical questions until now. I will emphasize this time so
as to not confuse:
When, exactly will QEX be publishing your new dictionary?
(NOT RHETORICAL)

I know through experience that this will take time; and I am willing
to provide further clues through emphasis, paragraphation, pagination,
hi-lighted words, bold words, variable pitch font and the rest to make
it easier for you if necessary.

73's
Richard Clark, KB7QHC

1906. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 19:16:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E343413.9050008@ieee.org>
Source record: 126245

Ian White, G3SEK wrote:
> OC_CAM's Razor wrote:
>> Ian, I resent the implication that I misquoted the article. The
>> additional
>> quotation adds absolutely nothing to explain or justify the violation of
>> the conservation of energy principle.
>>
>>> "In this case, the forward source power of 92.831 W combines in-phase
>>> with the re-reflected power of 0.555 W, resulting in a total
>>> forward-traveling power of 107.736 W. Again, it is significant to
>>> notice that this "addition" of power is determined entirely from the
>>> vector addition of forward voltage and current. It must be
>>> understood that it is really the two forward voltages and currents
>>> that combine, rather than the two forward powers."
>
> You repeatedly quote only the part that looks wrong, and repeatedly omit
> his next sentence that explains why.

His next sentence completely contradicts that sentence. Which would you have us believe? Is he saying opposite things in back-to-back sentences so he can cover all the bases? If someone believes in in-phase superposition of powers, he can point to his first sentence and say, "So do I". If someone doesn't believe in in-phase superposition of powers, he can point to the second sentence and say, "Neither do I". You think that's a good thing?

Ian, when I disagree with someone, I usually don't quote the passages with which I agree. That would be a waste of time and bandwidth. I agree with 98% of what the author says. It's that other 2% with which I disagree and tend to make postings about. You, OTOH, seem to want to round off that 98% up to 100% and accept as gospel whatever nonsense he writes in that other 2%.

> In my book, that's deliberate misquotation, and it does you no credit.

OK, I'll be glad to quote his sentence that contradicts what he said before if you really think that contradicting himself in back-to-back sentences is a good thing. So here it is:

"the forward source power combines in phase with the re-reflected power"

"it is really the two forward voltages and currents that combine, rather than the two forward powers"

He asserted both statements. How do you know which one he believes? He simply cannot have it both ways.

I disagree with the first statement and that's why I posted it. I agree
with the second statement and that's why I didn't post it. I thought
that was the normal procedure.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1907. 40 m dipole on 15 m? Does it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 19:21:58 UTC
From: fch <na@hle.com>
Message-ID: <3E343555.249421BA@hle.com>
Source record: 126247

It is coax fed. How efficient of a radiator of RF is a 40 m
dipole being used on 15 m?
Is it almost or as efficient as a regular 15 m dipole?

What other bands could a 80 m dipole be used on easily?

1908. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 19:41:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3439D5.1050302@ieee.org>
Source record: 126246

Gene Fuller wrote:
> When the solution is complete it can be enlightening to look at it in
> terms of interference phenomena. However, this is for visualization
> only. The "interference effect" is of no real use in developing the
> exact numerical solution to the problem.

Gene, I don't know of anybody who said that it was. Is this an attempt at a straw man? After everything else is said and done, I am doing an energy analysis to see if the conservation of energy principle has been honored. It hasn't. For the umteenth time, I have not developed a new and different method of transmission line analysis. I have added conservation of energy to the present accepted methods of analysis and discovered some people abusing the present methods.

> There is nothing magic in interference. It is simply the straightforward
> result from superposition of linear field components. Interference is
> "constructive" or "destructive" merely through one's definition of the
> terms. It is common to refer to complete cancellation as destructive,
> but there is no requirement to do so.

Of course, if you don't want to talk about it you don't need any words to describe it. I want to talk about it so I'm using the words in my vocabulary which, admittedly, are almost half a century old.

> It can also be enlightening to look at the energy balance after the
> solution is complete.

That is the ***ONLY*** thing I have done. I fear you have been duped by the author's numerous attempts at straw men. He has challenged me to analyze a system without using superposition. I don't know how and never said or implied that I could do that.

> Maxwell's equations do not violate conservation of energy. Kirchhoff's
> equations do not violate conservation of energy. Superposition of
> voltages in a linear system does not violate conservation of energy.

Yes, but 75 joules/sec + 8.33 joules/sec = 133.33 joules/sec certainly does violate the conservation of energy principle. My argument is with the author of the QEX article who abuses the conservation of energy principle, something I don't remember Maxwell or Kirchhoff doing. Can you produce evidence that Maxwell or Kirchhoff ever agreed with the above energy "equation" published by the author on this very newsgroup?

> Sure, it is possible to set up a problem incorrectly with improper
> boundary conditions. But that does not appear to be the issue here.
> Everyone seems to agree that the problem is set up correctly and the
> final result is correct.

Nope, everyone does NOT agree with that. Everyone agrees with the
superposition of voltages and currents. Nobody, except the author of the
QEX article, agrees that "forward source power combines in-phase with the
re-reflected power". If you missed it, Gene, that is a statement about
superposition of powers published in QEX. The author denies any errors
yet writes contradictory assertions. Why hasn't he been drawn and quartered?
(figuratively speaking, of course)

> The use of field variables is the standard way of solving such problems.
> Trying to insert conservation of energy into the middle of the analysis
> simply leads to a muddle.

A typical diversion advocating that the author of the QEX article should be
allowed to have his cake and eat it too. Sorry, Gene, there are a number
of us dedicated to technical correctness in ham publications. I am just the
most verbal at the moment.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1909. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 19:49:04 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E343BB0.700@ieee.org>
Source record: 126248

Richard Clark wrote:
> When, exactly will QEX be publishing your new dictionary?
> (NOT RHETORICAL)

Neither I nor QEX has any plans to publish any dictionary of mine.
I suggest you review what the words, "by definition", mean in a
scientific method sense. Zero E and H fields mean zero EM power,
by definition.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1910. Re: 40 m dipole on 15 m? Does it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 19:55:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E343D2F.2050601@ieee.org>
Source record: 126249

fch wrote:
> It is coax fed. How efficient of a radiator of RF is a 40 m
> dipole being used on 15 m?
> Is it almost or as efficient as a regular 15 m dipole?

Download the free demo version of EZNEC from eznec.com and
find out for yourself. Depending on the radiation pattern
you desire, the 40m dipole could be absolutely superb or
an absolute dog on 15m.

> What other bands could a 80 m dipole be used on easily?

Did you mean to change from a 40m dipole to an 80m dipole?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1911. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 20:21:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <the83v89sqpb4jagfckl3p6kqlomcqbvvr@4ax.com>
Source record: 126250

On Sun, 26 Jan 2003 12:59:33 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>
>Question for you: Why do you attack me on a personal ad hominem
>basis instead of finding something technically wrong with what
>I'm saying?

I have stopped beating my wife. Such shame, I hope you learn by my
example to do likewise.

You mean like that? Or like your quote above?

To quote my great Uncle Tex Moore from his book "The West":
"I always figure there was an open season on
tenderfeet the year around, and no hunting
license necessary."

73's
Richard Clark, KB7QHC

1912. WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 20:35:45 UTC
From: FM <radiovintage@hotmail.com>
Message-ID: <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>
Source record: 126251
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

I am looking for a CD of Windows 95 for my shack computer so I can run some
DOS programs.
THANKS

1913. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 20:39:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ugh83v06g1rgn5cqtp6of4cuovete0p7nc@4ax.com>
Source record: 126252

On Sun, 26 Jan 2003 13:41:09 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>published in QEX. The author denies any errors
>yet writes contradictory assertions. Why hasn't he been drawn and quartered?
>(figuratively speaking, of course)

And this is the base upon which you publish, a vanity rag that is so
technically numb so as to miss this egregious mistake, but somehow
validates yours?

>A typical diversion advocating that the author of the QEX article should be
>allowed to have his cake and eat it too. Sorry, Gene, there are a number
>of us dedicated to technical correctness in ham publications. I am just the
>most verbal at the moment.

Hi Cecil,

Not quite, I think I have been far more verbal than you in simply
asking the question above.

As my great Uncle Tex Moore, wrote in his book "The West" :
"So now you had better draw in your horns, or else
hunt another roost."

73's
Richard Clark, KB7QHC

1914. Redusing noise with grounding pole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 20:41:36 UTC
From: ronang@xs4all.nl
Message-ID: <b36845ed.0301261241.63e48273@posting.google.com>
Source record: 126253

Hello,

I have the following question, is it true that ther is a
noise-reduction on receiving shotwave-stations, when i put a copper
pole in the ground, and make a connection to my receiver (earth)

1) how deep (in mtrs) must i put ??

2) what kind of material mus i use (copper, aluminium,steel) ??

3) how long is the cable to te receiver and how thick ??

So if you can / will help me i would be pleassed

greetings from a rainy HOLLAND,

Ron (hamcall - pd1anb)

1915. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 20:44:42 UTC
From: Jim Menning <jmenning@new.rr.com>
Message-ID: <_MXY9.59485$Gm2.1408754@twister.rdc-kc.rr.com>
Source record: 126254
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"FM" <radiovintage@hotmail.com> wrote in message
news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> I am looking for a CD of Windows 95 for my shack computer so I can run some
> DOS programs.
> THANKS
>
>
Trolling...

1916. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 20:45:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <s4i83vkg0dtud9j8ennqvecofqliqdk7q4@4ax.com>
Source record: 126255

On Sun, 26 Jan 2003 13:49:04 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> When, exactly will QEX be publishing your new dictionary?
>> (NOT RHETORICAL)
>
>Neither I nor QEX has any plans to publish any dictionary of mine.
>I suggest you review what the words, "by definition", mean in a
>scientific method sense. Zero E and H fields mean zero EM power,
>by definition.

Hi Cecil,

Thank you. However, I have no interest in the discussion of the definition until you do publish your dictionary so that I can employ its full content towards the discovery of just what you are talking about. It will certainly take more than one definition.

I would love to quote my great Uncle Tex's play with words from his book. He does an amusing spin on the word ostracize, but that passage is too lengthy without some prompting from the audience. (hint)

73's
Richard Clark, KB7QHC

1917. Effect of Increasing Loop Diameter from 3 to 5 Feet

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 20:50:08 UTC
From: Al <ABurzynski@nojunk.satx.rr.com>
Message-ID: <4SXY9.21512$iW3.837143@twister.austin.rr.com>
Source record: 126256

I presently have a 3-ft diameter shielded loop that I am using for receive only. The loop has a 1-turn primary and a 10-turn secondary with a variable capacitor across it. I use the loop for 200 to 500kHz reception and it works quite nicely. I am considering increasing the diameter from 3 to 5 feet.

I am using G4FGQ's RJELOOP3 program (a very good program by the way) and it tells me that for the same frequency range, if I keep the same turns ratio and reduce the capacitance accordingly, I will get an approximate antenna gain of 7dB. It also states that the impedance seen by the receiver will approximately double from a range of 200 to 1300 ohms with the 3-foot loop, to 500 to 2700 ohms with the 5-foot loop.

Will the increase in antenna impedance as seen by the receiver, negatively offset any of the 7dB gain that the larger antenna provides? Is the increase of 7dB significant enough to tackle the larger loop project?

I am primarily using Spectran to find NDB beacons. I can easily see a 3dB difference in the signal strength of any two beacons. I think that a 7dB difference would be significant to bringing in signals out of the noise. My main concern is will I see a 7dB increase by changing my loop diameter from 3 to 5 feet?

Thanks for all input.

Al
KA5JGV

1918. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 21:08:39 UTC
From: Tom DeYoung <tdeyoung@mn.rr.com>
Message-ID: <r7YY9.59529$Gm2.1410426@twister.rdc-kc.rr.com>
Source record: 126257
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Wouldn't that be

"...so I can RUIN some DOS programs..."?

TD

"Jim Menning" <jmenning@new.rr.com> wrote in message
news:_MXY9.59485$Gm2.1408754@twister.rdc-kc.rr.com...
>
> "FM" <radiovintage@hotmail.com> wrote in message
> news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> > I am looking for a CD of Windows 95 for my shack computer so I can run
some
> > DOS programs.
> > THANKS
> >
> >
> Trolling...
>
>

1919. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 21:36:43 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3454EB.3050304@ieee.org>
Source record: 126259

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>published in QEX. The author denies any errors
>>yet writes contradictory assertions. Why hasn't he been drawn and quartered?
>>(figuratively speaking, of course)
>
> And this is the base upon which you publish, a vanity rag that is so
> technically numb so as to miss this egregious mistake, but somehow
> validates yours?

Can we assume from your question that you don't like to see
technical mistakes corrected in ham publications? Maybe I can
take the QEX author's approach to religion. I believe in Jesus
and I don't believe in Jesus. There, I've satisfied everyone.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1920. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 21:37:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v38l8j38qiu5c2@corp.supernews.com>
Source record: 126258

There is certainly no "definition" that requires that E and H fields become zero at a match point. A match point is simply the point at which V/I = Z0. At that point V and I are not only non-zero, but they're in phase.

There's obviously something wrong with your concept of traveling power waves if they require the E and H fields to be zero at a point where V and I are not. I suggest that you go back and take a careful look at the assumptions you've made that lead you to that obviously mistaken conclusion, and determine which assumtion or assumptions are wrong. Any view of how things work have to produce results that reflect reality.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> The E and H fields go to zero at a match point?
>
>
> Roy, the context was the "rearward-traveling waves 1 and 2" from
> the QEX article and the rearward-traveling reflected waves from
> non-glare glass.
>
> THE E AND H FIELDS OF THE REARWARD-TRAVELING WAVES GO TO ZERO AT
> A MATCH POINT, BY DEFINITION. If they don't go to zero, reflected
> energy is incident upon the source and the system is mismatched,
> by definition. How exactly, can you have the rearward-traveling
> E and H waves not go to zero without having reflected energy
> incident upon the source?
>
>> OC_CAM's Razor wrote:
>>
>>> . . . The same thing happens at a match point
>>> in a transmission line where the E and H fields ideally go to zero. Hope
>>> this helps you understand what I was saying earlier.
>>

1921. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 21:39:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E345595.9050409@ieee.org>
Source record: 126260

Richard Clark wrote:
> Thank you. However, I have no interest in the discussion of the
> definition until you do publish your dictionary so that I can employ
> its full content towards the discovery of just what you are talking
> about.

You obviously don't understand the concept of, "by definition".
I can define the output of a transmitter to be 100 watts (by
definition) without any help from any dictionary.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1922. Re: 40 m dipole on 15 m? Does it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 21:47:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v38lsfdhifb5e5@corp.supernews.com>
Source record: 126261

A 40 meter dipole is an efficient radiator on all bands from 40 upward, and also on 80 if the wire diameter isn't too small. But it's easy to match to 50 ohm coax only on 40 and 15 meters. To use a 40 meter dipole on both bands, I put a small inductor at the feedpoint. This improves the match on 15 without much effect on 40, although you can also adjust the length slightly to get the best possible match on both bands if it's important.

If the dipole is straight, you'll get a cloverleaf pattern on 15. If you bend both wires inward 30 degrees to make a horizontal vee, the lobes on 15 will be lined up to make a bidirectional pattern. This can be useful if there's only one direction (or two opposite directions) you want to communicate in.

As CAM suggested, the free demo version of EZNEC from http://eznec.com is a good way to experiment with various configurations and see the results.

Roy Lewallen, W7EL

fch wrote:
> It is coax fed. How efficient of a radiator of RF is a 40 m
> dipole being used on 15 m?
> Is it almost or as efficient as a regular 15 m dipole?
>
> What other bands could a 80 m dipole be used on easily?
>

1923. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 21:57:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3459CF.70309@ieee.org>
Source record: 126263

Roy Lewallen wrote:
> There is certainly no "definition" that requires that E and H fields
> become zero at a match point.

The E and H fields that become zero at a match point are the E and H fields incident upon the source. We know that because the reflected energy is zero. I am sorry that you misunderstood the context. It is difficult to maintain the context through numerous threaded postings.

> There's obviously something wrong with your concept of traveling power
> waves if they require the E and H fields to be zero at a point where V
> and I are not.

I didn't say the total E and H fields were zero so please don't play games. The rearward-traveling E and H fields are what become zero at a match point.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1924. Re: Effect of Increasing Loop Diameter from 3 to 5 Feet

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 21:59:23 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E345A3B.C63C815B@northwest.com>
Source record: 126262

You don't mention what you use - tuned or untuned. You also don;t state whether you use a preamp at the loop, thence feeding into the rx. Is this an unamplified loop?

I built a 9' dia tuned loop for chasing NDBs. 9' was chosen because that's what fit in the living room with a cathedral ceiling. I used a tuned loop to increase antenna sensitivity. Untuned loops just didn;t cut it for me. I used the equations from a series of articles in the (older) Lowdown magazine. Also used a modified Burhans preamp; changed from the VN10KM FET to a U310 JFET. Less gain but much, much quieter...

You could also post your query at the Lowdown website.
=======

Al wrote:

> I presently have a 3-ft diameter shielded loop that I am using for receive
> only. The loop has a 1-turn primary and a 10-turn secondary with a variable
> capacitor across it. I use the loop for 200 to 500kHz reception and it works
> quite nicely. I am considering increasing the diameter from 3 to 5 feet.
>
> I am using G4FGQ's RJELOOP3 program (a very good program by the way) and it
> tells me that for the same frequency range, if I keep the same turns ratio
> and reduce the capacitance accordingly, I will get an approximate antenna
> gain of 7dB. It also states that the impedance seen by the receiver will
> approximately double from a range of 200 to 1300 ohms with the 3-foot loop,
> to 500 to 2700 ohms with the 5-foot loop.
>
> Will the increase in antenna impedance as seen by the receiver, negatively
> offset any of the 7dB gain that the larger antenna provides? Is the increase
> of 7dB significant enough to tackle the larger loop project?
>
> I am primarily using Spectran to find NDB beacons. I can easily see a 3dB
> difference in the signal strength of any two beacons. I think that a 7dB
> difference would be significant to bringing in signals out of the noise. My
> main concern is will I see a 7dB increase by changing my loop diameter from
> 3 to 5 feet?
>
> Thanks for all input.
>
> Al
> KA5JGV

1925. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 22:28:28 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E346079.9090600@socal.rr.com>
Source record: 126264
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

FM wrote:

>I am looking for a CD of Windows 95 for my shack computer so I can run some
>DOS programs.
>THANKS
>
For what it's worth, Win95 doesn't run DOS programs properly.
You probably want to locate a copy of MS-DOS 5.0
The most stable one in the bunch.

Jeff

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

1926. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 22:29:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1ao83vs1hcdsv1k9i4pb4fcupc067rvi33@4ax.com>
Source record: 126265

On Sun, 26 Jan 2003 15:39:33 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Thank you. However, I have no interest in the discussion of the
>> definition until you do publish your dictionary so that I can employ
>> its full content towards the discovery of just what you are talking
>> about.
>
>You obviously don't understand the concept of, "by definition".
>I can define the output of a transmitter to be 100 watts (by
>definition) without any help from any dictionary.

Hi Cecil,

You certainly can. By why stop there? You can define the output of a transmitter to be 100 pints too and make equal sense I suppose. Hence my need for your dictionary to understand what you mean by pints. It is becoming clearer why QEX won't consider its publication, but that still doesn't elevate their technical acumen.

73's
Richard Clark, KB7QHC

1927. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 22:45:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ojo83vkhrferj3ggjsdn0trkdelvbehovv@4ax.com>
Source record: 126266

On Sun, 26 Jan 2003 15:36:43 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>published in QEX. The author denies any errors
>>>yet writes contradictory assertions. Why hasn't he been drawn and quartered?
>>>(figuratively speaking, of course)
>>
>> And this is the base upon which you publish, a vanity rag that is so
>> technically numb so as to miss this egregious mistake, but somehow
>> validates yours?
>
>Can we assume from your question that you don't like to see
>technical mistakes corrected in ham publications? Maybe I can
>take the QEX author's approach to religion. I believe in Jesus
>and I don't believe in Jesus. There, I've satisfied everyone.

Hi Cecil,

Hmm, no smiley face, and as that is your "defined" cue for an aside
that is not serious.... If you can take blaspheming so casually, we
can understand how easily you can presume my own thoughts to buttress
your claims. Again I erred in not marking the question with enough
emphasis so that it does not confuse you:
And this is the base upon which you publish, a vanity rag that is
so technically numb so as to miss this egregious mistake, but
somehow validates yours? (NOT RHETORICAL)
Really, such a simple, stupid question deserves no more than a yes or
no - or even ignoring; but your response is convoluted with religion
and its denial (what's that got to do with antennas - and is it
appropriate on the Sabbath?) (rhetorical).

Sorry if this sounds like ad hominem, but I suppose there is a world
of people that would be upset by your form of levering an argument.

73's
Richard Clark, KB7QHC

1928. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 22:47:32 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E346584.1050103@ieee.org>
Source record: 126267

Richard Clark wrote:
> It is becoming clearer why QEX won't consider its publication, but that
> still doesn't elevate their technical acumen.

Richard, are you the reincarnation of one of the priests who couldn't
stand to know that the earth is not the center of the universe and
instead mounted ad hominem attacks against Galileo? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1929. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 22:54:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v38pofk6nbicca@corp.supernews.com>
Source record: 126268

Well, you said, twice, that the E and H fields are zero at a match
point. If you expected me to infer from that, that you didn't mean the
total E and H fields are zero, you overestimated me. But I sometimes
have the same interpretation trouble with my wife, so I guess it's just me.

I'm not playing games -- I'm really that ignorant, or stupid, as the
case may be. But I hate to say this discussion sure hasn't helped reduce
the ignorance much.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> There is certainly no "definition" that requires that E and H fields
>> become zero at a match point.
>
>
> The E and H fields that become zero at a match point are the E and H
> fields incident upon the source. We know that because the reflected
> energy is zero. I am sorry that you misunderstood the context. It is
> difficult to maintain the context through numerous threaded postings.
>
>> There's obviously something wrong with your concept of traveling power
>> waves if they require the E and H fields to be zero at a point where V
>> and I are not.
>
>
> I didn't say the total E and H fields were zero so please don't play games.
> The rearward-traveling E and H fields are what become zero at a match
> point.

1930. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 23:08:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v38qim15s38be8@corp.supernews.com>
Source record: 126119

You don't really want the velocity factor of waves traveling in the metal, but on the surface. The velocity factor in a metal is indeed a function of its conductivity, and frequency, too -- the velocity factor in copper is, in fact, 0.00000438 at 10 MHz. That is, waves travel about 200,000 times slower in copper than in air at that frequency. But one of the reasons this isn't very interesting is that the waves don't get very far, anyway. At 10 MHz, the attenuation in copper is 10.6 dB per mil (.001 inch).

The resonant length of a dipole, for example, is a bit shorter than a half wavelength. But this difference in length is a function of diameter. There's no simple relationship, but the ARRL Antenna Book has some graphs. What I suggest is to use an antenna modeling program (I'm unashamedly prejudiced). You can get the numbers you want very quickly and easily by modeling a half wavelength dipole with different diameters and materials with the free EZNEC demo from http://eznec.com.

Roy Lewallen, W7EL

Jeremy Taylor wrote:
> Hi there
> I am trying to find some information on velocity factors as they relate
> to various metals as used in antenna construction - not in coax.
>
> Is this directly related to resistivity? I think there is also a
> relationship to thickness of conductor?
>
> I'm trying to figure out the optimal dimensions for elements in some
> antenna designs with different materials, 1/8" ss, 6.25mm al rod, 9mm al
> tube, 12 AWG copper, and so on - especially so I can translate some
> designs as I find them on the internet so as to apply them to materials
> I have ready to hand.
>
> Can anyone provide some advice in this regard, so I can figure out how
> long a 1/4 wave (for instance) is in various materials?
>
> Regards
> Jeremy
>

1931. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 23:12:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E346B61.2040902@ieee.org>
Source record: 126121

Roy Lewallen wrote:
> Well, you said, twice, that the E and H fields are zero at a match
> point. If you expected me to infer from that, that you didn't mean the
> total E and H fields are zero, you overestimated me. But I sometimes
> have the same interpretation trouble with my wife, so I guess it's just me.

If you will scroll back a couple of postings, you will see the context.
And exactly why are you not telepathic? :-) I apologize for trimming the
postings too much. I just hate a 100 page posting. I endeavor to trim
everything to one screen page.

> I'm not playing games -- I'm really that ignorant, or stupid, as the
> case may be. But I hate to say this discussion sure hasn't helped reduce
> the ignorance much.

So do the rearward-traveling E and H fields go to zero at a match point?
(on the source side of the match point) And if the rearward-traveling E
and H fields go to zero at a match point, what happens to the energy
in those canceled "rearward-traveling waves 1 and 2"?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1932. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 23:12:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9lq83vsr1ccg3en061psiofadlq42cm1gt@4ax.com>
Source record: 126120

On Sun, 26 Jan 2003 15:36:43 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>mistakes corrected in ham publications

Hi Cecil,

'Tis a pity you cannot take a lesson from my great Uncle Tex Moore, or
at least find his luck, from his book "The West":
"I prayed that every man who came into sight might be a buyer
for my "Old Maid's Dream," which name I had given my newly
discovered mine. And it was not long before a tenderfoot miner,
'book learned,' hove in sight behind a couple of Mexican canaries,
and became interested... So thorough was his book knowledge, I
had to teach him what the yellow metal was when panned out."

73's
Richard Clark, KB7QHC

1933. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-26 23:43:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <a4s83vc3l7570irk8gif1052k3adtsjqp9@4ax.com>
Source record: 126122

On Sun, 26 Jan 2003 16:47:32 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> It is becoming clearer why QEX won't consider its publication, but that
>> still doesn't elevate their technical acumen.
>
>Richard, are you the reincarnation of one of the priests who couldn't
>stand to know that the earth is not the center of the universe and
>instead mounted ad hominem attacks against Galileo? :-)

And yet he's stuck

From my great Uncle Tex's "The West":

He has been sparing with a city fellow and gets the upper hand to
obtain a good cattle contract for his boss...
"My boss wrote and asked me why they were
doing it, and I told him how it paid to comb
a guy off his high perch."

If you want to find reincarnations, you miss the obvious?

73's
Richard Clark, KB7QHC

1934. Re: 75/80 meter dipole mounting?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 00:09:31 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <%M_Y9.15724$zF6.1198220@bgtnsc04-news.ops.worldnet.att.net>
Source record: 126123

You could fold back that half of the dipole! Nothing to lose by trying.
"Ron P." <rpackerii@neo.rr.com> wrote in message
news:_YDY9.53893$i73.12504085@twister.neo.rr.com...
> I just bought a dipole for 75/80 meters, and I was wondering if I can put
> this up on a 30 foot tower (all I have available), and run one end to a
> garage (with a rope on an insulator) and the other end to the edge of my
> house. Will it matter if it is laying across the roof? It will be at about
a
> 130 degree angle instead of a 180 degree. Any suggestions will be
> appreciated. Thanks!
>
> Ron - kc8ulu
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.445 / Virus Database: 250 - Release Date: 1/21/03

1935. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 01:11:07 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v391mil7rp9ddd@corp.supernews.com>
Source record: 126124

Dear Bob:
Did you ever get your problem sorted out? If so, educate us. If
not, give us details that we might be able to use to help. 73, Mac
N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Bob Dixon" <Bob_Dixon@osu.edu> wrote in message
news:Bob_Dixon-796218.10080619112002@nntp.service.ohio-state.edu...
> I have just put up a Titanex LP12 Log Periodic antenna.
> Unfortunately its SWR is between 2 and 3:1 on all bands 14-30 MHz.
> Titanex is no help; they just say I must have put it together wrong.
> The manual is mostly in German, with some rather poor translations to
> English. The manual is self-contradictory regarding the element
lengths.
> Several email exchanges with them regarding this have also been
unclear
> and contradictory, so I suspect there is a language problem.
> Has anyone put up a Titanex log periodic, and found a low SWR?
> If so I would like to know EXACTLY how you set the element lengths.
> The twin boom design introduces an ambiguity about where you measure
> from where the half-elements are mounted on the boom.
> Thanks!
>
> Bob W8ERD

1936. Re: 40 m dipole on 15 m? Does it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 01:41:21 UTC
From: k9sqg@aol.com
Message-ID: <20030126204121.27993.00000236@mb-cm.aol.com>
Source record: 126125

If a valid email account were provided my response would have been received...

1937. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 02:11:58 UTC
From: richardharrison@webtv.net
Message-ID: <29703-3E34956E-18@storefull-2313.public.lawson.webtv.net>
Source record: 126127

Richard Clark wrote:
"This must include Donald O`Connor, or Jimmy Cagney too."

Agree. I thought Donald O`Connor in That`s Entertainment" gave an unsurpassed dance performance, and Cagney had feet on fire in several performances. Cagney was Geroge M. Cohan in the Cinema. But, we can`t name them all. If I had to pick the classiest dancer, I`d make the same choice Reg made: Fred Astaire.

Best regards, Richard Harrison, KB5WZI

1938. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 02:34:51 UTC
From: richardharrison@webtv.net
Message-ID: <29700-3E349ACB-401@storefull-2313.public.lawson.webtv.net>
Source record: 126126

Ian wrote:
"(a QEX quote) In this case, the forward source power of 92.831 W
combines in-phase with the re-reflected power of 0.555 W, resulting in a
total forward-traveling power of 107.736 W."

It adds to 93.386 W for me. Surely this is a simple mistake.

Best regards, Richard Harrison, KB5WZI

1939. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 02:52:14 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <_uScnYNYh5xFA6mjXTWcoA@comcast.com>
Source record: 126128
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

> > I am looking for a CD of Windows 95 for my shack computer so I can run some
> > DOS programs.
> > THANKS
> >
> >
> >
>
> If you want to run dos programs, why not use dos?

Because if the machine came up and on the screen was:

C:\>

They wouldn't know what to do. If it ain't called SETUP
or INSTALL, theys be lost!!!!

1940. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 04:23:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E34B44E.2080203@ieee.org>
Source record: 126129

Richard Harrison wrote:
> Ian wrote:
> "(a QEX quote) In this case, the forward source power of 92.831 W
> combines in-phase with the re-reflected power of 0.555 W, resulting in a
> total forward-traveling power of 107.736 W."
>
> It adds to 93.386 W for me. Surely this is a simple mistake.

Nope, it's an assertion. Here it is repeated with different numbers.

> "When the voltage and current associated with a wave of 75 W superimposes
> in-phase with the voltage and current associated with a wave of 8.33 W, the
> total power associated with the voltage and current of the resulting wave
> is 133.33 W."

That's where the super-superposer on my web page came from. The author of
the QEX article really believes and asserts that he can obtain more energy
out of the combination of two waves than the sum of the energy components
in the two waves. That's what the whole argument has been about for a year
and a half now. He fails to comprehend that the necessary extra energy is
coming from constructive interference caused by re-reflections.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1941. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 04:44:02 UTC
From: richardharrison@webtv.net
Message-ID: <29701-3E34B912-135@storefull-2313.public.lawson.webtv.net>
Source record: 126131

CAM wrote:
"So do the reaward-traveling E and H fields go to zero at a match point?
(on the source side of the match point)"

The match point matches the inpedance of the source or load (Isn`t that what a "match point means?) so there is no energy left over from encountering the match point. It is all absorbed by the encounter and there are zero rearward-traveling E and H fields heading back toward the source. All the energy continuers its forward progress until it`s gone.

I must not understand the question. Take the example of a 50-ohm transmitter connected to a 50-ohm load by a 1/2-wavelength of 300-ohm twinlead. The transmitter sees a 50-ohm load at the match point (the drivepoint of the 300-ohm impedance repeater consisting of two each 1/4-wave impedance inverters back-to-back, a total of 1/2-wave). So, there is zero reflected energy at the transmission line innput on the source side of the match point. The reflections are all within the 300-ohm line.

Best regards, Richard Harrison, KB5WZI

1942. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 05:14:57 UTC
From: Jeremy Taylor <ng@NOpounamuSPAM.com>
Message-ID: <mb3Z9.2229$7O1.458650@news02.tsnz.net>
Source record: 126130

J. Harvey wrote:
> "Jeremy Taylor"
>
>>...velocity factors as they relate
>>to various metals...
>
>
> The velocity factor of any medium is related to its inductance and
> capacitance per unit length. I don't believe that resistance enters into it
> (although perhaps the R could replace the L somewhat, you would still need
> to account for the C). Even a pure vacuum (good insulator) has a velocity
> factor: 'c', usually normalized to one for Vf.

I was aware of the velocity in a vacuum being c, of course, I was hoping
there was a simple factor to multiply into c for each material,
apparently not.

I was aware of the impact of thicker elements lengthening the effective
length of elements, requiring shorter elements to compensate. I suppose
that fits into the inductive relationship. And as thickness increases, I
suppose capacitance starts having an effect if there is a flat end on
the element...?

Anyway, will the properties of different metals cause (relevant for the
purposes of antenna construction) result in different inductance (etc)
assuming equal dimensions?

>
> For your purposes, you don't need to account for the conductivity of various
> metals.

I was under the impression that Stainless Steel elements should be
shorter than those made with aluminium - but how much shorter? that is
what I'm trying to figure out. (And I'd rather figure it out for the
general case, than just have someone give me a factor for this one example).

Is that impression I am under erroneous?

>
> Interesting question. I predict that this thread will be 1.2m long before
> it is done.
>

hi hi - don't want to open a can of worms or start a religious debate.
If I can be assured that the difference is so minimal at frequencies
between 40m and 23cm, then I'm that'll do me fine. I'm not going to cut
my elements to tolerances so fine that .073mm is noticable!

Regards
Jeremy

1943. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 05:21:44 UTC
From: Jeremy Taylor <ng@NOpounamuSPAM.com>
Message-ID: <Lh3Z9.2231$7O1.458782@news02.tsnz.net>
Source record: 126132

Art Unwin KB9MZ wrote:
> Jeremy Taylor <ng@NOpounamuSPAM.com> wrote in message
news:<dJGY9.1969$7O1.379681@news02.tsnz.net>...
>
>>Can anyone provide some advice in this regard, so I can figure out how
>>long a 1/4 wave (for instance) is in various materials?
>>
>>Regards
>>Jeremy
>
>
> Jeremy, the A.O computor program by Beezely allows you to enter
> the material of your choice when creating antennas
> Art

Thanks Art, I wasn't aware of AO until now, EZNEC demo I have. I have found that it will nicely figure out for you how well your antenna will perform, but I haven't found it especially useful to help me answer "what if" type questions. In fact the program wants to know answers to questions I just can't give it in some cases... darned if i know what the ground is like around here.

Useful, I am sure, for many aspects of antenna design for an expert. For a novice just starting out making antennas, I'd prefer something that gave me a few more clues. Cause I need a few :-)

Regards
Jeremy

1944. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 05:26:38 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <dAudnRTxhKG0XqmjXTWc2Q@comcast.com>
Source record: 126134
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Technician wrote:
>
> In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>, scott@scotti.sh!t
> says...
> >
> >
> >
> > > > > I am looking for a CD of Windows 95 for my shack computer so I can run some
> > > > > DOS programs.
> > > > > THANKS
> > > > >
> > > > >
> > > > >
> > > >
> > > > If you want to run dos programs, why not use dos?
> > >
> > >
> > > Because if the machine came up and on the screen was:
> > >
> > > C:\>
> > >
> > > They wouldn't know what to do. If it ain't called SETUP
> > > or INSTALL, theys be lost!!!!
> > >
>
> No offence, but if you are going to run DOS programs, my opinion is that
> you should at least know how to work at a prompt, regardless of the
> programs need for it.

I was building XT's back in the day.

1945. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 05:27:58 UTC
From: Jeremy Taylor <ng@NOpounamuSPAM.com>
Message-ID: <Dn3Z9.2234$7O1.459095@news02.tsnz.net>
Source record: 126133

Roy Lewallen wrote:
> You don't really want the velocity factor of waves traveling in the
> metal, but on the surface. The velocity factor in a metal is indeed a
> function of its conductivity, and frequency, too -- the velocity factor
> in copper is, in fact, 0.00000438 at 10 MHz. That is, waves travel about
> 200,000 times slower in copper than in air at that frequency. But one of
> the reasons this isn't very interesting is that the waves don't get very
> far, anyway. At 10 MHz, the attenuation in copper is 10.6 dB per mil
> (.001 inch).

If I understand you correctly, you are saying that there is a technically correct answer the question I asked, that is useles to me because the question I asked was the wrong one.

Certainly from the numbers you give, we would have rather small antennas, for even 10m, if the question I asked was the right one!

>
> The resonant length of a dipole, for example, is a bit shorter than a
> half wavelength. But this difference in length is a function of
> diameter.

Oh, ok, yes I was aware that you want a shorter antenna the fatter the element. Does that mean that the length of a quarter wave tends towards the length of a quarter wave in a vacuum as the diameter tends towards 0? (If the element was in a vacuum?)

And you are saying that conductivity or resistivity of material used in an element has no function in the desirable length of the element?

> There's no simple relationship, but the ARRL Antenna Book has

Damn, a simple relationship is what i want :-)

> some graphs. What I suggest is to use an antenna modeling program (I'm
> unashamedly prejudiced). You can get the numbers you want very quickly
> and easily by modeling a half wavelength dipole with different diameters
> and materials with the free EZNEC demo from http://eznec.com.
>

Yes, I have EZNEC demo - you should see my comments to Art in reply to his post. I am still too much of a novice to find EZNEC especially helpful to me at this point, I fear...

Regards
Jeremy

1946. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 06:48:22 UTC
From: BKT <bthomas1@wi.rr.com>
Message-ID: <WC4Z9.59767$Gm2.1441665@twister.rdc-kc.rr.com>
Source record: 126135
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

ebay 29.99

"FM" <radiovintage@hotmail.com> wrote in message
news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> I am looking for a CD of Windows 95 for my shack computer so I can run
some
> DOS programs.
> THANKS
>
>

1947. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 08:23:40 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E34EC8C.65B83BCF@cwis.net>
Source record: 126136

Rik,
Both look like 'Sterba' curtains to me. Just a
different number of 'elements', and fed in a different
place. I think someone is pulling your leg about
melting the ice...
'Doc

1948. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 08:55:04 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <v39sugiafnva01@corp.supernews.com>
Source record: 126137
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

I Know whom to blame now.

"Scott" <scott@scotti.sh!t> wrote in message
news:dAudnRTxhKG0XqmjXTWc2Q@comcast.com...
>
>
> Technician wrote:
> >
> > In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>, scott@scotti.sh!t
> > says...
> > >
> > >
> > >
> > > > I am looking for a CD of Windows 95 for my shack computer so I can
run some
> > > > DOS programs.
> > > > THANKS
> > > > >
> > > > >
> > > > >
> > > > >
> > > > If you want to run dos programs, why not use dos?
> > >
> > >
> > > Because if the machine came up and on the screen was:
> > >
> > > C:\>
> > >
> > > They wouldn't know what to do. If it ain't called SETUP
> > > or INSTALL, theys be lost!!!!
> > >
> >
> > No offence, but if you are going to run DOS programs, my opinion is that
> > you should at least know how to work at a prompt, regardless of the
> > programs need for it.
>
>
> I was building XT's back in the day.

1949. Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 10:04:14 UTC
From: John <jkporter2000@yahoo.com>
Message-ID: <Xns93106019322jkporterhawaiirrcom@66.75.162.201>
Source record: 126138

First I am a SWL that is studing to be a HAM ;-) Any way I live very high on a hill here in Honolulu over looking Dimondhead and Waikiki and I think there are limitations on Antennas for tv ect, but I think you can fly kits as high as you want to and I was wondering about attaching a "very" long wire antenna to the kite both for listening and one day / night for transmiting on! Normally there is plenty of wind to do the job ;-) I was wondering about the antenna part.
- John -

1950. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 11:31:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3a64mc8k3uia5@corp.supernews.com>
Source record: 126139

Jeremy Taylor wrote:
> Roy Lewallen wrote:
>
>> You don't really want the velocity factor of waves traveling in the
>> metal, but on the surface. The velocity factor in a metal is indeed a
>> function of its conductivity, and frequency, too -- the velocity
>> factor in copper is, in fact, 0.00000438 at 10 MHz. That is, waves
>> travel about 200,000 times slower in copper than in air at that
>> frequency. But one of the reasons this isn't very interesting is that
>> the waves don't get very far, anyway. At 10 MHz, the attenuation in
>> copper is 10.6 dB per mil (.001 inch).
>
>
> If I understand you correctly, you are saying that there is a
> technically correct answer the question I asked, that is useles to me
> because the question I asked was the wrong one.
>
> Certainly from the numbers you give, we would have rather small
> antennas, for even 10m, if the question I asked was the right one!

And, at nearly 18 dB per mil attenuation at 28 MHz, very inefficient ones!

>>
>> The resonant length of a dipole, for example, is a bit shorter than a
>> half wavelength. But this difference in length is a function of diameter.
>
>
> Oh, ok, yes I was aware that you want a shorter antenna the fatter the
> element. Does that mean that the length of a quarter wave tends towards
> the length of a quarter wave in a vacuum as the diameter tends towards
> 0? (If the element was in a vacuum?)

Yes and no. The theoretical reactance of an infinitely thin half wave
dipole is around +43 ohms, so it's not resonant. But with a bandwidth of
zero, it would take a length adjustment of zero to adjust the reactance
to zero, making it resonant.

> And you are saying that conductivity or resistivity of material used in
> an element has no function in the desirable length of the element?
>

Very little. Extremely lossy materials might have an impact, but going
from metal to another won't make an appreciable difference.

>> There's no simple relationship, but the ARRL Antenna Book has
>

>
> Damn, a simple relationship is what i want :-)
>
Sorry, there are countless books and papers written about the topic. But approximations abound, so if you have a clear idea of the range of antenna lengths and material diameters you're interested in, you can likely find one that'll fit reasonably well over the range of interest.

>> some graphs. What I suggest is to use an antenna modeling program (I'm
>> unashamedly prejudiced). You can get the numbers you want very quickly
>> and easily by modeling a half wavelength dipole with different
>> diameters and materials with the free EZNEC demo from http://eznec.com.
>>
>
> Yes, I have EZNEC demo - you should see my comments to Art in reply to
> his post. I am still too much of a novice to find EZNEC especially
> helpful to me at this point, I fear...

Maybe the following information will help. There seem to be quite a few EZNEC users on this group, so I hope the rest won't mind the rather lengthy and detailed posting describing one use for it.

Follow along, and I'll show you how to use EZNEC to answer some of your questions.

Start up the demo version, click the Open button along the left, then select BYDipole.ez, and click Open in the file selection dialog box. I chose this model because it's a simple dipole, close to what we'll use for the analysis. To keep ground characteristics from modifying results, we'll change to free space. Click Ground Type in the large window, select Free Space, then click Ok. You're interested in the effect of loss, so click Wire Loss in the white window, select Copper, then click Ok. Click Wires to open the Wires Window, where you can see in the Diameter column that this model is made from #12 wire. We might want to discern some fairly small changes in impedance, so increase the accuracy a little by increasing the number of segments to the maximum allowable odd number (odd so the source stays in the center) of 19 -- replace 11 in the Segs column with 19, then press <Enter>. In free space, the height (Z coordinate) makes no difference. Change the Z coordinates of both ends to 0 just to reduce the possibility of confusion later, when we're changing length. If you want, you can open the View Antenna window by clicking the View Ant button on the left of the main window. You should see a single wire going out along the Y axis, with a circle (the source) in its middle. Now let's see where the antenna is resonant. First check the impedance at the present frequency of 14 MHz by clicking the Src Dat button on the left. It shows an impedance of 68.83 - J 27.98 ohms. The negative reactance means the antenna is short -- it's resonant at a higher frequency. We could just go with the present resonant frequency, or we can adjust the antenna to resonance at 14 MHz. Let's adjust the length. There are a couple of ways to do this. One is to adjust the length, watch what happens to the impedance, adjust some

more, and so forth, until we zero in on the resonant condition of the source reactance (J term) of zero or very nearly zero. I'll illustrate another way, which is a little more involved, but it's a pretty quick way to get close.

Click the SWR button on the left of the main window. Enter 14, 14.5, and 0.1 for the Start, Stop, and Step frequencies -- we know resonance is higher but don't know how much. Click Run, and look at the resulting plot. The minimum SWR occurs between 14.2 and 14.3 MHz. The point of minimum SWR is usually very close to resonance. Close the SWR window and click Frequency in the main window. Enter 14.25 for the new frequency, then click Ok. Click Src Dat to see how close to resonance we are. The result is 7265 - J 2.106 ohms, which would normally be close enough, but you're interested in seeing small changes, so we'll get closer. So now we'll scale the antenna to 14 MHz and fine tune it. Click Frequency again, enter 14 for the frequency, but this time check the Rescale box, then click Ok. This makes the antenna longer, so it'll have about the same impedance at 14 MHz as the original did at 14.25. Click Src Dat. The impedance is pretty close to the value it was at 14.25 MHz. The slight difference is due to the fact that EZNEC didn't scale the gauge-specified wire diameter. The antenna needs to be just a little longer. In the Wires Window End 2 Y column, increase the value slightly to 34.08 (I cheated -- this took me two steps to determine) and run Src Dat again. The impedance is now 72.83 + J 0.0764, very close to resonance. Save this model as, say, Test_12_Cu. Note that the length is 34.08 feet. If you'd like, you can open an Antenna Notes file and save some information of your choice to go with this antenna. See "Antenna Notes" in the EZNEC manual index.

From here on, finding resonance with other wire materials and diameters is probably most easily done by tweaking the length. For example, let's see what galvanized steel wire would look like. In the main window, click Wire Loss, choose Zinc, and click Ok. Click Src Dat, and note that the reactance has changed only a little, to 0.7335 ohms. A couple of iterations done by changing the length and clicking Src Dat shows that the antenna is now resonant at 14 MHz with a length of 34.065 feet instead of 34.08. So the change from copper to zinc conductivity changed the resoant length by 0.015 feet, or 0.04%. You'll find that wire resistivity changes make less difference yet when the diameter is greater, and that diameter will have a noticeable impact.

EZNEC is a very general purpose program that does a lot of different things, so it's not unlikely that you can find some software to do a particular job or range of jobs more quickly and easily. Once you use EZNEC a few times, though, I hope you'll see its usefulness. And, for the demo, the price is right!

Roy Lewallen, W7EL

1951. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 11:45:05 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E351BC1.44E3075B@cwis.net>
Source record: 126140

John,
'Kite' antennas are not exactly a new idea, they've
been around for a while. There are safety hazards that
you should be aware of. That antenna makes for a pretty
good extension-cord, and you are 'plugged' into the end
of it. Watch the power lines! Believe it or not, if you
fly it above a certain height, you also have to report it
to the FAA. It really isn't as simple an idea as you
might think...
'Doc

1952. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 13:59:34 UTC
From: richardharrison@webtv.net
Message-ID: <20265-3E353B46-149@storefull-2315.public.lawson.webtv.net>
Source record: 126141

John wrote:
"Normally there is plenty of wind to do the job. I was wondering about the antenna part."

Abnormally low wind would be a problem. When the kite comes down and your antenna / feedline lays across the land. If there happen to be high voltage lines or the like which are crossed, the fireworks caused are likely your liability.

Otherwise, a versatile tuner is all you need.

Best regards, Richard Harrison, KB5WZI

1953. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 14:27:15 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b13fk2sdt1@helle.btinternet.com>
Source record: 126142

Jeremy,

The velocity factor INSIDE metal conductors is not relevant to radio antennas. It's what's in space EXTERNAL to the conductors that matters. But you didn't mean to say that, did you? Or did you? ;o)

To give you the feel of the effects of antenna dimensions and velocity, down-load in a few seconds program DIPCAGE2 from website below and run immediately.

It is important to become familiar with the magnitudes of the numerous effects. Most are of second or higher orders and can normally be forgotten about unless anyone wishes to start an argument on this newsgroup.

You may find other small programs available from the site to be educational as well as practical. Simple 'What-if ' operating procedure. Instantaneous answers. See the one-line descriptions.

Program DIPCAGE.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

1954. Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 14:57:24 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301270657.2e25a215@posting.google.com>
Source record: 126143

We have lots of commercial A.M. stations with extensive
use of ground radials. Does anybody have any idea of what
minimukm efficiency is imposed by the F.C.C. on such
antennas and what is a realistic top efficiency that can
or has been obtained either by commercials ,military or
amateurs.
I apprreciate any input on this question.
Art

1955. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 15:24:29 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E354E95.3000207@socal.rr.com>
Source record: 126144
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

8088

Technician wrote:

>In article <dAudnRTxhKG0XqmjXTWc2Q@comcast.com>, scott@scotti.sh!t
>says...
>
>
>>Technician wrote:
>>
>>
>>>In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>, scott@scotti.sh!t
>>>says...
>>>
>>>
>>>>
>>>>
>>>>
>>>>>I am looking for a CD of Windows 95 for my shack computer so I can run some
>>>>>DOS programs.
>>>>>THANKS
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>If you want to run dos programs, why not use dos?
>>>>>
>>>>>
>>>>Because if the machine came up and on the screen was:
>>>>
>>>>C:\>
>>>>
>>>>They wouldn't know what to do. If it ain't called SETUP
>>>>or INSTALL, theys be lost!!!!
>>>>
>>>>
>>>>
>>>No offence, but if you are going to run DOS programs, my opinion is that
>>>you should at least know how to work at a prompt, regardless of the
>>>programs need for it.
>>>
>>>

>>I was building XT's back in the day.
>>
>>
>>
>
>i used to have a big old XT. What was the CPU in those anyway? i think
>they were before the X86 family, but maybe not.
>
>~Travis
>
>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

1956. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 15:25:02 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E354EB5.8030108@socal.rr.com>
Source record: 126145
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

8088

Technician wrote:

>In article <dAudnRTxhKG0XqmjXTWc2Q@comcast.com>, scott@scotti.sh!t
>says...
>
>
>>Technician wrote:
>>
>>
>>>In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>, scott@scotti.sh!t
>>>says...
>>>
>>>
>>>>
>>>>
>>>>
>>>>>I am looking for a CD of Windows 95 for my shack computer so I can run some
>>>>>DOS programs.
>>>>>THANKS
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>If you want to run dos programs, why not use dos?
>>>>>
>>>>>
>>>>Because if the machine came up and on the screen was:
>>>>
>>>>C:\>
>>>>
>>>>They wouldn't know what to do. If it ain't called SETUP
>>>>or INSTALL, theys be lost!!!!
>>>>
>>>>
>>>>
>>>No offence, but if you are going to run DOS programs, my opinion is that
>>>you should at least know how to work at a prompt, regardless of the
>>>programs need for it.
>>>
>>>

>>I was building XT's back in the day.
>>
>>
>>
>
>i used to have a big old XT. What was the CPU in those anyway? i think
>they were before the X86 family, but maybe not.
>
>~Travis
>
>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

1957. Re: Hollow Vs. Solid aluminum: Differences

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 15:25:45 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <AAadnYH01pL00qijXTWcpw@comcast.com>
Source record: 126146

Craig,

From what I have seen, antennas at 2 meters and above tend to use solid elements, 6 meters and below tubing. At 6 meters 3/8 to 1/2 inch tubing is about right. I just looked at pieces of two different 6m beams in my garage, one (KLM) uses 3/8 elements, the other (Hygain) 7/16. If you use cheap hardware store aluminum that does not have a specification, you might want to use 1/2 inch. Softer alloy will not be as strong, but should be easier to bend without fracturing. The only time you would have to worry about element strength is when you have severe ice buildup.

BTW, instead of using a folded dipole DE, why not use a beta or hairpin match. These will let you adjust the SWR. The beta match is easier to use, because it requires a 4:1 balun, which just consists of a 1/2 wavelength of RG8. Neither one uses a caoacitor

Tam/WB2TT
"Craig" <craigmorrison1@hotmail.com> wrote in message
news:c3523vcrcc0125ub1tmfdub9qp3d4109pn@4ax.com...
> I'm putting together a list of materials for a 3-el 6m yagi and the
> aluminum factory offers a choice of 9.5mm solid rod, or hollow tube.
>
> Is there any particular advantage (or disadvantage) that one has over
> the other?
>
> Can solid rod be safely bent to make a folded dipole, or will it
> simply snap?
>
> And finally, what's a desirable wall thickness for 9.5mm tubing
> necessary to support the weight of an approximately 3 metre length of
> aluminum forming part of a diploe?
>
> Thanks for all suggestions!
> Craig

1958. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 15:45:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E35542E.6050602@ieee.org>
Source record: 126147

Richard Harrison wrote:
> I must not understand the question. Take the example of a 50-ohm
> transmitter connected to a 50-ohm load by a 1/2-wavelength of 300-ohm
> twinlead. The transmitter sees a 50-ohm load at the match point (the
> drivepoint of the 300-ohm impedance repeater consisting of two each
> 1/4-wave impedance inverters back-to-back, a total of 1/2-wave). So,
> there is zero reflected energy at the transmission line innput on the
> source side of the match point. The reflections are all within the
> 300-ohm line.

The question is: What happens to the reflected energy in the 300 ohm
line that is flowing toward the source and encounters the impedance
discontinuity? Here's what the author of the QEX article says:

"A total re-reflection of power at the match point is not necessary
for the impedance match to occur."

If there is not a total re-reflection of reflected energy flowing
toward the source and there is no energy incident upon the source,
what happens to that energy?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1959. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 15:52:44 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <3E3555CC.49A018CA@ziplog.com>
Source record: 126148

Just remember ... they go up a good ways if you provide the wire. What goes up comes down, which is the obvious thought. But what goes up also comes down another way sometimes. Bro Franklin made the notion of sticking your finger out and feeling the zap look like fun with that key... But Dr. Zeus also loves nice high things for lighrning rods... Since you live very high on a hill, if lightning is around you alread know about it. But you're gonna become an even nicer target right quick like this way.... kinda like to doggie with huge ears:

\ /
(!)
* *

John wrote:

> First I am a SWL that is studing to be a HAM ;-) Any way I live very high
> on a hill here in Honolulu over looking Dimondhead and Waikiki and I think
> there are limitations on Antennas for tv ect, but I think you can fly kits
> as high as you want to and I was wondering about attaching a "very" long
> wire antenna to the kite both for listening and one day / night for
> transmiting on! Normally there is plenty of wind to do the job ;-) I was
> wondering about the antenna part.
> - John -

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

1960. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 16:04:32 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <QqqcncInpJsdxaijXTWcqw@comcast.com>
Source record: 126149
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Check out ebay, but you want win98SE, not 95.

Tam/WB2TT
"FM" <radiovintage@hotmail.com> wrote in message
news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> I am looking for a CD of Windows 95 for my shack computer so I can run
some
> DOS programs.
> THANKS
>
>

1961. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 16:54:52 UTC
From: richardharrison@webtv.net
Message-ID: <20264-3E35645C-393@storefull-2315.public.lawson.webtv.net>
Source record: 126150

Jeremy wrote:
Can you provide some advice in this respect, so I can figure out how long a 1/4 wave (for instance) is in various metals?"

I just tried to respond with a too-long posting which disappeared from my screen. Arnold Bailey has all the answers in and around a chart on page 320 of "TV and Other Receiving Antennas".

Your length will vary significantly with diameter. The fatter the conductor, the shorter. Length does not vary significantly with the material at UHF.

Bailey gives a simple formula for a 1/2-wavelength antenna using only the conductor periphery as a function of free-space wavelength versus frequency.

Length = (1+P-sqrtP)(11.800/2(MHz)

Free-space wavelength inches=11,803/MHz

Fractional wavelength periphery using D in:
P= pi D/Free-space wavelength

Bailey gives an example using 200 MHz and a P=.053 inch.

!/2-wave=(1+.053-sqrt .053) 29.5 inches

1/2-wave=length= 24.3 inches.

Best regards, Richard Harrison, KB5WZI

1962. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 18:11:20 UTC
From: richardharrison@webtv.net
Message-ID: <2106-3E357648-27@storefull-2318.public.lawson.webtv.net>
Source record: 126153

CAM, W5DXP wrote:
"Here`s what the author of the QEX article says:
"A total re-reflection of power at the match point is not necessary for the impedance match to occur."

At a match point, the load impedance matches the source impedance, otherwise energy is reflected to the source.

At the match point, the source sees a matched load which just as well could be an infinite line of the same impedance. No energy returns to the source from an infinite line.

If a total re-reflection toward the load at or beyond the match point does not occur, it would not be the same as an infinite line which returns no energy to the source.

Best regards, Richard Harrison, KB5WZI

1963. Re: Quad?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 18:16:34 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <b13t22$2de5$1@news1.tribune.com>
Source record: 126151

I have the Cubex. Set up with 5 feeds from relay coax switch on the boom.

Quads are a beast to get up. My old Yagi was easy.

The only difference between the cubex kits and the "completed" quads is that
you drill your own holes, and measure your
wire with the kit. The "Kit" uses telescoping arms so they can be shipped
UPS.

I do not forsee going back to a Yagi.

John

"ARDUJENSKI" <ardujenski@aol.com> wrote in message
news:20030123094704.27866.00000231@mb-ml.aol.com...
> I am interested in buying a 5 band, 2 element QUAD. I would like feedback
> regarding the ones commercially available addressing ease of assembly,
tuning,
> and durability. I believe GEM QUAD, LIGHTNINGBOLT and CUBIX are the main
> sources
> http://www.lightningboltantennas.com/
> http://www.mts.net/~pb999287/
> http://www.cubex.com/default.htm
> Thanks...Alan KB7MBI in Woodinville, WA

1964. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 18:19:33 UTC
From: richard dalton <rdalton1@sbcglobal.net>
Message-ID: <VKeZ9.881$u65.416497850@newssvr11.news.prodigy.com>
Source record: 126152
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

I found win 98 &win ME on Kazaa,they work great
"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:QqqcncInpJsdxaijXTWcqw@comcast.com...
> Check out ebay, but you want win98SE, not 95.
>
> Tam/WB2TT
> "FM" <radiovintage@hotmail.com> wrote in message
> news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> > I am looking for a CD of Windows 95 for my shack computer so I can run
> some
> > DOS programs.
> > THANKS
> >
> >
>
>

1965. ANTENNA GROUNDING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 18:30:34 UTC
From: richard dalton <rdalton1@sbcglobal.net>
Message-ID: <eVeZ9.882$iM5.419206335@newssvr11.news.prodigy.com>
Source record: 126154

I live in an upstairs apartment with the typical concrete steps on a wrought iron(?) frame which is also set in concrete(at ground level).Does this seem to everybody that this metal framework would make a good antenna ground?

1966. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 19:00:49 UTC
From: Karl Beckman <Karl.Beckman@Motorola.com>
Message-ID: <b13vl2csj1@localhost.localdomain>
Source record: 126155

This is nothing new for Roy Llewallen, but going to a ferro-magnetic material such as iron or steel wire or tubing will make a difference. Also watch out for nickel-plated PL259 connectors. In high RF fields (and points of high VSWR) they can be a primary source of IM!

--
Karl Beckman, PE
Amateur Radio since 1964 WA8NVW WA8NVW@ARRL.net
West Park Radiops Club W8VM SkyWARN NWS-Cle WX8CLE
NavyMARS NNN0VBH NNN0VBH@NavyMARS.org
NNN0VBH@NavyMARS.org

"Quality is never an accident, it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives"

"Roy Lewallen" <w7el@eznec.com> wrote in message news:v3a64mc8k3uia5@corp.supernews.com...
> Jeremy Taylor wrote:
> > Roy Lewallen wrote:
> >
> >> You don't really want the velocity factor of waves traveling in the
> >> metal, but on the surface. The velocity factor in a metal is indeed a
> >> function of its conductivity, and frequency, too -- the velocity
> >> factor in copper is, in fact, 0.00000438 at 10 MHz. That is, waves
> >> travel about 200,000 times slower in copper than in air at that
> >> frequency. But one of the reasons this isn't very interesting is that
> >> the waves don't get very far, anyway. At 10 MHz, the attenuation in
> >> copper is 10.6 dB per mil (.001 inch).
> >
> >
> > If I understand you correctly, you are saying that there is a
> > technically correct answer the question I asked, that is useles to me
> > because the question I asked was the wrong one.
> >
> > Certainly from the numbers you give, we would have rather small
> > antennas, for even 10m, if the question I asked was the right one!
>
> And, at nearly 18 dB per mil attenuation at 28 MHz, very inefficient ones!
>
> >>
> >> The resonant length of a dipole, for example, is a bit shorter than a
> >> half wavelength. But this difference in length is a function of
diameter.

> >
> >
> > Oh, ok, yes I was aware that you want a shorter antenna the fatter the
> > element. Does that mean that the length of a quarter wave tends towards
> > the length of a quarter wave in a vacuum as the diameter tends towards
> > 0? (If the element was in a vacuum?)
>
> Yes and no. The theoretical reactance of an infinitely thin half wave
> dipole is around +43 ohms, so it's not resonant. But with a bandwidth of
> zero, it would take a length adjustment of zero to adjust the reactance
> to zero, making it resonant.
>
> > And you are saying that conductivity or resistivity of material used in
> > an element has no function in the desirable length of the element?
> >
>
> Very little. Extremely lossy materials might have an impact, but going
> from metal to another won't make an appreciable difference.
>
> >> There's no simple relationship, but the ARRL Antenna Book has
> >
> >
> > Damn, a simple relationship is what i want :-)
> >
> Sorry, there are countless books and papers written about the topic. But
> approximations abound, so if you have a clear idea of the range of
> antenna lengths and material diameters you're interested in, you can
> likely find one that'll fit reasonably well over the range of interest.
>
> >> some graphs. What I suggest is to use an antenna modeling program (I'm
> >> unashamedly prejudiced). You can get the numbers you want very quickly
> >> and easily by modeling a half wavelength dipole with different
> >> diameters and materials with the free EZNEC demo from http://eznec.com.
> >>
> >
> > Yes, I have EZNEC demo - you should see my comments to Art in reply to
> > his post. I am still too much of a novice to find EZNEC especially
> > helpful to me at this point, I fear...
>
> Maybe the following information will help. There seem to be quite a few
> EZNEC users on this group, so I hope the rest won't mind the rather
> lengthy and detailed posting describing one use for it.
>
> Follow along, and I'll show you how to use EZNEC to answer some of your
> questions.
>
> Start up the demo version, click the Open button along the left, then
> select BYDipole.ez, and click Open in the file selection dialog box. I
> chose this model because it's a simple dipole, close to what we'll use
> for the analysis. To keep ground characteristics from modifying results,

> we'll change to free space. Click Ground Type in the large window,
> select Free Space, then click Ok. You're interested in the effect of
> loss, so click Wire Loss in the white window, select Copper, then click
> Ok. Click Wires to open the Wires Window, where you can see in the
> Diameter column that this model is made from #12 wire. We might want to
> discern some fairly small changes in impedance, so increase the accuracy
> a little by increasing the number of segments to the maximum allowable
> odd number (odd so the source stays in the center) of 19 -- replace 11
> in the Segs column with 19, then press <Enter>. In free space, the
> height (Z coordinate) makes no difference. Change the Z coordinates of
> both ends to 0 just to reduce the possibility of confusion later, when
> we're changing length. If you want, you can open the View Antenna window
> by clicking the View Ant button on the left of the main window. You
> should see a single wire going out along the Y axis, with a circle (the
> source) in its middle. Now let's see where the antenna is resonant.
> First check the impedance at the present frequency of 14 MHz by clicking
> the Src Dat button on the left. It shows an impedance of 68.83 - J 27.98
> ohms. The negative reactance means the antenna is short -- it's resonant
> at a higher frequency. We could just go with the present resonant
> frequency, or we can adjust the antenna to resonance at 14 MHz. Let's
> adjust the length. There are a couple of ways to do this. One is to
> adjust the length, watch what happens to the impedance, adjust some
> more, and so forth, until we zero in on the resonant condition of the
> source reactance (J term) of zero or very nearly zero. I'll illustrate
> another way, which is a little more involved, but it's a pretty quick
> way to get close.
>
> Click the SWR button on the left of the main window. Enter 14, 14.5, and
> 0.1 for the Start, Stop, and Step frequencies -- we know resonance is
> higher but don't know how much. Click Run, and look at the resulting
> plot. The minimum SWR occurs between 14.2 and 14.3 MHz. The point of
> minimum SWR is usually very close to resonance. Close the SWR window and
> click Frequency in the main window. Enter 14.25 for the new frequency,
> then click Ok. Click Src Dat to see how close to resonance we are. The
> result is 7265 - J 2.106 ohms, which would normally be close enough, but
> you're interested in seeing small changes, so we'll get closer. So now
> we'll scale the antenna to 14 MHz and fine tune it. Click Frequency
> again, enter 14 for the frequency, but this time check the Rescale box,
> then click Ok. This makes the antenna longer, so it'll have about the
> same impedance at 14 MHz as the original did at 14.25. Click Src Dat.
> The impedance is pretty close to the value it was at 14.25 MHz. The
> slight difference is due to the fact that EZNEC didn't scale the
> gauge-specified wire diameter. The antenna needs to be just a little
> longer. In the Wires Window End 2 Y column, increase the value slightly
> to 34.08 (I cheated -- this took me two steps to determine) and run Src
> Dat again. The impedance is now 72.83 + J 0.0764, very close to
> resonance. Save this model as, say, Test_12_Cu. Note that the length is
> 34.08 feet. If you'd like, you can open an Antenna Notes file and save
> some information of your choice to go with this antenna. See "Antenna
> Notes" in the EZNEC manual index.

>
> From here on, finding resonance with other wire materials and diameters
> is probably most easily done by tweaking the length. For example, let's
> see what galvanized steel wire would look like. In the main window,
> click Wire Loss, choose Zinc, and click Ok. Click Src Dat, and note that
> the reactance has changed only a little, to 0.7335 ohms. A couple of
> iterations done by changing the length and clicking Src Dat shows that
> the antenna is now resonant at 14 MHz with a length of 34.065 feet
> instead of 34.08. So the change from copper to zinc conductivity changed
> the resoant length by 0.015 feet, or 0.04%. You'll find that wire
> resistivity changes make less difference yet when the diameter is
> greater, and that diameter will have a noticeable impact.
>
> EZNEC is a very general purpose program that does a lot of different
> things, so it's not unlikely that you can find some software to do a
> particular job or range of jobs more quickly and easily. Once you use
> EZNEC a few times, though, I hope you'll see its usefulness. And, for
> the demo, the price is right!
>
> Roy Lewallen, W7EL
>

1967. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 19:21:53 UTC
From: richardharrison@webtv.net
Message-ID: <27286-3E3586D1-441@storefull-2312.public.lawson.webtv.net>
Source record: 126158

CAM, W5DXP wrote:
"If there is not a total re-reflection of reflected energy flowing toward the source (incomplete re-reflection at the "match point") and there is no energy incident on the source, what happens to that energy?"

Again I have trouble understanding the problem. An incomplete re-reflection ensures some energy "incident" (biting) on the source. Waves passing in opposite directions do nothing but create standing waves as they ineffectively pass through each other on the line. A partial re-reflection allows energy through a "match point" to continue on toward the source. Some non-re-reflected energy continues onto the source. Its arrival changes the impedance the source "sees". What happens at the source to the reflected signal depends on the nature of the returned signal and the nature of the source.

Best regards, Richard Harrison, KB5WZI

1968. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 19:22:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3586E0.9090507@ieee.org>
Source record: 126156

Richard Harrison wrote:
> CAM, W5DXP wrote:
> "Here`s what the author of the QEX article says:
> "A total re-reflection of power at the match point is not necessary for
> the impedance match to occur."
>
> If a total re-reflection toward the load at or beyond the match point
> does not occur, it would not be the same as an infinite line which
> returns no energy to the source.

What the author is missing is that total re-reflection at a match point is a two step process. The first step is the only one he seems to be aware of and that's the Pref2(Rho^2) re-reflection. There is also the re-reflection caused by wave cancellation at the match point which the author tends to ignore. When he says, "... a complete cancellation of both waves occurs", he apparently just forgets about the energy involved in those waves which, of course, must be conserved. I'm trying to talk him out of ignoring that second step in the reflected energy re-reflection process.

The wave cancellation responsible for zero reflected energy incident upon the source (when a match point exists) causes re-reflection of the reflected energy involved in the wave cancellation. The two energy components in the canceled waves are Pref2(1-Rho^2) and Pfor1(Rho^2), both reflected wave components predicted by the wave reflection model and superposition theorem. Since, in a matched system, all energy winds up flowing toward the load, there is no question that ALL rearward-traveling reflected energy is re-reflected back toward the load. That energy includes everything except Pfwd1(1-Rho^2) which is the only energy component predicted by the superposition theorem that never gets reflected (until it reaches a mismatched load).
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1969. Re: ANTENNA GROUNDING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 19:23:59 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E35874F.3030100@ieee.org>
Source record: 126157

richard dalton wrote:
> I live in an upstairs apartment with the typical concrete steps on a wrought
> iron(?) frame which is also set in concrete(at ground level).Does this seem
> to everybody that this metal framework would make a good antenna ground?

Not a good idea. You could fry your neighbors with standing
waves on the iron frame.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1970. FA ANTENNA ROTATOR & CONTROLLER

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 19:47:11 UTC
From: edge3431@aol.comnospam
Message-ID: <20030127144711.07729.00000254@mb-fk.aol.com>
Source record: 126159

FOR SACRAMENTO/STOCKTON, CA AREA ONLY. This item is too heavy and bulky to ship. Must be picked up by buyer in Stockton.

Heavy duty antenna rotator and CDE controller. Will throw in mast pipe, etc. If the URL below doesn't work then paste the item number 3002897727 in the eBay search box.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3002897727&category=4672

1971. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 19:51:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <n03b3v4t3cv9b2e4efibpcoj0mv3510uo3@4ax.com>
Source record: 126160

On 27 Jan 2003 06:57:24 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>We have lots of commercial A.M. stations with extensive
>use of ground radials. Does anybody have any idea of what
>minimukm efficiency is imposed by the F.C.C. on such
>antennas and what is a realistic top efficiency that can
>or has been obtained either by commercials ,military or
>amateurs.
>I apprreciate any input on this question.
>Art

Hi Art,

When I tested for FCC 1st Class long ago, such considerations as
efficiency were rife through a lot of the test (actually, I believe it
was the 2nd Class that was far more rigorous in this regard).
However, even if a lot attention was put to it (no longer in this
day's watered down test from the FCC), I don't think the FCC mandates
any form of efficiency in that is actually a economic decision, not an
engineering one (even thought it is engineering's responsibility to
serve the economic interests). The only gold standard from the FCC
that I have observed is the mandate for a certain signal level at a
fixed distance for an applied power (which, in the historical
perspective does amount to a statement of efficiency, but indirectly).

73's
Richard Clark, KB7QHC

1972. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 19:58:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E358F6B.8000903@ieee.org>
Source record: 126161

Richard Harrison wrote:
> CAM, W5DXP wrote:
> "If there is not a total re-reflection of reflected energy flowing
> toward the source (incomplete re-reflection at the "match point") and
> there is no energy incident on the source, what happens to that energy?"
>
> Again I have trouble understanding the problem. An incomplete
> re-reflection ensures some energy "incident" (biting) on the source.

The problem is this assertion from the QEX article: "A total
re-reflection of power at the match point is not necessary
for the impedance match to occur."

You seem to be having the same problem with that statement as I do.
I personally consider that to be a good thing but strongly advise
you to don your asbestos suit before the flames start. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1973. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 20:00:57 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5o3b3votj9m9r0lbbgkgbvtmcevs11o547@4ax.com>
Source record: 126162

On Mon, 27 Jan 2003 10:04:14 GMT, John <jkporter2000@yahoo.com> wrote:

>First I am a SWL that is studing to be a HAM ;-) Any way I live very high
>on a hill here in Honolulu over looking Dimondhead and Waikiki and I think
>there are limitations on Antennas for tv ect, but I think you can fly kits
>as high as you want to and I was wondering about attaching a "very" long
>wire antenna to the kite both for listening and one day / night for
>transmiting on! Normally there is plenty of wind to do the job ;-) I was
>wondering about the antenna part.
>- John -

Hi John,

Well, I've seen a lot of reasons why you might get killed, but no one offered just what the antenna would do before that (the whole point after all if you are willing to take the risk).

For Short Wave, a very long antenna may become quite deaf as it would favor listening straight up. This may be useful to listening to the RF emissions from Jupiter (for the hour or so it was above you); but other wise deaf as I indicated.

If you then chanced to tune for AM DX it might just be the killer antenna and big gun on the island. The relationship between wavelength and physical size is the driving force and only inclusion of losses would give you some relief but at the same time whittling down the signal you want to hear (two sided blade). The simple answer that would satisfy both DX and safety issues is to reel it in closer (at which point it would hardly seem worth while).

Your major, major asset is that vast ground plane of the ocean offering you fantastic low angle opportunities that most would give their eye teeth for. That, in itself, would bring you considerable advantage even with a rubber duckie.

73's
Richard Clark, KB7QHC

1974. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 20:08:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <u84b3vk183uhigcci0k1l1qd4m2hkqcsv9@4ax.com>
Source record: 126163

On Sun, 26 Jan 2003 20:11:07 -0500, "J. McLaughlin"
<JCM@Power-Net.Net> wrote:

>Dear Bob:
> Did you ever get your problem sorted out? If so, educate us. If
>not, give us details that we might be able to use to help. 73, Mac
>N8TT
>

Hi Mac,

This could not be a problem that is solely an issue of cryptic german issues or documentation - and as they offered, is no doubt a construction issue.

As a construction issue, comparisons with a photo of their finished product should be enough to dismiss variations in element lengths (which is to say it should be visually obvious if THAT were the problem). Another problem could be that the transmission line connection of those elements (no, not YOUR transmission line, the strapping of the elements is a transmission line) has been fumbled so that the electrical pitch between the elements has been upset. This, again, would be quickly evident in a visual comparison. Or, that same transmission line has not been properly terminated. That termination is often a hairpin short (AKA stub, another transmission line feature). The center point of that hairpin is often strapped to the boom which could make a difference if not done (or broken free).

73's
Richard Clark, KB7QHC

1975. Re: Redusing noise with grounding pole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 20:14:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <sm4b3vo1igd53gdh2grr6pgvdiofea74i4@4ax.com>
Source record: 126164

On 26 Jan 2003 12:41:36 -0800, ronang@xs4all.nl (Ron) wrote:

>Hello,
>
>I have the following question, is it true that ther is a
>noise-reduction on receiving shotwave-stations, when i put a copper
>pole in the ground, and make a connection to my receiver (earth)
>
>1) how deep (in mtrs) must i put ??

Use the one already provided by your electric utility located beneath
the meter (follow the lonesome wire that drops from it, the pole in
the ground may be buried).

>
>2) what kind of material mus i use (copper, aluminium,steel) ??

Use copper, other metals may work, other metals may disappear as the
soil consumes them (think rust, but even though aluminum does not
rust, it does decompose in certain soil types).
>
>3) how long is the cable to te receiver and how thick ??

Long enough to get where you want it (it won't matter really for you).
How thick? That doesn't matter either as long as the wire doesn't
break when you sneeze.
>
>
>So if you can / will help me i would be pleassed
>
>
>greetings from a rainy HOLLAND,
>
>Ron (hamcall - pd1anb)

Hi Ron,

Well, true to form for responding without reading first, I notice your
call. The advice above was strictly for SWL. Luckily most of it
applies either way, but when power is involved the answers become
longer.

73's
Richard Clark, KB7QHC

1976. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 20:19:22 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <evgZ9.17647$zF6.1299332@bgtnsc04-news.ops.worldnet.att.net>
Source record: 126165

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E35542E.6050602@ieee.org...
>
> If there is not a total re-reflection of reflected energy flowing
> toward the source and there is no energy incident upon the source,
> what happens to that energy?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>

Cecil,

I'd like to offer a better (or perhaps just different) perspective on what really happens to the energy in the system as it directly relates to the Law of Conservation of Power (energy). I understand your perspective on the law of conservation of power but I think your logic should be applied to the total or net *delivered* power rather than to the addition of any individual forward and re-reflected power components.

In our previous discussions, we've been focusing on determining the steady state voltages, currents, and resulting powers as a function of the transient reflections and re-reflections within the system. Please recognize that the QEX articles were written to explain how the steady state forward and rearward voltages and currents (let's forget about power and energy for a moment) develop as a function of the transient voltages and currents within the system. The only point of the power discussion, and what you've interpreted as a power equation, was to demonstrate that the total forward power cannot be determined from the "powers" within the individual forward waves. This is consistent with general superposition theory. Recognize that the power discussions from my perspective, were intended to show that a total re-reflection of power does not occur at the match point. I recognize that you disagree with me on this and why. Before you jump to a response, please keep reading.

I think at this point, your perspective or interpretation of the law of conservation of power would be better understood if it were considered in terms of total or net *delivered* power. I think your argument against my analysis is based on the following understanding of *delivered* power rather than an understanding of forward, rearward and re-reflected transient "powers".

The Law of Conservation of Power requires that the total or net power dissipated within the system be equal to the total or net power delivered to the system. If we look at the system (the Zo match example) in terms of total or net power delivered to the junction (rather than forward and re-reflected powers at the junction), we see that in the initial state 100 W

of power arrives at the junction with 75 W delivered forward past the junction and 25 W reflected back towards the source. As the system transitions from the initial state to the steady state, the rearward waves delivered back towards the source cause the initial reflected power of 25 W to gradually diminish to 0 W while at the same time the total or net *delivered* power forward of the junction increases by the same amount exactly. So, in the steady state, the total net power delivered past the junction increases by 25 W from 75 W to 100 W. The "what happens to the energy?" question should only be asked in terms of what happens to the 25 W of power initially reflected towards the source. The 25 W watts of reflected power "gone as part of the destructive interference process" is now delivered past the junction. This is the law of conservation of power. [Note that this additional 25 W of delivered power is not a "forward traveling power".]

I think this is a better statement of your position on the law of conservation of power that I would agree with.

Regards,

Steve VE9SRB

1977. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 20:20:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <e45b3vsuitlqiotm3lj7sb676rvfnvmgrv@4ax.com>
Source record: 126166

On Mon, 27 Jan 2003 18:14:57 +1300, Jeremy Taylor
<ng@NOpounamuSPAM.com> wrote:

>
>hi hi - don't want to open a can of worms or start a religious debate.
>If I can be assured that the difference is so minimal at frequencies
>between 40m and 23cm, then I'm that'll do me fine. I'm not going to cut
>my elements to tolerances so fine that .073mm is noticable!
>
>Regards
>Jeremy

Hi Jeremy,

Rest assured.

The big difference would be if the metal is also susceptible to
attracting a magnet (think steel). Even with this "big" difference,
it would be a strain to observe except on the most delicate of lab
instruments (AM broadcasters don't give a hoot about it, or do the TV
folks, the FM folks, the two-way folks....).

The more compelling factor, as you indicate you appreciate, is
thickness which goes directly to inductance.

73's
Richard Clark, KB7QHC

1978. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 21:10:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <sa6b3v4ubcjrjscn6ve5mduo8ln2350r5f@4ax.com>
Source record: 126167

On Sun, 26 Jan 2003 14:54:06 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>
>I'm not playing games -- I'm really that ignorant, or stupid, as the
>case may be. But I hate to say this discussion sure hasn't helped reduce
>the ignorance much.
>
>Roy Lewallen, W7EL

Hi Roy,

Having read, and re-read this turgid side topic has resolved nothing
for me, and more to that matter is your posting did nothing either.
The inordinate complexity that Cecil puts into these things tells me
there is nothing beneath the surface and I tune out only to see how
others fare. Well, that is responded to, as stated above; but it
doesn't really tell me if you got THE answer (instead of the prolific
AN answer), or more to the matter, offered one of your own (or have
one held in confidence). But, as to this last, you (I/We) would
necessarily have to know what was being talked about to do that and I
don't get the impression that happened.

All of this has the logical clarity of trying to shoot the sun through
a thick fog for the purpose of finding a bearing. When I ask Cecil
how, the quality of response has been a poor socratic method that
drives me to respond: Yes it is daylight, yes the sun is a radiator,
yes the radiation falls upon the earth, yes I can see light, yes I
have my sextant, yes I know how to use it (when do we get to talk
about how you do it with fog?), yes one has to do this at noon, yes I
have an ephemeris (when do we talk about this fog?), yes the sea is
calm, yes I am looking in the right direction because I have a compass
(can we talk about how you do it in the fog?), yes it works fine (the
fog has nothing to do with it), how do you find you way through the
fog? Yes it is daylight, yes the sun is a radiator (what about the
fog, how do you do it?), yes the radiation falls upon the earth....

73's
Richard Clark, KB7QHC

1979. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 21:16:40 UTC
From: cornytheclown@hotmail.com
Message-ID: <8e8f59d4.0301271316.4a1d655c@posting.google.com>
Source record: 126168
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"BKT" <bthomas1@wi.rr.com> wrote in message
news:<WC4Z9.59767$Gm2.1441665@twister.rdc-kc.rr.com>...
> ebay 29.99
>

http://www.warez.com/ free if you dont pick up a virus or trojan
>
> "FM" <radiovintage@hotmail.com> wrote in message
> news:BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net...
> > I am looking for a CD of Windows 95 for my shack computer so I can run
> some
> > DOS programs.
> > THANKS
> >
> >

1980. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 21:59:29 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E35ABC1.70104@ieee.org>
Source record: 126069

VE9SRB wrote:
> I'd like to offer a better (or perhaps just different) perspective on what
> really happens to the energy in the system as it directly relates to the Law
> of Conservation of Power (energy). I understand your perspective on the law
> of conservation of power but I think your logic should be applied to the
> total or net *delivered* power rather than to the addition of any individual
> forward and re-reflected power components.

You seem to be saying that only NET energy must be conserved and individual small quantities of energy need not be conserved. If you are willing to officially state that the net energy in a billion photons has to be conserved but the energy in an individual photon need not be conserved, I do believe I can retire from this argument.

> The only point of the power discussion, and
> what you've interpreted as a power equation, was to demonstrate that the
> total forward power cannot be determined from the "powers" within the
> individual forward waves.

That's where you are wrong, Steve. *ALL* energy must balance so the energy components in the individual waves must balance. In your article, you tell us that the individual energy in each wave component is V^2/Z0. Assuming that is true, you simply cannot get more energy out of two (and only two) waves than exists in the two (and only two) waves. All energy must be conserved, not just the energy that you choose to be conserved. Where does the energy in your canceled "rearward-traveling waves 1 and 2 go? After a year and a half, you have never answered that question. In a one-dimensional transmission line, the answer is obvious. It must change directions, i.e. be re-reflected. There is simply no other possibility. It is exceptionally coincidental that the energy in the canceled waves is EXACTLY equal to the extra energy, SQRT(P1)*SQRT(P2), that you need to add to your "power" equations in your article, don't you think?

> This is consistent with general superposition
> theory. Recognize that the power discussions from my perspective, were
> intended to show that a total re-reflection of power does not occur at the
> match point.

You are saying that a total re-reflection of reflected energy does not occur but you have given us no alternatives as to where the unreflected energy goes instead of being re-reflected back toward the load. Up? Down? Sideways? Down a black hole? Stands still? Other_____? We know it doesn't reach the source so where does it go?

> I recognize that you disagree with me on this and why. Before
> you jump to a response, please keep reading.

OOPS, I already jumped to a response - sorry. :-)

> I think at this point, your perspective or interpretation of the law of
> conservation of power would be better understood if it were considered in
> terms of total or net *delivered* power.

Please assert that you do not believe in the conservation of energy principle
for any energy except NET energy and I will end my arguments with you. But
don't be surprised if the guys in the white smocks show up shortly thereafter
to haul you away.

> The Law of Conservation of Power requires that the total or net power
> dissipated within the system be equal to the total or net power delivered to
> the system.

You keep saying that, Steve, but that is not what the conservation of energy
principle says. It says that ALL energy must be conserved, not just the net
energy that Dr. Best chooses to be conserved. Do you often go around deciding
what energy must be conserved and what energy need not be conserved? If not,
why do you try that on this newsgroup?

Your next argument is irrelevant unless you believe that ONLY NET energy
need be conserved.

The superposition theorem predicts four energy components resulting from
the two waves incident upon the impedance discontinuity. These two waves
are Pfwd1 from the source and Pref2 from the mismatched load.

Pfwd1 = Pfwd1(1-Rho^2) + Pfwd1(Rho^2) = P1 + P3

Pref2 = Pref2(Rho^2) + Pref2(1-Rho^2) = P2 + P4

In a matched system, all the energy winds up flowing toward the load.

Pfwd2 = P1 + P2 + P3 + P4

Nothing could be simpler. In a matched system, all the reflected energy
is re-reflected. There is simply no place else for it to go.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1981. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 22:13:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E35AF06.2030305@ieee.org>
Source record: 126070

Richard Clark wrote:
> The inordinate complexity that Cecil puts into these things tells me
> there is nothing beneath the surface and I tune out only to see how
> others fare.

Einstein himself said that an explanation should be as simple as
possible but no simpler. No doubt, there were individuals incapable
of understanding his simplest description of relativity.

However, I fail to see the complexity of:

Source Pfwd1 = Pfwd1(1-Rho^2) + Pfwd1(Rho^2) = P1 + P3

Load Pref2 = Pref2(Rho^2) + Pref2(10Rho^2) = P2 + P4

For matched systems: Pfwd2 = P1 + P2 + P3 + P4

Granted, my 87 year old mother has no clue about the above but
I would expect more from readers of this newsgroup.

> ... how do you find you way through the fog?

Richard, there is no fog! Get those cataracts fixed! :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

1982. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 22:40:02 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v3bd77lhae60b3@corp.supernews.com>
Source record: 126071

Dear Richard:
I echo your observations.
To come at part of what you have said from a different direction:
an advantage of LPDAs is that they are relatively insensitive to minor
dimensional errors as long as the lengths and spacings of elements
progress geometrically (which is easy to check) and the driving TL
alternates phase. Some UHF antennas to be used in very nasty
environments for point to point service have benefited from the use of
LPDAs, rather than yagi type antennas, because the LPDAs keep on working
when a flying piece of ice breaks off an element or the antenna becomes
encased in ice. ...another example, so often illustrated on this site,
of fitting the antenna to the task...

That said, it would be interesting to learn what Dr. Dixon found. I
had a large LPDA that developed a lot more gain off of the back at the
low frequency end. (It worked fine at the high frequency end.) Found
that the rearmost element had lost continuity (on one side) a short
distance from the boom! An NEC-2 model showed good agreement. One can,
and should, learn from such events.

73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:u84b3vk183uhigcci0k1l1qd4m2hkqcsv9@4ax.com...
> On Sun, 26 Jan 2003 20:11:07 -0500, "J. McLaughlin"
> <JCM@Power-Net.Net> wrote:
>
> >Dear Bob:
> > Did you ever get your problem sorted out? If so, educate us. If
> >not, give us details that we might be able to use to help. 73,
Mac
> >N8TT
> >
>
> Hi Mac,
>
> This could not be a problem that is solely an issue of cryptic german
> issues or documentation - and as they offered, is no doubt a
> construction issue.
>
> As a construction issue, comparisons with a photo of their finished

> product should be enough to dismiss variations in element lengths
> (which is to say it should be visually obvious if THAT were the
> problem). Another problem could be that the transmission line
> connection of those elements (no, not YOUR transmission line, the
> strapping of the elements is a transmission line) has been fumbled so
> that the electrical pitch between the elements has been upset. This,
> again, would be quickly evident in a visual comparison. Or, that same
> transmission line has not been properly terminated. That termination
> is often a hairpin short (AKA stub, another transmission line
> feature). The center point of that hairpin is often strapped to the
> boom which could make a difference if not done (or broken free).
>
> 73's
> Richard Clark, KB7QHC

1983. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 22:45:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rqdb3v478b25ssmir3evbpsc1ki6olcug2@4ax.com>
Source record: 126072

On Mon, 27 Jan 2003 17:40:02 -0500, "J. McLaughlin"
<JCM@Power-Net.Net> wrote:

>
> That said, it would be interesting to learn what Dr. Dixon found. I
>had a large LPDA that developed a lot more gain off of the back at the
>low frequency end. (It worked fine at the high frequency end.) Found
>that the rearmost element had lost continuity (on one side) a short
>distance from the boom! An NEC-2 model showed good agreement. One can,
>and should, learn from such events.
>
> 73, Mac N8TT
>

Hi Mac,

Had to bring it down, did you? How did it lose continuity?

73's
Richard Clark, KB7QHC

1984. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 22:50:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <a2eb3v0hmr7d3u76i9bgqh8oopingfj9mg@4ax.com>
Source record: 126073

On Mon, 27 Jan 2003 22:45:54 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Mon, 27 Jan 2003 17:40:02 -0500, "J. McLaughlin"
><JCM@Power-Net.Net> wrote:
>
>>
>> That said, it would be interesting to learn what Dr. Dixon found. I
>>had a large LPDA that developed a lot more gain off of the back at the
>>low frequency end. (It worked fine at the high frequency end.) Found
>>that the rearmost element had lost continuity (on one side) a short
>>distance from the boom! An NEC-2 model showed good agreement. One can,
>>and should, learn from such events.
>>
>> 73, Mac N8TT
>>
>
>Hi Mac,
>
>Had to bring it down, did you? How did it lose continuity?
>
>73's
>Richard Clark, KB7QHC

'nother thought, how did its tune (SWR over frequency) look?

73's
Richard Clark, KB7QHC

1985. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 23:04:48 UTC
From: Rik van Riel <riel@surriel.com>
Message-ID: <pan.2003.01.27.23.04.48.163226@msgid.surriel.com>
Source record: 126074

On Mon, 27 Jan 2003 02:23:40 +0000, 'Doc wrote:

> Both look like 'Sterba' curtains to me. Just a
> different number of 'elements', and fed in a different
> place. I think someone is pulling your leg about
> melting the ice...

The first URL (in Norm's mail) isn't wired as a loop, but simply has
two halves and is the electrical equivalent of a dipole.

About melting the ice, this is serious business for a broadcaster who
pumps 500 kW of HF power into his sterba curtain. When your HF power is
that high, you don't want a higher SWR or (heaven forbid) a broken antenna
due to a crust of ice.

Rik
--
Bravely reimplemented by the knights who say "NIH".
http://www.surriel.com/ http://distro.conectiva.com/
Spam goes to october@surriel.com

1986. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 23:08:42 UTC
From: Rik van Riel <riel@surriel.com>
Message-ID: <pan.2003.01.27.23.08.42.100874@msgid.surriel.com>
Source record: 126075

On Sun, 26 Jan 2003 12:35:09 +0000, Russ wrote:
> On Sun, 26 Jan 2003 13:27:44 -0200, "Rik van Riel" <riel@surriel.com>
> wrote:
>>On Fri, 24 Jan 2003 06:04:59 +0000, Norm wrote:
>>
>>> A Sturba Curtain
>>>
>>Here you can find some info on the sterba:
>>http://www.qsl.net/we6w/projects/Sterba_ant.txt
>
> Shouldn't that be fed at one corner or at the bottom of one of the
> phasing lines? This is according to w4rnl's web page.

Indeed. And if my eyes are not mistaken, the sterba in the document I've
linked is fed that way...

Rik
--
Bravely reimplemented by the knights who say "NIH".
http://www.surriel.com/ http://distro.conectiva.com/
Spam goes to october@surriel.com

1987. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 23:20:20 UTC
From: Rik van Riel <riel@surriel.com>
Message-ID: <pan.2003.01.27.23.20.20.80471@msgid.surriel.com>
Source record: 126077

On Mon, 27 Jan 2003 20:00:57 +0000, Richard Clark wrote:

> For Short Wave, a very long antenna may become quite deaf as it would
> favor listening straight up. This may be useful to listening to the
> RF emissions from Jupiter (for the hour or so it was above you); but
> other wise deaf as I indicated.

That depends on how steep the wire is. If you manage to make the kite fly
in such a way that the antenna wire is at a 30 degree angle you've made
yourself a very nice directional antenna.

People on the Live-Wire mailing list (on yahoo) are doing exactly this.
Their usual setup is to use a strong military kite which is flying fairly
high up and is ankered to the ground with nonconductive wire. The antenna
wire is also attached to the kite, but is much longer.

That way the kite can fly "straight up" but the antenna can still be aimed
at whatever part of the world you want to work.

> If you then chanced to tune for AM DX it might just be the killer
> antenna and big gun on the island.

> Your major, major asset is that vast ground plane of the ocean
> offering you fantastic low angle opportunities that most would give
> their eye teeth for. That, in itself, would bring you considerable
> advantage even with a rubber duckie.

I wonder if there's a good beach for flying kites. Having a 1/4 wave
antenna on mediumwave with the infinite groundplane of the pacific ocean
would be about the best any dxer could hope for....

Rik
--
Bravely reimplemented by the knights who say "NIH".
http://www.surriel.com/ http://distro.conectiva.com/
Spam goes to october@surriel.com

1988. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 23:32:34 UTC
From: k4ia@aol.com
Message-ID: <20030127183234.18280.00000150@mb-mc.aol.com>
Source record: 126076

I don't understand. If the Sterba is a balanced antenna, fed with balanced line, why does it need the counterpoise/readial system?

If it has more gain than a Rhombic, which direction does it favor? Gain in one direction translates into attenuation in another. Doesn't sound like the *one* antenna I would want.

I would go with a top fed inverted L. Almost omni-directional and no radials. Check out Cebik's articles about them.

1989. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-27 23:43:01 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v3bgta70vuag2a@corp.supernews.com>
Source record: 126078

Dear Richard:
As well as I can remember, the SWR was little changed. Measuring
the F/B ratio using known, distant stations was an eye opener. One
needs to do a lot of averaging and rotating to arrive at valid results.
The longest element had a scheme to shorten its physical length
(while maintaining electrical length) that involved a substantial rod
being kept captive inside of a solid bracket on the outside (distant
from the boom) of an insulator that is in the element. The rod also
effected part of the support for the element. The rod was to be
retained by a set screw threaded in the bracket and normal to the rod.
Set screw was not tightened, but the tolerences were such that
continuity was effected for a while. Eventually, urged by significant
RF power, the "connection" became charred. When taken down, it was
clear that the set screw had not been tightened because there was no
impression into the rod. Mind, F/B was measured while receiving. The
antenna may well have had most of its normal F/B when transmitting
(small grin). ....as I tell my students, one major part of
engineering is checking and checking and ...
I note from another of your postings that you too are an ex 1st
Phone. For an underage kid, it was a great way to "do" radio and get
paid. 73, Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:a2eb3v0hmr7d3u76i9bgqh8oopingfj9mg@4ax.com...
> On Mon, 27 Jan 2003 22:45:54 GMT, Richard Clark <kb7qhc@attbi.com>
> wrote:
>
> >On Mon, 27 Jan 2003 17:40:02 -0500, "J. McLaughlin"
> ><JCM@Power-Net.Net> wrote:
> >
> >>
> >> That said, it would be interesting to learn what Dr. Dixon
found. I
> >had a large LPDA that developed a lot more gain off of the back at
the
> >low frequency end. (It worked fine at the high frequency end.)
Found
> >that the rearmost element had lost continuity (on one side) a short
> >distance from the boom! An NEC-2 model showed good agreement. One
can,
> >and should, learn from such events.
> >>

> >> 73, Mac N8TT
> >>
> >
> >Hi Mac,
> >
> >Had to bring it down, did you? How did it lose continuity?
> >
> >73's
> >Richard Clark, KB7QHC
>
> 'nother thought, how did its tune (SWR over frequency) look?
>
> 73's
> Richard Clark, KB7QHC

1990. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 00:09:20 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <9h2cndsxH8exV6ijXTWcpw@comcast.com>
Source record: 126079
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Tarmo Tammaru wrote:
>
> Check out ebay, but you want win98SE, not 95.

You're going to load 98 or ME on a P60 with 8MB of RAM and a
420MB hard drive?

I'm going to load up just such a machine with MY CD copy of
WIN 95 B. I have a buttload of 8MB DIMMS for it.

The 'puter was free. I can always find a home for it.
I just might hook it up to my network and hook a printer
to it in another room...

Anybody want a 486DX/2-66? VLB video and I/O. 20MB of 30
pin SIMM. Must be 4-4MB strips and 4-1MB strips in there.
Soundblaster with MKE CD ROM is extra. ;->

1991. Re: ANTENNA GROUNDING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 00:21:41 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b14iel$cp1$1@venus.btinternet.com>
Source record: 126080

Cam is being unduly pessimistic. He gets like that when he's just lost an argument. ;o)

The metal frame of a building makes a good radio frequency ground.

Connect it to the rig in the shack via the shortest reasonable route. Or via two separate independent routes. Your problem may be gaining access to it to make electrical connections.

Also connect the rig to the 60Hz power ground Also connect the domestic hot/cold metal water pipes via another wire. Also via yet another wire to any metal water pipes in the central heating system. Hot water radiator?

Connect everything in sight except the phone wire.

Don't daisy-chain ground connections. Flat twin cable such as 18-gauge speaker cable can be hidden under carpets.

(Taking a wire down an outside wall to an earth rod is just a waste of time and labour. It won't make the slightest difference.)

After that all you need is an end-fed 100 - 150 feet antenna wire through the shack window to a fence, tree or another building and with a simple home brew tuner you will be able to work all bands 160 to 10m.

Disadvantages of such a system are local noise pick-up and and increased liability to cause interference to nearby TV receivers on the higher frequency bands. But modern TV receivers seem to be less susceptible these days. Don't use more than 100 watts.

Reg, G4FGQ

1992. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 00:23:15 UTC
From: Randy <rchapman8@houston.rr.com>
Message-ID: <T3kZ9.13082$1z1.1509778@twister.austin.rr.com>
Source record: 126081
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"Scott" <scott@scotti.sh!t> wrote in message
news:9h2cndsxH8exV6ijXTWcpw@comcast.com...
>
>
> Tarmo Tammaru wrote:
> >
> > Check out ebay, but you want win98SE, not 95.
>
>
>
> You're going to load 98 or ME on a P60 with 8MB of RAM and a
> 420MB hard drive?
>
> I'm going to load up just such a machine with MY CD copy of
> WIN 95 B. I have a buttload of 8MB DIMMS for it.
>
> The 'puter was free. I can always find a home for it.
> I just might hook it up to my network and hook a printer
> to it in another room...
>
> Anybody want a 486DX/2-66? VLB video and I/O. 20MB of 30
> pin SIMM. Must be 4-4MB strips and 4-1MB strips in there.
> Soundblaster with MKE CD ROM is extra. ;->

Costs more to ship than it's worth. Keep using it for what job suits it
best....doorstop.

1993. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 00:29:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3mhb3v4ot3qk7rji9nkadin4rmnjb5dvt0@4ax.com>
Source record: 126082

On Mon, 27 Jan 2003 18:43:01 -0500, "J. McLaughlin"
<JCM@Power-Net.Net> wrote:

> I note from another of your postings that you too are an ex 1st
>Phone. For an underage kid, it was a great way to "do" radio and get
>paid. 73, Mac N8TT

Hi Mac,

Thanx for the amplification of the antenna problems. Geometry sounds
similar to my buddy's KLM LP.

When I finished the Radar section of ET school at Treasure Island, San
Francisco; I went to the FCC field office in the Financial District
(Battery Street if I recall) and took 3rd, 2nd, 1st, Radar at one
sitting. It was a long, long sitting: 0930-1430. To me, after the
brutal 2nd, the 1st was like coasting, and the Radar filled itself in.
I still hold my General RadioTelephone w/Radar.

Before that as a kid, I simply pestered my way into a local TV repair
shop. I got paid for what I fixed, and that came from the pile of
"tough dogs." Fast forward back to the Navy at TI, and I found myself
leading a dozen ET students in rebuilding donated TVs and Radios for
charity. The school of "tough dogs" had taught me well, and I guided
my crew through 400 TVs and 200 radios in 6 weeks to meet the
Christmas deadline.

Our output was 200 working TVs and at least 180 Radios. You would
never believe the gusto that could be put into fixing a TV when you
empower a student to DO ANYTHING YOU WANT. And they did with a $20
budget and loaned gear (maybe a beat-up sig gen and two or three
Simpsons and one OS-8). If any TV that came in the door had half a
chance, triage demanded it be cared for- the rest were stripped for
tubes, our only stock. We saw every model under the sun. Yes, the
futuristic one with the tube on a frame over the set. And models with
round tubes mounted vertical to be seen through the open lid's mirror
(late '40's).

I recall one life's lesson that occurred when a striker asked about a
set of rabbit ears to plug into his set. No budget for that. We had
a ground strap that ran the length of the benches, around the room and
eventually to ground somewhere distant. I pointed out the standard
clip leads and nodded in this straps direction. "It should be long
enough to present a signal" and he took the cue. The lesson was a
safety lesson because as soon as he clipped the antenna lead (already
on the TV) to the strap, the insulation fell off it like a noodle and

the wire burst into flame.

Couldn't have planned it better, nor more impressed the dozen students. Physics in action! Physics made real. And you die if you get it wrong (at sea, every thing is a conductor directly to you, the load). The technical lesson was about how AC cords are polarized, and how we, with our short cuts, had engineered what was commonly called a suicide adapter (aboard ship we called them a kills-me-quick). The clip lead completed the circuit (the set wasn't even on). My students religiously observed the one-hand-behind-the-back after that.

73's
Richard Clark, KB7QHC, PG-13-8550

1994. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 00:31:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <s1kb3v8rgk7fe1gevr375jtmstnnd7qui5@4ax.com>
Source record: 126083

On Mon, 27 Jan 2003 21:20:20 -0200, "Rik van Riel" <riel@surriel.com>
wrote:

>
>I wonder if there's a good beach for flying kites. Having a 1/4 wave
>antenna on mediumwave with the infinite groundplane of the pacific ocean
>would be about the best any dxer could hope for....
>
>Rik

Amen

1995. Re: ANTENNA GROUNDING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 00:42:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E35D1F0.4000301@ieee.org>
Source record: 126084

Reg Edwards wrote:
> Cam is being unduly pessimistic. He gets like that when he's just lost an
> argument. ;o)

I speak from experience, Reg. I got kicked out of an apartment in
Pasadena, TX for frying my neighbor's kid with RF. I used their
balcony railing for a counterpoise.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1996. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 00:59:21 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <-MWdnRcny9Z-SKijXTWcoA@comcast.com>
Source record: 126085
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Randy wrote:

> > Anybody want a 486DX/2-66? VLB video and I/O. 20MB of 30
> > pin SIMM. Must be 4-4MB strips and 4-1MB strips in there.
> > Soundblaster with MKE CD ROM is extra. ;->
>
> Costs more to ship than it's worth. Keep using it for what job suits it
> best....doorstop.

I can always find a cheap ham who needs to run DOS programs!!!

1997. Re: ANTENNA GROUNDING

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 02:18:54 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E35E88E.32DB197A@cwis.net>
Source record: 126086

Richard,
Since you have no idea how or what the metal stair
risers are connected to, you really won't know till
you try it. Any time you use any metal object for
grounding, you have to remember that if that 'metal'
is common with other people's property that you may
be causing more problems than it's worth. As in your
'ground' introduces RF into other people's homes.
Some times it doesn't matter, but in other cases, you're
asking for RFI complaints.
Something else to think about is that if the stairs
are not exclusively ~your~ property, then you can't just
use them for whatever you want. If the stairs are used
to reach other appartments, they don't belong to you.
Same for the plumbing...
'Doc

1998. Re: Redusing noise with grounding pole ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 02:42:50 UTC
From: richardharrison@webtv.net
Message-ID: <29700-3E35EE2A-565@storefull-2313.public.lawson.webtv.net>
Source record: 126088

Ron, PD1ANB wrote:
"Is it true that there is a noise reduction on receiving shortwave stations when I put a copper pole in the ground and make a connection to my receiver (earth)?"

Possibly. Most noise is local.

You may be using a random wire which above highly conductive earth becomes a Marconi. The vertical part of the wire is the antenna. The horizontal part is capacitive loading for the vertical. The earth return path to the radio completes the antenna circuit.

Without a ground-rod at the receiver, the random ground return system (path between the earth and the radio) through the electrical wiring may be susceptible to noise from household appliances. A direct connection between the receiver and the earth (at the ground-rod) may reduce random noise.

For safety from electrical shock and damage from electrical transients (surges) the added ground-rod must be connected to the electrical grounding system at the radio to avoid a difference in potential between the antenna and electrical systems at the radio. You don`t want lightning bolts flying around inside your radio.

In Holland, you are blessed with excellent earth cobductivity. This enables a Marconi antenna to work well.

Yet, better signal to noise performance in some cases may come from a high dipole antenna because it may discriminate against vertical polarization. Sky-waves are equally well received on either vertical or horizontal polarization but reception still depends on the quality of the receiving antenna. The transmitted sky-wave polarization makes no difference as the ionosphere completely scrambles this. All ground-wave propagation is vertically polarized. Horizontally-polarized waves don`t propagate along the surface of the earth, it shorts them out. So, that local noise from not too far away is mostly verttically polarized. The horizontal dipole discriminates against noise to some extent. The balanced horizontal dipole requires no connection to earth at all to receive r-f. It still needs the connection to earth for safety, but this connection doesn`t transfer its noise to a truly balanced antenna system.

Problem with a dipole is the horizomntal space needed, and the height needed when earth conductivity is extremely good.

By law in the U.S. all electrical earth connections at a site must be connected together and the reason is good. The earth in spots not far

apart can become electrified at greatly differing potentials and without a good connection between these points, the individual wires could shock or burn.

Best regards, Richard Harrison, KB5WZI

1999. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 02:46:36 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <6EydnR-G0NZlYKijXTWcpQ@ctc.net>
Source record: 126092
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

>
> Robert Bonomi wrote:
> >
> > C:\>
> > C:\DOS>
> > C:\DOS\RUN>
> > RUN \DOS\RUN
> >
> > with apologies to Dick and Jane
>
>
> Run where? DOS is single-tasking. It can't think ahead.
> Remember the big upgrade with WIN95? Being able to
> download a file and send it straight to the floppy drive!

Its a joke on the first book many of us older people learned to read from.

Dick and Jane were a boy and girl in the reading book. It starts off
something like:
See Dick, See Dick run.

2000. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 02:49:29 UTC
From: <>
Message-ID: <ZcmZ9.30776$A%3.392970@ord-read.news.verio.net>
Source record: 126087
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
Scott <"remove \"!t\" to reply"> wrote:
>
>
>
>> > I am looking for a CD of Windows 95 for my shack computer so I can run some
>> > DOS programs.
>> > THANKS
>> >
>> >
>> >
>>
>> If you want to run dos programs, why not use dos?
>
>
>Because if the machine came up and on the screen was:
>
>C:\>

C:\>
C:\DOS>
C:\DOS\RUN>
RUN \DOS\RUN

with apologies to Dick and Jane

2001. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 03:23:46 UTC
From: richardharrison@webtv.net
Message-ID: <29162-3E35F7C2-493@storefull-2317.public.lawson.webtv.net>
Source record: 126090

Art, KB9MZ wrote:
"Does anybody have any idea what minimum efficiency is imposed by the F.C.C. on such an (AM broadcast) antenna and what is a realistic top efficiency---?"

FCC dictates the radial system used and that controls efficiency pretty well.

The prescribed radial system produces a ground loss resistance of about one ohm. A 0.15-wave tower has a radiation resistance of about 10 ohms. So, efficiency will be about 90% with this short tower. With the usual 0.25-wave tower, radiation resistance runs around 30 ohms or more and this antenna is about 96% efficient. A 1/2-wave or a 5/8-wave antenna can get to nearly 100% efficient.

Of course, propagation loss is a function of soil resistivity between the transmitter and receiver on most paths.

Best regards, Richard Harrison, KB5WZI

2002. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 03:41:35 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <wSmdne3Pd9dwZqijXTWc3Q@comcast.com>
Source record: 126089
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Robert Bonomi wrote:
>
> C:\>
> C:\DOS>
> C:\DOS\RUN>
> RUN \DOS\RUN
>
> with apologies to Dick and Jane

Run where? DOS is single-tasking. It can't think ahead.
Remember the big upgrade with WIN95? Being able to
download a file and send it straight to the floppy drive!

2003. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 03:47:30 UTC
From: John <jkporter2000@yahoo.com>
Message-ID: <Xns9310B50E8110Djkporterhawaiirrcom@66.75.162.196>
Source record: 126091

'Doc <w5lz@cwis.net> wrote in news:3E351BC1.44E3075B@cwis.net:

>
>
> John,
> 'Kite' antennas are not exactly a new idea, they've
> been around for a while. There are safety hazards that
> you should be aware of. That antenna makes for a pretty
> good extension-cord, and you are 'plugged' into the end
> of it. Watch the power lines! Believe it or not, if you
> fly it above a certain height, you also have to report it
> to the FAA. It really isn't as simple an idea as you
> might think...
> 'Doc
>

I am not in any flight paths to or from air ports and all the power lines
and cable lines are underground. I all so have a lot of medel rods I use.
All so it is very rare for Hawaii to get any lightning - most of the
thunder storms are out at sea.
Thanks All!

2004. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 03:56:14 UTC
From: John <jkporter2000@yahoo.com>
Message-ID: <Xns9310B689B6B8Ejkporterhawaiirrcom@66.75.162.196>
Source record: 126093

"Rik van Riel" <riel@surriel.com> wrote in
news:pan.2003.01.27.23.20.20.80471@msgid.surriel.com:

> On Mon, 27 Jan 2003 20:00:57 +0000, Richard Clark wrote:
>
>
> People on the Live-Wire mailing list (on yahoo) are doing exactly
> this. Their usual setup is to use a strong military kite which is
> flying fairly high up and is ankered to the ground with nonconductive
> wire. The antenna wire is also attached to the kite, but is much
> longer.
>
> That way the kite can fly "straight up" but the antenna can still be
> aimed at whatever part of the world you want to work.
>
Thanks for all the pointers every one and for pointing me to yahoo!
Good DXing every one!

2005. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 04:37:14 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3c27p1d6uf37a@corp.supernews.com>
Source record: 126094
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Yep! back in the days when Heather had a mommy and a daddy...

"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:6EydnR-G0NZlYKijXTWcpQ@ctc.net...
> >
> > Robert Bonomi wrote:
> > >
> > > C:\>
> > > C:\DOS>
> > > C:\DOS\RUN>
> > > RUN \DOS\RUN
> > >
> > > with apologies to Dick and Jane
> >
> >
> > Run where? DOS is single-tasking. It can't think ahead.
> > Remember the big upgrade with WIN95? Being able to
> > download a file and send it straight to the floppy drive!
>
> Its a joke on the first book many of us older people learned to read from.
>
> Dick and Jane were a boy and girl in the reading book. It starts off
> something like:
> See Dick, See Dick run.
>
>

2006. Cushcraft MA5V

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 05:18:48 UTC
From: Per Brix <oz5abo@XXXtdcadsl.dk>
Message-ID: <3e3612b7$0$201$edfadb0f@dread14.news.tele.dk>
Source record: 126095

Hi

I am thinking of buying this antenna since I have limited space in my small garden for putting up an antenna. Antennas mounted on buildings are not allowed.

So could anyone tell me how long the radials for this antenna are and the diameter of the "foot print" ?

73, OZ5ABO, Per

2007. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 05:25:26 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E361446.8EAB26BB@mfi.net>
Source record: 126096
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Scott wrote:
>
> Technician wrote:
> >
> >
> > No offence, but if you are going to run DOS programs, my opinion is that
> > you should at least know how to work at a prompt, regardless of the
> > programs need for it.
>
> I was building XT's back in the day.

Real geeks format hard drives with debug :)
--

Michael A. Terrell
Central Florida

2008. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 05:42:46 UTC
From: bowman <bowman@montana.com>
Message-ID: <b1553s$vemjr$2@ID-159066.news.dfncis.de>
Source record: 126097
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna

Michael A. Terrell wrote:

> Real geeks format hard drives with debug :)

And master geeks can use debug to set up the Western Digital HD controller
to produce any of the 27 incompatible floppy formats used in the days of
CP/M ..... Maybe even do those NorthStar hard sector flops.

2009. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 06:02:30 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <6zydneXo875tgaujXTWc2Q@comcast.com>
Source record: 126098
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"Michael A. Terrell" wrote:
>
> Scott wrote:
> >
> > Technician wrote:
> > >
> > >
> > > No offence, but if you are going to run DOS programs, my opinion is that
> > > you should at least know how to work at a prompt, regardless of the
> > > programs need for it.
> > >
> > > I was building XT's back in the day.
>
> Real geeks format hard drives with debug :)

I got your geek...right here!!

-g=c800:5 (for WD)

2010. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 07:24:09 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <esbc3v4abi33t2kik5fhg6vfvsiv6edi6j@4ax.com>
Source record: 126099

On Mon, 27 Jan 2003 21:08:42 -0200, "Rik van Riel" <riel@surriel.com>
wrote:

>On Sun, 26 Jan 2003 12:35:09 +0000, Russ wrote:
>> On Sun, 26 Jan 2003 13:27:44 -0200, "Rik van Riel" <riel@surriel.com>
>> wrote:
>>>On Fri, 24 Jan 2003 06:04:59 +0000, Norm wrote:
>>>
>>>> A Sturba Curtain
>>>>
>>>Here you can find some info on the sterba:
>>>http://www.qsl.net/we6w/projects/Sterba_ant.txt
>>
>> Shouldn't that be fed at one corner or at the bottom of one of the
>> phasing lines? This is according to w4rnl's web page.
>
>Indeed. And if my eyes are not mistaken, the sterba in the document I've
>linked is fed that way...
>
>Rik
Rik,

There was a link in an earlier post that showed the feedpoint
at the center of an un-twisted "phase" line in the center of the
array. I believe that that becomes a multiple dipole. Your link does
show the correct feedpoint.

Russ

2011. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 07:32:25 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E363209.4220E75B@mfi.net>
Source record: 126100
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Scott wrote:
>
> "Michael A. Terrell" wrote:
> >
> > Scott wrote:
> > >
> > > Technician wrote:
> > > >
> > > >
> > > > No offence, but if you are going to run DOS programs, my opinion is that
> > > > you should at least know how to work at a prompt, regardless of the
> > > > programs need for it.
> > >
> > > I was building XT's back in the day.
> >
> > Real geeks format hard drives with debug :)
>
> I got your geek...right here!!
>
> -g=c800:5 (for WD)

I like to ask the "Computer experts", What was the code for setting
up a hard drive with debug, and seeing the blank stares. So much for an
IT department. :) I rebuild and sold a lot of XT and PCs, and went
through hundreds of used hard drives to test them using Debug. It was a
good idea to do a half dozen or more machines at once, because it took
so long to do a machine, and if one failed you stuck in another drive,
and started over. BTW, I still have a few 10 Meg Seagate SA-1004 8"
hard drives that predate the ST-506 interface. Geeky enough?
--

Michael A. Terrell
Central Florida

2012. 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 08:28:53 UTC
From: Dan Jacobson <jidanni@dman.ddts.net>
Message-ID: <87smvdlltm.fsf@jidanni.org>
Source record: 126101

In http://strongsignals.net/access/content/tips.html

BNC Wire Antenna
Gerald S. Santomassimo, KB0VOF
kb0vof@juno.com

For VHF/UHF/800, measure a quarter-, half-, 5/8-, (or whatever)
wavelength piece.

Is it true one can use 5/8 wavelength antennas? I thought only 1, 1/2,
1/4, 1/8 ... could be used. By the way, can 2, 4, 8 also be used?
(Antenna longer than wavelength.)
--
http://jidanni.org/ Taiwan(04)25854780

2013. New Ham Only Classified Ads Site

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 09:17:05 UTC
From: Lee Asher <keith@detectiveagents.com>
Message-ID: <mkic3voif22evrocd9mdiubk31r4h120c2@4ax.com>
Source record: 126102

Hi fellow Amateurs,

Just created, for Hams only, a brand new Classified Ads Site. Totally
FREE.

Send your ad to over 1500 other sites with one click.
Many categories. Take a look, tell your local hams and radio clubs.

http://cybertechworld.com/ham.htm

Oh and one other thing.....Have a great Christmas and take care.

73, Lee, VK4CXX
Brisbane, Australia.

Yours Sincerely,
Lee Asher
Brisbane, Australia
==========
Budget AutoResponder
http://budgetautoresponder.com
==========
FREE Software GIVEAWAYS
available from ALL these websites.

http://optinsafemail.net
http://detectiveagents.com
http://moretraffic-4u.com
http://cybertechworld.com

==========

2014. Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 09:33:07 UTC
From: Bjorn Henrik Vangstein <no.sp@m.no>
Message-ID: <Z7sZ9.16174$CG6.273855@news4.e.nsc.no>
Source record: 126103

I'm living in a place where a center fed dipole is out of the question. But I will still try to put up an decent end fed 80 m and 160 m wire antenna - a long wire, or more presicely a random length horisontal wire about 250 ft long, about 15 meter up.

The traditional choice of feed line is a balanced line (300 og 450 Ohm) or just a single wire connected a little bit away from the end of the antenna wire. A balanced line is not an option for me of two reasons: Nobody sells such in Norway, and it's impossible to get it inside the shack with out severe 'surgery' on the building.

I'm afraid that a single wire feed line inside the house will generate BCI/TVI, so my thought was to use a coax with only the center wire connected to the antenna and the shield disconnected in the antenna end. In the shack the shield will be connected to ground in an usual 'coax manner'. Is this a sensible solution?

73 de LA5MDA, Henrik
Oslo

2015. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 09:54:53 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E36536D.59AC6CBD@cwis.net>
Source record: 126104

Dan,
Any length of antenna can be used, 1/4w, 5/8w, or
any other fraction or multiple of a wave length. Certain
lengths have advantages such as a radiation pattern of a
particular shape or direction, or an easily matched input
impedance. In genral, longer antennas do 'better' than
shorter antennas. But, as with any generalization, there
are exceptions...
'Doc

2016. 1:6 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 10:35:29 UTC
From: Simon <nospam@no.spam.invalid>
Message-ID: <a2tZ9.3409$yP2.1789739@reader1.news.jippii.net>
Source record: 126114

How can i be sure that 1:6 balun is ok? can i test it by multimeter?

73's

Simon

2017. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 11:10:48 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <esoc3v0o1o30og6cjr04j6vpiifr3pao5q@4ax.com>
Source record: 126105

On Tue, 28 Jan 2003 10:33:07 +0100, "Bjorn Henrik Vangstein"
<no.sp@m.no> wrote:

>I'm living in a place where a center fed dipole is out of the question. But
>I will still try to put up an decent end fed 80 m and 160 m wire antenna - a
>long wire, or more presicely a random length horisontal wire about 250 ft
>long, about 15 meter up.
>
>The traditional choice of feed line is a balanced line (300 og 450 Ohm) or
>just a single wire connected a little bit away from the end of the antenna
>wire. A balanced line is not an option for me of two reasons: Nobody sells
>such in Norway, and it's impossible to get it inside the shack with out
>severe 'surgery' on the building.
>
>I'm afraid that a single wire feed line inside the house will generate
>BCI/TVI, so my thought was to use a coax with only the center wire connected
>to the antenna and the shield disconnected in the antenna end. In the shack
>the shield will be connected to ground in an usual 'coax manner'. Is this a
>sensible solution?
>
>73 de LA5MDA, Henrik
>Oslo

Henrik,

What you purpose will work it may however present matching problems
with your tuner. Also it accomplishes very little in the way of
reducing RFI when the sheild floats as you sugest it becomes the 2nd
and third wire of the transmissionline.. which given the right length
and current flows will radiate as much as the sigle wire fed system.

My sugestion would be to make the antenna length so that it is fed
through a remote tuning unit-- and fed via coax to the shack.

or bring Balanced line-- to the piont of entery into the house use a
good 1:1 choke balun there and convert to coax to the tuner.

73 Dave KC1DI

2018. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 11:17:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3cpm1s1rvgn78@corp.supernews.com>
Source record: 126106

Actually, the effect of at least moderate amounts of permeability on resonant length is almost entirely due to the change it makes in RF resistance. The RF resistance of a conductor is directly proportional to the square root of the permeabilty. It's also directly proportional to the square root of the DC resistivity. It turns out that increasing the permeability by a factor of 100 has very nearly the same (small) effect on resonant length as increasing the resistivity by 100 times. So the RF resistance is really the important factor.

The increase in RF resistance due to increased permeability is undesirable from an efficiency standpoint if the conductor is fairly small to begin with. But the use of common magnetic metals like steel or stainless steel isn't a problem if the conductor is large enough to have a small RF resistance even with high permeability. As Karl points out, though, IM can sometimes be a problem with materials having nonlinear ferromagnetic properties.

Roy Lewallen, W7EL

Karl Beckman wrote:
> This is nothing new for Roy Llewallen, but going to a ferro-magnetic
> material such as iron or steel wire or tubing will make a difference. Also
> watch out for nickel-plated PL259 connectors. In high RF fields (and points
> of high VSWR) they can be a primary source of IM!
>
> --
> Karl Beckman, PE
> Amateur Radio since 1964 WA8NVW WA8NVW@ARRL.net
> West Park Radiops Club W8VM SkyWARN NWS-Cle WX8CLE
> NavyMARS NNN0VBH NNN0VBH@NavyMARS.org
> NNN0VBH@NavyMARS.org
>
> "Quality is never an accident, it is always the result of high
> intention, sincere effort, intelligent direction and skillful
> execution; it represents the wise choice of many alternatives"
> ----------

2019. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 11:21:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3cptl9kqs950f@corp.supernews.com>
Source record: 126107

Richard Clark wrote:
>
> Hi Jeremy,
>
> Rest assured.
>
> The big difference would be if the metal is also susceptible to
> attracting a magnet (think steel). Even with this "big" difference,
> it would be a strain to observe except on the most delicate of lab
> instruments (AM broadcasters don't give a hoot about it, or do the TV
> folks, the FM folks, the two-way folks....).
>
> The more compelling factor, as you indicate you appreciate, is
> thickness which goes directly to inductance.
>
> 73's
> Richard Clark, KB7QHC

I'm sure you mean diameter, but it might be misconstrued. To clarify, *tubing* wall thickness doesn't make any electrical difference with typical materials at RF -- if the wall is thick enough to be structurally viable, it's thick enough that the tubing will be electrically indistinguishable from a solid conductor.

Roy Lewallen, W7EL

2020. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 13:17:04 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <ar6dnSxIoZVXH6ujXTWcoA@comcast.com>
Source record: 126108
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"Michael A. Terrell" wrote:
>
> Scott wrote:
> >
> > "Michael A. Terrell" wrote:
> > >
> > > Scott wrote:
> > > >
> > > > Technician wrote:
> > > > >
> > > > >
> > > > > No offence, but if you are going to run DOS programs, my opinion is that
> > > > > you should at least know how to work at a prompt, regardless of the
> > > > > programs need for it.
> > > > >
> > > > I was building XT's back in the day.
> > > >
> > > Real geeks format hard drives with debug :)
> > >
> > I got your geek...right here!!
> > >
> > -g=c800:5 (for WD)
>
> I like to ask the "Computer experts", What was the code for setting
> up a hard drive with debug, and seeing the blank stares. So much for an
> IT department. :) I rebuild and sold a lot of XT and PCs, and went
> through hundreds of used hard drives to test them using Debug. It was a
> good idea to do a half dozen or more machines at once, because it took
> so long to do a machine, and if one failed you stuck in another drive,
> and started over. BTW, I still have a few 10 Meg Seagate SA-1004 8"
> hard drives that predate the ST-506 interface. Geeky enough?

Yes you are!!! I like to ask the "Computer experts" how many 16 bit
slots are in an XT. Actually, debug ran a routine in ROM that did
the low-level format. Fdisk and Format are the only two steps most
ever see these days.

2021. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 13:43:57 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <762d3vglu4vdb3mr6mkjqc5f3uk63iedun@4ax.com>
Source record: 126109

On 28 Jan 2003 16:28:53 +0800, Dan Jacobson <jidanni@dman.ddts.net>
wrote:

>
>Is it true one can use 5/8 wavelength antennas? I thought only 1, 1/2,
>1/4, 1/8 ... could be used. By the way, can 2, 4, 8 also be used?
>(Antenna longer than wavelength.)

Umm.. 5/8's are used all the time. I have a 5/8 mobile 2m antenna on
the car. As a matter of fact, most 2m mobile antennas are 5/8. Many
base antennas are listed as being multiples of wavelengths in height.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2022. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 14:52:42 UTC
From: richardharrison@webtv.net
Message-ID: <29700-3E36993A-669@storefull-2313.public.lawson.webtv.net>
Source record: 126111

Dan Jacobson wrote:
"Is it true one can use 5/8 wavelength antennas?"

Yes. It is not resonant so a reactance must be added to neutralize the inherent reactance of the non-resonant length to get a large current in the antenna. A coil can be used much as if the antenna were 1/8-wave.

Grounded vertical antennas longer than 5/8 wavelength are uncommon by design unless phase inverters are used between sections to keep the current flowing in the same direction in all sections. Current naturally reverses every 1/2-wave of travel in an antenna.

A grounded vertical antenna produces increasing field strength perpendicular to the vertical as its length grows until it reaches the length of 5/8-wave. At that point, the out-of-phase radiatiation from the segment beyond 1/2-wavelength starts to detract enough to reduce field strength along the horizontal with increasing growth in the antenna`s length.

Energy which is distributed along the horizontal by a grounded 5/8-wave vertical antenna is redistributed at higher angles in longer similar antennas. Higher angle radiation is of no use to line of sight propsagation and becomes harmful to a medium-wave broadcacter at night when it reflects from the ionosphere to interfere with his ground-wave coverage.

You don`t see multiple-wavelength vertical broadcast antennas with phase inverters every 1/2-wave because they would be too expensive and 1/2-wave and 5/8-wave antennas give high signal strengths and near 100% radiation efficiencies when used with the FCC specified ground system of radials. In fact, most broadcasters are satisfied with the cost/ performance trade-off of a 1/4-wave grounded vertical antenna. Efficiency is about 96% , the antenna is naturally resonant, and the impedance presented to the feed system is conveniently low.They are willing to trade about 40% more field strength from a 5/8-wave antenna over a 1/4-wave antenna for the lower cost and easier operation of the 1/4-wave antenna.

Best regards, Richard Harrison, KB5WZI

2023. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 15:04:38 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <T1ydnU8BPfCaAaujXTWcrg@comcast.com>
Source record: 126110

Henrik,

I have seen antenna articles that suggest a very short piece of coax, long enough to reach outside the house. Then connect to a 4:1 balun on the outside wall of the house, connected to balanced line. I would think they sell 300 ohm balanced line in Norway, but if not, you can make your own balanced line out of wire and spacers. The normal type of wire that is used for your 220V 50 Hz wiring, spaced about 4cm apart will give you somewhere around a 400 - 600 ohm transmission line. The impedance of a parallel transmission line is Z0 = 276 x LOG (2 x S /D) where S is the center to center spacing of the line, and D is the diameter of the wire. It does not matter what units you use for S and D, so long as they are both the same. You need a spacer about every 1/2 meter or so. My understanding is that prior to WW2, this was the accepted way to do things.

Tam/WB2TT
"Bjorn Henrik Vangstein" <no.sp@m.no> wrote in message
news:Z7sZ9.16174$CG6.273855@news4.e.nsc.no...
> I'm living in a place where a center fed dipole is out of the question.
But
> I will still try to put up an decent end fed 80 m and 160 m wire antenna -
a
> long wire, or more presicely a random length horisontal wire about 250 ft
> long, about 15 meter up.
>
> The traditional choice of feed line is a balanced line (300 og 450 Ohm) or
> just a single wire connected a little bit away from the end of the antenna
> wire. A balanced line is not an option for me of two reasons: Nobody sells
> such in Norway, and it's impossible to get it inside the shack with out
> severe 'surgery' on the building.
>
> I'm afraid that a single wire feed line inside the house will generate
> BCI/TVI, so my thought was to use a coax with only the center wire
connected
> to the antenna and the shield disconnected in the antenna end. In the
shack
> the shield will be connected to ground in an usual 'coax manner'. Is this
a
> sensible solution?
>
> 73 de LA5MDA, Henrik
> Oslo
>
>

2024. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 15:29:55 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301280729.2695080f@posting.google.com>
Source record: 126112

Thanks for that Richard,for some reason I thought that
efficiencies in the order of 60% so I have never been attracted
to vertical antennas. Ofcoursre there is still the drawback
of radials but now I am better informed My mind had always wandered
towards vertical dipoles because of the areas required.Tom W8TI (I
miss him on this newsgroup) stated years ago that his vertical
outshone his top band dipole which reinforces the inportance of low
angle take off
Art

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<29162-3E35F7C2-493@storefull-2317.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "Does anybody have any idea what minimum efficiency is imposed by the
> F.C.C. on such an (AM broadcast) antenna and what is a realistic top
> efficiency---?"
>
> FCC dictates the radial system used and that controls efficiency pretty
> well.
>
> The prescribed radial system produces a ground loss resistance of about
> one ohm. A 0.15-wave tower has a radiation resistance of about 10 ohms.
> So, efficiency will be about 90% with this short tower. With the usual
> 0.25-wave tower, radiation resistance runs around 30 ohms or more and
> this antenna is about 96% efficient. A 1/2-wave or a 5/8-wave antenna
> can get to nearly 100% efficient.
>
> Of course, propagation loss is a function of soil resistivity between
> the transmitter and receiver on most paths.
>
> Best regards, Richard Harrison, KB5WZI

2025. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 15:39:26 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301280739.7de6803a@posting.google.com>
Source record: 126113

Jeremy,to cut to the chase, use of other materials can provide for broader band useage at the expense of efficiecy but with out pain to your transmitter.

Art

Jeremy Taylor <ng@NOpounamuSPAM.com> wrote in message news:<dJGY9.1969$7O1.379681@news02.tsnz.net>...
> Hi there
> I am trying to find some information on velocity factors as they relate
> to various metals as used in antenna construction - not in coax.
>
> Is this directly related to resistivity? I think there is also a
> relationship to thickness of conductor?
>
> I'm trying to figure out the optimal dimensions for elements in some
> antenna designs with different materials, 1/8" ss, 6.25mm al rod, 9mm al
> tube, 12 AWG copper, and so on - especially so I can translate some
> designs as I find them on the internet so as to apply them to materials
> I have ready to hand.
>
> Can anyone provide some advice in this regard, so I can figure out how
> long a 1/4 wave (for instance) is in various materials?
>
> Regards
> Jeremy

2026. Re: 1:6 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 16:29:51 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <p9CdnUIKc6GcLaujXTWc3A@comcast.com>
Source record: 126115

Connect a 300 ohm resistor to the 300 ohm port, and measure SWR. Do this at very low power. A 2W resistor will take 5W for a few seconds at a time.

Tam/WB2TT
"Simon" <nospam@no.spam.invalid> wrote in message news:a2tZ9.3409$yP2.1789739@reader1.news.jippii.net...
> How can i be sure that 1:6 balun is ok? can i test it by multimeter?
>
> 73's
>
> Simon
>
>
>
>

2027. Solar Spectral Power Estimates--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 16:40:36 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E36B298.740184DB@earthlink.net>
Source record: 126116

In a book I'm reading on radio astronomy, the author does a calculation in which he takes the
noise-power-freq-density of the sun to be 0.4*10-23 Watt/Hz. Presumably this is a power spectral
value. How does one obtain such a value? In Kraus's Radio Astronomy, Kraus gives graphs in for the
noise-power-intensity, Watt/m**2/Hz. I don't see where one can 'get' the data. Anyone know?

A little later in another example, the author uses in an example a value for noise-power-intensity,
which taken from pg 8-48 (Planck's Law) of Kraus corresponds to a frequency of 30KHz at 6000K. An
interesting example, but 30KHz doesn't seem like a 'typical' place to observe the Sun by radio.
Seems like a poor choice or I'm missing something. Comments?

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

"A W. Watson Tip: Ever have a ball point pen clog up with lots of ink still left?
You may be able to get it working again by heating it with a hair blower. Works for me.."

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

2028. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 17:03:57 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301280903.4223dc@posting.google.com>
Source record: 126118

Dan Jacobson <jidanni@dman.ddts.net> wrote in message news:<87smvdlltm.fsf@jidanni.org>...
> In http://strongsignals.net/access/content/tips.html
>
> BNC Wire Antenna
> # Gerald S. Santomassimo, KB0VOF
> # kb0vof@juno.com
>
> For VHF/UHF/800, measure a quarter-, half-, 5/8-, (or whatever)
> wavelength piece.
>
> Is it true one can use 5/8 wavelength antennas? I thought only 1, 1/2,
> 1/4, 1/8 ... could be used. By the way, can 2, 4, 8 also be used?
> (Antenna longer than wavelength.)

Sure, but you use a loading coil to tune to a 3/4 wave resonance. Only
1/4 and 3/4 wave whips give a good match "low Z" to a coax feed. All
other types of verticals will need matching. A whip .64 wave, which is
basically the same as a 5/8 wave, gives the most gain on the horizon
in theory than any other single piece radiator. So anything taller,
such as a 3/4 wave up, starts to show less gain on the horizon in
comparison as the pattern starts to develop higher angles. So you
don't want to use tall radiators over .64 wave, unless you have a way
to keep the currents in phase. IE: phasing stubs on "twin" collinear
type verticals. That type of antenna use stacked 5/8 radiators, with a
phasing stub between the elements. The eznec demo can show the types
of patterns you will see on the various lengths of whips. Also I
modeled a few for 10m use on this page.
http://web.wt.net/~nm5k/acompari.htm
MK

2029. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 17:07:29 UTC
From: n5kzw@arrl.net
Message-ID: <3e36b7f0.6140309@news.ev1.net>
Source record: 126117
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

The best advice I got (after the fact, unfortunately) was to get a
9-pin subminiature-D female connector kit from RadioShack. You want
the ones with loose pins. Make your solder connection to the solder
cups on the female contacts and then slip them oveer the pins on the
back of the DIN connector. You could also slip a piece of heat shrink
over the contact before pushing on to the DIN pins.

Regards,
Ed - N5KZW

On Fri, 24 Jan 2003 10:19:53 -0500, Scott <scott2rp789@netscape.net>
wrote:

>Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
>3 and 4 to get some line level audio from the rig. I could not believe
>my eyes when I got the 13 pin DIN - is there some trick to soldering to
>those pins? Or am I missing something here? Thanks - Scott.
>

2030. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 17:16:17 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <BVyZ9.7412$rq4.657523@bgtnsc05-news.ops.worldnet.att.net>
Source record: 126019

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E35ABC1.70104@ieee.org...
>
> Please assert that you do not believe in the conservation of energy
principle
> for any energy except NET energy and I will end my arguments with you. But
> don't be surprised if the guys in the white smocks show up shortly
thereafter
> to haul you away.
>

All I was illustrating is that the delivered power "adds" algebraically in a manner consistent with your interpretation of the law of conservation of energy as you apply it to the superposition of individual forward component waves in a transmission line. [note that delivered power is not a forward traveling power] Nothing more, nothing less. Any interpretation of my statements beyond that is entirely yours.

Take care.

Steve

2031. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 17:17:43 UTC
From: richardharrison@webtv.net
Message-ID: <20264-3E36BB37-607@storefull-2315.public.lawson.webtv.net>
Source record: 126021

Henrik, LA5MDA wrote:
"---a long wire, or more precisely a random length horizontal wire about 250 ft long, about 15 meters up."

OK. Henrik`s antenna is set. The horizontal length is near 1/2-wave at 160 meters and has a high drivepoint impedance. This can be helped by feeding it as if it were a Zepp. The 15 meter height is small with respect to wavelength at either 160 meters or 80 meters.

Open-wire line is favored for its low loss in feeding a high impedance and it is favored over a single wire because it can help transform the high antenna impedance to some lower value that can be more easily handled. The open-wire line can also help with balance at its drive-end. To get the benefits of the open-wire feedline, its length needs to stay well away from 1/2-wavelength and its multiples.

The horizontal wire approaches a wavelength at 80 meters. This is counterproductive broadside to the wire. The two halfwaves have currents in opposite directions. Directivity is not too high in a low antenna except toward the zenith. So, if diagonal responses are satisfactory on 80 meters, the antenna is OK. If better broadside response is desired, a trap could be used somewhere in the middle of the antenna to cut it about in two at 80 meters.

Best regards, Richard Harrison, KB5WZI

2032. Re: Cushcraft MA5V

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 17:22:10 UTC
From: fch <na@hle.com>
Message-ID: <3E36BC42.5D6C025D@hle.com>
Source record: 126022

Have you looked at a 5 band HexBeam??
Less of a visual impact and
I think would work better.

www.hexbeam.com

Per Brix wrote:

> Hi
>
> I am thinking of buying this antenna since I have limited space in my small
> garden for putting up an antenna. Antennas mounted on buildings are not
> allowed.
>
> So could anyone tell me how long the radials for this antenna are and the
> diameter of the "foot print" ?
>
> 73, OZ5ABO, Per

2033. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 17:23:46 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <VGGdnfTjxew-IaujXTWcpw@comcast.com>
Source record: 126020

PS: I don't know if plastic water pipe is legal in Norway, but if so, you can make the spreaders out of thin (~1 cm diameter) plastic pipe, cut into 5 or 6 cm long pieces. Drill a hole near each end and run the wires through the holes. Wrap some small wire around the main wire next to the spreader, then swing it arount to the other side of the spreader, and put a few turns on that side. If you use non insulated wire, you can solder the wires at the wrap. This will take a few hours...

If you want, I think I can email you a picture from a book.

Tam/WB2TT

2034. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 17:51:01 UTC
From: Dave Hall <nojunk_n3cvj@worldlynx.net>
Message-ID: <3E36C305.ECC@worldlynx.net>
Source record: 126025
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Scott wrote:
>
> "Michael A. Terrell" wrote:
> >
> > Scott wrote:
> > >
> > > "Michael A. Terrell" wrote:
> > > >
> > > > Scott wrote:
> > > > >
> > > > > Technician wrote:
> > > > > >
> > > > > >
> > > > > > No offence, but if you are going to run DOS programs, my opinion is that
> > > > > > you should at least know how to work at a prompt, regardless of the
> > > > > > programs need for it.
> > > > > >
> > > > > > I was building XT's back in the day.
> > > > >
> > > > > Real geeks format hard drives with debug :)
> > > >
> > > > I got your geek...right here!!
> > > >
> > > > -g=c800:5 (for WD)
> > >
> > > I like to ask the "Computer experts", What was the code for setting
> > > up a hard drive with debug, and seeing the blank stares. So much for an
> > > IT department. :) I rebuild and sold a lot of XT and PCs, and went
> > > through hundreds of used hard drives to test them using Debug. It was a
> > > good idea to do a half dozen or more machines at once, because it took
> > > so long to do a machine, and if one failed you stuck in another drive,
> > > and started over. BTW, I still have a few 10 Meg Seagate SA-1004 8"
> > > hard drives that predate the ST-506 interface. Geeky enough?
>
> Yes you are!!! I like to ask the "Computer experts" how many 16 bit
> slots are in an XT. Actually, debug ran a routine in ROM that did
> the low-level format. Fdisk and Format are the only two steps most
> ever see these days.

You mean like g=C800:5 ?

Dave
"Sandbagger"

2035. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 17:57:14 UTC
From: Skipp <msrnutsweareall@yahoo.com>
Message-ID: <b16g9qecd4@woodrow.ucdavis.edu>
Source record: 126024
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

: In rec.radio.amateur.homebrew Uncle Peter
: <radioconnectionNO@cox.netspam> wrote:
: Best of both worlds: MSR2000 PA deck running on a Micor repeater
: base.

There are at least 3 or 4 different MSR PA decks... the highest power continous duty units are pretty much the same as the Micor PA units. The high power (non continous duty) 110 watt units need to be run light duty cycle or turned down to about 60 watts to keep from burning them up in busy applications. Many people use fans on them... not a good idea to trust them at full tilt using a fan... but turning them down to 60 watts and a fan is a great idea.

There are some 30 watt Canadian PA units which can output about 50 watts when run full tilt. I run them about 35 watts with no problems.

A lot of people mistakenly compare the Micor fast/slow squelch system (AS Board) with the MSR squelch system. You can set the MSR squelch system up to work just as good, or the same as the micor response. The MSR squelch is always sharp and responds well into the noise floor, depending on how your set it up. In reality, the MSR Squelch is much more flexible. I detail the setup in my External Controller to MSR text found on the http://sonic.ucdavis.edu Amateur Radio pages. Most people prefer to believe what they first read and what is the most simple to set up right out of the box. In fact, the MSR Repeater Squelch Circuit is more flexible in adjustment than the Micor circuit.

Cheers
skipp
http://sonic.ucdavis.edu

: I love the Micor RX and squelch system over the Mitrek. With a little
: work the 110 watt PA and control system can be retrofitted to an
: existing Micor base. Solves the obsolete PNP RF transistor replacement
: problems as well.

: Cheers

: Pete

: "Skipp can be found through sonic" <notrealemail@yahoo.com> wrote in message
: news:b0s6d3isj3@woodrow.ucdavis.edu...
:> I too used International for many years, but they've become so expensive
:> that I sought out an alternative. I'm also a skeptic and had to verify
:> what I found would be a real fix.
:> A friend uses Bomar and gave me their number, I called and paid $10 per

:> crystal if I re-rocked the element myself. So I've done just that since
:> receiving my first order in.
:>
:> I've now re-crystaled over 30 pairs of MSR channel elements on both UHF
:> and VHF using the Bomar units... very cost effective and so far, not one
:> bad rock. I use the recrystaled elements in my commercial (trunking and
:> conventional) dual mode and amateur repeaters.
:>
:> I've had great service with International and only one receive element
:> (which they did) go just out of spec. But their prices have gotten way out
:> of line.
:>
:> So consider Bomar as a real option, I've placed very large orders with
:> them in the last two years and everything received has been spec, on
:> time and cost effective.
:>
:> I can also field MSR-2000 questions if you have any... I have over 50 in
:> service in many modes (including trunking) and have about worked out every
:> issue you could think up.
:>
:> I have a conversion to an external controller (ham) work up on the
:> http://sonic.ucdavis.edu Amateur Radio page. You can Email me from any
:> of the web pages if you have questions. I've also done tone panel
:> connections and repairs of which I'll provide help as practical.
:>
:> cheers
:> skipp
:> http://sonic.ucdavis.edu
:>
:> : In rec.radio.amateur.homebrew FM <radiovintage@hotmail.com> wrote:
:> : Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
:> : purchased crystals in many years where is the best place to buy them ??
: We
:> : will be using the repeater on 146.01/61.Also is there a site with the
: specs
:> : for the channel elements ?
:> : Rcvr Channel Element : KXN 1086A
:> : Xmtr Channel Element : KXN 1088A
:> : THANKS.
:>
:>

2036. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 18:11:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <uscd3vcqkr4uvp5k4o26akjsqec7ndpk31@4ax.com>
Source record: 126023

On 28 Jan 2003 07:29:55 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Thanks for that Richard,for some reason I thought that
>efficiencies in the order of 60% so I have never been attracted
>to vertical antennas. Ofcoursre there is still the drawback
>of radials but now I am better informed My mind had always wandered
>towards vertical dipoles because of the areas required.Tom W8TI (I
>miss him on this newsgroup) stated years ago that his vertical
>outshone his top band dipole which reinforces the inportance of low
>angle take off
>Art
>

Hi Art,

Low angle take-off is more a function of the soil condition far beyond
the longest radial because of simple geometric necessity. For
instance, if you want your antenna to have a good 5ï¿½ characteristic,
then the ground, as viewed from the current node of the antenna
(vertical only) 5ï¿½ below the horizon has to see an effective reflector
(that ground) out in the distance. This is rather simplistic because
it is largely a joke to try ray tracing from such a broad point as the
node (it covers a significant portion of the antenna structure and in
no way is a point from which rays draw cleanly).

If, instead, we were to pick a point, I would say halfway up (because
ALL radiation from ALL parts of the antenna make up the radiation's
lobe characteristics). From that point halfway up the vertical (not
ground, but could be the same thing) draw a line out infinitely at a
right angle (guaranteed to over shoot the horizon by definition, the
earth is constantly sloping away from that line) as your reference,
then cast a ray 5ï¿½ beneath that reference line and see where it
strikes earth. Simple trig (1 / tangent of 5ï¿½) tells us that it will
hit at 11.4 times that reference point's height above earth.

So, if your antenna's midpoint is located 20M up (we are considering a
160M quarterwave ground mounted vertical); then the quality of ground
229M away is the determiner of how well your 5ï¿½ take-off angle is
going to perform. If you want to enhance that characteristic,
lengthen your ground radials out, say, 250M (for an AM station with
120 radials that would take 300000M of wire) or 1.6 wavelengths per
radial about 6 times the usual, suggested length.

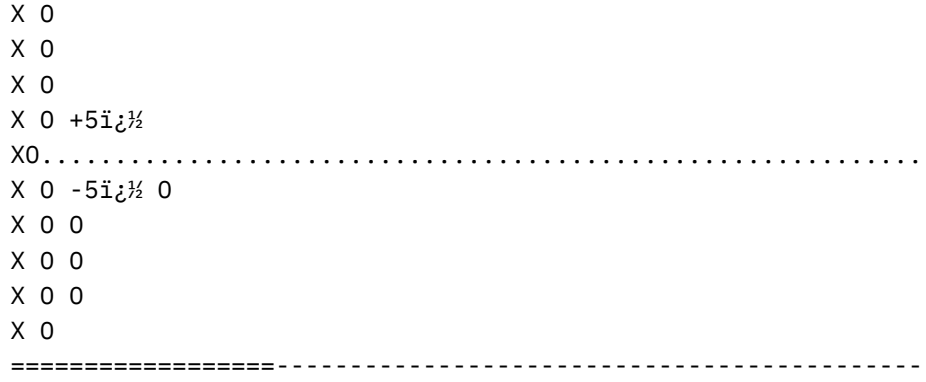
Well, let's consider just what ground has to offer that we generally,
and submissively, accept. Let's also take the bullet and call the

ground hardpan. When your antenna looks at that poor distant ground, it sees a smudgy mirror at the air/land boundary. If we look at the Zi of Air (377 Ohms) and the Zi of that land (190 Ohms) and compute the SWR, one can immediately appreciate how much power is going to reflect and how much is going to be absorbed by ground.

Well, time to move to farm country where you have the space to build a 160M antenna, plant radials, and not panic the neighbors. You put it up and from this setting, your antenna looks at the improved distant ground and sees a hazy mirror at the air/land boundary. If we look at the Zi of Air (377 Ohms) and the Zi of that land (65 Ohms) and compute the SWR, one can immediately appreciate how much MORE power is going to reflect and how much LESS is going to be absorbed by ground.

You win the lottery and decide to buy one of the islands nearby here (or pick your own) where you can see the glassy surface of brine all around you, even to the point of lapping up against your new antenna. You put it up and from this setting, your antenna looks at the vastly improved distant ground (OK so it's water) and sees a polished mirror at the air/water boundary. If we look at the Zi of Air (377 Ohms) and the Zi of that Ocean(10-20 Ohms) and compute the SWR, one can immediately appreciate it doesn't get much better than this without locating over an open pit copper mine.

73's
Richard Clark, KB7QHC



2037. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 18:13:09 UTC
From: richardharrison@webtv.net
Message-ID: <2104-3E36C835-234@storefull-2318.public.lawson.webtv.net>
Source record: 126028

Steve, VE9SRB wrote:
"---note that delivered power is not a forward traveling power---."

Quoting the Bird Model 43 "Theory of Operation" section:
"a. The forward wave travels (and its power flows) from the source to the load. It has an RF Voltage Ef and current If in phase, with Ef / If = Zo.

b. The reflected wave originates by reflection at the load, travels (and its power flows) from the load back to the source and has an RF voltage Er and current Ir in phase, with Er / Ir = Zo.

c. Note that each component wave is mathetically simple, and is completelly described by a single figure for power---."

I`m stopping here because I`ve posted all this before and we all know that the power delivered to the load is the same as that supplied by the transmitter and is simply the forward power minus the reflected power.

Best regards, Richard Harrison, KB5WZI

2038. Re: 1:6 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 18:20:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vkid3voorg4654cuc3ift9v2oq1qidubtj@4ax.com>
Source record: 126026

On Tue, 28 Jan 2003 11:29:51 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:

>Connect a 300 ohm resistor to the 300 ohm port, and measure SWR. Do this at
>very low power. A 2W resistor will take 5W for a few seconds at a time.
>
>Tam/WB2TT
>"Simon" <nospam@no.spam.invalid> wrote in message
>news:a2tZ9.3409$yP2.1789739@reader1.news.jippii.net...
>> How can i be sure that 1:6 balun is ok? can i test it by multimeter?
>>
>> 73's
>>
>> Simon
>>

Hi All,

Put two, back to back and drive a 50 Ohm dummy load.

73's
Richard Clark, KB7QHC

2039. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 18:30:37 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E36CC4D.1FEE921A@osite.com.br>
Source record: 126027

Richard Clark wrote:

> at the air/water boundary. If we look at the Zi of Air (377 Ohms) and
> the Zi of that Ocean(10-20 Ohms) and compute the SWR, one can
> immediately appreciate it doesn't get much better than this without
> locating over an open pit copper mine.

Wow, nice explanation, Richard!!!! Thanks.

BTW... the richest open copper mine I recall was only 2%
copper, the remaining 98% are made of sound granite rock, a
very poor conductor I believe.

Nice graphic!

> X O
> X O
> X O
> X O +5ï¿½
> XO...
> X O -5ï¿½ O
> X O O
> X O O
> X O O
> X O
> ==================---

--
Paulo E.P. Marcondes
ex-PU2PIX
Geologist - MSc student at Universidade de Sï¿½o Paulo
pepm#osite-com-br

2040. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 19:28:12 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <gRAZ9.7596$rq4.669450@bgtnsc05-news.ops.worldnet.att.net>
Source record: 126029

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:2104-3E36C835-234@storefull-2318.public.lawson.webtv.net...

> Steve, VE9SRB wrote:
> "---note that delivered power is not a forward traveling power---."
>
> Quoting the Bird Model 43 "Theory of Operation" section:
> "a. The forward wave travels (and its power flows) from the source to
> the load. It has an RF Voltage Ef and current If in phase, with Ef / If
> = Zo.
>
> b. The reflected wave originates by reflection at the load, travels (and
> its power flows) from the load back to the source and has an RF voltage
> Er and current Ir in phase, with Er / Ir = Zo.
>
> c. Note that each component wave is mathetically simple, and is
> completelly described by a single figure for power---."
>
> I`m stopping here because I`ve posted all this before and we all know
> that the power delivered to the load is the same as that supplied by the
> transmitter and is simply the forward power minus the reflected power.
>
> Best regards, Richard Harrison, KB5WZI
>

and the concept of "delivered power" is not the same as the concept of
"forward traveling power".

Steve

2041. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 20:56:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3drkg5jqq66ed@corp.supernews.com>
Source record: 126030

You have to remember that broadcasters are propagating their primary signal by ground wave, while amateurs use sky wave communication except for local QSOs. Although the efficiency of a vertical antenna can be made very high(*), as Richard points out, a very sizable fraction of the low angle sky wave radiation is lost in reflection from the ground beyond the radial system. The loss is total at zero elevation angle, and can amount to many dB at angles of a few degrees. At 40 meters, for example, around 70% of the total radiated energy is lost in this ground system reflection from average quality ground. Since nearly all the applied power is radiated from the antenna if the ground system is good, this loss doesn't appear in the normal calculation of antenna efficiency. So here you have a situation where the antenna efficiency, as normally defined, can be nearly 100%, while the overall efficiency including ground loss due to reflection is more like 30%. And, as I said, the loss is greatest at the lowest angles. EZNEC shows the loss due to this ground reflection to be a whopping 23 dB at an elevation angle of one degree, 11 dB at 5 degrees, and 7.5 dB at 10 degrees at 40 meters, average ground. This typically gets better at lower frequencies and worse at higher frequencies due to the skin depth change.

Remember, this is all assuming that you have a ground system with a large number of radials to begin with, or something like a vertical dipole that doesn't need ground radials to be efficient.

Roy Lewallen, W7EL

(*) In a series of QST articles in the '70s, Jerry Sevick W2FMI showed that even a very short vertical can be made to be quite efficient by using a ground system with a very large number of radials. But it still suffers from the ground reflection loss.

Art Unwin KB9MZ wrote:
> Thanks for that Richard,for some reason I thought that
> efficiencies in the order of 60% so I have never been attracted
> to vertical antennas. Ofcoursre there is still the drawback
> of radials but now I am better informed My mind had always wandered
> towards vertical dipoles because of the areas required.Tom W8TI (I
> miss him on this newsgroup) stated years ago that his vertical
> outshone his top band dipole which reinforces the inportance of low
> angle take off
> Art
>
>
>
>

> richardharrison@webtv.net (Richard Harrison) wrote in message
news:<29162-3E35F7C2-493@storefull-2317.public.lawson.webtv.net>...
>
>>Art, KB9MZ wrote:
>>"Does anybody have any idea what minimum efficiency is imposed by the
>>F.C.C. on such an (AM broadcast) antenna and what is a realistic top
>>efficiency---?"
>>
>>FCC dictates the radial system used and that controls efficiency pretty
>>well.
>>
>>The prescribed radial system produces a ground loss resistance of about
>>one ohm. A 0.15-wave tower has a radiation resistance of about 10 ohms.
>>So, efficiency will be about 90% with this short tower. With the usual
>>0.25-wave tower, radiation resistance runs around 30 ohms or more and
>>this antenna is about 96% efficient. A 1/2-wave or a 5/8-wave antenna
>>can get to nearly 100% efficient.
>>
>>Of course, propagation loss is a function of soil resistivity between
>>the transmitter and receiver on most paths.
>>
>>Best regards, Richard Harrison, KB5WZI
>

2042. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 21:17:45 UTC
From: richardharrison@webtv.net
Message-ID: <4702-3E36F379-625@storefull-2311.public.lawson.webtv.net>
Source record: 126031

Richard Clark wrote:
"Low take-off is more a function of the soil condition far beyond the longest radial because of simple geometric necessity."

OK. But, that applies in spades to horizontal antennas as well. The horizontal antenna over perfect earth has no radiation parallel with the earth. See Fig 10 on page 3-9 of the 19th edition of the ARRL Antenna Book.

On the other hand, using a grounded vertical, radiation parallel with the earth is maximum over perfect earth. See Fig 3 on page 3-5 of the 19th edition of the ARRL Antenna Book.

Omnidirectional in the horizontal plane is not the only reason for vertical polarization at sea. It`s the only game on the ocean.

Best regards, Richard Harrison, KB5WZI

2043. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 21:36:42 UTC
From: richardharrison@webtv.net
Message-ID: <4702-3E36F7EA-626@storefull-2311.public.lawson.webtv.net>
Source record: 126032

Roy Lewallen wrote:
"The loss is total at zero elevation angle, and can amount to many dB at angles of a few degrees."

Yes. This is true for horizontal polarization over perfect soil. Were this true for vertical polarization, a lot of AM-band broadcasters would be out of business. Their business is conducted via the zero elevation angle of radiation.

Best regards, Richard Harrison, KB5WZI

2044. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 21:49:14 UTC
From: Bjorn Henrik Vangstein <vangstein@bluezone.no>
Message-ID: <1043790569.389527@a217-118-32-43.bluecom.no>
Source record: 126033

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:20264-3E36BB37-607@storefull-2315.public.lawson.webtv.net...
> Henrik, LA5MDA wrote:
> "---a long wire, or more precisely a random length horizontal wire about
> 250 ft long, about 15 meters up."
>
> OK. Henrik`s antenna is set. The horizontal length is near 1/2-wave at
> 160 meters and has a high drivepoint impedance. This can be helped by
> feeding it as if it were a Zepp. The 15 meter height is small with
> respect to wavelength at either 160 meters or 80 meters.
>
> Open-wire line is favored for its low loss in feeding a high impedance
> and it is favored over a single wire because it can help transform the
> high antenna impedance to some lower value that can be more easily
> handled. The open-wire line can also help with balance at its drive-end.
> To get the benefits of the open-wire feedline, its length needs to stay
> well away from 1/2-wavelength and its multiples.
>
> The horizontal wire approaches a wavelength at 80 meters. This is
> counterproductive broadside to the wire. The two halfwaves have currents
> in opposite directions. Directivity is not too high in a low antenna
> except toward the zenith. So, if diagonal responses are satisfactory on
> 80 meters, the antenna is OK. If better broadside response is desired, a
> trap could be used somewhere in the middle of the antenna to cut it
> about in two at 80 meters.
>
> Best regards, Richard Harrison, KB5WZI
>

Richard,

Thanks for your kind help. I have one follow up:

Your advice is to shorten the antenna - for example to 200 ft - to bring
down the feed point impedance?
But then the down side might be a less effective radiator - because it's
shorter?

73 de Henrik, LA5MDA

2045. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 21:51:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E36FB5D.70405@ieee.org>
Source record: 126034

VE9SRB wrote:
> All I was illustrating is that the delivered power "adds" algebraically in a
> manner consistent with your interpretation of the law of conservation of
> energy as you apply it to the superposition of individual forward component
> waves in a transmission line.

I resent any assertion that I have ever superposed two powers "in phase" like you do. From your article, "... the forward source power combines in-phase with the re-reflected power ..." The only thing I have ever done is add two powers as scalars. Given the joules/sec nature of those average powers, if one is careful not to add the same energy twice, that is a perfectly acceptable procedure.

You said you didn't make any errors in your article so you obviously believe in superposition of two powers "in-phase". Never mind that power is a scalar and doesn't have a phase. Never mind that you contradict your above assertion in your following sentence. I actually have an email of yours showing exactly how two powers are superposed. I'll be glad to share that email with the group if you say it's OK.

We are still waiting for you to answer this question, Steve: Where does the energy in the two canceled "rearward-traveling waves 1 and 2" go? You say that each of those wave components is associated with V^2/Z0 joules/sec. So where does 2*V^2/Z0 joules/sec go? Don't you find it exceeding ironic? - that is the exact magnitude of joules/sec you need on the other side of the match point to perform your constructive interference superposition process? Energy is always conserved, Steve, not just when it is net energy. Gross energy is also conserved down to the last nanojoule.

You also have refused to answer this question: Where does the reflected energy go that you say is not re-reflected back toward the load? We know it is not incident upon the source. We know there are only two directions in a one-dimensional transmission line. I am at a loss to imagine where that darned energy goes unless you have a black hole in your pocket. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2046. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 21:54:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E36FC05.8030900@ieee.org>
Source record: 126035

Dan Jacobson wrote:
> Is it true one can use 5/8 wavelength antennas? I thought only 1, 1/2,
> 1/4, 1/8 ... could be used. By the way, can 2, 4, 8 also be used?
> (Antenna longer than wavelength.)

An antenna can be any length. Of course, the performance varies with
different lengths. A Larsen 5/8 monopole is a great 2m antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2047. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 21:57:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E36FCB6.6040309@ieee.org>
Source record: 126036

Bjorn Henrik Vangstein wrote:
> I'm afraid that a single wire feed line inside the house will generate
> BCI/TVI, so my thought was to use a coax with only the center wire connected
> to the antenna and the shield disconnected in the antenna end. In the shack
> the shield will be connected to ground in an usual 'coax manner'. Is this a
> sensible solution?

Nope, under those circumstances, common-mode currents render coax
virtually the same as twinlead.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2048. WTB: B&W Coax Switches

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 22:52:12 UTC
From: macve3gro@aol.com
Message-ID: <20030128175212.27662.00000307@mb-mj.aol.com>
Source record: 126037

I need two or three B&W coax switches, 5-position or Protax which is
5-positions plus rotor grounded. What have you? Thanks for reading. Harry,
VE3GRO
Harry MacLean, VE3GRO
500 Riverside Drive, London, ON N6H 2R7
(519) 473-1668

2049. Re: If only 1 wire antenna, which one would it be?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 22:58:44 UTC
From: macve3gro@aol.com
Message-ID: <20030128175844.27662.00000309@mb-mj.aol.com>
Source record: 126038

Check out this websit. Cebik has a paper that addresses this question, albeit for moderate space. No reason you couldn't double the size for 160-10-metre coverage. Harry, VE3GRO

http://www.cebik.com/radio.html
Harry MacLean, VE3GRO
500 Riverside Drive, London, ON N6H 2R7
(519) 473-1668

2050. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 23:18:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3e3ta2a3155e0@corp.supernews.com>
Source record: 126039

No loss occurs when a signal is reflected from perfect ground, regardless of the polarization. In the case of horizontally polarized waves, the sky wave signal at zero elevation angle is cancelled, but this isn't the same as loss -- the same reflection phenomenon causes reinforcement at other elevation angles, so all the power is still present beyond the reflection. Reinforcement can be made to occur at very low angles if the horizontal antenna is high above the ground, which is one reason amateurs continually strive to get antennas higher. When a horizontal antenna is put over real ground, there's very little loss at low angles -- the primary loss is at very high angles, and even that loss doesn't amount to a lot unless the antenna is very low.

Low angle vertically polarized signals, however, are actually lost when reflected from real ground. I did make an erroneous statement, though, in the amount, for which I apologize. The loss I quoted of 70% for a 40 meter quarter wave vertical over average ground, consists of the power lost by the reflection I mentioned plus the power lost to the ground wave. The ground wave is the primary means used by AM broadcasting, and they do everything they can to maximize it (such as using vertical polarization). But at HF the ground wave energy is dissipated within a few miles of the antenna, and is lost to any use for communicating beyond that. So while the ground wave is of overriding importance to broadcasters, it's simply power lost if you're using sky wave communication.

The phenomena I'm describing can be easily seen with EZNEC (which shows only the sky wave signal). If you use MININEC-type ground, conductive ground system losses are zero as if a perfect radial system were installed. If you set the Wire Loss to zero and have no resistive loads, the only source of loss to the far field is due to ground reflection. By looking at the Average Gain, which compares the power supplied to the antenna to the total power contained in the far field, you can immediately see what percentage of power is lost in ground reflection and/or ground wave for any antenna. If you'd like to learn more about how and why vertically and horizontally polarized signals react differently to ground reflection, Kraus has a good discussion, including reflection coefficient formulas, in _Antennas_.

Because of the different propagation modes (and to some extent because of the frequency difference), what's best for AM broadcasters is sometimes not the best for amateur sky wave communications, so you have to be careful when comparing the two applications.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:

> "The loss is total at zero elevation angle, and can amount to many dB at
> angles of a few degrees."
>
> Yes. This is true for horizontal polarization over perfect soil. Were
> this true for vertical polarization, a lot of AM-band broadcasters would
> be out of business. Their business is conducted via the zero elevation
> angle of radiation.
>
> Best regards, Richard Harrison, KB5WZI
>

2051. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-28 23:23:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3e47e18eet02c@corp.supernews.com>
Source record: 126040

The ground conductivity has a major impact on vertically polarized sky
wave signals, and very little impact on horizontally polarized sky wave
signals, particularly low angle horizontally polarized ones.

Yes, vertical polarization is the only way to go on the ocean. With the
high conductivity of the sea water, there's very little attenuation of
the sky wave signal, at all but the very, very lowest angles. So you get
very nearly the wonderful perfect-ground vertical antenna radiation
pattern you so often see in textbooks but which is so far from what
landlubbers can ever hope to achieve.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Richard Clark wrote:
> "Low take-off is more a function of the soil condition far beyond the
> longest radial because of simple geometric necessity."
>
> OK. But, that applies in spades to horizontal antennas as well. The
> horizontal antenna over perfect earth has no radiation parallel with the
> earth. See Fig 10 on page 3-9 of the 19th edition of the ARRL Antenna
> Book.
>
> On the other hand, using a grounded vertical, radiation parallel with
> the earth is maximum over perfect earth. See Fig 3 on page 3-5 of the
> 19th edition of the ARRL Antenna Book.
>
> Omnidirectional in the horizontal plane is not the only reason for
> vertical polarization at sea. It`s the only game on the ocean.
>
> Best regards, Richard Harrison, KB5WZI
>

2052. Re: Solar Spectral Power Estimates--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 00:19:12 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <V5FZ9.1838$hw4.589260@news20.bellglobal.com>
Source record: 126041

"Wayne Watson"
> ...noise-power-freq-density of the sun to be 0.4*10-23 Watt/Hz.
> Presumably this is a power spectral value. How does one obtain
> such a value?

In spite of the requirement for sunglasses, it is a simple "Black Body"
radiator.

> an example a value for noise-power-intensity, which taken
> from pg 8-48 (Planck's Law) of Kraus corresponds to a
> frequency of 30KHz at 6000K. An interesting example,
> but 30KHz doesn't seem like a 'typical' place to observe
> the Sun by radio. Seems like a poor choice or I'm missing
> something. Comments?

Without referring to your book, that 30 kHz seems like it might be the
bandwidth of the receiver. One needs to know the bandwidth to calibrate the
whole thing. 1 Hz bandwidth receivers are not usually available to the
average experimenter.

2053. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 00:30:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E37208D.3080907@ieee.org>
Source record: 126042

VE9SRB wrote:
> All I was illustrating is that the delivered power "adds" algebraically in a
> manner consistent with your interpretation of the law of conservation of
> energy as you apply it to the superposition of individual forward component
> waves in a transmission line.

Steve, expanding on our argument: You have said that the energy in the canceled "rearward-traveling waves 1 and 2" is not re-reflected. I pointed you to the optics example and you said that didn't prove anything. Well, take a look at this URL:

http://www.mellesgriot.com/products/optics/oc_2_1.htm

Quoting from that URL: "In the absence of absorption or scatter, the principle of conservation of energy indicates all "lost" reflected intensity will appear as enhanced intensity in the transmitted beam. The sum of the reflected and transmitted beam intensities is always equal to the incident intensity. This important fact has been confirmed experimentally."

Translating that into ham terms: The canceled energy in your rearward-traveling waves 1 and 2 is re-reflected, joins the forward energy flowing toward the load, and becomes incident upon the load, i.e. all the reflected energy is re-reflected in a matched system.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2054. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 00:53:58 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E372626.6070905@ieee.org>
Source record: 126043

OC_CAM's Razor wrote:
> http://www.mellesgriot.com/products/optics/oc_2_1.htm
>
> Quoting from that URL: "In the absence of absorption or scatter, the principle
> of conservation of energy indicates all "lost" reflected intensity will appear
> as enhanced intensity in the transmitted beam. The sum of the reflected and
> transmitted beam intensities is always equal to the incident intensity. This
> important fact has been confirmed experimentally."
>
> Translating that into ham terms: The canceled energy in your rearward-traveling
> waves 1 and 2 is re-reflected, joins the forward energy flowing toward the load,
> and becomes incident upon the load, i.e. all the reflected energy is re-reflected
> in a matched system.

Sorry, I forgot to paste this part from that URL:

"Clearly, if the wavelength of the incident light and the thickness of the
film are such that a phase difference exists between reflections of p, then
reflected wavefronts *interfere destructively*, and overall reflected intensity
is a minimum. If the two reflections are of equal amplitude, then this amplitude
(and hence intensity) minimum will be zero."

Dang, I wish I had said that. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2055. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 00:58:32 UTC
From: richardharrison@webtv.net
Message-ID: <4702-3E372738-644@storefull-2311.public.lawson.webtv.net>
Source record: 126044

Roy Lewallen wrote:
"The loss is total at zero degrees, and can amount to many dB at angles of a few degrees."

I responded by writing:
Yes, this is true for horizontal polarization over perfect soil."

Roy has already admitted to erring and I do too!

I was not referring to dissipation and should have said so. A perfect conductor is lossless. I continued, using sea water as an example which is about as perfect as "soil" gets. I used sea water as an example of how horizontal polarization does not work for ground waves or very low elevation angles over highly conductive surfaces. No energy is destroyed on reflection from a perfect reflector. It may be deflected in an undesired direction and thus is "lost" to a desired direction. I was careless. Sorry!

Best regards, Richard Harrison, KB5WZI

2056. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 01:55:17 UTC
From: Smokey <smokey@truck.stop>
Message-ID: <3tce3v88kdubc5ik82nqeosk5vcdfguogr@4ax.com>
Source record: 126045
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Sun, 26 Jan 2003 16:18:50 -0500, Technician <travis57@megalink.net>
wrote:

>In article <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>,
>radiovintage@hotmail.com says...
>> I am looking for a CD of Windows 95 for my shack computer so I can run some
>> DOS programs.
>> THANKS
>>
>>
>>
>
>If you want to run dos programs, why noy use dos?
>
>~Travis

If he's using Windows 95 his operating system is DOS. Windows 95 is
not an operating system.

2057. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 02:03:09 UTC
From: richardharrison@webtv.net
Message-ID: <2103-3E37365D-620@storefull-2318.public.lawson.webtv.net>
Source record: 126048

Roy Lewallen wrote:
"The ground conductivity has a major impact on vertically polarized sky wave signals, and very little impact on horizontally polarized ones."

Horizontally polarized waves are like Rodney Dangerfield. They don`t get no respect!

Terman writes in his 1955 edition on page 808:
"Examination of these vector diagrams shows that with a perfect reflector the horizontal components of the electric field will exactly cancel each other at the surface of the perfect reflector. In contrast, the vertical components of the incident and reflected waves do not cancel, but rather add at the reflector surface with small angular values."

Figures 10, 12, 13, and 14 of horizontal antenna patterns on pages 3-9, 3-11, and 3-12 of the 19th edition of the ARRL Antenna Book, all demonstrate the radiation cancellation at low elevation angles from horizontal antennas that Terman described. On the other hand, examination of vertical antenna radiation patterns will likewise demonstrate the positive part of Terman`s statement.

Best regards, Richard Harrison, KB5WZI

2058. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 02:05:08 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <oFGZ9.121550$Mb.5227447@twister.southeast.rr.com>
Source record: 126046

A 5/8ths is a loaded 3/4. with 3/4 being a resonant length. The reason for not actually using a 3/4 is that it has a higher radiation angle than the 5/8 and would send a larger portion of your signal into outer space. In theory a 5/8 has little gain over an end fed half wave antenna. In actuality when you consider the loss of the impedance matching circuit required with the 1/2 wl antenna the difference is more substantial. As a matter of fact some commercially availabe 1/2wl anteenas are actually worse than a 1/4 wl antenna.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E36FC05.8030900@ieee.org...
> Dan Jacobson wrote:
> > Is it true one can use 5/8 wavelength antennas? I thought only 1, 1/2,
> > 1/4, 1/8 ... could be used. By the way, can 2, 4, 8 also be used?
> > (Antenna longer than wavelength.)
>
> An antenna can be any length. Of course, the performance varies with
> different lengths. A Larsen 5/8 monopole is a great 2m antenna.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2059. Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 02:10:31 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <ejde3voj6huu7m7h9s35rjnqnjj7am5btt@4ax.com>
Source record: 126047
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

Hello. Sorry for the cross post, but since this has to do with both antennas and monitoring, I figured it was appropriate for both newsgroups.

I wish to monitor a trunked system that operates in the 406 - 410 mhz range. I currently have a VHF/UHF discone at 15 feet fed with 50 feet of RG-8U (from Rat Shack- ugh). I'm using a Pro-2053 to monitor it. I can pick up other frequencies originating from the same place in the 140 and 160 mhz ranges, but I'm not hearing any of the trunked system. I know the system is active and I should be hearing something.

I am about 25 miles straight line distance and my house is about 40 feet above sea level. Can anyone suggest why I might not hear the 400mhz system? Would boosting the antenna higher help (I could get it about 10 feet higher)?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2060. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 02:27:13 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E373C01.B8A1E207@mfi.net>
Source record: 126049
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Smokey wrote:
>
> On Sun, 26 Jan 2003 16:18:50 -0500, Technician <travis57@megalink.net>
> wrote:
>
> >In article <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>,
> >radiovintage@hotmail.com says...
> >> I am looking for a CD of Windows 95 for my shack computer so I can run some
> >> DOS programs.
> >> THANKS
> >>
> >>
> >>
> >
> >If you want to run dos programs, why noy use dos?
> >
> >~Travis
>
> If he's using Windows 95 his operating system is DOS. Windows 95 is
> not an operating system.

No, its not, but 95 only installs part of DOS. You have to do a
separate install of the rest of the files.
--

Michael A. Terrell
Central Florida

2061. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 02:34:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3efeads0smc3f@corp.supernews.com>
Source record: 126050

I don't disagree with Terman or the ARRL at all. And if either of these sources has plots of the patterns of horizontal antennas over grounds of different conductivity, you'll see that what I said is true -- the plots will be very nearly the same except at the highest elevation angles.

By contrast, plots of the (sky wave) patterns of vertical antennas of soils of different conductivity show major changes in the radiation intensity and pattern, particularly at low elevation angles.

If your favorite references don't have these plots, you can do the plots with EZNEC (including the demo version), or do the calculations for yourself without much difficulty using the reflection coefficients from Kraus or other sources. They should all agree, and produce the result I described in the quoted sentence.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:
> "The ground conductivity has a major impact on vertically polarized sky
> wave signals, and very little impact on horizontally polarized ones."
>
> Horizontally polarized waves are like Rodney Dangerfield. They don`t get
> no respect!
>
> Terman writes in his 1955 edition on page 808:
> "Examination of these vector diagrams shows that with a perfect
> reflector the horizontal components of the electric field will exactly
> cancel each other at the surface of the perfect reflector. In contrast,
> the vertical components of the incident and reflected waves do not
> cancel, but rather add at the reflector surface with small angular
> values."
>
> Figures 10, 12, 13, and 14 of horizontal antenna patterns on pages 3-9,
> 3-11, and 3-12 of the 19th edition of the ARRL Antenna Book, all
> demonstrate the radiation cancellation at low elevation angles from
> horizontal antennas that Terman described. On the other hand,
> examination of vertical antenna radiation patterns will likewise
> demonstrate the positive part of Terman`s statement.
>
> Best regards, Richard Harrison, KB5WZI
>

2062. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 02:44:31 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E373FA3.5B23BB3A@attbi.com>
Source record: 126051
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

At 15 feet high your radio horizon is about 5 miles. If you are 25 miles
from the trunking antenna then it is necessary for the trunking antenna
to be about 200 feet high.

If you raise your antenna to 25 feet then your horizon increases to
about 7 miles and the other antenna would need to be about 165 feet.

Sounds like it's not going to happen. You won't be able to hear the
trunk.

Deacon Dave, W1MCE

Andy KC2SSB wrote:
>
> Hello. Sorry for the cross post, but since this has to do with both
> antennas and monitoring, I figured it was appropriate for both
> newsgroups.
>
> I wish to monitor a trunked system that operates in the 406 - 410 mhz
> range. I currently have a VHF/UHF discone at 15 feet fed with 50 feet
> of RG-8U (from Rat Shack- ugh). I'm using a Pro-2053 to monitor it. I
> can pick up other frequencies originating from the same place in the
> 140 and 160 mhz ranges, but I'm not hearing any of the trunked system.
> I know the system is active and I should be hearing something.
>
> I am about 25 miles straight line distance and my house is about 40
> feet above sea level. Can anyone suggest why I might not hear the
> 400mhz system? Would boosting the antenna higher help (I could get it
> about 10 feet higher)?
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

2063. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 02:46:00 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E3740BD.2140296A@att.net>
Source record: 126052

Cecil,

While you are restoring forgotten paste-ups, be sure to add this one.

#####

One consequence of the wave properties of light is that waves exhibit
interference effects. Light waves that are in phase with each other
undergo constructive interference, as shown below.

Light waves that are exactly out of phase with each other (by 180
degrees or pi radians) undergo destructive interference, as shown below,
and their amplitudes cancel. In intermediate cases, *** total amplitude
is given by the vector resultant, and intensity is given by the square
of amplitude. ***

#####

Not much support for your insistence that the energy in individual wave
components can be added together directly. (Amplitude is the field
strength, and Intensity is equivalent to power.)

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> OC_CAM's Razor wrote:
> > http://www.mellesgriot.com/products/optics/oc_2_1.htm
> >
> > Quoting from that URL: "In the absence of absorption or scatter, the principle
> > of conservation of energy indicates all "lost" reflected intensity will appear
> > as enhanced intensity in the transmitted beam. The sum of the reflected and
> > transmitted beam intensities is always equal to the incident intensity. This
> > important fact has been confirmed experimentally."
> >
> > Translating that into ham terms: The canceled energy in your rearward-traveling
> > waves 1 and 2 is re-reflected, joins the forward energy flowing toward the load,
> > and becomes incident upon the load, i.e. all the reflected energy is re-reflected
> > in a matched system.
>
> Sorry, I forgot to paste this part from that URL:
>
> "Clearly, if the wavelength of the incident light and the thickness of the
> film are such that a phase difference exists between reflections of p, then
> reflected wavefronts *interfere destructively*, and overall reflected intensity

> is a minimum. If the two reflections are of equal amplitude, then this amplitude
> (and hence intensity) minimum will be zero."
>
> Dang, I wish I had said that. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp

2064. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 02:52:35 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E3741F2.DE239CCB@qth.com>
Source record: 126053
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap
Body handling: Binary attachment payload not displayed: radioranch.vcf

THIS is not a computer group, you geeks go ssomewhere else!! Its also not a
discussion group so go discuss somewhere else....PULEASSSSSEEEEE
what a bunch of crap

"Michael A. Terrell" wrote:

> Scott wrote:
> >
> > "Michael A. Terrell" wrote:
> > >
> > > Scott wrote:
> > > >
> > > > Technician wrote:
> > > > >
> > > > >
> > > > > No offence, but if you are going to run DOS programs, my opinion is that
> > > > > you should at least know how to work at a prompt, regardless of the
> > > > > programs need for it.
> > > > >
> > > > I was building XT's back in the day.
> > > >
> > > Real geeks format hard drives with debug :)
> > >
> > I got your geek...right here!!
> > >
> > -g=c800:5 (for WD)
>
> I like to ask the "Computer experts", What was the code for setting
> up a hard drive with debug, and seeing the blank stares. So much for an
> IT department. :) I rebuild and sold a lot of XT and PCs, and went
> through hundreds of used hard drives to test them using Debug. It was a
> good idea to do a half dozen or more machines at once, because it took
> so long to do a machine, and if one failed you stuck in another drive,
> and started over. BTW, I still have a few 10 Meg Seagate SA-1004 8"
> hard drives that predate the ST-506 interface. Geeky enough?
> --
>
> Michael A. Terrell
> Central Florida

[One or more binary attachments are retained only in the source text.]

2065. RE COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 03:03:15 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E374473.D8495B00@qth.com>
Source record: 126054
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap
Body handling: Binary attachment payload not displayed: radioranch.vcf

I have an idea, why not just put all these guys address into the big "spammers" lists til they quit posting to rec.radio.swap and other groups that just dont need this anymore...anybody like the idea? Im real tired of seeing off topic in rec.radio.swap where it doesnt belong...R U? Murray

Robert Bonomi wrote:

> In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
> Scott <"remove \"!t\" to reply"> wrote:
> >
> >
> >
> >> > I am looking for a CD of Windows 95 for my shack computer so I can run some
> >> > DOS programs.
> >> > THANKS
> >> >
> >> >
> >> >
> >>
> >> If you want to run dos programs, why not use dos?
> >
> >
> >Because if the machine came up and on the screen was:
> >
> >C:\>
>
> C:\>
> C:\DOS>
> C:\DOS\RUN>
> RUN \DOS\RUN
>
> with apologies to Dick and Jane

[One or more binary attachments are retained only in the source text.]

2066. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 03:17:42 UTC
From: tdonaly@aol.com
Message-ID: <20030128221742.14283.00000301@mb-ms.aol.com>
Source record: 126055

Gene wrote,
>
>Cecil,
>
>While you are restoring forgotten paste-ups, be sure to add this one.
>
>#####
>
>One consequence of the wave properties of light is that waves exhibit
>interference effects. Light waves that are in phase with each other
>undergo constructive interference, as shown below.
>
>Light waves that are exactly out of phase with each other (by 180
>degrees or pi radians) undergo destructive interference, as shown below,
>and their amplitudes cancel. In intermediate cases, *** total amplitude
>is given by the vector resultant, and intensity is given by the square
>of amplitude. ***
>
>#####
>
>Not much support for your insistence that the energy in individual wave
>components can be added together directly. (Amplitude is the field
>strength, and Intensity is equivalent to power.)
>
>73,
>Gene
>W4SZ
>

Hi Gene,
you're not the first person to try to get Cecil to believe this.
Unfortunately,
he won't. Oh, he may pay lip service to it in some oblique manner, but then
he'll
blithely go on adding powers together the way he always has and claiming
conservation
of energy made him do it.
73,
Tom Donaly, KA6RUH

2067. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 03:18:56 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E374820.BBF5F298@mfi.net>
Source record: 126056
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Murray Neece wrote:
>
> THIS is not a computer group, you geeks go ssomewhere else!! Its also not a
> discussion group so go discuss somewhere else....PULEASSSSSEEEEE
> what a bunch of crap
>
> "Michael A. Terrell" wrote:
>
> > Scott wrote:
> > >
> > > "Michael A. Terrell" wrote:
> > > >
> > > > Scott wrote:
> > > > >
> > > > > Technician wrote:
> > > > > >
> > > > > >
> > > > > > No offence, but if you are going to run DOS programs, my opinion is that
> > > > > > you should at least know how to work at a prompt, regardless of the
> > > > > > programs need for it.
> > > > > >
> > > > > > I was building XT's back in the day.
> > > > >
> > > > > Real geeks format hard drives with debug :)
> > > >
> > > > I got your geek...right here!!
> > > >
> > > > -g=c800:5 (for WD)
> > >
> > > I like to ask the "Computer experts", What was the code for setting
> > > up a hard drive with debug, and seeing the blank stares. So much for an
> > > IT department. :) I rebuild and sold a lot of XT and PCs, and went
> > > through hundreds of used hard drives to test them using Debug. It was a
> > > good idea to do a half dozen or more machines at once, because it took
> > > so long to do a machine, and if one failed you stuck in another drive,
> > > and started over. BTW, I still have a few 10 Meg Seagate SA-1004 8"
> > > hard drives that predate the ST-506 interface. Geeky enough?
> > > --
> > >
> > > Michael A. Terrell
> > > Central Florida

Stop e-mailing me. I did not start this thread, and your sorry ass
is why I don't go to rec.radio.swap that group is nothing but a moron
pissing contest that I don't have the time to wade through. If you are
too stupid to ignore this, or any other thread that you dislike you can
just go back to sleep. People like you give hams a bad name.
--

Michael A. Terrell
Central Florida

2068. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 03:32:09 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E374B39.B82573FA@mfi.net>
Source record: 126057
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Moparholic@hotmailnospam.com wrote:
>
> "Michael A. Terrell" <terrell@mfi.net> wrote:
> > Stop e-mailing me. I did not start this thread, and your sorry ass
> > is why I don't go to rec.radio.swap
> >
> It's cross posted to 7 groups.
>
> Smells like stink bait.
>
> --
> Go# 40 42 12
> ---------- http://NewsReader.Com/ ----------
> 50GB/Month

Then complain to the OP, not me.
--

Michael A. Terrell
Central Florida

2069. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 03:37:45 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E374C89.DDF023A5@mfi.net>
Source record: 126058
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Moparholic@hotmailnospam.com wrote:
>
> "Michael A. Terrell" <terrell@mfi.net> wrote:
> > Moparholic@hotmailnospam.com wrote:
> > >
> > > "Michael A. Terrell" <terrell@mfi.net> wrote:
> > > > Stop e-mailing me. I did not start this thread, and your sorry
> > > > ass is why I don't go to rec.radio.swap
> > > >
> > > It's cross posted to 7 groups.
> > >
> > > Smells like stink bait.
> > >
> > > --
> > > Go# 40 42 12
> > > ---------- http://NewsReader.Com/ ----------
> > > 50GB/Month
> >
> > Then complain to the OP, not me.
> >
> You're the dick head who responded.
>
> --
> Go# 40 42 12
> ---------- http://NewsReader.Com/ ----------
> 50GB/Month

Whats wrong, did you have a lovers spat with Murry?

PLONK!
--

Michael A. Terrell
Central Florida

Since Topica won't remove me from mailing lists I didn't subscribe
to, I'm going to list them so other spammers can put them on their
lists.

affinity@get.topica.com directory@get.topica.com info@get.topica.com
jobs@get.topica.com partners@get.topica.com press@get.topica.com
sales@get.topica.com suggestions@get.topica.com support@get.topica.com

2070. Re: RE COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 03:39:42 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E374CF0.6000401@socal.rr.com>
Source record: 126059
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Why not just learn to ignore it?

Murray Neece wrote:

>I have an idea, why not just put all these guys address into the big "spammers"
>lists til they quit posting to rec.radio.swap and other groups that just dont need
>this anymore...anybody like the idea? Im real tired of seeing off topic in
>rec.radio.swap where it doesnt belong...R U? Murray
>
>Robert Bonomi wrote:
>
>
>
>>In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
>>Scott <"remove \"!t\" to reply"> wrote:
>>
>>
>>>
>>>
>>>>>>I am looking for a CD of Windows 95 for my shack computer so I can run some
>>>>>DOS programs.
>>>>>THANKS
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>
>>>>If you want to run dos programs, why not use dos?
>>>>
>>>>
>>>Because if the machine came up and on the screen was:
>>>
>>>C:\>
>>>
>>>
>> C:\>
>> C:\DOS>
>> C:\DOS\RUN>
>> RUN \DOS\RUN
>>
>>with apologies to Dick and Jane
>>

>>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

2071. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 03:44:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E374E07.9040004@ieee.org>
Source record: 126060

Gene Fuller wrote:
> Not much support for your insistence that the energy in individual wave
> components can be added together directly. (Amplitude is the field
> strength, and Intensity is equivalent to power.)

Of course not, that's a different subject. The present subject is
100% re-reflection of reflected waves.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2072. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 03:46:36 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E374E9C.BC4569D3@uci.edu>
Source record: 126061

Gene Fuller wrote:
> Not much support for your insistence that the energy in individual wave
> components can be added together directly. (Amplitude is the field
> strength, and Intensity is equivalent to power.)
>
> 73,
> Gene
> W4SZ

With all the light intensity in the reflection effectively being cancelled (zero rate of energy flow back toward the source), and the requirement that the sum of transmitted intensity and reflected intensity must equal incident light intensity, the transmitted flow of energy can only be equal to the incident flow of energy. It looks like 100% support to me.

73, Jim AC6XG

2073. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 03:53:10 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E375025.7080003@ay.com.au>
Source record: 126062
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

FM wrote:
> I am looking for a CD of Windows 95 for my shack computer so I can run some
> DOS programs.

Crosspost to enough groups?

Why not just use MS-DOS 6.22, FreeDOS or Linux with dosemu depending on
how demanding the exactness of DOSiness you need.

MS-DOS 6.22 should be $5 or less now days. Win95 is still about $25 on
eBay and the like. Linux and FreeDOS are free with no moral issues like
warez copies of Microsoft OSs.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Crescent (12% of Full)

2074. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:01:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E375222.2080604@ieee.org>
Source record: 126064

Tdonaly wrote:
> Gene wrote,
>>Not much support for your insistence that the energy in individual wave
>>components can be added together directly. (Amplitude is the field
>>strength, and Intensity is equivalent to power.)
>>
> you're not the first person to try to get Cecil to believe this.
> Unfortunately, he won't. Oh, he may pay lip service to it in some
> oblique manner, but then he'll
> blithely go on adding powers together the way he always has and claiming
> conservation of energy made him do it.

And you think 75 joules/sec + 8.33 joules/sec = 133.33 joules/sec is
superior thinking? If adding 50 joules/sec of re-reflected power to that
equation to make it balance (as required by the conservation of energy
principle) is defined as "blithely" then I guess I'm guilty. Do you
really believe that 83.33 joules equals 133.33 joules?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2075. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:02:42 UTC
From: Jeffrey D Angus <jangus@socal.rr.com>
Message-ID: <3E375254.2080301@socal.rr.com>
Source record: 126063
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

And that's the best you can do for a response?

Moparholic@hotmailnospam.com wrote:

>"Michael A. Terrell" <terrell@mfi.net> wrote:
>
>
>>PLONK!
>>
>>
>>
>Stupid fucker cross posts a plonk.
>
>
>

--
"They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety." Benjamin Franklin
"A life lived in fear is a life half lived."
Tara Morice as Fran, from the movie "Strictly Ballroom"

2076. Re: RE COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:17:48 UTC
From: Jay <jay@hotmail.com>
Message-ID: <MBIZ9.48947$GX4.1954611@news2.east.cox.net>
Source record: 126065
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Well Murray...then leave. You will not be missed. Take your junk and
terrible attitude elsewhere.

"Murray Neece" <radioranch@qth.com> wrote in message
news:3E374473.D8495B00@qth.com...
> I have an idea, why not just put all these guys address into the big
"spammers"
> lists til they quit posting to rec.radio.swap and other groups that just
dont need
> this anymore...anybody like the idea? Im real tired of seeing off topic
in
> rec.radio.swap where it doesnt belong...R U? Murray
>
> Robert Bonomi wrote:
>
> > In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
> > Scott <"remove \"!t\" to reply"> wrote:
> > >
> > >
> > >
> > > >> > I am looking for a CD of Windows 95 for my shack computer so I can
run some
> > > >> > DOS programs.
> > > >> > THANKS
> > > >> >
> > > >> >
> > > >> >
> > > >>
> > > >> If you want to run dos programs, why not use dos?
> > > >
> > > >
> > > >Because if the machine came up and on the screen was:
> > > >
> > > >C:\>
> > >
> > > C:\>
> > > C:\DOS>
> > > C:\DOS\RUN>
> > > RUN \DOS\RUN
> > >
> > > with apologies to Dick and Jane
>

2077. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:30:30 UTC
From: Jeremy Taylor <jeremy.taylor@tait.co.nz>
Message-ID: <3E3758E6.E41C4A5A@tait.co.nz>
Source record: 126066

Reg Edwards wrote:

> Jeremy,
>
> The velocity factor INSIDE metal conductors is not relevant to radio
> antennas. It's what's in space EXTERNAL to the conductors that matters.
> But you didn't mean to say that, did you? Or did you? ;o)

No, I didn't... because I didn't understand that fact that you have just stated until I got feedback from this group!

>
>
> To give you the feel of the effects of antenna dimensions and velocity,
> down-load in a few seconds program DIPCAGE2 from website below and run
> immediately.

Ta, I'll have a go with it tonight

>
>
> It is important to become familiar with the magnitudes of the numerous
> effects. Most are of second or higher orders and can normally be forgotten
> about unless anyone wishes to start an argument on this newsgroup.

Well, I'm not interested in theoretical differences I should be able to ignore, only ones that make a practical difference in my antenna construction.

Thanks for your help.
Jeremy Taylor

2078. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:34:59 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E375A48.6EDACFEA@att.net>
Source record: 126067

Cecil,

You just proved my point. Your 75 plus 8.33 statement is in absolute
direct conflict with the Melles-Griot quote.

I won't waste any more time on this item. You either accept the
long-standing conventions or you don't.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Tdonaly wrote:
> > Gene wrote,
> >>Not much support for your insistence that the energy in individual wave
> >>components can be added together directly. (Amplitude is the field
> >>strength, and Intensity is equivalent to power.)
> >>
> > you're not the first person to try to get Cecil to believe this.
> > Unfortunately, he won't. Oh, he may pay lip service to it in some
> > oblique manner, but then he'll
> > blithely go on adding powers together the way he always has and claiming
> > conservation of energy made him do it.
>
> And you think 75 joules/sec + 8.33 joules/sec = 133.33 joules/sec is
> superior thinking? If adding 50 joules/sec of re-reflected power to that
> equation to make it balance (as required by the conservation of energy
> principle) is defined as "blithely" then I guess I'm guilty. Do you
> really believe that 83.33 joules equals 133.33 joules?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2079. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:35:54 UTC
From: Steven Dinius <10kc@fmtc.com>
Message-ID: <v3emghastlgi2f@corp.supernews.com>
Source record: 126068
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

KIDS!!!!

<Moparholic@hotmailnospam.com> wrote in message
news:20030128223525.770$gQ@newsreader.com...
> "Michael A. Terrell" <terrell@mfi.net> wrote:
> > Moparholic@hotmailnospam.com wrote:
> > >
> > > "Michael A. Terrell" <terrell@mfi.net> wrote:
> > > > Stop e-mailing me. I did not start this thread, and your sorry
> > > > ass is why I don't go to rec.radio.swap
> > > >
> > > It's cross posted to 7 groups.
> > >
> > > Smells like stink bait.
> > >
> > > --
> > > Go# 40 42 12
> > > ---------- http://NewsReader.Com/ ----------
> > > 50GB/Month
> > >
> > Then complain to the OP, not me.
> >
> You're the dick head who responded.
>
> --
> Go# 40 42 12
> ---------- http://NewsReader.Com/ ----------
> 50GB/Month

2080. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:35:55 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <7cme3voa19bb5gtnbkfre7q532g35ikg7u@4ax.com>
Source record: 125919
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

On Wed, 29 Jan 2003 02:44:31 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>At 15 feet high your radio horizon is about 5 miles. If you are 25 miles
>from the trunking antenna then it is necessary for the trunking antenna
>to be about 200 feet high.
>
>If you raise your antenna to 25 feet then your horizon increases to
>about 7 miles and the other antenna would need to be about 165 feet.
>
>Sounds like it's not going to happen. You won't be able to hear the
>trunk.
>
>Deacon Dave, W1MCE

So then trunking systems vary that much from conventional systems? As
I stated, I can hear transmissions in the 140's and 160's coming from
the same place, but none of the trunking. How does the type of antenna
work into this equation? How do you come up with your numbers?

I can hear the state police on their 800 mhz trunked system no problem
with the back of the set antenna and I am sure their antennas are much
farther away than 25 miles. I can hear a 400 mhz conventional system
that is about 30 miles north of me with the back of the set antenna...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2081. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:37:28 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301282037.39693a55@posting.google.com>
Source record: 125920

nm5k@wt.net (Mark Keith) wrote in message n
>
> Sure, but you use a loading coil to tune to a 3/4 wave resonance. Only
> 1/4 and 3/4 wave whips give a good match "low Z" to a coax feed. All
> other types of verticals will need matching.

One caveat...A center fed 1/2 wave vertical has a low Z feedpoint and
can be fed directly with coax. But a base fed 1/2 wave has a high Z
feedpoint, and will require a matching device.
MK

2082. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:38:32 UTC
From: Jeremy Taylor <jeremy.taylor@tait.co.nz>
Message-ID: <3E375AC8.1AFB7844@tait.co.nz>
Source record: 125921

Roy Lewallen wrote:

> Actually, the effect of at least moderate amounts of permeability on
> resonant length is almost entirely due to the change it makes in RF
> resistance. The RF resistance of a conductor is directly proportional to
> the square root of the permeabilty. It's also directly proportional to
> the square root of the DC resistivity. It turns out that increasing the
> permeability by a factor of 100 has very nearly the same (small) effect
> on resonant length as increasing the resistivity by 100 times. So the RF
> resistance is really the important factor.
>
> The increase in RF resistance due to increased permeability is
> undesirable from an efficiency standpoint if the conductor is fairly
> small to begin with. But the use of common magnetic metals like steel or
> stainless steel isn't a problem if the conductor is large enough to have
> a small RF resistance even with high permeability. As Karl points out,
> though, IM can sometimes be a problem with materials having nonlinear
> ferromagnetic properties.
>
> Roy Lewallen, W7EL
>
> Karl Beckman wrote:
> > This is nothing new for Roy Llewallen, but going to a ferro-magnetic
> > material such as iron or steel wire or tubing will make a difference. Also
> > watch out for nickel-plated PL259 connectors. In high RF fields (and points
> > of high VSWR) they can be a primary source of IM!
> >

Argh! This is where you chaps lost me. Karl alludes to something I need to consider when using steel instead of aluminium (for instance) but I'm not sure about the nature or magnitude of what I need to consider? And then I just got lost. :-)

I'll give you a f'rinstance: I am trying to build a K5OE Texas Eggbeater II at 70cm. I have 1/8" stainless steel as a material handy. The antenna was designed with copper in mind. So do I need to worry about differences because of using a ferro-mag material instead? Or in this instance, should I just say: 'nah, not enough of an influence to worry me'.

Roy, thanks for the EZ-NEC tutorial, I'll have a bash at it tonight.

Regards
Jeremy

2083. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:38:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jjme3vsnuinb3ftho8gush3rdcvu9qadjm@4ax.com>
Source record: 125922

On Tue, 28 Jan 2003 19:46:36 -0800, Jim Kelley <jwkelley@uci.edu>
wrote:

>
>
>Gene Fuller wrote:
>> Not much support for your insistence that the energy in individual wave
>> components can be added together directly. (Amplitude is the field
>> strength, and Intensity is equivalent to power.)
>>
>> 73,
>> Gene
>> W4SZ
>
>With all the light intensity in the reflection effectively being
>cancelled (zero rate of energy flow back toward the source), and the
>requirement that the sum of transmitted intensity and reflected
>intensity must equal incident light intensity, the transmitted flow of
>energy can only be equal to the incident flow of energy. It looks like
>100% support to me.
>
>73, Jim AC6XG

Hi Jim,

You can be right by being wrong; you can be wrong by being right.

Seems to me some religious savant, king, potentate, or pope was asked
about the morality of destroying an entire city to eradicate the
portion of the citizens who were infidels; his response:
"Kill them All, God will recognize his own."

73's
Richard Clark, KB7QHC

2084. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:41:53 UTC
From: Jeremy Taylor <jeremy.taylor@tait.co.nz>
Message-ID: <3E375B91.E1632E64@tait.co.nz>
Source record: 125923

Richard Harrison wrote:

> I just tried to respond with a too-long posting which disappeared from
> my screen. Arnold Bailey has all the answers in and around a chart on
> page 320 of "TV and Other Receiving Antennas".

I hate it when that happens. :-(

>
> Your length will vary significantly with diameter. The fatter the
> conductor, the shorter. Length does not vary significantly with the
> material at UHF.
>
> Bailey gives a simple formula for a 1/2-wavelength antenna using only
> the conductor periphery as a function of free-space wavelength versus
> frequency.
>

[snip equations]

thanks for that!

Regards
Jeremy

2085. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:45:18 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E375CB3.A0480595@att.net>
Source record: 125924

Jim,

Your statement is true, but it is not related to the issue at hand.
Nobody questions conservation of energy in the total system. The issue
is how to perform the details of the calculation.

73,
Gene
W4SZ

Jim Kelley wrote:
>
> Gene Fuller wrote:
> > Not much support for your insistence that the energy in individual wave
> > components can be added together directly. (Amplitude is the field
> > strength, and Intensity is equivalent to power.)
> >
> > 73,
> > Gene
> > W4SZ
>
> With all the light intensity in the reflection effectively being
> cancelled (zero rate of energy flow back toward the source), and the
> requirement that the sum of transmitted intensity and reflected
> intensity must equal incident light intensity, the transmitted flow of
> energy can only be equal to the incident flow of energy. It looks like
> 100% support to me.
>
> 73, Jim AC6XG

2086. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:48:30 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301282048.5a2b0d9f@posting.google.com>
Source record: 125925

Guys
All brilliant postings and very insightful for me.
I appreciate the considerable time and thought that
has been put to my original post, much more informative
than what I have read in literature so far.
Post more on this subject if you have something to
add as all of this is fascinating to me at this particular
time. I was wondering how a loaded dipole mounted vertically
would compare but I don't want to sideline the general theme.
Best regards
Art

Roy Lewallen <w7el@eznec.com> wrote in message news:<v3e3ta2a3155e0@corp.supernews.com>...
> No loss occurs when a signal is reflected from perfect ground,
> regardless of the polarization. In the case of horizontally polarized
> waves, the sky wave signal at zero elevation angle is cancelled, but
> this isn't the same as loss -- the same reflection phenomenon causes
> reinforcement at other elevation angles, so all the power is still
> present beyond the reflection. Reinforcement can be made to occur at
> very low angles if the horizontal antenna is high above the ground,
> which is one reason amateurs continually strive to get antennas higher.
> When a horizontal antenna is put over real ground, there's very little
> loss at low angles -- the primary loss is at very high angles, and even
> that loss doesn't amount to a lot unless the antenna is very low.
>
> Low angle vertically polarized signals, however, are actually lost when
> reflected from real ground. I did make an erroneous statement, though,
> in the amount, for which I apologize. The loss I quoted of 70% for a 40
> meter quarter wave vertical over average ground, consists of the power
> lost by the reflection I mentioned plus the power lost to the ground
> wave. The ground wave is the primary means used by AM broadcasting, and
> they do everything they can to maximize it (such as using vertical
> polarization). But at HF the ground wave energy is dissipated within a
> few miles of the antenna, and is lost to any use for communicating
> beyond that. So while the ground wave is of overriding importance to
> broadcasters, it's simply power lost if you're using sky wave communication.
>
> The phenomena I'm describing can be easily seen with EZNEC (which shows
> only the sky wave signal). If you use MININEC-type ground, conductive
> ground system losses are zero as if a perfect radial system were
> installed. If you set the Wire Loss to zero and have no resistive loads,
> the only source of loss to the far field is due to ground reflection. By
> looking at the Average Gain, which compares the power supplied to the
> antenna to the total power contained in the far field, you can

> immediately see what percentage of power is lost in ground reflection
> and/or ground wave for any antenna. If you'd like to learn more about
> how and why vertically and horizontally polarized signals react
> differently to ground reflection, Kraus has a good discussion, including
> reflection coefficient formulas, in _Antennas_.
>
> Because of the different propagation modes (and to some extent because
> of the frequency difference), what's best for AM broadcasters is
> sometimes not the best for amateur sky wave communications, so you have
> to be careful when comparing the two applications.
>
> Roy Lewallen, W7EL
>
> Richard Harrison wrote:
> > Roy Lewallen wrote:
> > "The loss is total at zero elevation angle, and can amount to many dB at
> > angles of a few degrees."
> >
> > Yes. This is true for horizontal polarization over perfect soil. Were
> > this true for vertical polarization, a lot of AM-band broadcasters would
> > be out of business. Their business is conducted via the zero elevation
> > angle of radiation.
> >
> > Best regards, Richard Harrison, KB5WZI
> >

2087. Re: 40 m dipole on 15 m? Does it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:50:46 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301282050.19696f62@posting.google.com>
Source record: 125926

fch <na@hle.com> wrote in message news:<3E343555.249421BA@hle.com>...
> It is coax fed. How efficient of a radiator of RF is a 40 m
> dipole being used on 15 m?
> Is it almost or as efficient as a regular 15 m dipole?
>
> What other bands could a 80 m dipole be used on easily?

Yes, it's about as efficient, but it has a different pattern as
mentioned.
I've always had good results using a coax fed 40m dipole on 15m. I
mentioned a while back running dipoles at 10 ft high when camping. I
used a 40m dipole at 10 ft high or less on 15m and worked JA's one
after another in the late afternoon with low power. Also I ran this
setup as a novice. The only problem is sometimes the SWR is a bit high
for a solid state rig. I just stick a tuner inline usually if needed.
The losses are low. A 40m will give decent results on 17m usually. 80m
dipole??? Dunno...It's ok on 30m for one...I've used one on 20m with
usable results also. The better "larger" the coax, the less loss in a
mismatched scenario. When you have a large mismatch on a coax system,
using fat rg-8 or 213, etc, pays off compared to thin rg-58. The
losses will be a good bit less with the bigger coax. MK

2088. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 04:56:51 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5lne3v8sr61vd7o955pk4kte3c3ipp7cor@4ax.com>
Source record: 125927

On Wed, 29 Jan 2003 17:38:32 +1300, Jeremy Taylor
<jeremy.taylor@tait.co.nz> wrote:

>
>Roy, thanks for the EZ-NEC tutorial, I'll have a bash at it tonight.
>
>Regards
>Jeremy

Hi Jeremy,

Take one of EZNEC's provided sample antennas (something close, even if
just a dipole);
scale it to the frequency of your intrest;
insure all dimensions conform (wire diameters are very critical);
set for copper loss;
give it a spin;
set for steel loss;
take it out for another turn 'round the track;
note the difference.

Does it matter? Only you can answer that question and the results
from above will be close enough.

73's
Richard Clark, KB7QHC

2089. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 05:22:59 UTC
From: ac6la@arrl.net
Message-ID: <960228f1.0301282122.330b212b@posting.google.com>
Source record: 125928

In a previous posting, Roy gave a good mini-tutorial on how to get started with antenna modeling using EZNEC. He touched on several key points concerning frequency sweeps, SWR curves, and resonance.

Like many hams, I use EZNEC a lot. But all antenna modeling programs can seem overwhelming when you are just getting started, so I'd like to expand on the points that Roy made by offering some pictures to go along with the words.

I started with the same back yard dipole that Roy used. Then I ran a frequency sweep and plotted various parameters. You can see the results at www.qsl.net/ac6la/adhoc/bydip.html . This "newsgroup posting in an alternate location" is not meant to answer any specific question that may have been posed in this thread. But like Roy said, there seem to be a lot of EZNEC users in this group so maybe this will be useful to some.

And yes, before the "seen it all, done it all, know it all" crowd jumps in, this gives me a chance to do some advertising.

Dan AC6LA

2090. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 05:39:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E37690E.4060701@ieee.org>
Source record: 125929

Gene Fuller wrote:
> Cecil,
>
> Your 75 plus 8.33 statement is in absolute
> direct conflict with the Melles-Griot quote.

Of course it is, Gene, that's the entire point. The 75 plus 8.33 is NOT MY STATEMENT! It is the statement by the author of the QEX article. What the Melles-Griot quote allows us to do is introduce the energy in the canceled waves as energy incident upon the load, something the author of the QEX article has been denying for a year and a half. Thus the correct equation for a matched system is:

75 joules/sec + 8.33 joules/sec + 50 joules/sec = 133.33 joules/sec

The author of the QEX article left out the 50 joules/sec. That was my original objection from almost two years ago. Notice how the energy equation now balances perfectly.

> I won't waste any more time on this item. You either accept the
> long-standing conventions or you don't.

One very, very long standing convention was that the earth was the center of the universe. Do you still accept that convention? What has happened is that a convention has allowed a conceptual error to creep in. The convention is trying to drive reality instead of vise versa. The tail is trying to wag the dog.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2091. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 05:49:06 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E376B52.6060908@ieee.org>
Source record: 125930

Gene Fuller wrote:
> Jim,
> Your statement is true, but it is not related to the issue at hand.
> Nobody questions conservation of energy in the total system. The issue
> is how to perform the details of the calculation.

That's not the immediate issue here at all, Gene. The issue here is whether, in a matched system, all the reflected energy is re-reflected. Melles-Griot says it is. The QEX article says it isn't. That's all we are discussing here at the moment. Please take it one step at a time.

If you will look back a couple of postings, you will see that what was being objected to here is this statement from the QEX article. "A total re-reflection of power at the match point is not necessary for the impedance match to occur." The Melles-Griot web page says the result of an impedance match is a total re-reflection of energy at the match point.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2092. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 06:17:58 UTC
From: richardharrison@webtv.net
Message-ID: <27287-3E377216-301@storefull-2312.public.lawson.webtv.net>
Source record: 125932

Henrik, LA5MDA wrote:
"Your advice is to shorten the antenna - for example to 200 ft - to bring down the feed point impedance?"

Impedance wasn`t the reason for the trap. It was to avoid currents in opposite directions in the horizontal wire at 80 meters. Current reverses direction after 1/2 wave of travel. A full-wavelength of wire has current in-phase, or that is more precisely in the same directions, when the wire is center-fed. When the full-wave of wire is end-fed, a current reversal will occur in its middle. This current reversal in the middle of the wire will cause a letter X radiation pattern from the wire in the horizontal plane, and not the figure 8 pattern commonly associated dipole antennas, or with end-fed antennas of 1/2-wavelength or shorter.

There may be nothing wrong with a "letter-X" radiation pattern. As was noted, the proximity of the earth to the proposed antenna will likely blur its directional characteristics anyway.

The impedance of the end-fed antenna which is near 1/2 wave at 160 meters and near a full-wave at 160 meters, has a high feedpoint impedance on both bands. A tapered open-wire line could be used as an impedance adjuster to produce a lower impedance for the radio. A "Q-section" is another possibility but requires more than one for a quarter-wave section for more than one bands. I was thinking you would just use a 600-ohm or some similiar Zo line section to partially transform the high antenna impedance to a lower impedance that was easier for a versatile tuner to handle. Many tuners are built for coax so a balun may be needed to permit use of the tuner.

Before coax became popular, antennas were often fed with open-wire line and the feedline loss was acceptable. Coax is lossier and makes mis-matched lines less tolerable.

Best regards, Richard Harrison, KB5WZI

2093. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 06:24:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vcse3vgh57iku9u6j3c16kf37c475virpt@4ax.com>
Source record: 125931

On Tue, 28 Jan 2003 23:49:06 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Gene Fuller wrote:
>> Jim,
>> Your statement is true, but it is not related to the issue at hand.
>> Nobody questions conservation of energy in the total system. The issue
>> is how to perform the details of the calculation.
>
>That's not the immediate issue here at all, Gene. The issue here is whether,
>in a matched system, all the reflected energy is re-reflected. Melles-Griot
>says it is. The QEX article says it isn't. That's all we are discussing
>here at the moment. Please take it one step at a time.
>
>If you will look back a couple of postings, you will see that what was
>being objected to here is this statement from the QEX article. "A total
>re-reflection of power at the match point is not necessary for the
>impedance match to occur." The Melles-Griot web page says the result of
>an impedance match is a total re-reflection of energy at the match point.

So, Cecil,

I suppose this means we all hold off yet again on our long standing
assessment of your outrageous violations of math and superposition and
celebrate this minor affair first?

Bang the Gong, get it on!

yeah, and after the party when you've lost your fizz? Cecil, it's
like you found yourself married to a girl that looked a whole lot
better last night roun' closing time. Ms Melles-Griot (nee) has been
presented to society as your mate-in-argument. How long will this
marriage last? go the whispers through Peyton Place.

73's
Richard Clark, KB7QHC

2094. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 06:53:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3eukfcqnu11df@corp.supernews.com>
Source record: 125933

Sorry if I confused you. The bottom line is that going from copper to stainless steel won't make a significant difference in the length you need. But if the stainless is ferromagnetic (some are and some aren't -- test with a magnet), it might be lossy enough at RF to noticeably reduce your signal strength. That's where modeling can help. Unfortunately, EZNEC doesn't have built-in wire loss values for any steels -- I didn't include them because of the tremendous number of alloys there are, and the fact that they vary all over the map. DC resistivity or conductivity isn't too hard to find for most alloys, but permeability is. Some ballpark values you could use to get a rough idea are:

Non-magnetic stainless (e.g., 302, 304):
Resistivity 7.4E-7 ohm-m
Rel. Permeability 1
Magnetic stainless (e.g., 410, 420):
Resistivity 5.6E-7 ohm-m
Rel. Permeability ?

302 and 304 seem to be the most common non-magnetic varieties, but there's a lot of variation among other types. For example, non-magnetic type 203 has a resistivity of 4.35E-6 ohm-m.

The only information I could readily find on the permeability of magnetic stainless steels was for some varieties specially fabricated for magnetic purposes. It has a permeability of 700 - 1200. I suspect it's not very well controlled in the common alloys. I'd use a value of maybe 500 as a wild guess. I'd be grateful to hear from anyone having better information.

Roy Lewallen, W7EL

Jeremy Taylor wrote:
> Roy Lewallen wrote:
>
>
>>Actually, the effect of at least moderate amounts of permeability on
>>resonant length is almost entirely due to the change it makes in RF
>>resistance. The RF resistance of a conductor is directly proportional to
>>the square root of the permeabilty. It's also directly proportional to
>>the square root of the DC resistivity. It turns out that increasing the
>>permeability by a factor of 100 has very nearly the same (small) effect
>>on resonant length as increasing the resistivity by 100 times. So the RF
>>resistance is really the important factor.
>>
>>The increase in RF resistance due to increased permeability is
>>undesirable from an efficiency standpoint if the conductor is fairly

>>small to begin with. But the use of common magnetic metals like steel or
>>stainless steel isn't a problem if the conductor is large enough to have
>>a small RF resistance even with high permeability. As Karl points out,
>>though, IM can sometimes be a problem with materials having nonlinear
>>ferromagnetic properties.
>>
>>Roy Lewallen, W7EL
>>
>>Karl Beckman wrote:
>>
>>>This is nothing new for Roy Llewallen, but going to a ferro-magnetic
>>>material such as iron or steel wire or tubing will make a difference. Also
>>>watch out for nickel-plated PL259 connectors. In high RF fields (and points
>>>of high VSWR) they can be a primary source of IM!
>>>
>>
>
> Argh! This is where you chaps lost me. Karl alludes to something I need to
> consider when using steel instead of aluminium (for instance) but I'm not sure
> about the nature or magnitude of what I need to consider? And then I just got
> lost. :-)
>
> I'll give you a f'rinstance: I am trying to build a K5OE Texas Eggbeater II at
> 70cm. I have 1/8" stainless steel as a material handy. The antenna was designed
> with copper in mind. So do I need to worry about differences because of using a
> ferro-mag material instead? Or in this instance, should I just say: 'nah, not
> enough of an influence to worry me'.
>
> Roy, thanks for the EZ-NEC tutorial, I'll have a bash at it tonight.
>
> Regards
> Jeremy
>
>

2095. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 07:04:55 UTC
From: richardharrison@webtv.net
Message-ID: <20264-3E377D17-714@storefull-2315.public.lawson.webtv.net>
Source record: 125935

CAM wrote a quote:
"A total re-reflection at the match point is not necessary for the impedance match to occur."

My opinion is that evidence of a match is the absence of reflected energy presented to the matched line or device. If re-reflection is incomplete, the non-re-reflected energy is making it through the "match point". Result? you don`t have a thorough match.

King, Mimno, and Wing say on page 44 of "Transmission Lines and Wave Guides":
"When impedances are conjugate-matched for transmission of power in one direction, they are conjugate-matched for power in the reverse direction, if no power loss occurs in the matching devices."

Best regards, Richard Harrison, KB5WZI

2096. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 07:10:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E377E80.7F72D9D7@cwis.net>
Source record: 125934

Jimmy,
You want to run through that 5/8 wave really being
a 6/8 wave part again? I think I may have missed something
there...
'Doc

2097. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 07:13:35 UTC
From: richardharrison@webtv.net
Message-ID: <20265-3E377F1F-316@storefull-2315.public.lawson.webtv.net>
Source record: 125937

Dang me! That was supposed to be "near a full-wave at 80 meters", not
160 meters again!

Best regards, Richard Harrison, KB5WZI

2098. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 07:21:50 UTC
From: B <b@bnobody.com>
Message-ID: <iiLZ9.50345$GX4.2005365@news2.east.cox.net>
Source record: 125936
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

My suggestion would be to go to the actual antenna and verify there are ACTUAL 400 mhz transmissions coming from it. If you do hear it then continue trotting with your horse down the road until you no longer hear it anymore. Bring along a GPS receiver and deduce from that information (altitude, distance, etc) where you are losing the signal at.

You're done..

"Andy KC2SSB" <nospam@nospam.com> wrote in message news:7cme3voa19bb5gtnbkfre7q532g35ikg7u@4ax.com...
> On Wed, 29 Jan 2003 02:44:31 GMT, Dave Shrader
> <david.shrader@attbi.com> wrote:
>
> >At 15 feet high your radio horizon is about 5 miles. If you are 25 miles
> >from the trunking antenna then it is necessary for the trunking antenna
> >to be about 200 feet high.
> >
> >If you raise your antenna to 25 feet then your horizon increases to
> >about 7 miles and the other antenna would need to be about 165 feet.
> >
> >Sounds like it's not going to happen. You won't be able to hear the
> >trunk.
> >
> >Deacon Dave, W1MCE
>
> So then trunking systems vary that much from conventional systems? As
> I stated, I can hear transmissions in the 140's and 160's coming from
> the same place, but none of the trunking. How does the type of antenna
> work into this equation? How do you come up with your numbers?
>
> I can hear the state police on their 800 mhz trunked system no problem
> with the back of the set antenna and I am sure their antennas are much
> farther away than 25 miles. I can hear a 400 mhz conventional system
> that is about 30 miles north of me with the back of the set antenna...
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

2099. Folded Dipoles for HF plans requested

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 08:51:58 UTC
From: James <deadman@quicksilver.net.nz>
Message-ID: <1043830100.34037@drone5.qsi.net.nz>
Source record: 125938

About ten years ago I had the pleasure of attending my first ever national field day (here in ZL land). I fantastic team effort and a wonderful event on 40 & 80mts. The thing is the antennae that were used where 3 element dipoles. I am unsure if they were terminated or if the elements were in "freespace" so to speak.

10 years on I am president of a small amateur club with around 30 active members, most of which are now well and truly members of the "old timers club" hi hi.

Getting to the point field day is approaching and I was wishing to re create the 4 wire dipoles that I used and heard the following year when that club was the successful winner of the contest.
The OM that owned those antennae is now a silent key... and I have had little success searching through antenna handbooks etc.
my team will probably consist of 4-5 operators so we will need all the help we can get...
does anyone have any plans?

ZL1WOT
73s

2100. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 11:25:20 UTC
From: B <b@bnobody.com>
Message-ID: <ASOZ9.52521$GX4.2037847@news2.east.cox.net>
Source record: 125939
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna
Body handling: HTML body converted to readable text

Furthermore, I would eliminate that antenna from the equation. Can't you just use a regular stock antenna that came with the scanner to get a lock on those 400 mhz signals? Try that and find out what frequencies they're operating at first before trying to figure out problems with your antenna.

"B" wrote in message
news:iiLZ9.50345$GX4.2005365@news2.east.cox.net...
> My suggestion would be to go to the actual antenna and verify there are
> ACTUAL 400 mhz transmissions coming from it. If you do hear it then
> continue trotting with your horse down the road until you no longer hear
it
> anymore. Bring along a GPS receiver and deduce from that information
> (altitude, distance, etc) where you are losing the signal at.
>
> You're done..
>
>
>
> "Andy KC2SSB" wrote in message
> news:7cme3voa19bb5gtnbkfre7q532g35ikg7u@4ax.com...
> > On Wed, 29 Jan 2003 02:44:31 GMT, Dave Shrader
> > wrote:
> >
> > >At 15 feet high your radio horizon is about 5 miles. If you are 25
miles
> > >from the trunking antenna then it is necessary for the trunking antenna
> > >to be about 200 feet high.
> > >
> > >If you raise your antenna to 25 feet then your horizon increases to
> > >about 7 miles and the other antenna would need to be about 165 feet.
> > >
> > >Sounds like it's not going to happen. You won't be able to hear the
> > >trunk.
> > >
> > >Deacon Dave, W1MCE
> >
> > So then trunking systems vary that much from conventional systems? As
> > I stated, I can hear transmissions in the 140's and 160's coming from
> > the same place, but none of the trunking. How does the type of antenna
> > work into this equation? How do you come up with your numbers?
> >
> > I can hear the state police on their 800 mhz trunked system no problem
> > with the back of the set antenna and I am sure their antennas are much

> > farther away than 25 miles. I can hear a 400 mhz conventional system
> > that is about 30 miles north of me with the back of the set antenna...
> > =-
> > 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> > Beachwood, NJ USA Grid FM29vw
> > http://vhfradiobuff.tripod.com
>
>

2101. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 11:59:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E37C20D.40409@ieee.org>
Source record: 125940

Richard Clark wrote:
> I suppose this means we all hold off yet again on our long standing
> assessment of your outrageous violations of math and superposition and
> celebrate this minor affair first?

I think you have me mixed up with the author of the QEX article,
Richard. I am not the one who advocates "combining power in-phase".
Or perhaps you have fallen victim to the many straw men that have
been set up as diversions. Or perhaps you believe that any energy
other than net energy need not be conserved. It's hard to tell
what you believe since you would rather take ad hominem pot shots
than discuss any technical details.

Do you agree with the author of the QEX article that each wave
component in a transmission line with an associated V and I
also has an associated energy of V*I = V^2/Z0 = I^2*Z0?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2102. Re: 1:6 balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 12:04:28 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E37C34C.5070308@ieee.org>
Source record: 125941

Richard Clark wrote:
> Put two, back to back and drive a 50 Ohm dummy load.

That won't verify that they are functioning as 1:6 baluns.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2103. W9INN Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 13:24:11 UTC
From: Stig Frederiksen <oz5u@cool.dk>
Message-ID: <b18klp$1jra$1@news.cybercity.dk>
Source record: 125942

Hello

Anyone knows wether W9INN still is in the antenna market, is yes, does he have a web page that works ??

73's

Stig Frederiksen
OZ5U

2104. Re: 40 m dipole on 15 m? Does it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 13:33:36 UTC
From: k9sqg@aol.com
Message-ID: <20030129083336.10074.00000031@mb-fk.aol.com>
Source record: 125943

Feeding the antenna with open wire line has the lowest loss, especially at high swr harmonic operation...

2105. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 13:54:41 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b18mf0$6it$1@sparta.btinternet.com>
Source record: 125944

Coax is lossier and makes
> mis-matched lines less tolerable.

==========

Coax is lossier (dB per 100 feet) only because its construction makes less efficient use of a given amount (weight per 100 feet) of copper.

Coax can have a loss less than any given open wire line simply by increasing its diameter regardless of SWR .

Reg, G4FGQ

2106. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 14:47:50 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b18pil$3nb$1@venus.btinternet.com>
Source record: 125945

> Guys
> All brilliant postings

==========

Art, on what standard do you base your judgement ? ;o)

2107. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 14:48:31 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E37E957.DFC3F295@attbi.com>
Source record: 125946
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

I'm only replying regarding the antenna heights required based on the
info you provided. If the trunking system is different, i.e. closer to
antennas or antenna heights vary, then the answer is different.

Radio Horizon miles [VHF/UHF] = 1.4 * SQRT[antenna height in feet].

Deacon Dave

Andy KC2SSB wrote:
>
> On Wed, 29 Jan 2003 02:44:31 GMT, Dave Shrader
> <david.shrader@attbi.com> wrote:
>
> >At 15 feet high your radio horizon is about 5 miles. If you are 25 miles
> >from the trunking antenna then it is necessary for the trunking antenna
> >to be about 200 feet high.
> >
> >If you raise your antenna to 25 feet then your horizon increases to
> >about 7 miles and the other antenna would need to be about 165 feet.
> >
> >Sounds like it's not going to happen. You won't be able to hear the
> >trunk.
> >
> >Deacon Dave, W1MCE
>
> So then trunking systems vary that much from conventional systems? As
> I stated, I can hear transmissions in the 140's and 160's coming from
> the same place, but none of the trunking. How does the type of antenna
> work into this equation? How do you come up with your numbers?
>
> I can hear the state police on their 800 mhz trunked system no problem
> with the back of the set antenna and I am sure their antennas are much
> farther away than 25 miles. I can hear a 400 mhz conventional system
> that is about 30 miles north of me with the back of the set antenna...
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

2108. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 14:50:47 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <egqf3vgvta8cfcifjvjua8d0rlt8rb4v1h@4ax.com>
Source record: 125947
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna
Body handling: HTML body converted to readable text

On Wed, 29 Jan 2003 07:21:50 GMT, "B" wrote:

>My suggestion would be to go to the actual antenna and verify there are
>ACTUAL 400 mhz transmissions coming from it. If you do hear it then
>continue trotting with your horse down the road until you no longer hear it
>anymore. Bring along a GPS receiver and deduce from that information
>(altitude, distance, etc) where you are losing the signal at.

I know for a fact that the system is in use as reported by other users
that are closer to it. I'm not going to go out and buy a GPS receiver
just to try to receive this signal...
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2109. Re: W9INN Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 14:53:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E37EAE6.6080205@ieee.org>
Source record: 125948

Stig Frederiksen wrote:
> Anyone knows wether W9INN still is in the antenna market, is yes, does he
> have a web page that works ??

He has an ad in the latest QST but no web page is given.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2110. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 14:57:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E37EBF5.10106@ieee.org>
Source record: 125950

Reg Edwards wrote:
> Coax can have a loss less than any given open wire line simply by increasing
> its diameter regardless of SWR .

What diameter of coax can I get for 12 cents a foot,
the cost of ladder-line? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2111. 160m mobile with Valor/Pro-am PHF-160B

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 14:59:03 UTC
From: n1kk@netzero.net
Message-ID: <d7adbb57.0301290659.4278f97d@posting.google.com>
Source record: 125949

Would like to hear from some recent users of this
mobile antenna. I would also like to get the
size of the antenna.

I am thinking of mounting this on top of my
80-10m Screwdriver antenna. I might be
able to use the lower adjustable coil to
tune the 160m band. The added height
might improve the performance too.

Ken
N1KK

2112. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 15:00:31 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <j0SZ9.9696$rq4.770885@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125951

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E37C20D.40409@ieee.org...

>
> I think you have me mixed up with the author of the QEX article,
> Richard. I am not the one who advocates "combining power in-phase".
>

In using superposition theory, we consider the voltage, current and power of each wave as if it *existed independently* in the line and then combine or add the individual voltages and currents to determine the total voltage and current, from which the total power is determined.

In terms of superposition theory, do you agree or disagree at this point? (this requires a yes or no answer)

You have already agreed that my use of superposition theory in adding the individual forward voltages and currents associated with each forward wave component to determine the resulting total forward voltage and current is correct. You have already agreed that the total forward power can be correctly determined from the total forward voltage and current. From that perspective, there is nothing wrong with the voltage, current and power superposition analysis in my QEX article.

In terms of using superposition theory, do you agree or disagree at this point? (this requires a yes or no answer)

As for "combining power in-phase", one point of the QEX article was to demonstrate that to determine the total forward power in the line you cannot simply add (algebraically) the forward powers associated with the individual voltages and currents. Specifically, in the QEX article the two forward powers associated with the individual voltages and currents are 92.831 W and 0.555 W. If we algebraically add these two forward powers we end up with a total forward power of 93.386 W (92.831 W + 0.555 W). However, correctly using the superposition of the individual voltages and currents, we determined that the correct forward power in the line is 107.736 W NOT 93.386 W. So, we see that the superposition (in terms of direct algebraic addition) of individual forward powers simply does not work.

In terms of using superposition theory, do you agree or disagree at this point? (this requires a yes or no answer)

Now for "combining power in phase". In the superposition of individual forward waves, we see that algebraically adding the individual powers simply does not work. But what if we had one additional piece of information? What if we knew that the voltages associated with the individual waves were exactly in-phase or more generally, we knew the phase difference (T) between

the two individual voltages? Knowing that the total forward voltage is equal to the vector sum of the individual voltages and that the individual power is equal to |V|^2/Zo, and that Ptotal = |V1 + V2|^2/Zo we can derive (using vector algebra) an expression for the "superposition" of individual forward powers to determine the total forward power as follows

Ptotal = P1 + P2 + 2 Sqrt(P1) Sqrt(P2) cos(T)

Details of the vector derivation of this formula are in the QEX article. A similar derivation of this formula as it applies to superposition theory is also in many basic electric circuit analysis texts (I'd be happy to provide a reference).

So, if P1 = 92.831 W and P2 = 0.555 W and T = 0, Ptotal can be determined correctly as 107.736 W. This is the formula associated with the "combining power in-phase" statement that Cecil makes on a somewhat regular basis. It is derived entirely based on the principles of vector voltage and current superposition. It is also the basis for Cecil's "Dr. Best says 75 W + 8.333 = 133.33 W" statement that you see on regular basis. If this statement is understood in terms of the above discussion on the superposition of voltage and current, its meaning would make sense.

That's all I have to say and will ever say again on the issue of superposition. In terms of the superposition of individual voltages and currents there is nothing incorrect in the QEX article.

Cecil's perspective on superposition theory is that it does not correctly relate the power in the total wave to the power in the individual waves. [note that every engineering and circuit analysis text covering the subject says its not supposed to because the relationship between power and voltage is not linear]. From Cecil's perspective, the fact that 92.831 W + 0.555 W does not algebraically add up to the correct answer of 107.736 W indicates that superposition does not work correctly in terms of the conservation of energy. This is the entire basis for Cecil's disagreement with my QEX article.

From my perspective its a matter of interpreting the steady state conditions. We disagree on the interpretation of the relationship between the individual powers and the resulting total power. I don't think the individual powers have the same significance as Cecil does. Once the waves combine the individual voltage, current and power values really have no meaning. The individual voltage and current values are valuable as part of the superposition analysis to help understand the transient wave reflection process.

> Or perhaps you have fallen victim to the many straw men that have
> been set up as diversions. Or perhaps you believe that any energy
> other than net energy need not be conserved. It's hard to tell
> what you believe since you would rather take ad hominem pot shots
> than discuss any technical details.
>
> Do you agree with the author of the QEX article that each wave

> component in a transmission line with an associated V and I
> also has an associated energy of V*I = V^2/Z0 = I^2*Z0?
> --

If the forward V and I of a wave is 100 V and 2 A, respectively, and Zo is 50 ohms, do you believe that the forward power associated with that wave (when considered independently) is anything other than 200 W? What exactly is wrong with P = V*I = |V|^2/Zo = |I|^2*Zo.

Regards and signing off,

Steve VE9SRB

2113. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 15:10:26 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E37EF36.A5B58D0@att.net>
Source record: 125952

Cecil,

Sorry, I was not clear enough through my use of shortcut notation.

It is YOUR analysis of the 75 plus 8.33 item that is incorrect. Steve's is correct, and it agrees with Melles-Griot and virtually all of the civilized world.

You are correct that there are too many issues floating around. I was responding directly to your repeated comment about the 75 plus 8.33 item.

This involves a basic property of linear superposition. It is unrelated to conjugate matches, power reversals, or any of the rest of the issues that seem to be floating around.

Yes, I understand that this superposition is used in a problem analysis that is controversial. That does not make the basic properties of superposition incorrect. My only reason for continuing to hammer on this superposition principle is that it is impossible to proceed to the real problem if the fundamental math is incorrect.

Solve the problem by analyzing FIELDS first. Then and only then should you worry about checking if the energy balance is OK. Unless a calculation error has been made the final energy balance will automatically work out correctly.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Cecil,
> >
> > Your 75 plus 8.33 statement is in absolute
> > direct conflict with the Melles-Griot quote.
>
> Of course it is, Gene, that's the entire point. The 75 plus 8.33
> is NOT MY STATEMENT! It is the statement by the author of the QEX
> article. What the Melles-Griot quote allows us to do is introduce
> the energy in the canceled waves as energy incident upon the load,
> something the author of the QEX article has been denying for a year
> and a half. Thus the correct equation for a matched system is:
>
> 75 joules/sec + 8.33 joules/sec + 50 joules/sec = 133.33 joules/sec

>
> The author of the QEX article left out the 50 joules/sec. That was
> my original objection from almost two years ago. Notice how the
> energy equation now balances perfectly.
>
> > I won't waste any more time on this item. You either accept the
> > long-standing conventions or you don't.
>
> One very, very long standing convention was that the earth was the
> center of the universe. Do you still accept that convention? What
> has happened is that a convention has allowed a conceptual error
> to creep in. The convention is trying to drive reality instead of
> vise versa. The tail is trying to wag the dog.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2114. Re: W9INN Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 15:12:06 UTC
From: Stahr <w6nycthetrash@earthlink.net>
Message-ID: <abSZ9.2709$Wu1.200076@newsread1.prod.itd.earthlink.net>
Source record: 125953

This one is not "official", but may give you some info...

http://www.qsl.net/n0nv/w9inn.html

Best 73 de:
Dennis Stahr - W6NYC

http://www.qsl.net/w6nyc/
Take out "the trash" when return emailing

"Stig Frederiksen" <oz5u@cool.dk> wrote in message
news:b18klp$1jra$1@news.cybercity.dk...
> Hello
>
> Anyone knows wether W9INN still is in the antenna market, is yes, does he
> have a web page that works ??
>
> 73's
>
> Stig Frederiksen
> OZ5U
>
>

2115. Re: Folded Dipoles for HF plans requested

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 15:13:36 UTC
From: Stahr <w6nycthetrash@earthlink.net>
Message-ID: <AcSZ9.2713$Wu1.200067@newsread1.prod.itd.earthlink.net>
Source record: 125954

Hope this is of some help to you....

http://www.hard-core-dx.com/nordicdx/antenna/wire/t2fd.html

Best 73 de:
Dennis Stahr - W6NYC

http://www.qsl.net/w6nyc/
Take out "the trash" when return emailing

"James" <deadman@quicksilver.net.nz> wrote in message
news:1043830100.34037@drone5.qsi.net.nz...
> About ten years ago I had the pleasure of attending my first ever national
> field day (here in ZL land). I fantastic team effort and a wonderful event
> on 40 & 80mts. The thing is the antennae that were used where 3 element
> dipoles. I am unsure if they were terminated or if the elements were in
> "freespace" so to speak.
>
> 10 years on I am president of a small amateur club with around 30 active
> members, most of which are now well and truly members of the "old timers
> club" hi hi.
>
> Getting to the point field day is approaching and I was wishing to re
create
> the 4 wire dipoles that I used and heard the following year when that club
> was the successful winner of the contest.
> The OM that owned those antennae is now a silent key... and I have had
> little success searching through antenna handbooks etc.
> my team will probably consist of 4-5 operators so we will need all the
help
> we can get...
> does anyone have any plans?
>
>
> ZL1WOT
> 73s
>
>
>

2116. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 15:24:13 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E37F272.22495E1A@att.net>
Source record: 125955

Cecil,

I just searched the Melles-Griot material, and I can find no reference at all to "re-reflected". Are you making this stuff up to suit the need for the moment?

How about, "Had I not believed it, I would not have seen it with my own eyes."

By the way, another direct quote from a different M-G page:

"As with any multilayer coating, performance and design are calculated in terms of relative amplitudes and phases which are then summed to give the overall (net) amplitude of the reflected beam. The overall amplitude is then squared to give the intensity."

This simply is not debatable. One MUST find the net fields first, then the power.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Jim,
> > Your statement is true, but it is not related to the issue at hand.
> > Nobody questions conservation of energy in the total system. The issue
> > is how to perform the details of the calculation.
>
> That's not the immediate issue here at all, Gene. The issue here is whether,
> in a matched system, all the reflected energy is re-reflected. Melles-Griot
> says it is. The QEX article says it isn't. That's all we are discussing
> here at the moment. Please take it one step at a time.

2117. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 15:25:26 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0301290725.4a88358e@posting.google.com>
Source record: 125956
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

Hi Andy,
is the trunked system an analog one and working on fixed frequencies ?
If it uses the spread-spectrum technology, it appears as slight noise
on your scanner. If it uses digitized speech, it appears as QRM of
some sort.

73 de Ivan

2118. Re: Folded Dipoles for HF plans requested

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 15:33:23 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0301290733.22121898@posting.google.com>
Source record: 125957

Hi James,
consult ON4UN's book "Low-band DXing". One whole chapter is dedicated
to beams (Yagis) for 40 and 80 m. If I remember correctly, it is
nearly impossible to build folded dipoles for these bands due to
excessive weight, but beams with straight dipoles 20 resp. 40 m long
have been already built.

73 de Ivan OK1SIP

2119. Discone icing

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 16:05:01 UTC
From: Michalkun <no.spam@nospam.com>
Message-ID: <Xns931267B6EF57Emichalkunyahoocom@128.233.3.7>
Source record: 125958

My dicone got iced. Will it affect it's performance or do waves go easily through ice?

2120. Re: Discone icing

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 16:24:46 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E38004E.76A99C11@cwis.net>
Source record: 125959

Michalkun,
That's one of those, 'it depends', questions and
in most cases probably won't make ~much~ difference.
'Doc

2121. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 16:26:38 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <2hTZ9.123884$Mb.5457267@twister.southeast.rr.com>
Source record: 125960

Yep, 5/8 ths is not resonant, your radio will not see it as a resistive load
. to make it ressonant the 5/8 is loaded to 3/4 which is resistive and then
the feed point is attached to the loading coil at the desired resistance,
usually the 50 ohm, point.
"'Doc" <w5lz@cwis.net> wrote in message news:3E377E80.7F72D9D7@cwis.net...
>
>
> Jimmy,
> You want to run through that 5/8 wave really being
> a 6/8 wave part again? I think I may have missed something
> there...
> 'Doc

2122. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 16:37:15 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <di0g3v0v28u1ju91kfoa7ojjrob0qs4ef5@4ax.com>
Source record: 125961
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

On 29 Jan 2003 07:25:26 -0800, remove_ok1sip@atlas.cz (OK1SIP) wrote:

>is the trunked system an analog one and working on fixed frequencies ?
>If it uses the spread-spectrum technology, it appears as slight noise
>on your scanner. If it uses digitized speech, it appears as QRM of
>some sort.

it's an analog system on about 15 frequencies or so. The scanner is set up to properly receive the system. I currently monitor another more local 500 mhz trunked system.

Why is it that trunked systems apparently have shorter range than standard systems? The other transmissions that I've heard from the same place are repeaters in the 140 and 160 mhz ranges and they come in strong. Why wouldn't a trunked system act the same way? I understand that 400 mhz has shorter range, but I can hear a 400 mhz standard system (medic dispatch frequencies in the next county up) that is located about 30 miles north of me with the antenna on the back of the scanner.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2123. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 16:40:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3803EB.5030001@ieee.org>
Source record: 125962

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> In using superposition theory, we consider the voltage, current and power of
> each wave as if it *existed independently* in the line and then combine or
> add the individual voltages and currents to determine the total voltage and
> current, from which the total power is determined.
>
> In terms of superposition theory, do you agree or disagree at this point?
> (this requires a yes or no answer)

I would agree with your statement and add a caveat. If the total energy
turns out to be more than the sum of the energy components existing independently
in the two waves being superposed, then additional energy is being supplied
from another source which is usually constructive interference. That you may
be ignorant of the source unknown to you is of no consequence. Summing two
and only two waves to obtain a total energy greater than the energy components
of the two waves is a violation of the conservation of energy principle.
If you could truly do that, then you could get 400 watts out of two 100W
transmitters and you haven't demonstrated that capability.

> You have already agreed that my use of superposition theory in adding the
> individual forward voltages and currents associated with each forward wave
> component to determine the resulting total forward voltage and current is
> correct. You have already agreed that the total forward power can be
> correctly determined from the total forward voltage and current. From that
> perspective, there is nothing wrong with the voltage, current and power
> superposition analysis in my QEX article.

Of course there is, Steve. You simply cannot obtain more energy out of two
and only two waves than exists in the two and only two waves. You have left
out the energy in the "rearward-traveling waves 1 and 2" which has been
proven by the Melles-Griot web page to be re-reflected energy. That's what
I have been saying all along. For some reason known only to yourself, you
left out part of the re-reflected energy in your energy equation. What did
you have to gain from doing that? Now that you are aware of your mistake,
why don't you admit it?

> In terms of using superposition theory, do you agree or disagree at this
> point? (this requires a yes or no answer)

Have you stopped beating your wife yet? :-)

> As for "combining power in-phase", one point of the QEX article was to
> demonstrate that to determine the total forward power in the line you cannot
> simply add (algebraically) the forward powers associated with the individual
> voltages and currents.

Of course you can, Steve, you have to. There's that pesky conservation of energy principle, remember?

> Specifically, in the QEX article the two forward
> powers associated with the individual voltages and currents are 92.831 W and
> 0.555 W. If we algebraically add these two forward powers we end up with a
> total forward power of 93.386 W (92.831 W + 0.555 W).

If you add all the power including the 14.35 W of constructive interference from the wave cancellation on the other side of the impedance discontinuity, you will obtain the correct 107.736 W of forward power. You have proved that you cannot get the correct answer by adding the energy components in two and only two waves. You need to add the power from all four waves predicted by the superposition principle. Why do you choose to ignore the other two waves? Where does the energy in your canceled "rearward-traveling waves 1 and 2 go? Why have you repeatedly refused to answer that question?

If you will graph the four voltages involved, the destructive and constructive interference will be so obvious it will jump off the paper at you. The phase angle between V3 and V4 is 180 degrees minus the phase angle between V1 and V2.

> However, correctly
> using the superposition of the individual voltages and currents, we
> determined that the correct forward power in the line is 107.736 W NOT
> 93.386 W. So, we see that the superposition (in terms of direct algebraic
> addition) of individual forward powers simply does not work.

All we see is that you left the constructive interference energy out of your energy equation. If you haven't succeeded in demonstrating 400 W delivered by the superposition of two 100 W transmitters, you haven't proven your case.

> In terms of using superposition theory, do you agree or disagree at this
> point? (this requires a yes or no answer)

I have told you what is wrong with your analysis. You are leaving out an important energy component. The Melles-Griot web page proves that component does indeed exist and that you were wrong about it not existing and not being re-reflected power. What is your purpose in continuing to ignore that energy component? Do you still maintain there's nothing wrong with your QEX article?

> Now for "combining power in phase". In the superposition of individual
> forward waves, we see that algebraically adding the individual powers simply
> does not work.

Adding *ALL* the energy components involved does work. You just haven't added them all. Now that you know about all of them, your energy equation balances perfectly.

> But what if we had one additional piece of information?
> What if we knew that the voltages associated with the individual waves were
> exactly in-phase or more generally, we knew the phase difference (T) between
> the two individual voltages? Knowing that the total forward voltage is

> equal to the vector sum of the individual voltages and that the individual
> power is equal to |V|^2/Zo, and that Ptotal = |V1 + V2|^2/Zo we can derive
> (using vector algebra) an expression for the "superposition" of individual
> forward powers to determine the total forward power as follows
>
> Ptotal = P1 + P2 + 2 Sqrt(P1) Sqrt(P2) cos(T)

This is a mathematically true statement, Steve, but it is misleading. Your
2 Sqrt(P1) Sqrt(P2) cos(T) is the re-reflected power referenced on the
Melles-Griot web page, i.e. the energy delivered by the total (or partial)
cancellation of your "rearward-traveling waves 1 and 2" that you choose
to completely ignore.

> Details of the vector derivation of this formula are in the QEX article. A
> similar derivation of this formula as it applies to superposition theory is
> also in many basic electric circuit analysis texts (I'd be happy to provide
> a reference).

There's nothing wrong with your math. It is the metaphysical jump to conclusions
that you make because you left out an important energy component. You ignore a
major energy component and therefore it doesn't exist anymore? Hint: it continues
to exist in reality, just not in your head.

> So, if P1 = 92.831 W and P2 = 0.555 W and T = 0, Ptotal can be determined
> correctly as 107.736 W.

Let's look at the entire picture at the impedance discontinuity

Source power Pfwd1 = 100 W
Your P1 = Pfwd1(1-Rho^2) = 92.831 W = V1*I1
Your P2 = Pref2(Rho^2) = 0.555 W = V2*I2

The other two terms predicted by the superposition principle, that you leave
out of your energy equation, are your canceled "rearward-traveling waves 1 and 2".
Why do you ignore them and leave them out? You haven't named them so I will name
them P3 and P4, the other two terms predicted by the superposition principle.

P3 = Pfwd1(Rho^2) = 7.17W = V3*I3
P4 = Pref2(1-Rho^2) = 7.17 W = V4*I4

V3 and V4 are 180 degrees out of phase and cancel.
I3 and I4 are 180 degrees out of phase and cancel.
What happens to P3 and P4? According to the Melles-Griot web page,
that energy is re-reflected. P3+P4 = 7.17W + 7.17W = 14.34 W of
re-reflected energy that you have not accounted for. Add that re-
reflected energy into your energy equation and what do we get?

P1 + P2 + P3 + P4 = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W
P1 + P2 + P3 + P4 = P1+P2+ 2 Sqrt(P1) Sqrt(P2) = Ptotal = 107.736W

So your term 2 Sqrt(P1) Sqrt(P2) is really P3 + P4 in disguise
since P3 + P4 = 2 Sqrt(P1) Sqrt(P2). Why did you need to disguise
those energy components? Why didn't you just say that, in a matched
system, Ptotal equals the sum of the components predicted by the

superposition principle. You do believe that, don't you?

Your voltage and current superposition continues to be correct and
now your corrected energy equation balances. What could be better?

> In terms of the superposition of individual voltages and
> currents there is nothing incorrect in the QEX article.

I agree and have always agreed with that statement, Steve. What you are
begging us to do is because you are correct about 98% of what you wrote,
we should round that off to 100% correct and give you a pass on the 2%
of your article that is wrong. It is your treatment of energy that is
wrong. It is your assertions that contradict the Melles-Griot web page
that are wrong.

> Cecil's perspective on superposition theory is that it does not correctly
> relate the power in the total wave to the power in the individual waves.

That's a false statement, just another one of your straw men. You are the
one making the mistake. Don't try to blame it on the superposition theory.
I have never seen any superposition theory that says that 75W + 8.33W = 133.33W.

> From Cecil's perspective, the fact that 92.831 W + 0.555 W
> does not algebraically add up to the correct answer of 107.736 W indicates
> that superposition does not work correctly in terms of the conservation of
> energy.

That is a false statement. The Melles-Griot explains it all to you, Steve.
Why don't you take time to read that web page and find out where the exact
magnitude of your extra needed energy comes from? Hint: it comes from the
re-reflected energy that you chose to ignore in your QEX article.

> Once the waves
> combine the individual voltage, current and power values really have no
> meaning.

Translation: Since I get the correct answer, my mistakes don't matter.
Lots of other people also get the correct answer, Steve, including me.
Why do you try to hold me to a higher standard than you hold yourself.

> If the forward V and I of a wave is 100 V and 2 A, respectively, and Zo is
> 50 ohms, do you believe that the forward power associated with that wave
> (when considered independently) is anything other than 200 W? What exactly
> is wrong with P = V*I = |V|^2/Zo = |I|^2*Zo.

What is wrong with applying your own equations to your own "rearward-
traveling waves 1 and 2"? All I have done is follow your model to its
final conclusion. Why don't you like that final conclusion? After all,
it's your model, not mine.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!

------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2124. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 16:48:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3805DE.3070709@ieee.org>
Source record: 125963

Gene Fuller wrote:
> It is YOUR analysis of the 75 plus 8.33 item that is incorrect. Steve's
> is correct, and it agrees with Melles-Griot and virtually all of the
> civilized world.

You obviously have not read the QEX article. It says: "A total
re-reflection of power at the match point is not necessary for the
impedance match to occur." Gene, that's a direct contradiction of
the material on the Melles-Griot web page and virtually all of the
civilized world.

> This involves a basic property of linear superposition. It is unrelated
> to conjugate matches, power reversals, or any of the rest of the issues
> that seem to be floating around.

The QEX article integrates the wave reflection model with the superposition
model. Wave reversals are indeed related to superposition by the author.

> Solve the problem by analyzing FIELDS first.

I'm sorry, Gene, but I must use the same model that Dr. Best did. You
guys simply cannot make assertions based on a model and then assert
that the model is wrong in order to defend your assertions based on
that very model. Talk about having your cake and eating it too.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2125. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 16:51:24 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <gETZ9.123891$Mb.5464202@twister.southeast.rr.com>
Source record: 125964

to add a little bit:

Assume you take a random length radiator and add lumped inductance to the feedpoint end of it to make it resonant(purely resistive at a desired frequency). This is known as "loading an antenna".What is the difference if this random length radiator just happens to be 5/8 wl long at the desired freq and you add inductance to make it resonant. IS this not also "loading the antenna", making it electrically longer.

"Jimmy" <Gfender@carolina.rr.com> wrote in message news:2hTZ9.123884$Mb.5457267@twister.southeast.rr.com...
> Yep, 5/8 ths is not resonant, your radio will not see it as a resistive load
> . to make it ressonant the 5/8 is loaded to 3/4 which is resistive and then
> the feed point is attached to the loading coil at the desired resistance,
> usually the 50 ohm, point.
> "'Doc" <w5lz@cwis.net> wrote in message news:3E377E80.7F72D9D7@cwis.net...
> >
> >
> > Jimmy,
> > You want to run through that 5/8 wave really being
> > a 6/8 wave part again? I think I may have missed something
> > there...
> > 'Doc
>
>

2126. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 16:58:51 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <812g3v86mt1ghdg65cemo79l3je8hhorh8@4ax.com>
Source record: 125965

On Wed, 29 Jan 2003 05:59:09 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> I suppose this means we all hold off yet again on our long standing
>> assessment of your outrageous violations of math and superposition and
>> celebrate this minor affair first?
>
>It's hard to tell

;-)

2127. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 17:00:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E380895.1080706@ieee.org>
Source record: 125966

Gene Fuller wrote:
> Cecil,
>
> I just searched the Melles-Griot material, and I can find no reference
> at all to "re-reflected". Are you making this stuff up to suit the need
> for the moment?

All energy flowing toward the load in a single source system is non-reflected energy or re-reflected energy. All energy flowing toward the source in a single source system is reflected energy. That's the language we use. Instead of nit-picking my language, why don't you find something technically wrong with my ideas?

> "As with any multilayer coating, performance and design are calculated
> in terms of relative amplitudes and phases which are then summed to give
> the overall (net) amplitude of the reflected beam. The overall amplitude
> is then squared to give the intensity."

Do you know anybody who disagrees? If not, this looks like a straw man.

> This simply is not debatable. One MUST find the net fields first, then
> the power.

That's exactly what I do, Gene. After all of that, the energy must balance. No energy is allowed to be lost in the canceled "rearward-traveling waves 1 and 2". That's what the Melles-Griot web page says. The QEX article implies that the energy in the canceled "rearward-traveling waves 1 and 2" disappears from the system. I have asked the author where it goes but he has refused to answer. Why do you think he refuses to answer, Gene? Do you know where the energy in the canceled "rearward-traveling waves 1 and 2" goes? If so, do you also refuse to answer? The Melles-Griot web page says that energy reverses direction and becomes incident upon the load.

If the author of the QEX article agrees with the Melles-Griot web page, he will assert that the energy in his canceled "rearward-traveling waves 1 and 2" reverses direction and becomes incident upon the load. That will negate about half a dozen of his assertions in his QEX article.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2128. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 17:21:00 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vh2g3vse9h664bo3rkpin384tje54k62oo@4ax.com>
Source record: 125967

On Wed, 29 Jan 2003 15:10:26 GMT, Gene Fuller <W4SZzzzzz@att.net>
wrote:

> My only reason for continuing to hammer on this
>superposition principle

Hi Gene,

Its mostly amusing, but pointless. The citation offered agrees with
long established concepts, those concepts have been gone over and
agreed to by Cecil as evidenced by his choice of authority.

Cecil, I still wait patiently to find out what it is that I said that
so convinced you that I have made supporting comments.

Well, it is true, I certainly pointed you in the direction of handling
this issue with the senior science of Optics. You did seek out a
competent authority in Melles-Griot. You did offer their treatment of
the standard math that completely resolves the issue. And now we can
all go back to a normal life - unless of course, you find some dispute
with the notion that Powers do not add through Superposition and
reject this same authority and its science which you held as the
embodiment of your argument.

But you haven't offered that, and I am content to observe in your
citation
>>*** total amplitude
>>is given by the vector resultant, and intensity is given by the square
>>of amplitude. ***
that you now bow to the obvious logic and declaim your absurd comments
that have been filling these threads.

From this we can see that, Yes you do now accept that under the
boundary conditions specified by Steve that x + y does in fact equal
z.

73's
Richard Clark, KB7QHC

2129. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 17:33:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <j44g3vk0728eneobg0h7f7gs455fkoioqa@4ax.com>
Source record: 125968

On Wed, 29 Jan 2003 10:48:30 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>You
>guys simply cannot make assertions based on a model and then assert
>that the model is wrong in order to defend your assertions based on
>that very model. Talk about having your cake and eating it too.

Hi Cecil,

You are confused, I see. We are not disagreeing with your source; we
fully agree with your authority Melles-Griot's dissertation that
reveals the longstanding observation we have all made to you:
>>*** total amplitude is given by the vector resultant,
>>and intensity is given by the square of amplitude. ***

Thank you for following my Optics lead to this conclusion.

73's
Richard Clark, KB7QHC

2130. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 17:37:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9d4g3v4af7df51hm5oj28b9uuo92ti8nu8@4ax.com>
Source record: 125969

On Wed, 29 Jan 2003 11:00:05 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>
>If the author of the QEX article agrees with the Melles-Griot web page

Hi Cecil,

I am sure he has no problem with your authority's application and
usage of
>>*** total amplitude is given by the vector resultant,
>>and intensity is given by the square of amplitude. ***
and that the two of you now have a common reference to employ in any
further discussion.

Thanx for this unambiguous confirmation.

73's
Richard Clark, KB7QHC

2131. Re: 40 m dipole on 15 m? Does it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 17:47:55 UTC
From: thompson@mindspring.com
Message-ID: <b193q6$ca9$1@slb2.atl.mindspring.net>
Source record: 125970

I had a three stack of a KLM 5 el 20, a homebrew 4 el 10, and a 2 el Mosley 40 in the late 70's.
I wanted to work 15 too and found the Mosley 40 (2.2 SWR) worked well through a tuner. There was an excellent article by W9LT in the January 1976 CQ where he tested a tri-band element with various elements in front and back and got empirical results. One of the facts was that a 40 meter reflector with a 15 meter driven element (dipole) in front acted just like a 15 meter 2 elment beam. I had decided to add a 15 meter driven dipole to the 40 meter beam and detune the 40 meter driven element to a 15 meter director with a stub that I would switch out on 40 with a relay. This worked well. With the 40 meter beam at 80 feet I had great luck with Europe and cross country USA contacts.

Later when I replaced the mono banders with a KLM KT34XA I found that my new Cushcraft 40 meter beam works very well on 15 (this is why you need plenty of separation between a tri-bander or 15 monobander and a 40 meter beam. I have run tests with a station in Hong Kong which is a difficult path from Atlanta. I switched between the KT34XA and the 2 el 40 and found almost NO difference in strength. Now I try both antennas and the 12 feet between them can make a drastic difference at times. Often the 40 meter beam is MUCH louder into say EX8 or UK9 and even VK long path. As N4KG says the more antennas you have the better and for an antenna to do dual duty (triple as I use the 40 beam on 17 too)..all the better. Maybe if I phase the KT34XA and 2 el Cushcraft I will eliminate the interaction or use it to my advantage.

Mr. Sommer, DJ2UT the builder of the big Sommer antennas says that since the 40 meter beam is 1 and 1/2 wavelength on 15 that it has a slight edge in forward gain over a 2 el 15 meter with say a reflector and dipole driven element. My tests seem to bear this out.

73 Dave K4JRB

2132. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 18:23:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E381C2A.1080900@ieee.org>
Source record: 125971

Richard Clark wrote:
> The citation offered agrees with
> long established concepts, those concepts have been gone over and
> agreed to by Cecil as evidenced by his choice of authority.
>
> Cecil, I still wait patiently to find out what it is that I said that
> so convinced you that I have made supporting comments.

You just did, Richard, one sentence above. Thanks for agreeing with me that the canceled interference energy in the "rearward-traveling waves 1 and 2" in the QEX article reverses direction and becomes incident upon the load. That's exactly the energy the author lacks in his previously false energy equation which he has been denying exists at all.

> Well, it is true, I certainly pointed you in the direction of handling
> this issue with the senior science of Optics. You did seek out a
> competent authority in Melles-Griot. You did offer their treatment of
> the standard math that completely resolves the issue. And now we can
> all go back to a normal life - unless of course, you find some dispute
> with the notion that Powers do not add through Superposition and
> reject this same authority and its science which you held as the
> embodiment of your argument.

Richard, the Melles-Griot web page proves that the QEX article contains errors. All your diversions will not change that fact.

> that you now bow to the obvious logic and declaim your absurd comments
> that have been filling these threads.

Of course, you cannot quote even one of those "absurd comments". All you can do is allude to something that is not there. Old trick, doesn't work.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2133. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 18:29:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E381D87.7010607@ieee.org>
Source record: 125972

Richard Clark wrote:
> You are confused, I see. We are not disagreeing with your source; we
> fully agree with your authority Melles-Griot's dissertation that
> reveals the longstanding observation we have all made to you:

If you "fully agree" with my source, you agree that the QEX article
contains errors. The QEX article and Melles-Griot's web page cannot
both be correct.

>>>*** total amplitude is given by the vector resultant,
>>>and intensity is given by the square of amplitude. ***
>
> Thank you for following my Optics lead to this conclusion.

And thank you for agreeing with what I have been saying for months.
Now, when are you going to condemn the errors in the QEX article?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2134. Re: Tips on soldering 13 pin DIN???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 18:32:12 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <M6VZ9.3$hG6.615@twister.southeast.rr.com>
Source record: 125973
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.antenna

I couldnt find a connector for mine so I just pushed the wire into the socket. It has been one of those things I have been trying to get around to doing better but will probably will evolve into a permanent temporary fix.

"Ed Bailen" <n5kzw@arrl.net> wrote in message news:3e36b7f0.6140309@news.ev1.net...
> The best advice I got (after the fact, unfortunately) was to get a
> 9-pin subminiature-D female connector kit from RadioShack. You want
> the ones with loose pins. Make your solder connection to the solder
> cups on the female contacts and then slip them oveer the pins on the
> back of the DIN connector. You could also slip a piece of heat shrink
> over the contact before pushing on to the DIN pins.
>
> Regards,
> Ed - N5KZW
>
> On Fri, 24 Jan 2003 10:19:53 -0500, Scott <scott2rp789@netscape.net>
> wrote:
>
> >Hi - I picked up a 13 pin DIN for my Kenwood. I'm just going to use pins
> >3 and 4 to get some line level audio from the rig. I could not believe
> >my eyes when I got the 13 pin DIN - is there some trick to soldering to
> >those pins? Or am I missing something here? Thanks - Scott.
> >
>

2135. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 18:42:44 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <a68g3vck4cu84q06t1nf21mc1if7metcmm@4ax.com>
Source record: 125974

On Wed, 29 Jan 2003 12:23:38 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Of course, you cannot quote even one of those "absurd comments".

no sooner said than done.

73's
Richard Clark, KB7QHC

2136. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 18:42:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <fc8g3vk40fpf262nur1j0gs1ujlhmgb1et@4ax.com>
Source record: 125975

On Wed, 29 Jan 2003 12:29:27 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Now, when are you going to condemn the errors in the QEX article?

When do you go to press?

73's
Richard Clark, KB7QHC

2137. Re: Folded Dipoles for HF plans requested

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 18:45:15 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <%iVZ9.11$hG6.877@twister.southeast.rr.com>
Source record: 125976

A while back I saw an article where a guy built a folded dipole for 80 meters. He built it like a clothes line with pullies on each end that allowed him to move the feed point and make the antenna have nearly the same impedance on which ever band he was working. I think this would be a great antenna to have on a field day. I know I would be impressed by seeing an antenna with no traps or no apparent other means of tunning do 80 , 40 ,20, 15 and 10.

"James" <deadman@quicksilver.net.nz> wrote in message
news:1043830100.34037@drone5.qsi.net.nz...
> About ten years ago I had the pleasure of attending my first ever national
> field day (here in ZL land). I fantastic team effort and a wonderful event
> on 40 & 80mts. The thing is the antennae that were used where 3 element
> dipoles. I am unsure if they were terminated or if the elements were in
> "freespace" so to speak.
>
> 10 years on I am president of a small amateur club with around 30 active
> members, most of which are now well and truly members of the "old timers
> club" hi hi.
>
> Getting to the point field day is approaching and I was wishing to re
create
> the 4 wire dipoles that I used and heard the following year when that club
> was the successful winner of the contest.
> The OM that owned those antennae is now a silent key... and I have had
> little success searching through antenna handbooks etc.
> my team will probably consist of 4-5 operators so we will need all the
help
> we can get...
> does anyone have any plans?
>
>
> ZL1WOT
> 73s
>
>

2138. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 18:57:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E38242D.4090301@ieee.org>
Source record: 125977

Richard Clark wrote:
> On Wed, 29 Jan 2003 11:00:05 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>>If the author of the QEX article agrees with the Melles-Griot web page
>
> I am sure he has no problem with your authority's application and
> usage of
>
>>>*** total amplitude is given by the vector resultant,
>>>and intensity is given by the square of amplitude. ***
>>
> and that the two of you now have a common reference to employ in any
> further discussion.
>
> Thanx for this unambiguous confirmation.

I told you that you agreed with me, Richard. Now we get to the part of the Melles-Griot web page with which you agree and Dr. Best disagrees:

"Clearly, if the wavelength of the incident light and the thickness of the film are such that a phase difference exists between reflections of p, then REFLECTED WAVEFRONTS INTERFERE DESTRUCTIVELY, and overall reflected intensity is a minimum. IF THE TWO REFLECTIONS ARE OF EQUAL AMPLITUDE, then this amplitude (and hence INTENSITY) minimum will be ZERO."

How many times has Dr. Best said those reflected wavefronts do not interfere destructively?

In the absence of absorption or scatter, the principle of CONSERVATION OF ENERGY indicates all "LOST" REFLECTED INTENSITY will appear as ENHANCED INTENSITY IN THE TRANSMITTED BEAM. The SUM of the reflected and transmitted beam INTENSITIES is always equal to the incident INTENSITY. This important ***FACT*** has been confirmed experimentally." emphasis mine.

How many times has Dr. Best asserted that the conservation of energy principle does not require the lost reflected intensity to appear as enhanced intensity (constructive interference) in the transmitted beam?

Dr. Best has repeatedly asserted that the reflected wavefronts do NOT interfere destructively, that the canceled energy in those wavefronts does NOT appear as enhanced intensity (constructive interference) in the transmitted beam, and that the conservation of energy principle is satisfied without consideration of the lost reflected "intensity". The Melles-Griot web page contradicts virtually everything that Dr. Best has been saying on this newsgroup. Anyone following the discussion closely will attest to that fact.

When the reflected wavefronts interfere destructively, the energy in those wavefronts reverses directions and heads for the load as constructive interference, i.e. "enhanced intensity". When you can get Dr. Best to agree with the Melles-Griot web page and admit that the energy in his article's canceled "rearward-traveling waves 1 and 2" reverses directions and heads back toward the load, I will buy you the beer of your choice. (And it's hard to convince anyone that the author didn't say what he said when he said it in writing in a magazine article and on this newsgroup numerous times.)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2139. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 19:05:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3825E3.4060400@ieee.org>
Source record: 125978

Richard Clark wrote:
> On Wed, 29 Jan 2003 12:29:27 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>>Now, when are you going to condemn the errors in the QEX article?
>
> When do you go to press?

It may not be "press", Richard. QEX has turned down my article.
All I got was the standard rejection letter.

So I will publish the material on my web page and in any other
ham publication that will accept it. Based on what you have
said, I expect you will fully agree with it and object only
to my writing style.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2140. Re: Folded Dipoles for HF plans requested

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 19:07:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E38267E.3040604@ieee.org>
Source record: 125980

Jimmy wrote:
> A while back I saw an article where a guy built a folded dipole for 80
> meters. He built it like a clothes line with pullies on each end that
> allowed him to move the feed point and make the antenna have nearly the same
> impedance on which ever band he was working. I think this would be a great
> antenna to have on a field day. I know I would be impressed by seeing an
> antenna with no traps or no apparent other means of tunning do 80 , 40 ,20,
> 15 and 10.

And the common-mode currents created by the off center feeding should
contribute to some good low angle vertically polarized radiation like
The Carolina Windom.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2141. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 19:09:29 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <JFVZ9.14$hG6.3027@twister.southeast.rr.com>
Source record: 125979

The A99 in my opinion is a pretty bad antenna, A half wave end fed antenna with a very lossy impedance matching network that actually performs worse than a 1/4 wl ground plane. You would do beter with a half wave coaxial antenna which is center fed without a matching network. They can easily be home brewed for much less than the cost of the A99.

"Ron P." <rpackerii@neo.rr.com> wrote in message
news:gp8X9.30251$i73.7462989@twister.neo.rr.com...
> Ok, quick update...
>
> on Sunday, I was able to talk to K7PIG in AZ on the A99 (had to go to
> work, cut ragchewing out). Monday, talked to G0DKM in UK (I am in Ohio) on
> 28.500 USB for a bit. QSL in mail. Thanks alot folks, and as soon as our
> Hamfest is here (2 more weeks!!) I am hoping to get a tuner, paddles, and
> antenna for 160 (75/80 dipole on the way)!
>
> 73!
> Ron - kc8ulu
> "KB9TMP" <kb9tmp@juno.com> wrote in message
> news:v2mgsjaq1pbv29@corp.supernews.com...
> >
> > "Ron P." <rpackerii@neo.rr.com> wrote in message
> > news:jAjW9.25183$i73.4382336@twister.neo.rr.com...
> > > I just passed my morse code/General exam and I was wondering if my old
> > > pre-ham (for me) Antron 99 can be used for 10/12 meters? I don't have
> any
> > > extra spending money to buy a new antenna and was wondering if this
> could
> > be
> > > tuned for these bands. Thanks!
> > >
> > > Ron - kc8ulu/ag
> > >
> > >
> >
> > Ron
> > I'm using a A99 with a cheap MFJ-945E tuner
> > and I can run 10-17 meters just fine. It really out
> > does the G5RV that I use also on those frequencies.
> > But for anything outside of 10m you have to use the
> > tuner to make it work. Enjoy and congrats on the
> > upgrade!!!
> >
> > --

> > '73' From KB9TMP
> > "The secret of life is honesty and fair dealing,
> > if you can fake that, you've got it made."
> > -Groucho Marx
> >
> >
> >
>
>

2142. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 19:13:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3827BF.9020302@ieee.org>
Source record: 125981

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Of course, you cannot quote even one of those "absurd comments".
>
> no sooner said than done.

Is that all you could find, Richard? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2143. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 19:33:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3gb4lardstt9a@corp.supernews.com>
Source record: 125982

The term "electrically longer" could be used to mean two different
things, and you've got to be careful not to confuse the two.

If you top load a vertical, it looks "electrically longer" because the
top loading changes the current distribution to resemble a longer
antenna (but with some of the top portion still missing), and the
radiation resistance increases as it would if the antenna were actually
made longer. The reactance also decreases as for a longer antenna.

But base loading an antenna doesn't change either the current
distribution or the radiation resistance. Unlike top loading, it has no
effect at all on the characteristics of the antenna itself. Therefore,
it doesn't make the antenna "electrically longer" in the same sense that
top loading does. All it does is to modify the feedpoint reactance. Some
people might regard the reactance change as making the antenna appear
longer, but all it's really doing is modifying the reactance seen by the
source. Because the current distribution isn't modified, the pattern
shape will be unaltered by base loading.

Although it's slightly more complicated to match (if base fed), a 1/2
wave antenna will provide better efficiency than 5/8 wave if you have a
poor ground system, because of its high base impedance. It's a much
better choice for something like an HT, where you're stuck with a very
poor "ground system". Modeling comparisons with realistic ground
conductivity and ground system loss show that a 5/8 wave antenna often
doesn't deliver the expected gain over a shorter antenna, and there's no
reason to believe that objective tests won't confirm the modeling results.

Roy Lewallen, W7EL

Jimmy wrote:
> to add a little bit:
>
> Assume you take a random length radiator and add lumped inductance to the
> feedpoint end of it to make it resonant(purely resistive at a desired
> frequency). This is known as "loading an antenna".What is the difference if
> this random length radiator just happens to be 5/8 wl long at the desired
> freq and you add inductance to make it resonant. IS this not also "loading
> the antenna", making it electrically longer.
>
> "Jimmy" <Gfender@carolina.rr.com> wrote in message
> news:2hTZ9.123884$Mb.5457267@twister.southeast.rr.com...
>
>>Yep, 5/8 ths is not resonant, your radio will not see it as a resistive
>
> load

>
>>. to make it ressonant the 5/8 is loaded to 3/4 which is resistive and
>
> then
>
>>the feed point is attached to the loading coil at the desired resistance,
>>usually the 50 ohm, point.
>>"'Doc" <w5lz@cwis.net> wrote in message news:3E377E80.7F72D9D7@cwis.net...
>>
>>>
>>>Jimmy,
>>> You want to run through that 5/8 wave really being
>>>a 6/8 wave part again? I think I may have missed something
>>>there...
>>> 'Doc
>>
>>
>
>

2144. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 19:41:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bfbg3v0ioos0far3ept0cl15ad55fuer1c@4ax.com>
Source record: 125983

On Wed, 29 Jan 2003 13:05:07 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> On Wed, 29 Jan 2003 12:29:27 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Now, when are you going to condemn the errors in the QEX article?
>>
>> When do you go to press?
>
>It may not be "press", Richard. QEX has turned down my article.
>All I got was the standard rejection letter.

Well, I am truly sad to hear that. I may find fault for some issues,
but your effort and commitment is not counted in that. Care to join
me spitting on those editors now? ;-)

>
>So I will publish the material on my web page and in any other
>ham publication that will accept it. Based on what you have
>said, I expect you will fully agree with it and object only
>to my writing style.

That may well happen. There is always room for surprise all around.

73's
Richard Clark, KB7QHC

2145. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 19:44:44 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <erbg3vct61prnleqnsglb1dsld0g4tlr0t@4ax.com>
Source record: 125984

On Wed, 29 Jan 2003 13:13:03 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Of course, you cannot quote even one of those "absurd comments".
>>
>> no sooner said than done.

>Is that all you could find, Richard? :-)

Um, I could go on forever if you simply ask for more! ;-)
Be careful to snip the recursion before this goes into the meltdown of
combinatorial expolsion.

73's
Richard Clark, KB7QHC

2146. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:14:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E38362E.8040707@ieee.org>
Source record: 125985

Richard Clark wrote:
> Well, I am truly sad to hear that. I may find fault for some issues,
> but your effort and commitment is not counted in that. Care to join
> me spitting on those editors now? ;-)

Not really, Richard. They are under pressures to which you and I are
not exposed. Do you do what your boss tells you to do? I did when my
paycheck depended upon it. It doesn't take Einstein to figure out
this subject is a political hot potato, not a technical issue. The
technical side is, as you say, almost a no-brainer. There is lots
more emotion than thought invested. When was the last time you
had something technical to say on the subject? And have I ever
responded emotionally? Shut your mouth! :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2147. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:16:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b19cqenqk1@knossos.btinternet.com>
Source record: 125986

CAM sed -
> Reg Edwards wrote:
> > Coax can have a loss less than any given open wire line simply by
increasing
> > its diameter regardless of SWR .

==========

> What diameter of coax can I get for 12 cents a foot,
> the cost of ladder-line? :-)

==========

CAM, as usual, you immediately get to the crux of the matter.

Choice of line has nothing to do with SWR. All depends on the price of
copper and the state of your bank balance.

Reg, G4FGQ

2148. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:18:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E38371C.6090707@ieee.org>
Source record: 125988

Richard Clark wrote:
> Be careful to snip the recursion before this goes into the meltdown of
> combinatorial expolsion.

I'm betting that you are pouring through my postings trying to find
what you thought I said. I've done that with yours. And no fair
producing something that I thought Dr. Best said. I could definitely
be wrong about that. Please produce something technical that I said
that is wrong. And be careful in assuming that an if/then statement
is anything other than a conditional statement obeying the laws of
logic.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2149. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:20:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <63cg3vk8ojb6g6u26glimcaf2296emm88d@4ax.com>
Source record: 125987

On Wed, 29 Jan 2003 12:57:49 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> On Wed, 29 Jan 2003 11:00:05 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>>If the author of the QEX article agrees with the Melles-Griot web page
>>
>> I am sure he has no problem with your authority's application and
>> usage of
>>
>>>>>*** total amplitude is given by the vector resultant,
>>>>and intensity is given by the square of amplitude. ***
>>>
>> and that the two of you now have a common reference to employ in any
>> further discussion.
>>
>> Thanx for this unambiguous confirmation.
>
>I told you that you agreed with me, Richard. Now we get to the part of
>the Melles-Griot web page with which you agree and Dr. Best disagrees:
>
Sorry Cecil,

I give Steve full credit to speak for himself and would rather that
than your heady infusion of extrapolated details. I am unfamiliar
with the QEX articles you are criticizing so I don't feel compelled to
stand with them on their merit nor rail against them to conform to
your perception of their flaws. Your arguments will have to stand on
their own.

I will accede that you and I have a basis in theory presented in an
Optical paradigm that offers enough answers to resolve these issues.
You paced us through some rather shaky logic that has serious
problems; and I await your publication to resolve those doubts.

73's
Richard Clark, KB7QHC

2150. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:24:15 UTC
From: k3bu@aol.com
Message-ID: <20030129152415.18543.00000526@mb-dh.aol.com>
Source record: 125989

Roy, W7EL wrote:
>But base loading an antenna doesn't change either the current
>distribution or the radiation resistance. Unlike top loading, it has no
>effect at all on the characteristics of the antenna itself. Therefore,
>it doesn't make the antenna "electrically longer" in the same sense that
>top loading does. All it does is to modify the feedpoint reactance. Some
>people might regard the reactance change as making the antenna appear
>longer, but all it's really doing is modifying the reactance seen by the
>source. Because the current distribution isn't modified, the pattern
>shape will be unaltered by base loading.

If I add, say 3 turn coil at the base of the 20m mobile antenna, I can see the shift of resonant frequency down. Isn't the electrical length of the radiator extended by the wire/tubing in the coil? It appears to me that we are extending the radiator (making it electrically longer) and tapping onto the higher impedance point. True, it doesn't change the pattern, but sure makes the radiator appear longer. Same goes for Beta matches on Yagis (hairpin). Driven element has to be shortened to compensate for the "loading" effect of the hairpin, to maintain resonance.

Yuri, K3BU

2151. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:26:30 UTC
From: richardharrison@webtv.net
Message-ID: <715-3E3838F6-82@storefull-2312.public.lawson.webtv.net>
Source record: 125992

CAM wrote:
"There`s nothing wrong with your math."

Since r-f power on a transmission line is a scaler according to my authority, Bird Electronic Corp., and it is summed by simple arithmetic, it is impossible for 2+2 to add to more than 4.

Likewise, 50 volts puts 1 amp through a 50-ohm line for a power of 50 watts.

You can`t take two powers of 50 watts each and say they are in-phase, so now I have 100 volts at 2 amps (not in the same line, anyway).
You could parallel two lines and supply 50 volts at two amps. Or, you could series two lines and supply 100 volts at one amp. But you can`t do both at the same time with your limited resources.

100 volts times 2 amps is 200 watts, not 100 watts. There is no magic that turns 100 watts into 200 watts. The maximum you can get from two powers of 50 watts each is 100 watts.

I can`t load a pdf file and I don`t have access to QEX. I don`t know what Steve`s done, but I am certain 92.831 W and 0.555 W do not add to 107.736 W.

Optimal application of two powers can`t exceed the simple sum of the two powers, or as CAM correctly says, perpetual motion is easily within our grasp.

Best Regards, Richard Harrison, KB5WZI

2152. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:38:25 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v3gf0hfbiaem60@corp.supernews.com>
Source record: 125990

Hello Jeremy.
The resistivity of stainless is roughly two orders of magnitude higher than copper.
I^2R losses in the antenna will be two orders of magnitude higher using stainless than copper.
Oh, and that velocity is about 0.95c and doesn't vary much between metals.
H
NQ5H

"Jeremy Taylor" <jeremy.taylor@tait.co.nz> wrote in message news:3E375AC8.1AFB7844@tait.co.nz...
snip
> Argh! This is where you chaps lost me. Karl alludes to something I need to
> consider when using steel instead of aluminium (for instance) but I'm not sure
> about the nature or magnitude of what I need to consider? And then I just got
> lost. :-)
>
> I'll give you a f'rinstance: I am trying to build a K5OE Texas Eggbeater II at
> 70cm. I have 1/8" stainless steel as a material handy. The antenna was designed
> with copper in mind. So do I need to worry about differences because of using a
> ferro-mag material instead? Or in this instance, should I just say: 'nah, not
> enough of an influence to worry me'.
>
> Roy, thanks for the EZ-NEC tutorial, I'll have a bash at it tonight.
>
> Regards
> Jeremy
>
>

2153. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:39:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E383BF6.8030107@ieee.org>
Source record: 125991

Reg Edwards wrote:
> CAM, as usual, you immediately get to the crux of the matter.
>
> Choice of line has nothing to do with SWR. All depends on the price of
> copper and the state of your bank balance.

Well, I guess it all boils down to priorities. I would lots rather
have a new Harley V-Rod than super low loss coax. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2154. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:44:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E383D3D.30801@ieee.org>
Source record: 125993

Richard Clark wrote:
> I give Steve full credit to speak for himself and would rather that
> than your heady infusion of extrapolated details. I am unfamiliar
> with the QEX articles you are criticizing ...

Well, no wonder you sided with the author of the QEX article. You
haven't read the article and you assumed QEX wouldn't publish anything
except a perfect article. :-)

> I will accede that you and I have a basis in theory presented in an
> Optical paradigm that offers enough answers to resolve these issues.
> You paced us through some rather shaky logic that has serious
> problems; and I await your publication to resolve those doubts.

I assure you that it's not the logic that's shaky, Richard. It is
my inadequate 50 year old vocabulary coupled with a writing style
that assumes too much. Hopefully, I can correct my short-comings
for you.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2155. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:49:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E383E5E.2040902@ieee.org>
Source record: 125994

Yuri Blanarovich wrote:
> True, it doesn't change the pattern, but sure makes the
> radiator appear longer.

What you have to be careful of, Yuri, is whether the loading
coil makes the radiator appear longer to the transmitter or
to the 377 ohm ï¿½ther. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2156. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:52:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E383F17.1070400@ieee.org>
Source record: 125995

Richard Harrison wrote:
> CAM wrote:
> "There`s nothing wrong with your math."
>
> Since r-f power on a transmission line is a scaler according to my
> authority, Bird Electronic Corp., and it is summed by simple arithmetic,
> it is impossible for 2+2 to add to more than 4.

Thanks, Richard, I have a habit of assuming a context. I should have said: There's nothing wrong with your math when you superpose voltages and currents. There's obviously something wrong with his math when he superposes 75W and 8.33W to obtain 133.33W.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2157. Re: Folded Dipoles for HF plans requested

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 20:55:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b19f36$ak1$1@sparta.btinternet.com>
Source record: 125996

> And the common-mode currents created by the off center feeding should
> contribute to some good low angle vertically polarized radiation like
> The Carolina Windom.

==========

Or like any other sort of antenna which radiates from the feedline. The easiest, most inexpensive way of arranging things is just a plain, simple, common-sense Inverted-L.

Now expect a tirade of arguments from old-wives, anxious to contribute their 2-cents worth, about TVI, computer interference, RF-in-the-shack, merits'demerits of balanced/unbalanced feedlines, maintaining good relations with neighbours, etc., etc.

Reg, G4FGQ

2158. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:01:10 UTC
From: richardharrison@webtv.net
Message-ID: <717-3E384116-14@storefull-2312.public.lawson.webtv.net>
Source record: 125999

Reg, G4FGQ wrote:
"Coax can have a loss less than any given wire line simply by increasing its diameter regardless of SWR."

The Battleship Texas docked here has coax about 1m in diameter. Coax should have lower radiation loss.

Best regards, Richard Harrison, KB5WZI

2159. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:03:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <magg3v0jlm32nafo2e5i6ma08tjsrr4h1v@4ax.com>
Source record: 125997

On Wed, 29 Jan 2003 14:18:36 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>I'm betting that you are pouring through my postings

Cecil, I bet you are still expecting the GA optimization from
fraudtenna will be posted soon.

Guess who's gonna win?

73's
Richard Clark, KB7QHC

2160. Re: Folded Dipoles for HF plans requested

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:03:20 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <q3gg3voala7cthqv4bnkr89bi44rvn741p@4ax.com>
Source record: 125998

On Wed, 29 Jan 2003 21:51:58 +1300, "James"
<deadman@quicksilver.net.nz> wrote:

>About ten years ago I had the pleasure of attending my first ever national
>field day (here in ZL land). I fantastic team effort and a wonderful event
>on 40 & 80mts. The thing is the antennae that were used where 3 element
>dipoles. I am unsure if they were terminated or if the elements were in
>"freespace" so to speak.
>
>10 years on I am president of a small amateur club with around 30 active
>members, most of which are now well and truly members of the "old timers
>club" hi hi.
>
>Getting to the point field day is approaching and I was wishing to re create
>the 4 wire dipoles that I used and heard the following year when that club
>was the successful winner of the contest.
>The OM that owned those antennae is now a silent key... and I have had
>little success searching through antenna handbooks etc.
>my team will probably consist of 4-5 operators so we will need all the help
>we can get...
>does anyone have any plans?
>
>
>ZL1WOT
>73s
>

What you may have been looking at may not have been a 3 wire folded
dipole.. though it could be.
There was a multiband antenna that used to be quite popular about 30
or 40 years ago call the mor-gain.. it was a parallel dipole
arrangement that covered 80--10 meters and there were other models
that covered 80-40-20 etc. The company has since gone out of business
but it should not be difficult to fabricate the same type of antenna.

W9INN sells similar parallel dipoles but his have loading coil Or
traps not sure which .. I think the mor-gain antennas were trap free.

hope this is of some help in your quest
73 KC1DI

2161. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:15:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E384459.9030207@ieee.org>
Source record: 126000

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>I'm betting that you are pouring through my postings
>
> Cecil, I bet you are still expecting the GA optimization from
> fraudtenna will be posted soon.
>
> Guess who's gonna win?

Well Richard, you are, no doubt, going to find something stupid that
I said. I never said I was perfect. If you can produce a wrongness
that I have uttered that I have not already apologized for, I will
be surprised and apologize for it all over again. In fact, someone
actually did find a typo in my potential QEX article and I have
forever been humbled by that typo. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2162. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:21:36 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301291321.105b307b@posting.google.com>
Source record: 126001

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b18pil$3nb$1@venus.btinternet.com>...
> > Guys
> > All brilliant postings
>
> ========================
>
> Art, on what standard do you base your judgement ? ;o)

Well Richard Clark started it off with a post outlining things that
I hadn,t thought of before or for that matter seen in print. Both
Richard and Roy then joined in and made it a roundtable so what we
read was not isolated parts of a jigsaw puzzle which then shot off
to other things but stayed on coarse with out gottchas and the
pointing
of fingers. For me as you know this is not the norm for my questions,
I am not saying they were earthshaking but very informative to me
because I knew so little. It is not yet a complete picture for me but
a good foundation for me. Richards start with respect to take off and
lobe depth
still hasn't got me sorted out on vertical dipoles. I have a
theoretical
situation in mind that leaves some questions in my mind. Say we have a
vertical collinear array, I know it is difficult to visualize but
assume
then they are loaded dipoles which makes the a short version of a 160
meter
form.If this collinear dipole had its center at 20 M high then one of
the dipoles will be close to ground. Now based on Richards aproach the
lobe center will emanate from the center of the two dipoles. Then it
is to be seen that that the bottom dipole will put forth a lobe that
is not
horizontal but slightly higher to merge with the lobe of the upper
dipole. Now my understanding or knoweledge is limited but I see this
as a solution to maintain a low sky angle but not low enough so that
ground absorbtion is nigh absent.
I know it is difficult to visualise Reg but what do you think as to
what
the take off angle will show and it's affect on efficiency for sky
wave use?
Best regards
Art

2163. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:32:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3gi314r399042@corp.supernews.com>
Source record: 126002

I've been told more than once that I'm brainless, so this is just more proof.

The issue that's being argued long and loud is a no-brainer only if you blandly accept certain premises, such as the notions of waves of average power flowing and reflecting on a transmission line, and that certain simple rules can be applied when these supposed waves interfere. Some very thoughtful people don't accept these ideas so readily, and feel that inadequate justification has been given for the concepts and the rules that are derived from them. This isn't because they have no brains, but because they don't see the justification for the premises.

Ptolemy's elaborate explanation of planetary motion is likewise a no-brainer -- provided that you accept that the Earth is at the center of the universe. And there's definitely something Ptolemic about this whole subject. I haven't yet worked by way through the published and submitted material, but so far none of it strikes me as being very Copernican.

But a no-brainer, it ain't.

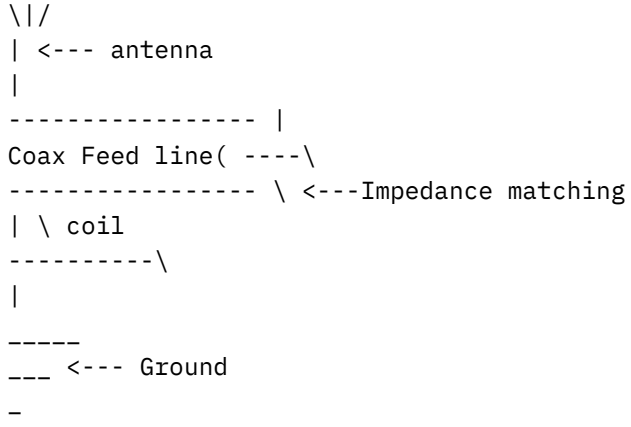
Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Richard Clark wrote:
>
>> Well, I am truly sad to hear that. I may find fault for some issues,
>> but your effort and commitment is not counted in that. Care to join
>> me spitting on those editors now? ;-)
>
>
> Not really, Richard. They are under pressures to which you and I are
> not exposed. Do you do what your boss tells you to do? I did when my
> paycheck depended upon it. It doesn't take Einstein to figure out
> this subject is a political hot potato, not a technical issue. The
> technical side is, as you say, almost a no-brainer. There is lots
> more emotion than thought invested. When was the last time you
> had something technical to say on the subject? And have I ever
> responded emotionally? Shut your mouth! :-)

2164. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:35:41 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E38492D.4467F59D@cwis.net>
Source record: 126003

Jimmy,
If the 'graphics' work correctly in this example;



I make the following assumptions;

A. The antenna begins at the coax's center conductor's connection
with the top of the impedance matching coil.

B. The impedance matching coil is connected between the center and
shield conductors of the coaxial feed line.

c. The bottom of the coil and shield are connected to ground.

If the antenna is a 5/8 wave vertical and there is no 'loading coil'
in it's construction, how is it's length electrically changed to 3/4
wave length?
'Doc

2165. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:42:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3gild8s34nf9c@corp.supernews.com>
Source record: 126004

Power isn't a phasor, but that doesn't make it a scalar. The power at any point on a transmission line is a sinusoidal function of twice the frequency of the voltage or current, plus a DC offset. The DC offset is the average value. If one wants to calculate forward and reverse power from the forward and reverse traveling voltage and current waves, these also have the same waveshape.

Any analysis dealing with power has to deal with these facts. The analyses are ever-so-much easier (a no-brainer, as Cecil has said) if the time-varying nature of the power is conveniently overlooked. But then, if the results are correct it's just by luck.

Roy Lewallen, W7EL

Richard Harrison wrote:
> CAM wrote:
> "There`s nothing wrong with your math."
>
> Since r-f power on a transmission line is a scaler according to my
> authority, Bird Electronic Corp., and it is summed by simple arithmetic,
> it is impossible for 2+2 to add to more than 4.
>
> Likewise, 50 volts puts 1 amp through a 50-ohm line for a power of 50
> watts.
>
> You can`t take two powers of 50 watts each and say they are in-phase, so
> now I have 100 volts at 2 amps (not in the same line, anyway).
> You could parallel two lines and supply 50 volts at two amps. Or, you
> could series two lines and supply 100 volts at one amp. But you can`t do
> both at the same time with your limited resources.
>
> 100 volts times 2 amps is 200 watts, not 100 watts. There is no magic
> that turns 100 watts into 200 watts. The maximum you can get from two
> powers of 50 watts each is 100 watts.
>
> I can`t load a pdf file and I don`t have access to QEX. I don`t know
> what Steve`s done, but I am certain 92.831 W and 0.555 W do not add to
> 107.736 W.
>
> Optimal application of two powers can`t exceed the simple sum of the two
> powers, or as CAM correctly says, perpetual motion is easily within our
> grasp.
>
> Best Regards, Richard Harrison, KB5WZI
>

2166. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:46:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3gitfi17jsoaa@corp.supernews.com>
Source record: 126005

No, the electrical length of the radiator (insofar as its radiation properties are concerned) is extended by the length of the coil itself, not by the wire it contains.

By your sentence "True, it doesn't change the pattern, but sure makes the radiator appear longer," I see that I've completely failed to communicate the point I was trying to make. Maybe someone else can do a better job.

Roy Lewallen, W7EL

Yuri Blanarovich wrote:
> Roy, W7EL wrote:
>
>>But base loading an antenna doesn't change either the current
>>distribution or the radiation resistance. Unlike top loading, it has no
>>effect at all on the characteristics of the antenna itself. Therefore,
>>it doesn't make the antenna "electrically longer" in the same sense that
>>top loading does. All it does is to modify the feedpoint reactance. Some
>>people might regard the reactance change as making the antenna appear
>>longer, but all it's really doing is modifying the reactance seen by the
>>source. Because the current distribution isn't modified, the pattern
>>shape will be unaltered by base loading.
>
>
> If I add, say 3 turn coil at the base of the 20m mobile antenna, I can see the
> shift of resonant frequency down. Isn't the electrical length of the radiator
> extended by the wire/tubing in the coil? It appears to me that we are
> extending the radiator (making it electrically longer) and tapping onto the
> higher impedance point. True, it doesn't change the pattern, but sure makes the
> radiator appear longer. Same goes for Beta matches on Yagis (hairpin). Driven
> element has to be shortened to compensate for the "loading" effect of the
> hairpin, to maintain resonance.
>
> Yuri, K3BU

2167. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:51:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3gj6cdpighs3c@corp.supernews.com>
Source record: 126006

Yeah, if you adjust the matching network so the antenna impedance is 377 ohms, then it looks like an extension of free space, and the RF just slips off the antenna like. . . well, you can supply your own nasal-secretion similes.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Yuri Blanarovich wrote:
>
>> True, it doesn't change the pattern, but sure makes the
>> radiator appear longer.
>
>
> What you have to be careful of, Yuri, is whether the loading
> coil makes the radiator appear longer to the transmitter or
> to the 377 ohm ï¿½ther. :-)

2168. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:51:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E384CFD.4040006@ieee.org>
Source record: 126008

Roy Lewallen wrote:
> The issue that's being argued long and loud is a no-brainer only if you
> blandly accept certain premises, such as the notions of waves of average
> power flowing and reflecting on a transmission line, and that certain
> simple rules can be applied when these supposed waves interfere. Some
> very thoughtful people don't accept these ideas so readily, and feel
> that inadequate justification has been given for the concepts and the
> rules that are derived from them. This isn't because they have no
> brains, but because they don't see the justification for the premises.

Well, that's an altogether other side of the argument. The author of the QEX article adopts the wave reflection model with no reservations. He combines the wave reflection model with the superposition theorem and arrives at certain conclusions. I combine everything with the conservation of energy principle and arrive at different conclusions. Someone who rejects the wave reflection model will arrive at completely different conclusions. For instance, it is probable that quantum physics completely invalidates the wave reflection model.

What we cannot allow is someone adopting the wave reflection model for his published article and then rejecting the wave reflection model as his defense. That's like a person murdering his parents and then throwing himself on the mercy of the courts because he is an orphan.

The argument between Dr. Best and me presupposes the validity of the wave reflection model. Is it really valid? I don't know the answer to that question. All I know is that Dr. Best adopted that model so I am arguing with him within the framework of his model. Anyone who doesn't believe in the validity of the wave reflection model cannot take either my side or Dr. Best's side for obvious reasons. So before you jump in with all four feet, do you accept the wave reflection model? It's like you cannot play football until you accept the rules of the game of football. Are you game?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2169. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:53:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <60jg3vs941ntl5seudeek2f4sc4qfauucq@4ax.com>
Source record: 126007

On Wed, 29 Jan 2003 15:15:05 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>I'm betting that you are pouring through my postings
>>
>> Cecil, I bet you are still expecting the GA optimization from
>> fraudtenna will be posted soon.
>>
>> Guess who's gonna win?
>
>Well Richard, you are, no doubt, going to find something stupid that
>I said. I never said I was perfect. If you can produce a wrongness
>that I have uttered that I have not already apologized for, I will
>be surprised and apologize for it all over again. In fact, someone
>actually did find a typo in my potential QEX article and I have
>forever been humbled by that typo. :-)

Hi Cecil,

You really should try reading me (2 sentences after all) rather than
using my comments as a backdrop.

I don't know what would disappoint you more, me looking for dirt, or
me not looking for dirt.

If my humor is so subtle as to evade your sensibilities, the
translation of my quote above is: "I couldn't care less." To dumb it
down further, no I am not looking for dirt.

In words of one syl a ble: get on with post ing your pa per.

73's
Richard Clark, KB7QHC

2170. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 21:58:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E384E83.20504@ieee.org>
Source record: 126009

Roy Lewallen wrote:
> Power isn't a phasor, but that doesn't make it a scalar.

My physics book says energy is a scalar. Does measuring
energy for one second turn it into something besides a
scalar?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2171. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 22:03:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E384FBA.8030605@ieee.org>
Source record: 126010

Richard Clark wrote:
> In words of one syl a ble: get on with post ing your pa per.

So far, it has been rejected so I'm not sure mere mortals are
capable of understanding it. I am thinking about a format that
Homo sapiens lacking the alien genes that I possess, can
understand. Richard, do you possess those alien genes?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2172. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 22:11:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kikg3v8sstcjgrerbmcajhgme3tdls2mm0@4ax.com>
Source record: 126011

On Wed, 29 Jan 2003 16:03:38 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> In words of one syl a ble: get on with post ing your pa per.
>
>So far, it has been rejected so I'm not sure mere mortals are
>capable of understanding it. I am thinking about a format that
>Homo sapiens lacking the alien genes that I possess, can
>understand. Richard, do you possess those alien genes?

I'm wearing blue-genes right now, does that help?

73's
Richard Clark, KB7QHC

2173. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 22:35:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E385726.8030105@ieee.org>
Source record: 126012

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>So far, it has been rejected so I'm not sure mere mortals are
>>capable of understanding it. I am thinking about a format that
>>Homo sapiens lacking the alien genes that I possess, can
>>understand. Richard, do you possess those alien genes?
>
> I'm wearing blue-genes right now, does that help?

What I have decided to do is begin my analysis where Dr. Best's
analysis stops. That will require some reformatting. Stand by.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2174. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 22:38:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3glvdb3vcel10@corp.supernews.com>
Source record: 126013

Is your physics book speaking of energy that's moving back and forth in
a sinusoidal fashion at an RF rate?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Power isn't a phasor, but that doesn't make it a scalar.
>
>
> My physics book says energy is a scalar. Does measuring
> energy for one second turn it into something besides a
> scalar?

2175. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 22:55:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3gmugbv4g2j3f@corp.supernews.com>
Source record: 126014

OC_CAM's Razor wrote:
> . . .
> The argument between Dr. Best and me presupposes the validity of
> the wave reflection model. Is it really valid? I don't know the
> answer to that question. All I know is that Dr. Best adopted that
> model so I am arguing with him within the framework of his model.
> Anyone who doesn't believe in the validity of the wave reflection
> model cannot take either my side or Dr. Best's side for obvious
> reasons. So before you jump in with all four feet, do you accept
> the wave reflection model? It's like you cannot play football
> until you accept the rules of the game of football. Are you game?

I don't accept the model of waves of average power flowing and reflecting in a line. This doesn't mean I'm saying the model can't be valid -- I just haven't seen ample justification for it. This might change as I read the papers more thoroughly.

I've been working on an analysis of the power and energy as a function of time at each point on a transmission line. These are readily calculated from established knowledge of voltages and currents along the line. Like voltage and current standing waves, any model of power or energy waves will have to predict these total values at every point, and I haven't yet taken a close enough look at either your model or Steve's to see if either fits. If either model does fit, it still isn't proof of the validity of the model. But if a model doesn't correctly predict the known total result, it has to be wrong.

No, there's no way I'll accept rules for which I've seen (so far) no justifiable basis in fact. Until the factual basis is established for the underlying postulates, the conclusions that follow are just so much hot air. (But again, this might have been done in the available works which I haven't finished studying.) As it is, I'm spending way more of my time than I should on this subject. I'm certainly not going to waste it by arguing how long the poltergeists' noses are when no one has yet seen one or shown that they even exist.

Roy Lewallen, W7EL

2176. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 22:58:41 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <g1mg3v0lrfe9lia4d39u9ka4lp6hdbafkh@4ax.com>
Source record: 126015

On Wed, 29 Jan 2003 13:46:24 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

|No, the electrical length of the radiator (insofar as its radiation
|properties are concerned) is extended by the length of the coil itself,
|not by the wire it contains.
|
|By your sentence "True, it doesn't change the pattern, but sure makes
|the radiator appear longer," I see that I've completely failed to
|communicate the point I was trying to make. Maybe someone else can do a
|better job.

I doubt it but I'll take a shot.

Yuri,

I hate to pull a Cecil,<g> but add a half-wavelength of transmission
line between your radiator and the inductor. Now you've physically
separated the matching function from the radiation function. The
radiator radiates identically whether the inductor is in place or not.
All that changes is the impedance seen at the input to the inductor.
The length of the inductor is immaterial.
|
|Roy Lewallen, W7EL
|
|Yuri Blanarovich wrote:
|> Roy, W7EL wrote:
|>
|>>But base loading an antenna doesn't change either the current
|>>distribution or the radiation resistance. Unlike top loading, it has no
|>>effect at all on the characteristics of the antenna itself. Therefore,
|>>it doesn't make the antenna "electrically longer" in the same sense that
|>>top loading does. All it does is to modify the feedpoint reactance. Some
|>>people might regard the reactance change as making the antenna appear
|>>longer, but all it's really doing is modifying the reactance seen by the
|>>source. Because the current distribution isn't modified, the pattern
|>>shape will be unaltered by base loading.
|>
|>
|> If I add, say 3 turn coil at the base of the 20m mobile antenna, I can see the
|> shift of resonant frequency down. Isn't the electrical length of the radiator
|> extended by the wire/tubing in the coil? It appears to me that we are
|> extending the radiator (making it electrically longer) and tapping onto the
|> higher impedance point. True, it doesn't change the pattern, but sure makes the
|> radiator appear longer. Same goes for Beta matches on Yagis (hairpin). Driven

|> element has to be shortened to compensate for the "loading" effect of the
|> hairpin, to maintain resonance.

The hairpin match is a form of a distributed L-network. The hairpin does not "load" the antenna. The real part of the feedpoint impedance of most Yagis is below 50 ohm. By shortening the DE, this lower-than-50-ohm resistance is put in series with a capacitive reactance.

This series capacitive reactance in conjunction with the shunt inductance of the hairpin forms the L-network. If the real part of the feedpoint impedance is known, then the reactances are easily calculated using the design equations for L-networks.

Since the real part of the impedance changes slightly with length changes, tuning can be an interative process. On the other hand, my 3-element Yagi was built to a model and a beta match was calculated. It took one change in DE length and one change in shorting bar position to achieve almost exact conformance to the model.

73,

Wes N7WS

2177. Re: A99 for 10/12m?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 23:14:20 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301291514.ce4860d@posting.google.com>
Source record: 126016

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:<JFVZ9.14$hG6.3027@twister.southeast.rr.com>...
> The A99 in my opinion is a pretty bad antenna, A half wave end fed antenna
> with a very lossy impedance matching network that actually performs worse
> than a 1/4 wl ground plane. You would do beter with a half wave coaxial
> antenna which is center fed without a matching network. They can easily be
> home brewed for much less than the cost of the A99.

I thought the A-99 was center fed. ?? I haven't really checked them
out though.
From looking at them, I was under the impression they were a center
fed thing about like the shakesphere, or the old radio shack "glass"
center fed 1/2's. Myself, if base fed, I use the "gamma loop" type
matching setup. This is the same as the cushcraft A-10 verticals. If
there is any excess loss with that device, I've never noticed it. That
antenna always beat a 1/4 GP at the same "base" height when I tried
them. In fact, if I were to buy a storebought 10m vertical, I would
recommend the cushcraft A-10 vertical. It's fairly cheap and it works
well. It's also easily modifiable if you want to make a different
antenna from it. Also, it's easy to adjust the tuning for anything
from CB to the top of 10m. You could tune 12m if you lengthened the
whip a bit. You can also easily turn it into a 5/8 GP for 10m. Pretty
versatile piece of metal... MK

2178. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 23:22:21 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <NmZZ9.3424$Wu1.252565@newsread1.prod.itd.earthlink.net>
Source record: 126017

Steve Best wrote:
> In using superposition theory, we consider the voltage, current and power
of
> each wave as if it *existed independently* in the line and then combine or
> add the individual voltages and currents to determine the total voltage
and
> current, from which the total power is determined.
>
> In terms of superposition theory, do you agree or disagree at this point?
> (this requires a yes or no answer)

I agree that the superposition theory is correct if there are two separate voltage sources--two generators. I do not agree that the theory is correct when there is only one source, the RF amplifier. And this is the point I've tried to make with you, Steve, for years on end. Your use of the theory is invalid. Please let me explain in detail.

Power is embodied by waves of voltage and current. When power is available from two separate sources the voltages and currents from those sources superpose and the powers add, providing the voltages and currents from the separate generators are in phase. In other words, when there are two separate sources, the superposition of the respective voltages and currents results in a forward power that can be determined by adding the voltages, and squaring the sum, as in Steve's Eq 9.

However, when there is only a single source, the RF amplifier, superposition of the source and reflected voltages cannot determine the forward power, because the reflected power originated only from one source, the RF amplifier. Then, if the reflected voltage is added to the source voltage, there is insufficient power available from the single source for the superposition of the two voltages, along with the resulting proportional increase in current, to increase the forward power equal to the product of the resulting voltage and current.

I don't have all the data being used in this thread, so please let me revert to the numbers in Steve's network problem in his same article. The load mismatch is 3:1 for a reflection coefficient 0.5. With 100 w delivered by the source the voltage entering the system is 70.71 v and the current is 1.414 a. The total forward power is 133.33 w and the reflected power is 33.33 watts. The power-increase factor is 1.333 which derives the forward power of 133.33 w. With 133.33 w on the 50-ohm line the forward voltage is 81.65v and forward current is 1.633 a. Note that the forward voltage-current product is 133.33 w, the sum of the source and reflected powers. The voltage- and current-increase for reflection coefficient of 0.5 is the square root of the power-increase factor, 1.1547. Check it out this factor

yields the correct forward voltage and current.

However, for 33.33 w on the 50-ohm line, the reflected voltage is 40.82 volts. Adding this to the source voltage 70.71 v, as Steve does, we get 111.53 v. on a 50-ohm line. This voltage would bring the forward power to 248.8 w, an impossibility, because the forward current would have to be 2.23 a, while the true forward current is 1.63 a. This is what happens when the reflected voltage is incorrectly added to the source voltage, totally invalidating the superposition of source and reflected voltages, because there is only one source that can't deliver 2.23 a. Two separate sources are required for superposition of voltages to be valid.

On the other hand, superposing the reflected voltage 40.28 v on the true forward voltage, 81.65 v, yields the maximum of the standing wave, and subtracting the 40.28 v from the forward voltage yields the minimum of the standing wave. Check out my data and discover that Steve's claim that superposition of source and reflected voltage to determine forward power is invalid.

Walt, W2DU

2179. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 23:25:12 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E3862D8.32AF1C4D@uci.edu>
Source record: 126018

Roy Lewallen wrote:
> I don't accept the model of waves of average power flowing and
> reflecting in a line. This doesn't mean I'm saying the model can't be
> valid -- I just haven't seen ample justification for it. This might
> change as I read the papers more thoroughly.

Probably best to think of it simply as energy flowing thus and so as
waves.
Then think of power when the energy gets to where its going.

> I've been working on an analysis of the power and energy as a function
> of time at each point on a transmission line. These are readily
> calculated from established knowledge of voltages and currents along the
> line. Like voltage and current standing waves, any model of power or
> energy waves will have to predict these total values at every point, and
> I haven't yet taken a close enough look at either your model or Steve's
> to see if either fits. If either model does fit, it still isn't proof of
> the validity of the model. But if a model doesn't correctly predict the
> known total result, it has to be wrong.

What would you think about a model in which things don't add up, vs. a
model in which things do add up?

73, Jim AC6XG

2180. Re: 40 m dipole on 15 m? Does it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 23:32:21 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301291532.72e72a87@posting.google.com>
Source record: 125869

k9sqg@aol.com (K9SQG) wrote in message
news:<20030129083336.10074.00000031@mb-fk.aol.com>...
> Feeding the antenna with open wire line has the lowest loss, especially at high
> swr harmonic operation...

Sure, but if you stay away from bands where the Z is very high, you
can still do pretty well. IE: I would never use a coax fed 40m dipole
on 20m, but I would on 17 or 15. On 20, the high Z feed will kill you.
You can still operate, but you lose quite a bit. On 17, it's not so
bad. The loss is not enough to make a drastic difference on the other
end. On 15, the loss naturally is very low.
I'd use the 80m dipole on 20m in his case...
On 30m, I use my 80/40/20 parallel dipoles fed with a single
coax/tuner. The SWR is about 5:1 or so. Being I use thick 213, and
being on 10 mhz, the losses are quite low. I get quite good results.
Even if you lose half your power, you only lose a half S unit in
theory. Probably more on a real radio's meter, but you still should be
good copy unless you were in the noise to begin with. I know I don't
even begin to lose that much on 30m. MK

2181. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 23:42:48 UTC
From: k3bu@aol.com
Message-ID: <20030129184248.23215.00000019@mb-bd.aol.com>
Source record: 125870

Wes, N7WS qrote:
>
>The hairpin match is a form of a distributed L-network. The hairpin
>does not "load" the antenna. The real part of the feedpoint impedance
>of most Yagis is below 50 ohm. By shortening the DE, this
>lower-than-50-ohm resistance is put in series with a capacitive
>reactance.
>

I gues I am having trouble seeing what is the difference between say, taking dipole (or driven element in a beam), inserting hairpin in the middle. I see this as loading (electrically extending) the radiator to achieve resonance, just like placing loading coils or stubs/hairpins anywhere else on the element. Along the hairpin we would have impedance from minimum to max corresponding to the length of the coil/stub. What makes it different when we attach the feedline? Isn't it the case when we are searching for impedance along the way to match the feedline? K7GCO is feeding his Yagis off center at the 50 ohm point on the driven element.

Slightly confucused :-)

Yuri, K3BU

2182. Re: 160m mobile with Valor/Pro-am PHF-160B

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-29 23:55:18 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301291555.7f2d88d6@posting.google.com>
Source record: 125871

n1kk@netzero.net (Ken) wrote in message
news:<d7adbb57.0301290659.4278f97d@posting.google.com>...
> Would like to hear from some recent users of this
> mobile antenna. I would also like to get the
> size of the antenna.
>
> I am thinking of mounting this on top of my
> 80-10m Screwdriver antenna. I might be
> able to use the lower adjustable coil to
> tune the 160m band. The added height
> might improve the performance too.
>
> Ken
> N1KK

I haven't use one, but I have seen one. I think it was appx 8 ft or so total height. The coil was fatter then the stick. Maybe 1.5-2 inches dia. Quite a few turns needed being the stinger is not too tall for a 160m antenna. I suspect they work ok if you have a good mount on a large vehicle. But not in the same league as a top loaded bugcatcher. What you want to do will probably work, but I wouldn't expect overly great results unless you can add a taller stinger, or a capacity hat of some sort. Top loading is fairly important on a 160m mobile if you want top results. Otherwise the current distribution is not so hot. If the mast below your screwdriver coil is not tall, this makes things worse. This is why I don't use screwdrivers. It's hard to have a tall mast under the coil in general. My present antenna has the coil 5 ft above the base normally. 8 ft feet if I add my 3 ft extender mast. 5 ft stinger on top of the coil. I only use the 13 ft antenna parked though...The mount is 4.5 ft off the ground. So it's 17.5 ft tall at the tip in that mode. I just built it a couple of weeks ago. It's 80-10 so far, but I'm kicking around adding 160m some way...I'm not sure if it's worth it or not... Adds a lot of wind load and weight. My antenna is very light as it is. About like a medium size rod and reel. I might just use a clip-on 30 ft wire to add capacity and only run 160m when parked. I'd do much better being I would be using the 80m coil only. I'm usually on 75m if I'm driving at night. MK

2183. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 00:31:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3gsienrq2r44e@corp.supernews.com>
Source record: 125872

Jim Kelley wrote:
> . . .
> What would you think about a model in which things don't add up, vs. a
> model in which things do add up?
>
> 73, Jim AC6XG

I'd look very, very carefully if the "things" are things which should add up and, if so, how they should add up. Which is what I'm doing.

Roy Lewallen, W7EL

2184. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 00:54:11 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <rCednSQdXJMp6qWjXTWcpw@comcast.com>
Source record: 125873

Don't think I buy that. The feedpont impedance of a 3/4 vertical (perfect ground) is around 35 ohms resistive, whereas the 5/8 is about 70 - J300. When you add an inductor to the base of a 5/8 you make the impedance 70 + j0., which is not the same as the 3/4 wave. Adding the coil has no effect on the radiation pattern. If you really want 50 ohms, you have to fudge the length a little.

Tam/WB2TT
"Jimmy" <Gfender@carolina.rr.com> wrote in message news:2hTZ9.123884$Mb.5457267@twister.southeast.rr.com...
> Yep, 5/8 ths is not resonant, your radio will not see it as a resistive load
> . to make it ressonant the 5/8 is loaded to 3/4 which is resistive and then
> the feed point is attached to the loading coil at the desired resistance,
> usually the 50 ohm, point.
> "'Doc" <w5lz@cwis.net> wrote in message news:3E377E80.7F72D9D7@cwis.net...
> >
> >
> > Jimmy,
> > You want to run through that 5/8 wave really being
> > a 6/8 wave part again? I think I may have missed something
> > there...
> > 'Doc
>
>

2185. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 02:06:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3888B9.3060807@ieee.org>
Source record: 125874

Roy Lewallen wrote:
> Is your physics book speaking of energy that's moving back and forth in
> a sinusoidal fashion at an RF rate?

It doesn't differentiate between different kinds of energy.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2186. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 02:10:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1a1igobq1@knossos.btinternet.com>
Source record: 125876

> The Battleship Texas docked here has coax about 1m in diameter. Coax
> should have lower radiation loss.
>
> Best regards, Richard Harrison, KB5WZI

==========

In this case it is USA taxpayers who suffer the loss.

2187. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 02:10:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1a1igobq2@knossos.btinternet.com>
Source record: 125875

> I know it is difficult to visualise Reg but what do you think as to
> what
> the take off angle will show and it's affect on efficiency for sky
> wave use?
==========

Art,

When predicting ionospheric or groundwave propagation I prefer initial information about my antenna to be in the form of an easy-to-understand 3-dimensional radiation pattern in the presence of a 'perfect' ground. It is mathematically calculable with mathematical precision. Un-arguable!

This allows ME to take into account the many and varied conditions along the ground or ionospheric paths between me and a distant receiver. I don't want information to be biassed, pre-distorted, in some vague ill-defined manner by somebody who very likely has different ideas on the subject to mine.

On the other hand, there's very little to worry about when predicting HF ionospheric radio paths and when the 99% confidence limits of distant field strength is typically +/- 15 dB. That's a range of 5 S-units.

Radio is by far the most inexact of all the engineering sciences - if that name is deserved. Anything can be made to work. And it's all great fun, eh?

Reg, G4FGQ

2188. autek wm-2 manual

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 02:15:41 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0301291815.576cb848@posting.google.com>
Source record: 125877

I've recently aquired a used Autek WM-1 swr/pwr meter. I'd like a copy of the owner's manual or instruction sheet. I'm willing to reimburse for copying/postage fees......or perhaps someone could scan it and send it via email? Any help will be appreciated. Thanks in advance.

Rich K2CPE
rckchp@comcast.net

2189. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 02:17:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E388B1F.9070009@ieee.org>
Source record: 125878

Roy Lewallen wrote:
> I haven't yet taken a close enough look at either your model or Steve's
> to see if either fits.

I don't know how people got the impression that I invented something new
and different. I have no model of my own. I assumed the methods and boundary
conditions of Steve's model and found some conservation of energy violations.
I definitely have NOT invented anything new. In fact, I was taught most of
this stuff at Texas A&M during the 50's by a professor who is dead by now.
Again, I don't have a model of my own. The Melles-Griot web page explains
exactly how Dr. Best went wrong. Their model is my model and is NOT a new
model of anything.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2190. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 02:26:30 UTC
From: Joe Bento <joseph-nospam-@kirtland.com>
Message-ID: <f83h3vck0p4qt5jkak4eug6qvvk5rvic9a@4ax.com>
Source record: 125879
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Tue, 28 Jan 2003 00:25:26 -0500, "Michael A. Terrell"
<terrell@mfi.net> wrote:

>Scott wrote:
>>
>> Technician wrote:
>> >
>> >
>> > No offence, but if you are going to run DOS programs, my opinion is that
>> > you should at least know how to work at a prompt, regardless of the
>> > programs need for it.
>>
>> I was building XT's back in the day.
>
> Real geeks format hard drives with debug :)

oh yes...

wasn't it something like:

C:>DEBUG

-
-g=c800:5

It's been a VERY LONG time since I did that!

Joe

Remove the -nospam- to send e-mail
joseph-nospam-@kirtland.com

2191. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 02:28:56 UTC
From: richardharrison@webtv.net
Message-ID: <9072-3E388DE8-54@storefull-2311.public.lawson.webtv.net>
Source record: 125881

Roy Lewallen wrote:
"The power at any point on a transmission line is a sinusoidal function of twice the frequency of the voltage or current."

Interesting facts but not particularly relevant to line solutions. The volts and amps on the line are sinusoidal. They have rms values equivalent to d-c. A light bulb for practical purposes produces the same heat and light when excited by either a-c or d-c. Instantaneous values have little practical use if we are lucky. As an a-c cycle has two alternations and each produces a pulse of power in our bulb, power pulses have twice the frequency of the a-c voltage and its related current. To be complete, I`ll say that r-f is high-frequency a-c.

Power is not an rms value. Power is an average value. We usually need not be concerned with the number of power pulses per cycle as we are averaging anyway.

Power by Cecil`s IEEE dictionary is the rate of energy transfer or energy transformation. This is valid for average a-c power, same as for d-c.

Assuming a line with negligible loss, for convenience, the power from a single source in a sole direction is the same anywhere in the line, on average.

Stripping a problem to its bare essentials is the easiest way I`ve found to solve a problem. Unecessary complication never helped me.

Best regards, Richard Harrison, KB5WZI

2192. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 02:33:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E388F06.2040802@ieee.org>
Source record: 125880

Walter Maxwell wrote:
> I agree that the superposition theory is correct if there are two separate
> voltage sources--two generators. I do not agree that the theory is correct
> when there is only one source, the RF amplifier.

This is a point of disagreement between W2DU and me. When I factor in the destructive and constructive interference, superposition of forward and reflected power makes sense to me. In fact, I was surprised at how elegant and symmetrical the final solution really is. A rebuttal of the QEX article already exists on my web page. I will have a graphic there in the next couple of days which will illustrate the perfect symmetry of an impedance discontinuity.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2193. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:25:31 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E389AEB.8061AEF5@shaw.ca>
Source record: 125882

Reg Edwards wrote:
>
> > I know it is difficult to visualise Reg but what do you think as to
> > what
> > the take off angle will show and it's affect on efficiency for sky
> > wave use?
> ============================
>
> Art,
>
> When predicting ionospheric or groundwave propagation I prefer initial
> information about my antenna to be in the form of an easy-to-understand
> 3-dimensional radiation pattern in the presence of a 'perfect' ground.

(snipped for brevity)

>
> Radio is by far the most inexact of all the engineering sciences - if that
> name is deserved. Anything can be made to work. And it's all great fun, eh?
> ---
> Reg, G4FGQ

Boy! Would we be lost without trimmer caps, and permeability tuned coils,
and experimenters who make things work despite the inexactitudes!

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit a very special personal website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

2194. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:25:45 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E389AFA.7E69E8FF@shaw.ca>
Source record: 125883

Reg Edwards wrote:
>
> > I know it is difficult to visualise Reg but what do you think as to
> > what
> > the take off angle will show and it's affect on efficiency for sky
> > wave use?
> ============================
>
> Art,
>
> When predicting ionospheric or groundwave propagation I prefer initial
> information about my antenna to be in the form of an easy-to-understand
> 3-dimensional radiation pattern in the presence of a 'perfect' ground.

(snipped for brevity)

>
> Radio is by far the most inexact of all the engineering sciences - if that
> name is deserved. Anything can be made to work. And it's all great fun, eh?
> ---
> Reg, G4FGQ

Boy! Would we be lost without trimmer caps, and permeability tuned coils,
and experimenters who make things work despite the inexactitudes!

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my personal website at http://members.shaw.ca/finkirv/
Visit a very special personal website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

2195. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:27:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E389B84.7060508@ieee.org>
Source record: 125884

OC_CAM's Razor wrote:
> When I factor in the
> destructive and constructive interference, superposition of forward and
> reflected power makes sense to me.

Of course, I meant superposition of the voltages and currents associated
with the forward and reflected waves makes sense to me. Sorry.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2196. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:34:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jh6h3v4nvapfl47mccck3o2e2s78iebm5q@4ax.com>
Source record: 125885

On Wed, 29 Jan 2003 20:06:49 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Roy Lewallen wrote:
>> Is your physics book speaking of energy that's moving back and forth in
>> a sinusoidal fashion at an RF rate?
>
>It doesn't differentiate between different kinds of energy.

Hi Cecil,

That's too bad. Most works that purport to teach Physics will at
least cover two: Potential Energy and Kinetic Energy.

Cecil, you stumble over pebbles like this too often. You cry about ad
hominem when you offer such temptations open to interpretation: do you
really have a handle on the subject, or you just shinin' us on?
Frankly, your defense is shallow when you culture this style - and
worse, you admit you do a poor job of it.

73's
Richard Clark, KB7QHC

2197. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:44:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E389FB5.4010107@ieee.org>
Source record: 125886

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>
>>Roy Lewallen wrote:
>>>Is your physics book speaking of energy that's moving back and forth in
>>>a sinusoidal fashion at an RF rate?
>>
>>It doesn't differentiate between different kinds of energy.
>
> That's too bad. Most works that purport to teach Physics will at
> least cover two: Potential Energy and Kinetic Energy.

You forgot the smiley face, Richard. The context is "vector energy"
Vs "scalar energy". My physics book doesn't handle energy as a vector.
It says, "Examples of scalars are energy, mass, volume, temperature,
time, length of a string, and size of an angle."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2198. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:49:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3h85jrfre2mc5@corp.supernews.com>
Source record: 125887

I think the whole point is trying to decide which complications are necessary and which aren't. When analyzing voltage and current waves in a transmission lines, we don't simply take their average or RMS values and ignore the fact that they're sinusoids (although someone using phasors who doesn't understand what a phasor is might be misled into thinking so). So what justifies ignoring the time-varying nature of the power waveform?

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:
> "The power at any point on a transmission line is a sinusoidal function
> of twice the frequency of the voltage or current."
>
> Interesting facts but not particularly relevant to line solutions. The
> volts and amps on the line are sinusoidal. They have rms values
> equivalent to d-c. A light bulb for practical purposes produces the same
> heat and light when excited by either a-c or d-c. Instantaneous values
> have little practical use if we are lucky. As an a-c cycle has two
> alternations and each produces a pulse of power in our bulb, power
> pulses have twice the frequency of the a-c voltage and its related
> current. To be complete, I`ll say that r-f is high-frequency a-c.
>
> Power is not an rms value. Power is an average value. We usually need
> not be concerned with the number of power pulses per cycle as we are
> averaging anyway.
>
> Power by Cecil`s IEEE dictionary is the rate of energy transfer or
> energy transformation. This is valid for average a-c power, same as for
> d-c.
>
> Assuming a line with negligible loss, for convenience, the power from a
> single source in a sole direction is the same anywhere in the line, on
> average.
>
> Stripping a problem to its bare essentials is the easiest way I`ve found
> to solve a problem. Unecessary complication never helped me.
>
> Best regards, Richard Harrison, KB5WZI
>

2199. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:49:53 UTC
From: Ken Bessler <kg0wx@yahoo.com>
Message-ID: <Bh1_9.47297$Vh.30252@news2.central.cox.net>
Source record: 125888
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

"Joe Bento" <joseph-nospam-@kirtland.com> wrote in message
news:f83h3vck0p4qt5jkak4eug6qvvk5rvic9a@4ax.com...
> On Tue, 28 Jan 2003 00:25:26 -0500, "Michael A. Terrell"
> <terrell@mfi.net> wrote:
>
> oh yes...
>
> wasn't it something like:
>
> C:>DEBUG
>

Well duh, what else would it be? Sheesh....

C:\prompt pg$t

2200. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:51:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <sn7h3vcj1ep0utlb39s2nfp3vu2knj2rf0@4ax.com>
Source record: 125889

On Wed, 29 Jan 2003 20:33:42 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> I agree that the superposition theory is correct if there are two separate
>> voltage sources--two generators. I do not agree that the theory is correct
>> when there is only one source, the RF amplifier.
>
>This is a point of disagreement between W2DU and me. When I factor in the
>destructive and constructive interference, superposition of forward and
>reflected power makes sense to me. In fact, I was surprised at how elegant
>and symmetrical the final solution really is. A rebuttal of the QEX article
>already exists on my web page. I will have a graphic there in the next
>couple of days which will illustrate the perfect symmetry of an impedance
>discontinuity.

Hi Cecil,

I will relieve you of the stress of waiting my comments and fulfill
your manifest prophecy for me:

You managed to use "Dr. Best" 39 times in the document;
the word "power" was used 59 times.

The first would be a red flag for any editor, even a comatose one, to
drop this epistle from publication. Not for personalities, your
content hasn't enough sizzle to warm that up for sales. You may think
you are the tiger, but it reads meow. No, simply because this red
flag is redundant to the second metric above which reveals death in
writing: repetition. To put it bluntly, you wrote a sleeping pill.

73's
Richard Clark, KB7QHC

2201. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:55:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3h8hfbgm8mt7e@corp.supernews.com>
Source record: 125890

And, actually, the energy in any line not terminated in its characteristic impedance alternates between being moved and being stored, i.e., the power is one direction for a while, zero for a while, and in the other direction for a while, each cycle. This is analogous to a transfer of energy between potential and kinetic, although I'm not on firm enough theoretical ground to declare it so. If the line is open, short, or terminated in a pure reactance, all the energy in the line alternates between being moved and statically stored, and none enters or exits the line.

It's hard to see how a model that ignores this can have a very close relationship to reality.

Roy Lewallen, W7EL

Richard Clark wrote:
> On Wed, 29 Jan 2003 20:06:49 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Roy Lewallen wrote:
>>
>>>Is your physics book speaking of energy that's moving back and forth in
>>>a sinusoidal fashion at an RF rate?
>>
>>It doesn't differentiate between different kinds of energy.
>
>
> Hi Cecil,
>
> That's too bad. Most works that purport to teach Physics will at
> least cover two: Potential Energy and Kinetic Energy.
>
> Cecil, you stumble over pebbles like this too often. You cry about ad
> hominem when you offer such temptations open to interpretation: do you
> really have a handle on the subject, or you just shinin' us on?
> Frankly, your defense is shallow when you culture this style - and
> worse, you admit you do a poor job of it.
>
> 73's
> Richard Clark, KB7QHC

2202. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 03:59:21 UTC
From: richardharrison@webtv.net
Message-ID: <7410-3E38A319-101@storefull-2316.public.lawson.webtv.net>
Source record: 125891

Art, KB9MZ wrote:
"Say we have a collinear array---."

Kink, Mimno, and Wing have written "Transmission lines and Wave Guides". It includes a Section 40 on page 189 by Ronold W.P. King on: "Distant Fields of Collinear Arrangements of Antennas: Vertical Antennas over the Earth; Collinear Array".

It is a little involved, but most of your answers are there.

Best regards, Richard Harrison, KB5WZI

2203. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 04:13:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E38A658.7060304@ieee.org>
Source record: 125892

Richard Clark wrote:
> I will relieve you of the stress of waiting my comments and fulfill
> your manifest prophecy for me:
>
> You managed to use "Dr. Best" 39 times in the document;
> the word "power" was used 59 times.
>
> The first would be a red flag for any editor, even a comatose one, to
> drop this epistle from publication.

Uhhhhhhhh Richard, I haven't posted my article to my web page yet.
I doubt that any editor has ever seen my web page. Please stop jumping
to conclusions.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2204. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 04:20:03 UTC
From: tdonaly@aol.com
Message-ID: <20030129232003.21241.00000335@mb-mm.aol.com>
Source record: 125893

Cecil wrote,
>
>You forgot the smiley face, Richard. The context is "vector energy"
>Vs "scalar energy". My physics book doesn't handle energy as a vector.
>It says, "Examples of scalars are energy, mass, volume, temperature,
>time, length of a string, and size of an angle."
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
I was always under the impression the Poynting Vector
was a vector.
73,
Tom Donaly, KA6RUH

2205. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 04:22:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E38A88D.4050309@ieee.org>
Source record: 125894

Roy Lewallen wrote:
> And, actually, the energy in any line not terminated in its
> characteristic impedance alternates between being moved and being
> stored, i.e., the power is one direction for a while, zero for a while,
> and in the other direction for a while, each cycle. This is analogous to
> a transfer of energy between potential and kinetic, although I'm not on
> firm enough theoretical ground to declare it so. If the line is open,
> short, or terminated in a pure reactance, all the energy in the line
> alternates between being moved and statically stored, and none enters or
> exits the line.
>
> It's hard to see how a model that ignores this can have a very close
> relationship to reality.

If one knows what they are doing with phasors, all the above is taken into account. Given some starting reference, a phasor diagram is a snapshot of the system at a certain point in the cycle. When I look at a phasor diagram drawn on a sheet of paper, I am completely aware of the e^(j*omega*t) aspect of the phasors.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2206. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 04:27:21 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E38A9A9.5060407@ieee.org>
Source record: 125896

Tdonaly wrote:
> Cecil wrote,
>
>>You forgot the smiley face, Richard. The context is "vector energy"
>>Vs "scalar energy". My physics book doesn't handle energy as a vector.
>>It says, "Examples of scalars are energy, mass, volume, temperature,
>>time, length of a string, and size of an angle."
>
> I was always under the impression the Poynting Vector
> was a vector.

:-) My Shortley-Williams never heard of the Poynting Vector. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2207. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 04:29:35 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <0yidnZM9dve0N6WjXTWcoQ@comcast.com>
Source record: 125895
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Joe Bento wrote:
> C:>DEBUG
>
> -
> -g=c800:5
>
> It's been a VERY LONG time since I did that!

What happened if your supplier slipped you some DTC's?

2208. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 04:31:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <miah3v486od4despjs522frnt40opdh3ai@4ax.com>
Source record: 125897

On Wed, 29 Jan 2003 20:28:56 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Power is not an rms value. Power is an average value.

root MEAN square, or square root of the MEAN of the squares is an
average value.

> We usually need
>not be concerned with the number of power pulses per cycle as we are
>averaging anyway.

Hi Richard,

Which is only true of a sinusoid. Cecil has diverged from that to
include modulation in his discussion, so when responding to him, we
must be more general in treatments. We play at the transient end of
the pool, so shape and number have a material influence on the outcome
of measurements. Lastly, there is no error in using the general form,
even when the specific offers the opportunity of speed or specialized
units (it is transparent to the outcome which math is employed).

73's
Richard Clark, KB7QHC

2209. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:03:56 UTC
From: richardharrison@webtv.net
Message-ID: <24457-3E38B23C-124@storefull-2315.public.lawson.webtv.net>
Source record: 125898

Roy Lewallen wrote:
"---we don`t simply take their average or RMS values and ignore the fact they`re sinusoids (although someone using phasors who doesn`t understand what a phasor is might be mislead into thinking so)."

Well, I don`t want to draw sinusoids to scale and use graphical methods to solve practical problems (except for a Smith chart without the sinusoid). We have higher level symbols to manipulate for easier solutions.

This thread is about transmission lines and waves traveling on them. All we need for analysis is phasors which are easier to handle than the sinusoids themselves.

I can think of no justification for fretting about the time-varying nature of the power waveform. We are interested in the forward and reflected wattmeter indications, not the number of pulses causing those readings. We use a different instrument to count events such as a pulse.

Best regards, Richard Harrison, KB5WZI

2210. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:15:10 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e38b608_3@news1.prserv.net>
Source record: 125900
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

Trunked systems are designed much like cellular systems, each transmitter
covers only a small area. Then, the frequencies are reused. And, if the
coverage area is well defined, the nearer sites may well have directional
antennas aimed away from you.

--
Crazy George
Remove NO and SPAM from return address
"Andy KC2SSB" <nospam@nospam.com> wrote in message
news:di0g3v0v28u1ju91kfoa7ojjrob0qs4ef5@4ax.com...
> On 29 Jan 2003 07:25:26 -0800, remove_ok1sip@atlas.cz (OK1SIP) wrote:
>
> >is the trunked system an analog one and working on fixed frequencies ?
> >If it uses the spread-spectrum technology, it appears as slight noise
> >on your scanner. If it uses digitized speech, it appears as QRM of
> >some sort.
>
> it's an analog system on about 15 frequencies or so. The scanner is
> set up to properly receive the system. I currently monitor another
> more local 500 mhz trunked system.
>
> Why is it that trunked systems apparently have shorter range than
> standard systems? The other transmissions that I've heard from the
> same place are repeaters in the 140 and 160 mhz ranges and they come
> in strong. Why wouldn't a trunked system act the same way? I
> understand that 400 mhz has shorter range, but I can hear a 400 mhz
> standard system (medic dispatch frequencies in the next county up)
> that is located about 30 miles north of me with the antenna on the
> back of the scanner.
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

2211. Re: Discone icing

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:16:44 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e38b609_3@news1.prserv.net>
Source record: 125901

I saw a pitcher on the T and V where the waves were feeezin up around Boston
last week.

--
Crazy George
Remove NO and SPAM from return address
"Michalkun" <no.spam@nospam.com> wrote in message
news:Xns931267B6EF57Emichalkunyahoocom@128.233.3.7...
> My dicone got iced. Will it affect it's performance or do waves go easily
> through ice?

2212. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:16:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3hda2ev3oqh82@corp.supernews.com>
Source record: 125899

Um, if you know what you're doing with phasors, you realize that when you multiply voltage and current phasors to get power, you don't get a phasor. (At least not at the same frequency as the V and I phasors, so it can't be used in mixed calculations.) But it's still a time-varying function. The only rigorous way I know of to make the calculation of power is to multiply the time v and i functions themselves. That's how it's done in the textbooks I have, and for good reason. The result of multiplying those time functions is the time function of power.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> And, actually, the energy in any line not terminated in its
>> characteristic impedance alternates between being moved and being
>> stored, i.e., the power is one direction for a while, zero for a
>> while, and in the other direction for a while, each cycle. This is
>> analogous to a transfer of energy between potential and kinetic,
>> although I'm not on firm enough theoretical ground to declare it so.
>> If the line is open, short, or terminated in a pure reactance, all the
>> energy in the line alternates between being moved and statically
>> stored, and none enters or exits the line.
>>
>> It's hard to see how a model that ignores this can have a very close
>> relationship to reality.
>
>
> If one knows what they are doing with phasors, all the above is taken into
> account. Given some starting reference, a phasor diagram is a snapshot of
> the system at a certain point in the cycle. When I look at a phasor diagram
> drawn on a sheet of paper, I am completely aware of the e^(j*omega*t)
> aspect
> of the phasors.

2213. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:25:23 UTC
From: richardharrison@webtv.net
Message-ID: <24457-3E38B743-127@storefull-2315.public.lawson.webtv.net>
Source record: 125904

Roy Lewallen wrote:
"---the power is one direction for a while, zero for a while, and in the other direction for a while each cycle."

Not exactly. On the positive alternation, we have a positive voltage and a positive current. Power is their product, a positive value.

On the negative alternation, the down direction, not the up direction, we have a negative voltage and also a negative current. Power is their product. A negative times a negative gives a positive value for the power pulse. If we have a symmetrical waveform, all the pulses in all the alternations are the same and they are all positive. Their average is not zero nor is it discontinuous.

Best regards, Richard Harrison, KB5WZI

2214. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:35:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4nbh3vsoueei1n1jebl6rtd9rdebda6lc3@4ax.com>
Source record: 125902

On Wed, 29 Jan 2003 21:44:53 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>
>>>It doesn't differentiate between different kinds of energy.
>>
>> That's too bad. Most works that purport to teach Physics will at
>> least cover two: Potential Energy and Kinetic Energy.
>

Hi Cecil,

Another observation from Feynman's "Lectures on Physics,":
Chapter 4, Conservation of Energy
"Conservation of energy can be understood only if
we have the formula for all of its forms."
This is found in his discussion of Potential Energy which is followed by his discussion of Kinetic Energy. The conservation of energy is incumbent upon having BOTH kinds known and directly expressed. Your text is seriously in error if it omits this balance. We have covered this problem in the past, Cecil, and your source contains errors in contrast to vector conventions in place for the last 40 years.

Kinetic Energy contains a vector for the brain-dead obvious motion (which is sufficient, but not a complete analysis); and Potential Energy contains a vector to the reference to which the Potential is related - this is hugely obvious in simply saying +5 volts instead of -5 volts.

Two distinct kinds of Energy: The Potential Energy for Newton's apple has a vector straight down called gravity. Gravity is stated in terms of distance per timeï¿½, a vector. The Kinetic Energy for Newton's apple was also straight down in describing its motion, a vector, which balances the remaining Potential Energy at every quantum step in the fall.
conservation of Energy = PE + KE
conservation of Energy = vector + vector

Cecil, more pebbles are breaking your stride. This still raises the question: do you really have a handle on the subject, or you just shinin' us on? Frankly, your defense is shallow when you culture this style - and worse, you admit you do a poor job of it.

73's
Richard Clark, KB7QHC

2215. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:44:46 UTC
From: <>
Message-ID: <iZ2_9.31316$A%3.394197@ord-read.news.verio.net>
Source record: 125903
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <wSmdne3Pd9dwZqijXTWc3Q@comcast.com>,
Scott <"remove \"!t\" to reply"> wrote:
>
>
>Robert Bonomi wrote:
>>
>> C:\>
>> C:\DOS>
>> C:\DOS\RUN>
>> RUN \DOS\RUN
>>
>> with apologies to Dick and Jane
>
>
>Run where? DOS is single-tasking. It can't think ahead.

"Run" as in "execute", silly.

Back in those days, there were several programming 'languages' that
"compiled" the source code in to a compact representation, and which
required a "run-time interpreter" to actually execute it. This provided
for 'hardware independance, because you could move the "compiled" programs
to any system where the 'run-time interpreter' had been implemented.

A couple of the better-known examples of this approach were "Business Basic",
and "dBase".

Both of those languages provided a MS-DOS program called "RUN.EXE" which _was_
the "run-time interpreter". You really _did_ do things like "run invoice.prg".

>Remember the big upgrade with WIN95? Being able to
>download a file and send it straight to the floppy drive!

I could do that under DOS 1.1, using the KERMIT comm. program.

I even did it on machines that _did_not_have_ a hard-drive. Sometimes I was
writing to the 'current' floppy, sometimes to the 'other' one (when the
machine was "loaded" enough to have *TWO* floppies, that is. yeah, once
upon a time, that _was_ a "high end" machine :)

I had to write a special program to do it on a "PC jr", because _that_
box was deliberately crippled and couldn't service the serial-port
interrupe _while_ writing a sector to disk. Thus, had to do an [XOFF]
before issuing the disk write, and an [XON] after it finished.

2216. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:51:16 UTC
From: <>
Message-ID: <o33_9.31317$A%3.394128@ord-read.news.verio.net>
Source record: 125905
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <MPG.18a0c04b2ea7914498974e@news.megalink.net>,
Technician <travis57@megalink.net> wrote:
>In article <wSmdne3Pd9dwZqijXTWc3Q@comcast.com>, scott@scotti.sh!t
>says...
>>
>>
>> Robert Bonomi wrote:
>> >
>> > C:\>
>> > C:\DOS>
>> > C:\DOS\RUN>
>> > RUN \DOS\RUN
>> >
>> > with apologies to Dick and Jane
>>
>>
>> Run where? DOS is single-tasking. It can't think ahead.
>> Remember the big upgrade with WIN95? Being able to
>> download a file and send it straight to the floppy drive!
>>
>
>Remember when customizing your computing environment meant just changing
>the prompt?
>I always thought it funny to give it a Unix style prompt.
>"prompt $$"
>or for the current Linux Bash prompt
>"prompt [root@host.net $P] $$"

The _really_ funny one was to, in a computer *store* -- praticularly one
like the computer department of a Sears (where the help usually was *not*
terribly computer-literate -- set the prompt to the 'screen erase' sequence,
after making sure that 'ansi.sys' was loaded.

It was simply _amazing_ how many supposedly "knowledgable" salespersons were
utterly unable to cope with, and/or "fix" that particular "gotcha".

2217. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:54:25 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <NkmdnRGAqdKWI6WjXTWcrg@comcast.com>
Source record: 125906
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Robert Bonomi wrote:
>
> The _really_ funny one was to, in a computer *store* -- praticularly one
> like the computer department of a Sears (where the help usually was *not*
> terribly computer-literate -- set the prompt to the 'screen erase' sequence,
> after making sure that 'ansi.sys' was loaded.
>
> It was simply _amazing_ how many supposedly "knowledgable" salespersons were
> utterly unable to cope with, and/or "fix" that particular "gotcha".

Was that \"(ESC)[2J\" ?

2218. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:56:21 UTC
From: Joe Bento <joseph-nospam-@kirtland.com>
Message-ID: <vleh3v4pkltmigrcial85u66v01ndfimdl@4ax.com>
Source record: 125908
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Wed, 29 Jan 2003 23:29:35 -0500, Scott <scott@scotti.sh!t> wrote:

>
>
>Joe Bento wrote:
>> C:>DEBUG
>>
>> -
>> -g=c800:5
>>
>> It's been a VERY LONG time since I did that!
>
>
>What happened if your supplier slipped you some DTC's?

I never used a DTC drive. I looked through an old reference just now though, and it looks as though DTC used the same command as Western Digital.

IIRC, the original 10meg drive that came with my XT used the command g=c800:1

It's been too long that I don't recall the difference between the :1 or :5 part of the command, and can now find no reference to the :1.

I still remember "upgrading" to a 30meg drive that cost me a fortune (for me) of $300 at the time, and hearing the steady click, click... as the stepper motor slowly rotated during the low-level format process.

Joe

Remove the -nospam- to send e-mail
joseph-nospam-@kirtland.com

2219. Re: RE COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 05:56:40 UTC
From: <>
Message-ID: <s83_9.31318$A%3.394286@ord-read.news.verio.net>
Source record: 125907
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

I have a better idea. in three parts:
1) why don't you *stop* posting in HTML, since it just makes your posts
an average of *FOUR*TIMES* larger than they need to be?
2) recommend you learn to use the 'killfile' capability of your newsreader,
so you can pre-emptively 'ignore' threads and authors that bore you.
3) recommend that the rest of the world consider using _their_ killfile
capabilities to 'ignore' those with their nose so bent out of shape
about a little humor.

I'll start.

plonk

(that's the sound of an author's name hitting the the 'kill file', Murray)

In article <3E374473.D8495B00@qth.com>,
Murray Neece <radioranch@qth.com> wrote:
>-=-=-=-=-=-
>
>I have an idea, why not just put all these guys address into the big "spammers"
>lists til they quit posting to rec.radio.swap and other groups that just
>dont need
>this anymore...anybody like the idea? Im real tired of seeing off topic in
>rec.radio.swap where it doesnt belong...R U? Murray
>
>Robert Bonomi wrote:
>
>> In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
>> Scott <"remove \"!t\" to reply"> wrote:
>> >
>> >
>> >
>> >> > I am looking for a CD of Windows 95 for my shack computer so I
>can run some
>> >> > DOS programs.
>> >> > THANKS
>> >> >
>> >> >
>> >> >
>> >>
>> >> If you want to run dos programs, why not use dos?
>> >
>> >
>> >Because if the machine came up and on the screen was:

>> >
>> >C:\>
>>
>> C:\>
>> C:\DOS>
>> C:\DOS\RUN>
>> RUN \DOS\RUN
>>
>> with apologies to Dick and Jane
>
>-=-=-=-=-=-
>[Attachment type=text/x-vcard, name=radioranch.vcf]
>-=-=-=-=-=-

2220. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 06:01:16 UTC
From: <>
Message-ID: <Mc3_9.31319$A%3.394308@ord-read.news.verio.net>
Source record: 125909
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <3tce3v88kdubc5ik82nqeosk5vcdfguogr@4ax.com>,
Smokey <smokey@truck.stop> wrote:
>On Sun, 26 Jan 2003 16:18:50 -0500, Technician <travis57@megalink.net>
>wrote:
>
>>In article <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>,
>>radiovintage@hotmail.com says...
>>> I am looking for a CD of Windows 95 for my shack computer so I can run some
>>> DOS programs.
>>> THANKS
>>>
>>>
>>>
>>
>>If you want to run dos programs, why noy use dos?
>>
>>~Travis
>
>If he's using Windows 95 his operating system is DOS. Windows 95 is
>not an operating system.

Neither is MS-DOS (it's merely a 'glorified progam loader').

It is said:

"Windows is a 32-bit graphical interface,
for a 16-bit extension,
to an 8-bit operating system,
written for a 4-bit processor,
by a 2-bit company,
without 1 bit of skill in what they were doing."

Methinks the description is somewhat _generous_.

2221. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 06:04:21 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <D-ecnciv0t3CXaWjXTWcog@comcast.com>
Source record: 125910
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Robert Bonomi wrote:

> I even did it on machines that _did_not_have_ a hard-drive. Sometimes I was
> writing to the 'current' floppy, sometimes to the 'other' one (when the
> machine was "loaded" enough to have *TWO* floppies, that is. yeah, once
> upon a time, that _was_ a "high end" machine :)

I had the loaded XT with 2 360K floppies, 20MB ST225, multi I/O card,
CGA adapter and CGA monitor. I had a 286-12 with EGA and a 40MB ST4051.
I had a 386DX/40 with 2 Maxtor full height 140MB XT1140 drives. The
damn MFM cables would get flaky over time. My first IDE drive bought
around that time was a 1.2GB that cost $250. Being in the business,
I get good stuff at the right price. No Pavilions or emachines or
Dells or Gateways or Aptivas for me. You can buy that sh!t. I won't.

I'm ending this crossposted thread here. Have a gooder.

2222. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 06:10:47 UTC
From: <>
Message-ID: <HI3_9.31321$A%3.394224@ord-read.news.verio.net>
Source record: 125911
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <f83h3vck0p4qt5jkak4eug6qvvk5rvic9a@4ax.com>,
Joe Bento <joseph-nospam-@kirtland.com> wrote:
>On Tue, 28 Jan 2003 00:25:26 -0500, "Michael A. Terrell"
><terrell@mfi.net> wrote:
>
[[.. munch ..]]
>>
>> Real geeks format hard drives with debug :)
>
>oh yes...
>
>wasn't it something like:
>
>C:>DEBUG
>
>-
>-g=c800:5
>

Some controllers had "advanced" utilities accessible via

-g=c800:8

and the "c800' wasn't necessarily reliable. it could be "whatever"
the base address for the on-board ROM was set as. usually via
jumpers, so you could have more than one controller in the system.

2223. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 06:19:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3hh01nbnmbm0a@corp.supernews.com>
Source record: 125912

Richard Harrison wrote:
> Roy Lewallen wrote:
> "---the power is one direction for a while, zero for a while, and in the
> other direction for a while each cycle."
>
> Not exactly. On the positive alternation, we have a positive voltage and
> a positive current. Power is their product, a positive value.
>
> On the negative alternation, the down direction, not the up direction,
> we have a negative voltage and also a negative current. Power is their
> product. A negative times a negative gives a positive value for the
> power pulse. If we have a symmetrical waveform, all the pulses in all
> the alternations are the same and they are all positive. Their average
> is not zero nor is it discontinuous.
>
> Best regards, Richard Harrison, KB5WZI
>

This is true only when the voltage and current are in phase. And they're only in phase if the load is matched to the Z0 of the line (or at particular points along the line otherwise). I described the various possibilities some time ago, but I see it's time to do it again.

If the voltage and current are in quadrature (which they are at all points along a line if the line is open, shorted, or terminated with a pure impedance), the product of the V and I make a sine wave centered around zero. It's positive for half the cycle and negative for half the cycle. In this case, energy is moved back and forth, but there's no net power flow. The power goes one way for half the cycle and equally the other way for the other half -- the average is zero. This should be expected -- no power enters or leaves the line in steady state with these line terminations.

If the voltage and current are in phase (which they are at all points along a line only if it's terminated in its characteristic impedance), the product of V and I make a sine wave with an offset equal to half the peak-to-peak sine wave amplitude. It just keeps the sine wave all positive (or all negative, depending on how you've defined positive V and I). The offset is the average power, and the sine wave extends from zero to twice the average power. This is the special case you've described. In this case, power does always go in one direction -- toward the load -- as you've described. Again this should be expected, with a matched termination. Voltage and current 180 degrees out of phase amount to the same thing, but with power in the other direction.

In all other cases of phase angle, the product of V and I make a sine wave with an offset that's less than half the peak to peak value. This means that the power goes one way for more than half the cycle, and the other way for the remainder of the cycle. If the load has a finite resistance but isn't purely resistive and matched, this phase relationship will occur everywhere along the line except at a point each quarter wavelength along the line where V and I are in phase. The situation is somewhat analogous to a lossy tank circuit in which the circulating energy is greater than the energy delivered to the resistance each cycle. Energy is moved back and forth, and some escapes to the load each cycle.

It's not hard to do the multiplication of V and I at various phase angles to verify that this is correct. Nor is it difficult to calculate the voltage and current at any point along a transmission line, to see that they're in phase only if the line is matched, or at distinct points each each quarter wavelength along the line.

Roy Lewallen, W7EL

2224. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 06:24:38 UTC
From: <>
Message-ID: <Gy3_9.31322$A%3.394177@ord-read.news.verio.net>
Source record: 125913
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <vleh3v4pkltmigrcial85u66v01ndfimdl@4ax.com>,
Joe Bento <joseph-nospam-@kirtland.com> wrote:
>On Wed, 29 Jan 2003 23:29:35 -0500, Scott <scott@scotti.sh!t> wrote:
>
>>
>>
>>Joe Bento wrote:
>>> C:>DEBUG
>>>
>>> -
>>> -g=c800:5
>>>
>>> It's been a VERY LONG time since I did that!
>>
>>
>>What happened if your supplier slipped you some DTC's?
>
>I never used a DTC drive. I looked through an old reference just now
>though, and it looks as though DTC used the same command as Western
>Digital.
>
>IIRC, the original 10meg drive that came with my XT used the command
>g=c800:1

impossible. the first 5 bytes of the ROM were 'reserved'.

the first 2 are an "identifying signature" for the 'start of ROM'
hex "55 AA"
the 3rd byte is the size of the ROM in 'paragraphs'
the 4th and 5th are a 'short jump' instruction to the start of the
ROM 'power-up initialization' code.

The "POST" bios code scans all 'high' memory, looking for the 'signature'
on paragraph boundaries. when it finds one, it a) does a 'far call' to
{base_address}:3, and b) when that returns, skips over the declared size
of the ROM, before continuing the search for more 'signatures'.

Sometimes there were 'multiple' entry points in the ROM, usually at
3-byte intervals up from xxxx:5. I know I used some that had "advanced"
configuration stuff at xxxx:8.

>
>It's been too long that I don't recall the difference between the :1
>or :5 part of the command, and can now find no reference to the :1.

>
>I still remember "upgrading" to a 30meg drive that cost me a fortune
>(for me) of $300 at the time, and hearing the steady click, click...
>as the stepper motor slowly rotated during the low-level format
>process.
>
>
>Joe
>
>Remove the -nospam- to send e-mail
>joseph-nospam-@kirtland.com
>
>

2225. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 06:33:01 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <4ohh3vg7u38gac0sdu68qid2lsbk5fc7u7@4ax.com>
Source record: 125914
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

On Wed, 29 Jan 2003 23:15:10 -0600, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

>Trunked systems are designed much like cellular systems, each transmitter
>covers only a small area. Then, the frequencies are reused. And, if the
>coverage area is well defined, the nearer sites may well have directional
>antennas aimed away from you.

I see. Any chance that a directional antenna at my location, at the 15
feet I mentioned would help me receive this system?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2226. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 06:35:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <r4ih3v488epqav86o8j6nsrjsmgucbbgkc@4ax.com>
Source record: 125915

On Wed, 29 Jan 2003 22:13:12 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> I will relieve you of the stress of waiting my comments and fulfill
>> your manifest prophecy for me:
>>
>> You managed to use "Dr. Best" 39 times in the document;
>> the word "power" was used 59 times.
>>
>> The first would be a red flag for any editor, even a comatose one, to
>> drop this epistle from publication.
>
>Uhhhhhhhh Richard, I haven't posted my article to my web page yet.
>I doubt that any editor has ever seen my web page. Please stop jumping
>to conclusions.

http://www.qsl.net/w5dxp/waves2.htm

2227. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 06:41:30 UTC
From: <>
Message-ID: <uO3_9.31323$A%3.394012@ord-read.news.verio.net>
Source record: 125916
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

In article <NkmdnRGAqdKWI6WjXTWcrg@comcast.com>,
Scott <"remove \"!t\" to reply"> wrote:
>
>
>Robert Bonomi wrote:
>>
>> The _really_ funny one was to, in a computer *store* -- praticularly one
>> like the computer department of a Sears (where the help usually was *not*
>> terribly computer-literate -- set the prompt to the 'screen erase' sequence,
>> after making sure that 'ansi.sys' was loaded.
>>
>> It was simply _amazing_ how many supposedly "knowledgable" salespersons were
>> utterly unable to cope with, and/or "fix" that particular "gotcha".
>
>
>Was that \"(ESC)[2J\" ?

These days, "I dunno" applies. I don't keep that stuff memorized.

However, consulting my Unix 'termcap' file, it looks like the
requisite magic is:

prompt=$E[;H$E[2J

the first escape sequence 'homes' the cursor (top-left corner),
then the second one does an 'erase from cursor position to end of screen'

2228. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 07:10:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3hjubfrtu8729@corp.supernews.com>
Source record: 125917

Roy Lewallen wrote:
> . . .
> If the voltage and current are in quadrature (which they are at all
> points along a line if the line is open, shorted, or terminated with a
> pure impedance), . . .

Correction. That last word should be reactance, not impedance. I
apologize for the error.

Roy Lewallen, W7EL

2229. MFJ 1786 Magnetic Loop antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 07:20:24 UTC
From: Dirk Schuurs <pa3gwl@amsat.org>
Message-ID: <b1ajpahve2@news.hccnet.nl>
Source record: 125918

Hi,

I'm looking for a very small, but good HF-antenna.
My eye catched the MFJ 1786 Magnetic Loop antenna.

Can somebody tell me their results with this antenna.
It's for indoor or balcony use, just abt 5 meters above groundlevel.....
Other tips for good and small HF-antenna's are welcome too !

Regards,
Dirk PA3GWL

2230. V/UHF ant. placement

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 09:03:34 UTC
From: Toni - ec3dds <ec3dds@hotmail.com>
Message-ID: <psph3v44fd7h8thnuetb2ego48m75emgnd@4ax.com>
Source record: 125819

Hi,

Having moved to a new location I have to install new antennas, and I have some doubts:

For V/UHF I will put a Diamond dualband antenna (http://www.rfparts.com/diamond/base2.html). My question is that not wanting to exceed 20 feet height I can choose a short antenna -X200- on a long mast, so that the antenna is free of obstacles, or a longer antenna with more gain -X500- on a shorter mast but the bottom of which would have some obstacles around.

I think the big question here is if on this type of antennas (probably collinear) the radiation/reception occurs mainly in the bottom part or if it is evenly distributed across the entire antenna. In the first case I would prefer the small antenna on the long mast, but on the second I could use the long antenna to profit the extra gain in the directions where there are no obstacles.

I also doubt on which is the minimum distance to an HF vertical so that the horizontal radiation pattern is minimally affected (i.e. it has no "shadows") and, very important, the HF antenna is not detuned. Would 8 ft. be enough or should I try to put them further apart? I also wonder if the 17ft. antenna at an 8 ft. distance from the HF vertical can have some kind of parasitic effect on the higher bands and produce some shadows.

Thanks for answers.

Toni

2231. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 11:06:05 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <xG7_9.3696$hG6.115071@twister.southeast.rr.com>
Source record: 125820

I fail to see the difference between impedance matching and loading except
for one condition and that is when the antenna is resonant to begin with but
at some undesirable impedance that must be transformed to say 50 ohms as is
in the case of a i/2 wl antenna were several thousand ohm s has to be
matched to a coax.I also understand what you and Roy are saying but only see
it as a different perpesctive. Adding a coil tunes out capacitive reactance
in a short antenna. I see no difference in calling this matching or loading.
I prefer to use the term matching when the radiator is already resonant but
you need to change the impedance to some other resistive value. I use the
term loading when the impedance of the antenna is complex and need s to be
made purely resistive. If I had a 15 ft whip and placed an inductor at the
bottom of it to make resonate on 40M would YOU call this loading or
impedance matching?
>
>
> Jimmy,
> If the 'graphics' work correctly in this example;
>
> \|/
> | <--- antenna
> |
> ----------------- |
> Coax Feed line(----\
> ----------------- \ <---Impedance matching
> | \ coil
> ----------\
> |
> _____
> ___ <--- Ground
> _
>
>
> I make the following assumptions;
>
> A. The antenna begins at the coax's center conductor's connection
> with the top of the impedance matching coil.
>
> B. The impedance matching coil is connected between the center and
> shield conductors of the coaxial feed line.
>
> c. The bottom of the coil and shield are connected to ground.
>
> If the antenna is a 5/8 wave vertical and there is no 'loading coil'
> in it's construction, how is it's length electrically changed to 3/4

> wave length?
> 'Doc

You CHOOSE not ot view the coil as part of the antenna, it would be equally correct to view it as part of the antenna. just as much as it would be correct to view the coil in the base loaded 40M antenna I described as part of the antenna. They both do exactly the same thing. A s a matter of act I could draw a diagram of a base loaded 3/4 wl antenna and it would be exactly the same as your 5/8. Can you may a drawing of a base loaded 3/4 antenna and have it look any different from your 5/8?

2232. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 11:18:45 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <pS7_9.3721$hG6.116938@twister.southeast.rr.com>
Source record: 125821

Are you saying that if I had a 5/8 wave length radiator I could not base load it to 3/4. If I did, would not the circuit be identical to that of a 5/8 wl antenna with matching circuit.

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:rCednSQdXJMp6qWjXTWcpw@comcast.com...
> Don't think I buy that. The feedpont impedance of a 3/4 vertical (perfect
> ground) is around 35 ohms resistive, whereas the 5/8 is about 70 - J300.
> When you add an inductor to the base of a 5/8 you make the impedance 70 +
> j0., which is not the same as the 3/4 wave. Adding the coil has no effect on
> the radiation pattern. If you really want 50 ohms, you have to fudge the
> length a little.
>
> Tam/WB2TT
> "Jimmy" <Gfender@carolina.rr.com> wrote in message
> news:2hTZ9.123884$Mb.5457267@twister.southeast.rr.com...
> > Yep, 5/8 ths is not resonant, your radio will not see it as a resistive
> load
> > . to make it ressonant the 5/8 is loaded to 3/4 which is resistive and
> then
> > the feed point is attached to the loading coil at the desired
resistance,
> > usually the 50 ohm, point.
> > "'Doc" <w5lz@cwis.net> wrote in message
news:3E377E80.7F72D9D7@cwis.net...
> > >
> > >
> > > Jimmy,
> > > You want to run through that 5/8 wave really being
> > > a 6/8 wave part again? I think I may have missed something
> > > there...
> > > 'Doc
> >
> >
>
>

2233. Re: V/UHF ant. placement

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 11:46:43 UTC
From: Joe O <jenjoeo@zianet.com>
Message-ID: <3e3911a2@news.zianet.com>
Source record: 125822

Setting aside any free space analysis, I recommend that you place the
antennas where ever they are visually acceptable and sufficiently supported.
Any antenna is better than no antenna especially if you are limited to max
20 ft height.

A more important consideration is the question of RF safety. If you are
running 50 watts or less it is probably acceptable to mount the antenna
almost anywhere. Just remember it is your responsibility to comply with the
Max Exposure Limits for your station.

Joe O, KI5FJ

"Toni - ec3dds" <ec3dds@hotmail.com> wrote in message
news:psph3v44fd7h8thnuetb2ego48m75emgnd@4ax.com...
> Hi,
>
> Having moved to a new location I have to install new antennas, and I
> have some doubts:
>
> For V/UHF I will put a Diamond dualband antenna
> (http://www.rfparts.com/diamond/base2.html). My question is that not
> wanting to exceed 20 feet height I can choose a short antenna -X200-
> on a long mast, so that the antenna is free of obstacles, or a longer
> antenna with more gain -X500- on a shorter mast but the bottom of
> which would have some obstacles around.
>
> I think the big question here is if on this type of antennas (probably
> collinear) the radiation/reception occurs mainly in the bottom part or
> if it is evenly distributed across the entire antenna. In the first
> case I would prefer the small antenna on the long mast, but on the
> second I could use the long antenna to profit the extra gain in the
> directions where there are no obstacles.
>
> I also doubt on which is the minimum distance to an HF vertical so
> that the horizontal radiation pattern is minimally affected (i.e. it
> has no "shadows") and, very important, the HF antenna is not detuned.
> Would 8 ft. be enough or should I try to put them further apart? I
> also wonder if the 17ft. antenna at an 8 ft. distance from the HF
> vertical can have some kind of parasitic effect on the higher bands
> and produce some shadows.
>
> Thanks for answers.
>
> Toni

2234. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 12:14:26 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E391722.AEF393ED@cwis.net>
Source record: 125823

Jimmy,
Very simply, if the coil is 'above' the feed point
of the antenna, it's a loading coil. If it's below
the feed point of the antenna it's changing the antenna's
input impedance. There can also be a third option, where
a loding coil and impedance matching coil can be combined
at the base of an antenna. It may not be much of a distinction
to you, but where the coil is in relation to the feed point of
the antenna does make a difference. Can you see the distinction
I'm making? As to whether Roy agrees with me, or has the same
view of it, you'll have to ask him...
'Doc

2235. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 12:16:03 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <7I8_9.12492$rq4.887986@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125824

"Walter Maxwell" <w2du@iag.net> wrote in message
news:NmZZ9.3424$Wu1.252565@newsread1.prod.itd.earthlink.net...
>
> I agree that the superposition theory is correct if there are two separate
> voltage sources--two generators. I do not agree that the theory is correct
> when there is only one source, the RF amplifier. And this is the point
I've
> tried to make with you, Steve, for years on end. Your use of the theory is
> invalid. Please let me explain in detail.
>

Johnson, Skilling, Chipman, Adler, etc, etc. in every text on transmission line theory and analysis state and show mathematically that the total forward voltage and current in a transmission is found from the superposition of the individual forward voltages and currents. I agree with them.

Please present a third part reference that shows this widely accepted and used principle to be incorrect in the transient analysis of wave reflections in transmission lines.

Steve VE9SRB

2236. Re: V/UHF ant. placement

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 12:18:37 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E39181D.59B441D1@cwis.net>
Source record: 125825

Joe,
Did you notice his call sign, EC3DDS? Does
Spain have exposure regulations as we do here
in the U.S.?
'Doc

2237. I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 12:52:33 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E392011.59187D34@qth.com>
Source record: 125826
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap
Body handling: Binary attachment payload not displayed: radioranch.vcf

That YOU IDIOTS would carry this conversation on these groups indicates your disdain for any rules of decency on the groups...You and Scott should get on a chat group for socially un acceptable computer geeks and leave the radio groups alone. AMERICA unite and blast these guys at thier home email sites...PLEASE!!

Robert Bonomi wrote:

> I have a better idea. in three parts:
> 1) why don't you *stop* posting in HTML, since it just makes your posts
> an average of *FOUR*TIMES* larger than they need to be?
> 2) recommend you learn to use the 'killfile' capability of your newsreader,
> so you can pre-emptively 'ignore' threads and authors that bore you.
> 3) recommend that the rest of the world consider using _their_ killfile
> capabilities to 'ignore' those with their nose so bent out of shape
> about a little humor.
>
> I'll start.
>
> *plonk*
>
> (that's the sound of an author's name hitting the the 'kill file', Murray)
>
> In article <3E374473.D8495B00@qth.com>,
> Murray Neece <radioranch@qth.com> wrote:
> >-=-=-=-=-=-
> >
> >I have an idea, why not just put all these guys address into the big "spammers"
> >lists til they quit posting to rec.radio.swap and other groups that just
> >dont need
> >this anymore...anybody like the idea? Im real tired of seeing off topic in
> >rec.radio.swap where it doesnt belong...R U? Murray
> >
> >Robert Bonomi wrote:
> >
> >> In article <_uScnYNYh5xFA6mjXTWcoA@comcast.com>,
> >> Scott <"remove \"!t\" to reply"> wrote:
> >> >
> >> >
> >> >
> >> >> I am looking for a CD of Windows 95 for my shack computer so I
> >can run some
> >> >> DOS programs.

> >> >> > THANKS
> >> >> >
> >> >> >
> >> >> >
> >> >>
> >> >> If you want to run dos programs, why not use dos?
> >> >
> >> >
> >> >Because if the machine came up and on the screen was:
> >> >
> >> >C:\>
> >>
> >> C:\>
> >> C:\DOS>
> >> C:\DOS\RUN>
> >> RUN \DOS\RUN
> >>
> >> with apologies to Dick and Jane
> >
> >-=-=-=-=-=-
> >[Attachment type=text/x-vcard, name=radioranch.vcf]
> >-=-=-=-=-=-

[One or more binary attachments are retained only in the source text.]

2238. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 13:10:43 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <nv9_9.12525$rq4.890820@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125827

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E3803EB.5030001@ieee.org...

>
> P1 + P2 + P3 + P4 = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W

Cecil,

I've decided to stick around for a bit more. I would like to discuss your concepts a bit further and will do so without stating my opinions, agreements or disagreements. I would simply like to understand your position in greater detail.

Okay, in reference to the example in my QEX article:

In the above power equation, is it your opinion that the individual powers represent "forward traveling powers" in the transformer section?

The Zo in the transformer section is 86.603 ohms.

What is your associated forward voltage equation in the transformer section?

No explanation needed, I would just like to see the forward voltage equation.

After you answer these questions, I'll have a few more.

Thanks,

Steve VE9SRB

2239. Re: I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 13:26:06 UTC
From: Smokey <smokey@truck.stop>
Message-ID: <3e3b26e8.79491893@news.easynews.com>
Source record: 125828
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Thu, 30 Jan 2003 06:52:33 -0600, Murray Neece <radioranch@qth.com>
wrote:

>That YOU IDIOTS would carry this conversation on these groups indicates your disdain
>for any rules of decency on the groups...You and Scott should get on a chat group
>for socially un acceptable computer geeks and leave the radio groups alone. AMERICA
>unite and blast these guys at thier home email sites...PLEASE!!
>

Why is this such a problem for you? If you don't like the
subject, don't read it. No one is forcing you to read anything on
Usenet If anyone needs to be blasted, its you. Please don't post
messages with your VCF attachment, this is not a binaries news group.
By the way, you started this off topic thread. Your such an IDIOT
that you would carry on this conversation on these groups indicates
your disdain for any rules of decency on the groups.

2240. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 13:32:02 UTC
From: richardharrison@webtv.net
Message-ID: <27046-3E392952-134@storefull-2314.public.lawson.webtv.net>
Source record: 125832

Roy Lewallen wrote:
"This is true only when the voltage and current are in phase. And they`re only in phase if the load is matched to the Zo of the line---."

Fortunately, voltage and current in each direction on the line are in-phase everywhere along a good transmission line. The line is an enforcer. Current flow is instant and in-synch with ihe applied voltage. Same is true for the reflection from a mis-matched load.

You would have no use for a directional wattmeter that only worked on matched lines.

Again, I`ll quote from the Bird Model 43 Instruction Book, page 4:
"a. The Forward Wave travels (and its power flows) from the source to the load. It has an RF Voltage Ef and current If in phase, with Ef / If = Zo.

b. The Reflected Wave originates by reflection at the load, travels (amd its power flowes) from the load back to the source and also has an RF voltage Er and current Ir, in phase, with Er / Ir = Zo.

c. Note that each component wave is mathematically simple, and is completely described by a single figure for power for instance:

Wf = Watts Forward = Ef^2 / Zo = If^2 Zo = Ef(If)

Wr = Watts Reflected = Er^2 / Zo = Ir^2 Zo = Er(Ir)

Zo is the characteristic impedance of the uniform line and simplifies matters by being nearly a pure resistance, usually 50 ohms, for useful lines. The main RF circuit of the Thruline (trademark) is a short piece of uniform air type line section, whose Zo is 50 ohms, in which accurate measurements may be made."

As Dr. Paul Joseph Goebbels used to reiterate:
"Repeat, repeat, repeat to get the point across."

If he hadn`t already been hung by the neck, I`d ask him, How many times???!!!

Best regards, Richard Harrison, KB5WZI

2241. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 13:33:01 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <MLWcnQB2x_satKSjXTWc3Q@comcast.com>
Source record: 125829
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Robert Bonomi wrote:
> >
> >Was that \"(ESC)[2J\" ?
>
> These days, "I dunno" applies. I don't keep that stuff memorized.
>
> However, consulting my Unix 'termcap' file, it looks like the
> requisite magic is:
>
> prompt=$E[;H$E[2J
>
> the first escape sequence 'homes' the cursor (top-left corner),
> then the second one does an 'erase from cursor position to end of screen'

I did mine from memory. ESCAPE LEFT-BRACKET 2 J came to mind.

ESCAPE LEFT-BRACKET ; H. That's move the cursor home.

I wrote ansi.sys screens for people back then.

OK. Back to the 21st century. I'm done with this thread.

2242. By Special Request...for Murray only

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 13:36:00 UTC
From: Scott <scott@scotti.sh!t>
Message-ID: <MLWcnQN2x_ukt6SjXTWc3Q@comcast.com>
Source record: 125830
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

For someone who thinks his poop smells like roses...

```
*******
* *
* *
*********
* *
* *
* *
******* *******
* * * *
* * * ******
* * * * *
****** * * * * *
* * * * * * *
* * * *
* * *
* *
* *
* *
* *
* *
```

From the USENET newsgroups that you pissed on.

2243. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 13:39:43 UTC
From: Smokey <smokey@truck.stop>
Message-ID: <3e3c2ba3.80703295@news.easynews.com>
Source record: 125831
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Thu, 30 Jan 2003 06:01:16 GMT, bonomi@c-ns. (Robert Bonomi) wrote:

>In article <3tce3v88kdubc5ik82nqeosk5vcdfguogr@4ax.com>,
>Smokey <smokey@truck.stop> wrote:
>>On Sun, 26 Jan 2003 16:18:50 -0500, Technician <travis57@megalink.net>
>>wrote:
>>
>>>In article <BEXY9.4755$d66.445384@newsread1.prod.itd.earthlink.net>,
>>>radiovintage@hotmail.com says...
>>>> I am looking for a CD of Windows 95 for my shack computer so I can run some
>>>> DOS programs.
>>>> THANKS
>>>>
>>>>
>>>>
>>>
>>>If you want to run dos programs, why noy use dos?
>>>
>>>~Travis
>>
>>If he's using Windows 95 his operating system is DOS. Windows 95 is
>>not an operating system.
>
>Neither is MS-DOS (it's merely a 'glorified progam loader').
>
>
>It is said:
>
> "Windows is a 32-bit graphical interface,
> for a 16-bit extension,
> to an 8-bit operating system,
> written for a 4-bit processor,
> by a 2-bit company,
> without 1 bit of skill in what they were doing."
>
>
>Methinks the description is somewhat _generous_.

So what would be on your list of operating systems then?

2244. Re: V/UHF ant. placement

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 13:52:00 UTC
From: derswede@aol.comspam.com
Message-ID: <20030130085200.21580.00000639@mb-mu.aol.com>
Source record: 125833

> Did you notice his call sign, EC3DDS? Does
>Spain have exposure regulations as we do here
>in the U.S.?

Doc, I'd assume a common sense reply in that he'd want to keep as much RF away from people as possible. Spanish RF can cause just as many problem, you know! (Heh....anyone on the CW portion of 10 can hear that!)

Y, Toni, naturalmente quiere instalar su antena el mas alto posible....sobre algo de lamina, esp. porque puede afectar la propagacion del seï¿½el. Si las obstuciones son de lamina, mi preferencia es por la antena mas corta pero sobre las otras cosas.

Por HF, el problema es diferente en vez de VHF, porque normalmente utilisar mas energia RF que puede afectarse y causar problemas con televisores, telefonos, etc. Puede instalar un dipole en vez de un vertical??

El Doc es un experto....yo tengo solamente opiones!!

Suerte;
Andrew

2245. Re: 160m mobile with Valor/Pro-am PHF-160B

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 14:14:24 UTC
From: n1kk@netzero.net
Message-ID: <d7adbb57.0301300614.555f543a@posting.google.com>
Source record: 125834

Thanks for your feedback,

I am trying to decide if I should upgrade my Mel Woody
N7LYY Screwdriver antenna to his newer version which
covers 160m - 10m. It is my understanding he has
to use closer turns per inch for the coil.
Mel said it will tune 160m with a 66-72 inch top whip.
This makes me wonder about reduced performance on 80 and 40
meters compared to his original design.

This is one of the reasons I thought about the
PHF-160B. I would have to get out of the car
for the band change but at least I would maintain
existing performace on 80 and 40 meters plus
the PHF-160B would be mounted at least 4 feet
above the bumper.

Ken
N1KK

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0301291555.7f2d88d6@posting.google.com>...
> n1kk@netzero.net (Ken) wrote in message
news:<d7adbb57.0301290659.4278f97d@posting.google.com>...
> > Would like to hear from some recent users of this
> > mobile antenna. I would also like to get the
> > size of the antenna.
> >
> > I am thinking of mounting this on top of my
> > 80-10m Screwdriver antenna. I might be
> > able to use the lower adjustable coil to
> > tune the 160m band. The added height
> > might improve the performance too.
> >
> > Ken
> > N1KK
>
> I haven't use one, but I have seen one. I think it was appx 8 ft or so
> total height. The coil was fatter then the stick. Maybe 1.5-2 inches
> dia. Quite a few turns needed being the stinger is not too tall for a
> 160m antenna. I suspect they work ok if you have a good mount on a
> large vehicle. But not in the same league as a top loaded bugcatcher.
> What you want to do will probably work, but I wouldn't expect overly
> great results unless you can add a taller stinger, or a capacity hat
> of some sort. Top loading is fairly important on a 160m mobile if you

> want top results. Otherwise the current distribution is not so hot. If
> the mast below your screwdriver coil is not tall, this makes things
> worse. This is why I don't use screwdrivers. It's hard to have a tall
> mast under the coil in general. My present antenna has the coil 5 ft
> above the base normally. 8 ft feet if I add my 3 ft extender mast. 5
> ft stinger on top of the coil. I only use the 13 ft antenna parked
> though...The mount is 4.5 ft off the ground. So it's 17.5 ft tall at
> the tip in that mode. I just built it a couple of weeks ago. It's
> 80-10 so far, but I'm kicking around adding 160m some way...I'm not
> sure if it's worth it or not... Adds a lot of wind load and weight. My
> antenna is very light as it is. About like a medium size rod and reel.
> I might just use a clip-on 30 ft wire to add capacity and only run
> 160m when parked. I'd do much better being I would be using the 80m
> coil only. I'm usually on 75m if I'm driving at night. MK

2246. Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 14:22:03 UTC
From: n1kk@netzero.net
Message-ID: <d7adbb57.0301300622.6d464b9d@posting.google.com>
Source record: 125835

I would like to hear from some users of this antenna concerning
the 160m performance. I would also like to hear
from anyone that might have upgraded from his original
80-10m antenna and noticed any difference
in the 80 and 40 meter performance. I am concerned
the closer spaced winding of the coil on the
160m version might reduce performance.

Did the 160m antenna tune from 160m - 10 with
the same top whip?

thanks,
Ken
N1KK

2247. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 14:43:20 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39399E.4914CD1F@attbi.com>
Source record: 125836

160 meters itself will reduce the performance!!

Deacon Dave, W1MCE

Ken wrote:
>
> I would like to hear from some users of this antenna concerning
> the 160m performance. I would also like to hear
> from anyone that might have upgraded from his original
> 80-10m antenna and noticed any difference
> in the 80 and 40 meter performance. I am concerned
> the closer spaced winding of the coil on the
> 160m version might reduce performance.
>
> Did the 160m antenna tune from 160m - 10 with
> the same top whip?
>
> thanks,
> Ken
> N1KK

2248. Portable 2 meter???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 14:49:38 UTC
From: E <sumpcaver@worldnet.att.net>
Message-ID: <6Ya_9.12590$rq4.896984@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125837

I'm looking for suggestions for a portable 2 meter antenna. I have a Yeasu FT-817 and I would like to take it backpacking. I'm looking for a cheap, lightweight solution.

Thanks,
Erik
KB3IZY
sumpcaver@att.net

2249. Re: Question about receiving a 400mhz trunked system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 14:50:54 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e393d3f_1@news1.prserv.net>
Source record: 125839
Cross-posted to: rec.radio.scanner,rec.radio.amateur.antenna

Andy:

Well, dB gain is dB gain. If 10 dB is needed to make the path work, and the antenna has 10 dB of forward gain, then yes.

You are asking a question like:
1. "How much water will it take to fill this bucket if I hold it in my right hand?"
2. "How big's the bucket?"
1. "I dunno."
2. "Well, however much it takes to fill it, that's how much it will take to fill it, whether you hold it in your right hand, left hand, or put it on the table."
and so on.....

See the problem?
--
Crazy George
Remove NO and SPAM from return address
"Andy KC2SSB" <nospam@nospam.com> wrote in message
news:4ohh3vg7u38gac0sdu68qid2lsbk5fc7u7@4ax.com...
> On Wed, 29 Jan 2003 23:15:10 -0600, "Crazy George"
> <munschNO@attglobal.net.SPAM> wrote:
>
> >Trunked systems are designed much like cellular systems, each transmitter
> >covers only a small area. Then, the frequencies are reused. And, if the
> >coverage area is well defined, the nearer sites may well have directional
> >antennas aimed away from you.
>
> I see. Any chance that a directional antenna at my location, at the 15
> feet I mentioned would help me receive this system?
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

2250. Re: V/UHF ant. placement

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 14:54:35 UTC
From: Toni - ec3dds <ec3dds@hotmail.com>
Message-ID: <59ei3volq9k672m268pip0f1alntvbg997@4ax.com>
Source record: 125838

On 30 Jan 2003 13:52:00 GMT, derswede@aol.comspam.com (AA) wrote:

>> Did you notice his call sign, EC3DDS? Does
>>Spain have exposure regulations as we do here
>>in the U.S.?
>
>Doc, I'd assume a common sense reply in that he'd want to keep as much RF away
>from people as possible. Spanish RF can cause just as many problem, you know!
>(Heh....anyone on the CW portion of 10 can hear that!)
>
>Y, Toni, naturalmente quiere instalar su antena el mas alto posible....sobre
>algo de lamina, esp. porque puede afectar la propagacion del seï¿½el. Si las
>obstuciones son de lamina, mi preferencia es por la antena mas corta pero sobre
>las otras cosas.
>
>Por HF, el problema es diferente en vez de VHF, porque normalmente utilisar mas
>energia RF que puede afectarse y causar problemas con televisores, telefonos,
>etc. Puede instalar un dipole en vez de un vertical??
>
>El Doc es un experto....yo tengo solamente opiones!!
>
>Suerte;
>Andrew

Hi, thanks for your answers.

There is not much problem with RF safety, because the antennas will go
on the elevator room over a roof where the only inhabitants are my
neighbor's not very friendly dogs (a boxer and a pitbull). Aside, I
will be using a 5W handset on V/UHF and 100W on HF.

The obstacle is the building next to mine, which is two stories higher
but at a distance about 50 ft. and covering about 45ï¿½ of the horizon.
This is something I cannot do much about on V/UHF and whose effect I
cannot foresee in HF. I'll see when I have my antennas there. I prefer
this to keep thinking for years how to mount a better antenna!

Toni - ec3dds

2251. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 14:56:39 UTC
From: richardharrison@webtv.net
Message-ID: <717-3E393D27-36@storefull-2312.public.lawson.webtv.net>
Source record: 125842

Roy, G4FGQ wrote:
"In this case it is USA taxpayers who suffer the loss."

We had many losses. The battleship used inverted L antennas. These were matched at the transmitter, far from the drivepoint of that "L". The drivepoint could be just a few ohms or a thousand ohms, so the designer`s low-loss solution was enormous air-dielectric coax.

Best regards, Richard Harrison, KB5WZI

2252. Re: Portable 2 meter???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 15:05:18 UTC
From: Mike <mike@nospam.com>
Message-ID: <3E393F2B.555C007E@nospam.com>
Source record: 125840

Hi,

Here is a link for a portable jpole made with twin lead instead of the more
common copper pipe.
http://www.mvw.net/radio/jpole.html

Here is a link for the half square for 2m, you can build it with stranded
instead of solid wire
to make it easier to transport. It has about three units of gain over the
Jpole and is directional
over the jpole antenna. Be sure to check out http://www.cebik.com/ when you
have more time.

http://www.cebik.com/hs.html

73 mike

E wrote:

> I'm looking for suggestions for a portable 2 meter antenna. I have a Yeasu
> FT-817 and I would like to take it backpacking. I'm looking for a cheap,
> lightweight solution.
>
> Thanks,
> Erik
> KB3IZY
> sumpcaver@att.net

2253. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 15:13:44 UTC
From: jwb@kirtland.com
Message-ID: <3e3940e5.1784403186@news.cis.dfn.de>
Source record: 125843
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Mon, 27 Jan 2003 22:41:35 -0500, Scott <scott@scotti.sh!t> wrote:

>
>
>Robert Bonomi wrote:
>>
>> C:\>
>> C:\DOS>
>> C:\DOS\RUN>
>> RUN \DOS\RUN
>>
>> with apologies to Dick and Jane
>
>
>Run where? DOS is single-tasking. It can't think ahead.
>Remember the big upgrade with WIN95? Being able to
>download a file and send it straight to the floppy drive!

I remember back in 1990 or so, I ran Desqview to "multitask" is DOS,
running a two-line BBS quite sucessfully.

Joe

2254. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 15:16:05 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <W5qcnUUVvNoo3KSjXTWcog@comcast.com>
Source record: 125844

No matter what you did to the base of a 5/8 antenna, it still has the propagation characteristics of a 5/8 antenna. Base loading or impedance matching does not make it 3/4 any more than 1/4 or 5/4. You don't want a 3/4 antenna anyhow, because a lot of the energy goes straight up.

BTW, I think one way they get the 5/8 to be 50 ohms is tu use a tapped inductor.

Tam/WB2TT
"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:pS7_9.3721$hG6.116938@twister.southeast.rr.com...
> Are you saying that if I had a 5/8 wave length radiator I could not base
> load it to 3/4. If I did, would not the circuit be identical to that of a
> 5/8 wl antenna with matching circuit.
>
>
> "Tarmo Tammaru" <t-tammaru@home.com> wrote in message
> news:rCednSQdXJMp6qWjXTWcpw@comcast.com...
> > Don't think I buy that. The feedpont impedance of a 3/4 vertical
(perfect
> > ground) is around 35 ohms resistive, whereas the 5/8 is about 70 -
J300.
> > When you add an inductor to the base of a 5/8 you make the impedance 70
+
> > j0., which is not the same as the 3/4 wave. Adding the coil has no
effect
> on
> > the radiation pattern. If you really want 50 ohms, you have to fudge the
> > length a little.
> >
> > Tam/WB2TT
> > "Jimmy" <Gfender@carolina.rr.com> wrote in message
> > news:2hTZ9.123884$Mb.5457267@twister.southeast.rr.com...
> > > Yep, 5/8 ths is not resonant, your radio will not see it as a
resistive
> > load
> > > . to make it ressonant the 5/8 is loaded to 3/4 which is resistive and
> > then
> > > the feed point is attached to the loading coil at the desired
> resistance,
> > > usually the 50 ohm, point.
> > > "'Doc" <w5lz@cwis.net> wrote in message
> news:3E377E80.7F72D9D7@cwis.net...
> > > >
> > > >

> > > > Jimmy,
> > > > You want to run through that 5/8 wave really being
> > > > a 6/8 wave part again? I think I may have missed something
> > > > there...
> > > > 'Doc
> > >
> > >
> >
> >
>
>

2255. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 15:36:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E394678.9070105@ieee.org>
Source record: 125845

Roy Lewallen wrote:
> Um, if you know what you're doing with phasors, you realize that when
> you multiply voltage and current phasors to get power, you don't get a
> phasor. (At least not at the same frequency as the V and I phasors, so
> it can't be used in mixed calculations.) But it's still a time-varying
> function. The only rigorous way I know of to make the calculation of
> power is to multiply the time v and i functions themselves. That's how
> it's done in the textbooks I have, and for good reason. The result of
> multiplying those time functions is the time function of power.

If you follow the wave reflection model, the forward voltage is in phase
with the forward current and the reflected voltage is in phase with the
reflected current. That makes the power math a scalar product instead of
a vector product. It is admittedly a short cut simplification, but it
works. AC voltages and currents in phase can then be treated like DC
voltages and currents since there is no reactance present (if we ignore
the small reactance present in Z0).

Following the wave reflection model in a transmission line with reflections,
the forward and reflected (reverse) wave components can be treated separately.
Since the component voltage is always in phase or 180 degrees out of phase
with the associated component current, cos(theta) is always equal to 1 which
simplifies the match considerably.

You are attempting to deal with total voltage and total current and that's
perfectly OK but you are complicating the math because cos(theta) is no
longer always equal to 1. Many references indicate that it is valid to
treat the forward wave and the reflected wave separately, thus simplifying
the math and obtaining the correct results. One such reference is Johnson's
"Transmission Lines and Networks".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2256. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 15:39:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39471D.7020105@ieee.org>
Source record: 125846

Richard Harrison wrote:
> Roy Lewallen wrote:
> "---the power is one direction for a while, zero for a while, and in the
> other direction for a while each cycle."
>
> Not exactly. On the positive alternation, we have a positive voltage and
> a positive current. Power is their product, a positive value.
>
> On the negative alternation, the down direction, not the up direction,
> we have a negative voltage and also a negative current. Power is their
> product. A negative times a negative gives a positive value for the
> power pulse. If we have a symmetrical waveform, all the pulses in all
> the alternations are the same and they are all positive. Their average
> is not zero nor is it discontinuous.

I suspect you are talking about the individual forward or reverse wave components and Roy is talking about the total sum of those waves. The sum of those waves puts the voltage and current out of phase with each other.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2257. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 15:42:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3947F4.2000107@ieee.org>
Source record: 125847

Richard Clark wrote:
> Another observation from Feynman's "Lectures on Physics,":
> Chapter 4, Conservation of Energy
> "Conservation of energy can be understood only if
> we have the formula for all of its forms."
> This is found in his discussion of Potential Energy which is followed
> by his discussion of Kinetic Energy. The conservation of energy is
> incumbent upon having BOTH kinds known and directly expressed.

We know what kind of energy exists in a transmission line, Richard. Why do you need this diversion away from the topic at hand which is RF in the form of dynamic joules/sec? Do we really need to consider the potential energy of the transmission line weight hanging above ground?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2258. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 15:46:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3948DE.4030508@ieee.org>
Source record: 125848

Roy Lewallen wrote:
> This is true only when the voltage and current are in phase. And they're
> only in phase if the load is matched to the Z0 of the line (or at
> particular points along the line otherwise). I described the various
> possibilities some time ago, but I see it's time to do it again.

Roy, you guys have a disconnect. Richard is describing the boundary conditions set by the wave reflection model where the forward voltage is always in phase with the forward current and the reflected voltage is always in phase with the reflected current no matter what the impedance of the load (as long as Z0 is resistive).

You are obviously talking about total voltage and total current and that's OK. But it complicates the math to such a point that you are going to lose a lot of readers.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2259. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 15:52:12 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <MSb_9.4277$hG6.139926@twister.southeast.rr.com>
Source record: 125849

Doc,
But for a base loaded antenna or a 5/8 there is no requirement for the the feed point to be above the coil. Feed can be accomplished in shunt with th coil or in series with the coil.To say that a 5/8 is not the same as a base loaded 3/4 is to say that the base loaded 3/4 is impossible to build. Is this what you are trying to tell me? Also the better part of the coil on a 5/8 designed for 50 ohm input is above the tap so i guess you are saying this part is for loading and the other part is for impedance matching..Glad we finally agree that is at least partially loaded. LOL. If you design a base loaded 3/4 wl antenna with the radiator length somewhere between 1/2 and 3/4 wl will not the basic construction be the same as for the 5/8, just a little more or less coil to conpensate for the length of the radiator.

"'Doc" <w5lz@cwis.net> wrote in message news:3E391722.AEF393ED@cwis.net...
>
>
> Jimmy,
> Very simply, if the coil is 'above' the feed point
> of the antenna, it's a loading coil. If it's below
> the feed point of the antenna it's changing the antenna's
> input impedance. There can also be a third option, where
> a loding coil and impedance matching coil can be combined
> at the base of an antenna. It may not be much of a distinction
> to you, but where the coil is in relation to the feed point of
> the antenna does make a difference. Can you see the distinction
> I'm making? As to whether Roy agrees with me, or has the same
> view of it, you'll have to ask him...
> 'Doc

2260. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 15:53:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E394A6F.7050601@ieee.org>
Source record: 125850

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Uhhhhhhhh Richard, I haven't posted my article to my web page yet.
>>I doubt that any editor has ever seen my web page. Please stop jumping
>>to conclusions.
>
> http://www.qsl.net/w5dxp/waves2.htm

That is *NOT* my QEX article, Richard. My QEX article will be 'qexart1.htm'
and it is not ready yet. It takes a lot of time and effort to convert
from Microsoft Word to HTML and get everything right. For instance, I
cannot find the greek letter 'Rho' using HTML so I have to convert stuff
like that by hand. Please be patient.

I have NEVER submitted 'waves2.htm' for publication to QEX or any other
publication. Did you find anything technically wrong with it or you
just don't like the writing style?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2261. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:00:30 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <bghi3vovg1367tp65sh3k7o0bb99oq1edi@4ax.com>
Source record: 125851

On 29 Jan 2003 23:42:48 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

|Wes, N7WS qrote:
|>
|>The hairpin match is a form of a distributed L-network. The hairpin
|>does not "load" the antenna. The real part of the feedpoint impedance
|>of most Yagis is below 50 ohm. By shortening the DE, this
|>lower-than-50-ohm resistance is put in series with a capacitive
|>reactance.
|>
|
|I gues I am having trouble seeing what is the difference between say, taking
|dipole (or driven element in a beam), inserting hairpin in the middle. I see
|this as loading (electrically extending) the radiator to achieve resonance,
|just like placing loading coils or stubs/hairpins anywhere else on the element.
|Along the hairpin we would have impedance from minimum to max corresponding to
|the length of the coil/stub. What makes it different when we attach the
|feedline? Isn't it the case when we are searching for impedance along the way
|to match the feedline? K7GCO is feeding his Yagis off center at the 50 ohm
|point on the driven element.

First you must remember that the feedpoint impedance is normally given
as a series equivalent. (We do call it an impedance rather than an
admittance). Boy, I would never feed a Yagi element off-center.

Placing a stub, in *parallel* with the feedpoint is not the same as
placing a loading inductance *in series* with the feedpoint.

To amplify what I stated previously about the function of stub
matching as applied to Yagis I offer the following real-world example.
Modeling my HB 3-element 20-meter Yagi without any matching I get the
following results:

Freq R X

14.000 27.75 -10.42
14.050 27.54 -6.89
14.100 27.16 -3.28
14.150 26.63 0.44
14.200 25.97 4.30
14.250 25.18 8.31
14.300 24.29 12.50

Since I want the match to be decent over the CW and lower Phone band,
I decide to match at 14.15 MHz. So I need an L-network that steps up
26.6 ohm to 50 ohm. To increase the 26.6 ohm (Rs) to 50 ohm (Rp), a

series reactance is required.

Using the equations for L-networks I first determine the required matching Q thus:

Q = (Rp/Rs-1)^0.5
Q = (50/26.63-1)^0.5
Q = 0.96 or Q ~ 1.

The series matching reactance is found from:

Xs = Rs * Q
Xs = 26.63 * 0.96
Xs = 24.98 or ~ 25 ohm.

Since I am going to use a parallel inductive stub, I need to make the series reactance capacitive. I can do this by shortening the driven element to make the reactance = -j25.

Back at the modeling program (I use AC6LA's MultiNEC as a shell over EZNEC which makes this easy since I can make the element tip length a variable and sweep the length at the match frequency).

Once I find the new length I have the following:

Freq R X

14.000 25.50 -35.59
14.050 25.29 -32.16
14.100 24.93 -28.67
14.150 24.43 -25.06
14.200 23.81 -21.34
14.250 23.07 -17.47
14.300 22.25 -13.44

Note that because the element is a bit shorter, the real part is slightly lower so the matching Q is now

Q = Xs / Rs = 25.06/24.43
Q = 1.03 or for practical purposes still, Q ~ 1.

The required shunt inductive reactance is found

Xp = 50 / Q
Xp = +j50

So I need a stub that presents +j50 in *parallel* with the feedpoint. In my case I planned to use 1/2" diameter tubing for the stub and because I built the antenna from material from a TH-6, the mounting insulators defined the spacing of the tubing and the distance from the boom. Using equations from Reference Data for Radio Engineers for a balanced line above ground, I determined that the Zo of the stub was approximately 150 ohm.

Using another of AC6LA's handy programs, TLDetails, I set up a 150 ohm line with a short on one end and determine that a length of 42.7 inches gives +j50 at 14.15 MHz.

Back at the antenna modeling program I install a 42.7" long, 150 ohm shorted transmission line at the feedpoint and calculate:

Freq R X SWR

14.000 73.99 9.29 1.522
14.050 65.93 4.15 1.331
14.100 57.88 0.75 1.158
14.150 50.12 -1.13 1.023
14.200 42.86 -1.74 1.172
14.250 36.25 -1.32 1.381
14.300 30.37 -0.10 1.647

I my case, I also use the stub for the balun. A couple of photos show this:

http://users.triconet.org/wesandlinda/YagiFeed-1a.jpg

http://users.triconet.org/wesandlinda/YagiFeed-2a.jpg

As a tribute to modeling and Leeson's "Physical Design of Yagi Antennas", it took exactly one adjustment of the DE length and one adjustment of the stub length to meet the design goals.

73,

Wes N7WS

2262. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:15:29 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <Bcc_9.4342$hG6.141151@twister.southeast.rr.com>
Source record: 125852

As Roy stated and I agree with you and him both, but to the best of my knowledge it is not required by a loading coil to alter the current distribution of antenna though where you place it will determine how and if the current pattern is altered hence the propagation.As for as the angle of elevation that i choose for my antenna that is my choosing. As a matter of fact I have used 1.25 wl verticals. It is not a matter of how far they talk but where they talk. In my opion furtherest is not always best. When conditions are right for skip they allows me to talk into areas that i would normally overshoot. BTW: please answer my question, Would not a base loaded 3/4 wl antenna with the actual radiator length significantly longer than 1/2 wl and signifcantly shorter than 3/4 be identical in constuction to a 5/8. Yes or no.

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:W5qcnUUVvNoo3KSjXTWcog@comcast.com...
> No matter what you did to the base of a 5/8 antenna, it still has the
> propagation characteristics of a 5/8 antenna. Base loading or impedance
> matching does not make it 3/4 any more than 1/4 or 5/4. You don't want a
3/4
> antenna anyhow, because a lot of the energy goes straight up.
>
> BTW, I think one way they get the 5/8 to be 50 ohms is tu use a tapped
> inductor.
>
> Tam/WB2TT
> "Jimmy" <Gfender@carolina.rr.com> wrote in message
> news:pS7_9.3721$hG6.116938@twister.southeast.rr.com...
> > Are you saying that if I had a 5/8 wave length radiator I could not base
> > load it to 3/4. If I did, would not the circuit be identical to that of
a
> > 5/8 wl antenna with matching circuit.
> >
> >
> > "Tarmo Tammaru" <t-tammaru@home.com> wrote in message
> > news:rCednSQdXJMp6qWjXTWcpw@comcast.com...
> > > Don't think I buy that. The feedpont impedance of a 3/4 vertical
> (perfect
> > > ground) is around 35 ohms resistive, whereas the 5/8 is about 70 -
> J300.
> > > When you add an inductor to the base of a 5/8 you make the impedance
70
> +
> > > j0., which is not the same as the 3/4 wave. Adding the coil has no
> effect

> > on
> > > the radiation pattern. If you really want 50 ohms, you have to fudge
the
> > > length a little.
> > >
> > > Tam/WB2TT
> > > "Jimmy" <Gfender@carolina.rr.com> wrote in message
> > > news:2hTZ9.123884$Mb.5457267@twister.southeast.rr.com...
> > > > Yep, 5/8 ths is not resonant, your radio will not see it as a
> resistive
> > > load
> > > > . to make it ressonant the 5/8 is loaded to 3/4 which is resistive
and
> > > then
> > > > the feed point is attached to the loading coil at the desired
> > resistance,
> > > > usually the 50 ohm, point.
> > > > "'Doc" <w5lz@cwis.net> wrote in message
> > news:3E377E80.7F72D9D7@cwis.net...
> > > > >
> > > > >
> > > > > Jimmy,
> > > > > You want to run through that 5/8 wave really being
> > > > > a 6/8 wave part again? I think I may have missed something
> > > > > there...
> > > > > 'Doc
> > > >
> > > >
> > > >
> > >
> > >
> >
> >
>
>

2263. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:19:03 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E395077.913EB5D9@cwis.net>
Source record: 125853

Jimmy,
If you're not willing to understand, I'm certainly
not going to waste my time trying to explain. Good
luck...
'Doc

2264. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:23:02 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E395166.6C0E37A2@cwis.net>
Source record: 125854

Ken,
Can't say about the performance of that antenna, I've
never had one. I can comment about the 'close' windings
of the coil. It shouldn't affect the performance of the
antenna at all. The power handling capability, yes.
'Doc

2265. Re: V/UHF ant. placement

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:25:18 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3951EE.239C16BE@cwis.net>
Source record: 125855

Andrew,
El Doc no es un experto!
el 'Doc

2266. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:25:36 UTC
From: richardharrison@webtv.net
Message-ID: <27047-3E395200-51@storefull-2314.public.lawson.webtv.net>
Source record: 125858

Jimmy wrote:
"I fail to see the difference between impedance matching and loading
except---."

Consider the double-tuned r-f transformer. It can be made with any
amount of coupling and any impedance ratio. It can also be made with
adjustable coupling or with a selectable impedance ratio.

Coupling is another term for mutual impedance, or how much occurrences
in one circuit influence another circuit. Coupling between a radio and
its antenna may be treated exactly in many respects as in a double-tuned
r-f transformer. Loading is coupling. Impedance matching is controlling
the ratio between the radio and its antenna. For the conjugate match,
reactance must be eliminated in addition to the resistive match.

Loading and matching interact. Change the impedance ratio and expect to
retune and to readjust the coupling.

Radios used to have swinging links to adjust loading, and tapped coils
to adjust impedance match.

Jimmy also wrote:
"If I had a 15 ft whip and placed an inductor at the bottom of it to
make it resonate on 40M would you call this loading or impedance
matching?"

Yes.

Traditionally, this is called a loading coil. "Tuning-coil" would be
more descriptive of its function which is reactance nullification.

Best regards, Richard Harrison, KB5WZI

2267. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:31:01 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <9rc_9.4415$hG6.141632@twister.southeast.rr.com>
Source record: 125856

Well, I wasn't trying to compare good grounds to bad. this is obviously one
of the good things about a half wave end fed vertical. Also are you saying
for a coil to be a loading coil it MUST be placed so as to alter the
antennas current distribution. I guess to be politically correct one should
discribe an antenna as being a "a/b wl antenna loaded to a x/y wl".rather
than as a loaded x/y antenna.

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v3gb4lardstt9a@corp.supernews.com...
> The term "electrically longer" could be used to mean two different
> things, and you've got to be careful not to confuse the two.
>
> If you top load a vertical, it looks "electrically longer" because the
> top loading changes the current distribution to resemble a longer
> antenna (but with some of the top portion still missing), and the
> radiation resistance increases as it would if the antenna were actually
> made longer. The reactance also decreases as for a longer antenna.
>
> But base loading an antenna doesn't change either the current
> distribution or the radiation resistance. Unlike top loading, it has no
> effect at all on the characteristics of the antenna itself. Therefore,
> it doesn't make the antenna "electrically longer" in the same sense that
> top loading does. All it does is to modify the feedpoint reactance. Some
> people might regard the reactance change as making the antenna appear
> longer, but all it's really doing is modifying the reactance seen by the
> source. Because the current distribution isn't modified, the pattern
> shape will be unaltered by base loading.
>
> Although it's slightly more complicated to match (if base fed), a 1/2
> wave antenna will provide better efficiency than 5/8 wave if you have a
> poor ground system, because of its high base impedance. It's a much
> better choice for something like an HT, where you're stuck with a very
> poor "ground system". Modeling comparisons with realistic ground
> conductivity and ground system loss show that a 5/8 wave antenna often
> doesn't deliver the expected gain over a shorter antenna, and there's no
> reason to believe that objective tests won't confirm the modeling results.
>
> Roy Lewallen, W7EL
>
> Jimmy wrote:
> > to add a little bit:
> >
> > Assume you take a random length radiator and add lumped inductance to
the

> > feedpoint end of it to make it resonant(purely resistive at a desired
> > frequency). This is known as "loading an antenna".What is the difference
if
> > this random length radiator just happens to be 5/8 wl long at the
desired
> > freq and you add inductance to make it resonant. IS this not also
"loading
> > the antenna", making it electrically longer.
> >
> > "Jimmy" <Gfender@carolina.rr.com> wrote in message
> > news:2hTZ9.123884$Mb.5457267@twister.southeast.rr.com...
> >
> >>Yep, 5/8 ths is not resonant, your radio will not see it as a resistive
> >
> > load
> >
> >>. to make it ressonant the 5/8 is loaded to 3/4 which is resistive and
> >
> > then
> >
> >>the feed point is attached to the loading coil at the desired
resistance,
> >>usually the 50 ohm, point.
> >>"'Doc" <w5lz@cwis.net> wrote in message
news:3E377E80.7F72D9D7@cwis.net...
> >>
> >>>
> >>>Jimmy,
> >>> You want to run through that 5/8 wave really being
> >>>a 6/8 wave part again? I think I may have missed something
> >>>there...
> >>> 'Doc
> >>
> >>
> >
> >
>

2268. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:40:07 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Hzc_9.4886$wd2.378072@newsread2.prod.itd.earthlink.net>
Source record: 125857

Steve, you're not paying attention to the math I showed that proves that addition of reflected voltage and source voltage doesn't establish the forward voltage. The addition shown in Johnson yields the voltage at any point along a mismatched line. You may recall that this is the VOLTAGE STANDING WAVE, NOT THE FORWARD VOLTAGE.

VE9SRB <srbest@att.net> wrote in message
news:7I8_9.12492$rq4.887986@bgtnsc05-news.ops.worldnet.att.net...
>
> "Walter Maxwell" <w2du@iag.net> wrote in message
> news:NmZZ9.3424$Wu1.252565@newsread1.prod.itd.earthlink.net...
> >
> > I agree that the superposition theory is correct if there are two
separate
> > voltage sources--two generators. I do not agree that the theory is
correct
> > when there is only one source, the RF amplifier. And this is the point
> I've
> > tried to make with you, Steve, for years on end. Your use of the theory
is
> > invalid. Please let me explain in detail.
> >
>
> Johnson, Skilling, Chipman, Adler, etc, etc. in every text on transmission
> line theory and analysis state and show mathematically that the total
> forward voltage and current in a transmission is found from the
> superposition of the individual forward voltages and currents. I agree
with
> them.
>
> Please present a third part reference that shows this widely accepted and
> used principle to be incorrect in the transient analysis of wave
reflections
> in transmission lines.
>
> Steve VE9SRB
>
>
>

2269. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:49:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E395785.3020407@ieee.org>
Source record: 125859

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> Okay, in reference to the example in my QEX article:
>
> In the above power equation, is it your opinion that the individual powers
> represent "forward traveling powers" in the transformer section?
>
> The Zo in the transformer section is 86.603 ohms.

Let's get the block diagram nailed down before we proceed.

100W XMTR--50 ohm feedline--x--1/4WL 86.6 ohm feedline--150 ohm load
Pfwd1=100W, Pref1=0 Pfwd2=107.736W, Pref2=7.735W
|Rho|= 0.268, Rho^2=0.072, (1-Rho^2)=0.92831

> What is your associated forward voltage equation in the transformer section?

Assuming all the above is correct, I get a forward voltage in the transformer
section of 96.59V, just like you. Following your naming conventions:
P1=92.831W so V1=89.66v, P2=0.555W so V2=6.93V, V1+V2=96.59V
It all checks out. I have told you repeatedly that I don't find anything
wrong with your superposition of voltages so why did you ask a voltage
question? Why don't you ask an energy question?

The energy associated with V1 is 89.66^2/86.6 = 92.831 joules/sec
The energy associated with V2 is 6.93^2/86.6 = 0.555 joules/sec
The energy associated with Vfwd2 is 96.59^2/86.6 = 107.736 joules/sec
92.831 + 0.555 does not add up to 107.736 so 14.35 joules/sec is coming
from somewhere else. Let's find it.

Pfwd1 - P1 = P3 = Pfwd1(Rho^2), the source energy that is re-reflected
100W - 92.83W = 7.17W = P3 This is half the missing energy

Pref2 - P2 = P4 = Pref2(1-Rho^2), the reflected energy that is not re-reflected
7.735W - 0.555W = 7.17W = P4 This is the other half of the missing energy

P3 = V3*I3, P4 = V4*I4, V3+V4=0, I3+I4=0
These are your canceled "rearward-traveling waves 1 and 2" from your QEX article.
They are indeed canceled because V3 and V4 are 180 degrees out of phase and
I3 and I4 are 180 degrees out of phase. What happens to the energy in those
two canceled waves? We have already seen that energy is 7.17 joules/sec plus
7.17 joules/sec equals 14.35 joules/sec, the EXACT amount of energy we need
to add to P1+P2 to get Pfwd2. The following quote from the Melles-Griot web
page tells us that is exactly what happens.

>>"Clearly, if the wavelength of the incident light and the thickness
>> of the film are such that a phase difference exists between reflections of p,

>> then REFLECTED WAVEFRONTS INTERFERE DESTRUCTIVELY, and overall reflected intensity
>> is a minimum. If the two reflections are of equal amplitude, then this amplitude
>> (and hence intensity) minimum will be ZERO. In the absence of absorption or scatter,
>> the PRINCIPLE OF CONSERVATION OF ENERGY indicates all 'LOST' reflected intensity will
>> appear as ENHANCED INTENSITY IN THE TRANSMITTED BEAM. The SUM of the reflected and
>> transmitted beam intensities is ALWAYS equal to the incident intensity. This
>> important FACT has been confirmed experimentally."

Please note the words "interfere destructively". That's what your "rearward-
traveling waves 1 and 2" do. That destructive interference energy has to go
somewhere and it does. It reverses direction, joins P1+P2 to make Pfwd2 equal
to P1+P2+P3+P4. That is what the above means when it says, "all lost reflected
intensity will appear as enhanced intensity in the transmitted beam." "Enhanced
intensity" is another name for constructive interference. Nothing could possibly
be clearer than that.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2270. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:51:39 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <vKc_9.12699$rq4.906929@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125860

"Walter Maxwell" <w2du@iag.net> wrote in message
news:Hzc_9.4886$wd2.378072@newsread2.prod.itd.earthlink.net...
> Steve, you're not paying attention to the math I showed that proves that
> addition of reflected voltage and source voltage doesn't establish the
> forward voltage. The addition shown in Johnson yields the voltage at any
> point along a mismatched line. You may recall that this is the VOLTAGE
> STANDING WAVE, NOT THE FORWARD VOLTAGE.
>

In your voltage math, you're not superimposing the correct forward voltages.
The "source voltage" that you like to use in the superposition process is
the total voltage on the line, not a forward voltage.

See my other post and try again.

Steve

2271. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 16:52:07 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <XKc_9.12700$rq4.907369@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125861

"Walter Maxwell" <w2du@iag.net> wrote in message
news:NmZZ9.3424$Wu1.252565@newsread1.prod.itd.earthlink.net...

Walter,

You have again misinterpreted how I apply superposition.

> I don't have all the data being used in this thread, so please let me
revert
> to the numbers in Steve's network problem in his same article. The load
> mismatch is 3:1 for a reflection coefficient 0.5. With 100 w delivered by
> the source the voltage entering the system is 70.71 v and the current is
> 1.414 a.
>
> However, for 33.33 w on the 50-ohm line, the reflected voltage is 40.82
> volts. Adding this to the source voltage 70.71 v, as Steve does, we get
> 111.53 v. on a 50-ohm line. This voltage would bring the forward power to
> 248.8 w, an impossibility, because the forward current would have to be
2.23
> a, while the true forward current is 1.63 a. This is what happens when the
> reflected voltage is incorrectly added to the source voltage, totally
> invalidating the superposition of source and reflected voltages, because
> there is only one source that can't deliver 2.23 a. Two separate sources
are
> required for superposition of voltages to be valid.
>
> On the other hand, superposing the reflected voltage 40.28 v on the true
> forward voltage, 81.65 v, yields the maximum of the standing wave, and
> subtracting the 40.28 v from the forward voltage yields the minimum of the
> standing wave. Check out my data and discover that Steve's claim that
> superposition of source and reflected voltage to determine forward power
is
> invalid.
>
> Walt, W2DU
>

Walter, please read the QEX article again very carefully and correctly
identify the two *forward* voltages that I superimpose. You criticize my
use of superposition but you don't even correctly identify the two forward
voltages that I superimpose. How can you validly criticize my work when you
don't even understand it???

Here it is for you again, please check the article.

One forward voltage is the initial forward voltage developed in the transmission line at t=0. From my QEX article it is determined as follows:

At t=0, the forward source voltage arriving at the network input is 70.71 V. At t=0, the reflection coefficient at the network input is rho = 0.466 - j0.182, |rho| = 0.5. At t=0, a reflected voltage of 32.94 - j12.843 V is created at the network input. [Note that a Zo match does not exist at the network input at t=0] At t=0, the total voltage developed at the network input is 103.651 -j12.843 V. This is the total voltage delivered to the network input at t=0. The resulting forward voltage developed at the transmission line input (connected at the network output) is found to be -53.740 + j29.361 V. The magnitude of this voltage is 61.238 V. This is one of the forward voltages that I use in the superposition process.

The second forward voltage that I use in the superposition process is the steady state re-reflected voltage developed at the output of the network. This is determined as follows:

The steady state reflected voltage arriving at the network output is 40.489 + j5.223 V. The magnitude of this voltage is 40.824 V. The forward traveling re-reflected voltage developed at the network output is determined using the reflection coefficient seen at the network output. This reflection coefficient is -0.405 +j0.294, from which the forward traveling re-reflected voltage is found to be -17.913 +9.787 V. This voltage has a magnitude of 20.41 V. This is the other forward voltage that I use in the superposition process.

NOW, the total forward voltage is found from (-53.740 + j29.361) + (-17.913 +j9.787) = -71.653 + j39.148 V. This total forward voltage has a magnitude of 81.65 V and therefore, the total forward power is 133.33 W.

The total voltage at the input to the line is found from the sum of the forward and rearward voltages as follows: (-71.653 + j39.148) + (40.489 + j5.223) = -31.164 + j44.371. The total voltage has a magnitude of 54.221 V. Note that the steady state Zin to the line is not 150 ohms in the QEX article example. It is 18.213 - j14.273 Ohms. You can determine that the net power delivered to the line is 100 W.

I'm not even sure what your doing with the voltages you discuss above. Whatever it is, it does not even closely represent my superposition analysis.

Regards,

Steve

2272. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 17:00:12 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <wSc_9.12707$rq4.907334@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125862

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E395785.3020407@ieee.org...

>
> P1 + P2 + P3 + P4 = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W

Does this equation represent FORWARD traveling power in the transformer
section.

If it does, please state explicitly the associated forward voltage equation
in the transformer section. I understand your postion as outlined in your
other response. I want a direct explicit answer to this question and then
I'll move forward. I am only going to ask direct questions and will not
challenge anything you say. I just want direct answers to a few questions I
have to ask. This will help me understand your position better. I don't
intend to argue with you.

Thank you.

Steve

2273. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 17:01:12 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301300901.6046ba08@posting.google.com>
Source record: 125863

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b1a1igobq2@knossos.btinternet.com>...
> is mathematically calculable with mathematical precision. Un-arguable!
>
> This allows ME to take into account the many and varied conditions along the
> ground or ionospheric paths between me and a distant receiver. I don't want
> information to be biassed, pre-distorted, in some vague ill-defined manner
> by somebody who very likely has different ideas on the subject to mine.
>
Reg, I did not give a good response to you, let me try again.
I know who you are and what you do and where you come from and
know that you are very good at what you do. On this newsgroup there
are many different types of thinkers. I am a 'out of the box' thinker
which means my starting point in a subject is different from all
others
and sometimes evoke the terms of idiot or poor communicator.
My starting point or obsession if you want to use that word, is
efficiency
of communication between two people which brings forth the term Q and
other
things related beyond an antenna or antenna system and does not start
with percentages of wavelength or matching (see efficiency per
unitlength
posting) When Richard started in this thread beyond just the antenna
I said EUREKA, yes magnificent was a poor choice of words, then Roy
pointed to losseS that are not normally part of antenna efficiency
discussions , Richard just gave me another clue which brings forth a
'Eureka' with his mention of a book regarding the same subject(
Richard you mentioned another name in your posting so can you confirm
author,
publisher e.t.c. for library search)
So Reg, I rely on insights given to me by others that are pertinant
to
my particular line of thought, I play blind mans bluff in a way to
garner or gain confidence in my chosen line of thought or for reasons
to regroup as I am not smart enough to do it on my own.
So different people are important to any newsgroup as well as yourself
as a scientific moderator or info supplier as well as people like
myself who can be termed a hinderance. So "magnificent " was a poor
choice of words where the term "Eureka" would be a much better
utterance
. for the likes of me.
By the way England disapointes me for treating Arabs like American
Indians with

war feelings and the herding of all into enclosed reservations with
the underlying thought of 'the only good one is a dead one'
Have a great day Reg, I look forward to meeting you again, Now about a
a vertical collinear close to ground, what.....
Regards
Art
any insight

2274. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 17:11:28 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E395CC0.5060008@ieee.org>
Source record: 125864

VE9SRB wrote:
> I'm not even sure what your doing with the voltages you discuss above.
> Whatever it is, it does not even closely represent my superposition
> analysis.

You guys seem to me to be two inches away from each other and neither
is willing to budge an inch.

As I understand what Walt is saying: When the energy in your canceled
"rearward-traveling waves 1 and 2" reverses direction as explained on
the Melles-Griot web page, that energy joins the E and H fields of
the forward wave energy flowing toward the load. That energy is what
you have been missing from your energy equations and your superposition
of two voltages will not work without that extra energy. As I understand
it, Walt is saying that energy can be considered to be a third voltage.

Let's say it is 50 joules/sec reversing direction in a Z0=150 ohm
transmission line. 50 joules/sec in a Z0=150 ohm transmission line
will result in an individual third wave component of
Sqrt(50*150)=86.6V.

You change the 8.33W of reflected energy into a voltage component
that you call V2. Walt changes the other 50W of reflected energy
into another voltage component and you object. He's doing essentially
the same thing with that 50W that you are doing with the 8.33W.

Disclaimer: This is my opinion of what Walt is thinking and I may
be wrong.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2275. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 17:20:02 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <69d_9.12729$rq4.909655@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125865

"Walter Maxwell" <w2du@iag.net> wrote in message
news:Hzc_9.4886$wd2.378072@newsread2.prod.itd.earthlink.net...
> Steve, you're not paying attention to the math I showed that proves that
> addition of reflected voltage and source voltage doesn't establish the
> forward voltage. The addition shown in Johnson yields the voltage at any
> point along a mismatched line. You may recall that this is the VOLTAGE
> STANDING WAVE, NOT THE FORWARD VOLTAGE.
>

If you read Johnson very carefully, you will see that he explicitly states that the equation for TOTAL voltage is comprised of two terms. Johnson explicitly states that one term represents the FORWARD voltage and one term represents the REARWARD voltage. If you look at Johnson's derivation carefully, you will see that the total FORWARD voltage term is derived from the direct superposition of the initial forward voltage (determined at t=0) and all of the forward traveling re-reflected voltages created at the source. Note that these re-reflected terms are directly determined from the source reflection coefficient. Its right in the equation.

The above is simply fact that is easily verified by anyone else reading Johnson's text. If you disagree with Johnson on this, then I would not expect you to understand my superposition analysis and further discussion is pointless.

Walter, with all due respect, I have patience with Cecil because he at least understands the basics of the voltage and current superposition analysis I perform. He and I disagree on one very fine point of interpreting the relationship between the steady state powers and the individual transient powers. You and I have been discussing my voltage and current superposition analysis for over two years and you still cannot even correctly identify the two forward voltages that I superimpose. I just don't have anymore patience if you can't get beyond this point.

Steve VE9SRB

2276. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 17:25:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39601F.4030306@ieee.org>
Source record: 125866

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
>>P1 + P2 + P3 + P4 = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W
>
> Does this equation represent FORWARD traveling power in the transformer
> section.

Yes, it represents the cross product of the E and H fields.

> If it does, please state explicitly the associated forward voltage equation
> in the transformer section.

First I will show the voltage equation *AT* the match point, Steve.
The superposition theorem predicts four voltage components *AT* the
match point. They are 89.66V, 6.93V, 18.93V, and 18.93V corresponding
to V1, V2, V3, and V4. V3 and V4 are 180 degrees out of phase so the
voltage equation *AT* the match point is:

Vmatch = 89.66V + 6.93V + 18.93V - 18.93V = 96.59V
Pmatch = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W
Since V3 and V4 cancel, the VFtotal equation becomes:
VFtotal = 89.66V + 6.93V = 107.736V (just like yours)

The V3 and V4 voltage waves are canceled at the match point. The energy
in those two waves joins the E and H fields to allow VFtotal to exist.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2277. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 17:35:48 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Und_9.12742$rq4.910642@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125867

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E395CC0.5060008@ieee.org...
> VE9SRB wrote:
> > I'm not even sure what your doing with the voltages you discuss above.
> > Whatever it is, it does not even closely represent my superposition
> > analysis.
>
> You guys seem to me to be two inches away from each other and neither
> is willing to budge an inch.
>

Walter is claiming that voltage superposition does not work.

He trys to prove this by stating the following:

"However, for 33.33 w on the 50-ohm line, the reflected voltage is 40.82
volts. Adding this to the source voltage 70.71 v, as Steve does, we get
111.53 v. on a 50-ohm line. This voltage would bring the forward power to
248.8 w, an impossibility, because the forward current would have to be 2.23
a, while the true forward current is 1.63 a. This is what happens when the
reflected voltage is incorrectly added to the source voltage, totally
invalidating the superposition of source and reflected voltages, because
there is only one source that can't deliver 2.23 a. Two separate sources are
required for superposition of voltages to be valid."

The problem with these statement is that they do not even closely represent
what "Steve does". Walter's statements about how I add voltages are simply
wrong.

Steve adds a forward voltage determined at t=0 to a re-reflected voltage
determined in the steady state (this avoids having to look at each transient
component separately). I have never added the "source voltage" (as Walter
defines it) to the "reflected voltage". Walter is incorrectly stating the
two voltages I add, thus misrepresenting my superposition analysis, and then
claims that it is wrong.

Steve VE9SRB

2278. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 17:55:41 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <xGd_9.4859$hG6.152058@twister.southeast.rr.com>
Source record: 125868

I cant understand if you are not willing to answer my questions, that is why
I asked. You didnt even try to answer.
"'Doc" <w5lz@cwis.net> wrote in message news:3E395077.913EB5D9@cwis.net...
>
>
> Jimmy,
> If you're not willing to understand, I'm certainly
> not going to waste my time trying to explain. Good
> luck...
> 'Doc

2279. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:00:12 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <MKd_9.22942$zF6.1650777@bgtnsc04-news.ops.worldnet.att.net>
Source record: 125769

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E39601F.4030306@ieee.org...
> VE9SRB wrote:
> > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> >>P1 + P2 + P3 + P4 = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W
> >
> > Does this equation represent FORWARD traveling power in the transformer
> > section.
>
> Yes, it represents the cross product of the E and H fields.
>
> > If it does, please state explicitly the associated forward voltage
equation
> > in the transformer section.
>
> First I will show the voltage equation *AT* the match point, Steve.
> The superposition theorem predicts four voltage components *AT* the
> match point. They are 89.66V, 6.93V, 18.93V, and 18.93V corresponding
> to V1, V2, V3, and V4. V3 and V4 are 180 degrees out of phase so the
> voltage equation *AT* the match point is:
>
> Vmatch = 89.66V + 6.93V + 18.93V - 18.93V = 96.59V
> Pmatch = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W
> Since V3 and V4 cancel, the VFtotal equation becomes:
> VFtotal = 89.66V + 6.93V = 107.736V (just like yours)
>
> The V3 and V4 voltage waves are canceled at the match point. The energy
> in those two waves joins the E and H fields to allow VFtotal to exist.
> --

I don't understand what you mean by "allow VFtotal to exist". Are you
saying that the two forward voltages of 89.66 V + 6.93 V don't somehow
correctly add to 96.59 V or somehow don't (by themselves) allow the 96.59 V
to exist as a forward voltage in the transformer section?

The discussion on what happens *AT* the match point does not provide any
information about what happens *IN* the 50 ohm line or *IN* the transformer
section.

You're not directly answering the second question.

You've stated that

> P1 + P2 + P3 + P4 = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W

represents an equation for *forward* power in the transformer section.

The +18.93 V and -18.93 V (associated with the 7.17 + 7.17 W in the above equation) are the two rearward voltages in the 50 ohm line that "cancel" in the destructive interference process. Do these voltages and their associated currents reverse direction and become forward voltages and currents in the transformer section?

Steve VE9SRB

2280. Re: By Special Request...for Murray only

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:00:34 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3E396842.AE2B418C@crosslink.net>
Source record: 125841
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Ahhh, something on topic: digital communications!

Scott wrote:
>
> For someone who thinks his poop smells like roses...
>
> *******
> * *
> * *
> *********
> * *
> * *
> * *
> ******* *******
> * * * *
> * * * ******
> * * * * *
> ****** * * * * *
> * * * * * * *
> * * * *
> * * *
> * *
> * *
> * *
> * *
> * *
>
> From the USENET newsgroups that you pissed on.

2281. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:01:21 UTC
From: JJ <radiobuff0@mailcity.moc>
Message-ID: <3E396871.3060405@mailcity.moc>
Source record: 125775
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Take the rec.antiques.radio+phono out of this discussion.

Scott wrote:
>
> Robert Bonomi wrote:
>
>
>>I even did it on machines that _did_not_have_ a hard-drive. Sometimes I was
>>writing to the 'current' floppy, sometimes to the 'other' one (when the
>>machine was "loaded" enough to have *TWO* floppies, that is. yeah, once
>>upon a time, that _was_ a "high end" machine :)
>
>
> I had the loaded XT with 2 360K floppies, 20MB ST225, multi I/O card,
> CGA adapter and CGA monitor. I had a 286-12 with EGA and a 40MB ST4051.
> I had a 386DX/40 with 2 Maxtor full height 140MB XT1140 drives. The
> damn MFM cables would get flaky over time. My first IDE drive bought
> around that time was a 1.2GB that cost $250. Being in the business,
> I get good stuff at the right price. No Pavilions or emachines or
> Dells or Gateways or Aptivas for me. You can buy that sh!t. I won't.
>
> I'm ending this crossposted thread here. Have a gooder.

2282. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:10:39 UTC
From: richardharrison@webtv.net
Message-ID: <4268-3E396A9F-284@storefull-2317.public.lawson.webtv.net>
Source record: 125772

CAM wrote:
"Roy, you guys have a disconnect. Richard is describing the boundary conditions set by the wave reflection model where the forward voltage is always in phase with the forward current and the reflected voltage is always in phase with the reflected current no matter what the impedance of the load (as long as Z0 is resistive)."

Yes. And, the wave reflection model works very well indeed. Ask the typical Bird Wattmeter user.

Total voltage and current make standing waves and these are important as impedance representations of the totals, not the waves in each direction. The impedance for the wave in each direction is simply Zo which in most lines is close enough to Ro to permit Ohm`s law calculations of the d-c type to determine power.

The effect of a reactive load is usually also unimportant on directional wattmeter measurements. Terman writes on page 94 of his 1955 opus: "With both capacitive and inductive loads, the displacement of the minima from their open-circuited position is greater the lower the load resistance. It is also to be noted that the effect of a reactive load is merely to displace the position of the minima, the distance between the adjacent minima still remain a half wavelength, just as in the open and short-circuited cases."

OK. Terman is talking standing wave patterns but what he says confirms that the effect of a reactive load is only a pattern shift. We can get the same measurement result by sensing the energy on a line with reflections in a different place. Since the wattmeter can be used at any place on the line with the same results, a reactive load has no effect on power measurement. This confirms what we already know. The average power in either direction is not oscillating but is a solid constant value.

Best regards, Richard Harrison, KB5WZI

2283. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:40:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3971A2.7030404@ieee.org>
Source record: 125771

VE9SRB wrote:
> I don't understand what you mean by "allow VFtotal to exist". Are you
> saying that the two forward voltages of 89.66 V + 6.93 V don't somehow
> correctly add to 96.59 V or somehow don't (by themselves) allow the 96.59 V
> to exist as a forward voltage in the transformer section?

Yes, that's exactly what I have been saying for a year and a half. I have challenged you to take two 70.7V volt signals from two IC-706's and add them together to get 141.4V into a 50 ohm load. If you cannot get 400W out of two 100W transmitters, just figure out why you cannot do it. If you had 200W from somewhere else, you could do it. Exactly the same thing happens at a match point in a transmission line that is distanced from the source by the transmission line.

> The discussion on what happens *AT* the match point does not provide any
> information about what happens *IN* the 50 ohm line or *IN* the transformer
> section.

Yes, it does, Steve. You must have missed it. Please review the Melles-Griot web page to see what happens *AT* the thin film surface, the match point. Most textbook illustrations show the canceled vectors continuing along in space and continuing to be canceled. The Melles-Griot web page indicates that is not what happens. Canceled means canceled. Those rearward-facing fields cease to exist in the rearward direction and therefore, reverse direction just as the web page says. I am superposing E and H fields. You are superposing voltages and currents. The result will be identical assuming you and I account for all the energy.

> The +18.93 V and -18.93 V (associated with the 7.17 + 7.17 W in the above
> equation) are the two rearward voltages in the 50 ohm line that "cancel" in
> the destructive interference process. Do these voltages and their
> associated currents reverse direction and become forward voltages and
> currents in the transformer section?

The canceled voltages and their associated currents have an associated energy. When the voltages and currents vectorially add to zero, the energy components in those two canceled waves reverses direction (i.e. is re-reflected) and join the forward E and H fields in the transformer section thus contributing to the total forward voltage and forward current. I don't consider it necessary that the energy reversing direction be a separate voltage/current wave but there is no mathematical reason not to consider the energy from the canceled wave to be a third voltage/current wave adding to the other two. I believe that is what Mr. Maxwell is doing.

If you haven't already done so, please read the Melles-Griot web page. You seem to me to be confused about what they have to say. Or else you are

rejecting what they have to say. So do you agree with the Melles-Griot web page?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2284. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:41:58 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39718C.A3483A75@attbi.com>
Source record: 125770

Jimmy, let me jump in.

When an antenna is 'loaded' the current distribution[s] on the antenna change. If I place an inductor 1/2 way along an antenna I change the 'self inductance' of the antenna and the current changes both above and below the inductor. If I now move the inductor the currents change to satisfy the conditions imposed by the new location.

Impedance matching requires, as a minimum, two different reactive components; an inductor and a capacitor. This comprises an 'L' section, or with three components a 'TEE' section, or a 'PI' section; additionally you may use a tapped inductor, a split capacitor etc.

A 5/8 wavelength vertical antenna has an end point Load Impedance of approximately 120-j400 Ohms. For most amateur radios this has to be converted to a 50 ohm load. the purpose of the matching section is to accomplish the impedance transformation.

Now it is possible to do both with a tapped inductor at the base of the antenna. Remember the antenna has capacitance to 'ground'. So with the antenna and coil inductance and the capacitor to ground effect it is possible to achieve a 50 ohm load.

The impedance looking into the matching section is approximately:

R = Q*SQRT[L/C]

So, antenna Q, and suitable values of Inductance and Capacitance will transform 120-j400 to 50 ohms.

Conclusion: 1) Loading changes the current distribution on the antenna

2) Matching transforms one impedance to another.

73, Deacon Dave, W1MCE

2285. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:52:24 UTC
From: richardharrison@webtv.net
Message-ID: <7257-3E397468-98@storefull-2313.public.lawson.webtv.net>
Source record: 125777

Art, KB9MZ wrote:
"Say we have a collinear array---."

I misspelled King`s name in the list of authors. The collinear story is in the 1945 book: "Transmission Lines and Wave Guides" from McGraw-Hill. Authors were three Ph.D`s at Harvard, ---- King, Mimno, and Wing.

Best regards, Richard H.Harrison, KB5WZI

2286. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:53:36 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3it5dcp800vdb@corp.supernews.com>
Source record: 125773

Oh the glory of outcome based education. One can define terms to mean anything they want them to (see Alice in wonderland) and no one is supposed to point out that the world has agreed on certain principals. Why!, because it may hurt their self-esteem to point out they lack knowledge.

Gee Jimmy, your really close 2+2 is almost 5 so you get a smiley face...

"'Doc" <w5lz@cwis.net> wrote in message news:3E391722.AEF393ED@cwis.net...
>
>
> Jimmy,
> Very simply, if the coil is 'above' the feed point
> of the antenna, it's a loading coil. If it's below
> the feed point of the antenna it's changing the antenna's
> input impedance. There can also be a third option, where
> a loding coil and impedance matching coil can be combined
> at the base of an antenna. It may not be much of a distinction
> to you, but where the coil is in relation to the feed point of
> the antenna does make a difference. Can you see the distinction
> I'm making? As to whether Roy agrees with me, or has the same
> view of it, you'll have to ask him...
> 'Doc

2287. Re: V/UHF ant. placement

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:55:15 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <nye_9.5009$hG6.157144@twister.southeast.rr.com>
Source record: 125774

After visiting the web site I would say go with the x 200 on the longer
mast.

"Toni - ec3dds" <ec3dds@hotmail.com> wrote in message
news:psph3v44fd7h8thnuetb2ego48m75emgnd@4ax.com...
> Hi,
>
> Having moved to a new location I have to install new antennas, and I
> have some doubts:
>
> For V/UHF I will put a Diamond dualband antenna
> (http://www.rfparts.com/diamond/base2.html). My question is that not
> wanting to exceed 20 feet height I can choose a short antenna -X200-
> on a long mast, so that the antenna is free of obstacles, or a longer
> antenna with more gain -X500- on a shorter mast but the bottom of
> which would have some obstacles around.
>
> I think the big question here is if on this type of antennas (probably
> collinear) the radiation/reception occurs mainly in the bottom part or
> if it is evenly distributed across the entire antenna. In the first
> case I would prefer the small antenna on the long mast, but on the
> second I could use the long antenna to profit the extra gain in the
> directions where there are no obstacles.
>
> I also doubt on which is the minimum distance to an HF vertical so
> that the horizontal radiation pattern is minimally affected (i.e. it
> has no "shadows") and, very important, the HF antenna is not detuned.
> Would 8 ft. be enough or should I try to put them further apart? I
> also wonder if the 17ft. antenna at an 8 ft. distance from the HF
> vertical can have some kind of parasitic effect on the higher bands
> and produce some shadows.
>
> Thanks for answers.
>
> Toni

2288. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 18:55:30 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E397522.B8E006C9@uci.edu>
Source record: 125776

Roy Lewallen wrote:
>
> And, actually, the energy in any line not terminated in its
> characteristic impedance alternates between being moved and being
> stored, i.e., the power is one direction for a while, zero for a while,
> and in the other direction for a while, each cycle.

If that happened, how could the power ever get anywhere? ;-) Seems
like a pretty good reason NOT to think of power as something that
moves.

ac6xg

2289. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 19:18:54 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <yUe_9.12841$rq4.918589@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125778

Cecil,

This will probably be it for awhile. Something else has come up that I must deal with.

See comments below. I'll talk to you later.

Steve

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E3971A2.7030404@ieee.org...
> VE9SRB wrote:
> > I don't understand what you mean by "allow VFtotal to exist". Are you
> > saying that the two forward voltages of 89.66 V + 6.93 V don't somehow
> > correctly add to 96.59 V or somehow don't (by themselves) allow the 96.59 V
> > to exist as a forward voltage in the transformer section?
>
> Yes, that's exactly what I have been saying for a year and a half. I have
> challenged you to take two 70.7V volt signals from two IC-706's and
> add them together to get 141.4V into a 50 ohm load. If you cannot get
> 400W out of two 100W transmitters, just figure out why you cannot do it.
> If you had 200W from somewhere else, you could do it. Exactly the same
> thing happens at a match point in a transmission line that is distanced
> from the source by the transmission line.
>

I'm not sure how you can have it both ways, i.e. superposition gives the correct answers but it really doesn't work.

> > The discussion on what happens *AT* the match point does not provide any
> > information about what happens *IN* the 50 ohm line or *IN* the transformer
> > section.
>
> Yes, it does, Steve. You must have missed it. Please review the Melles-Griot
> web page to see what happens *AT* the thin film surface, the match point.
> Most textbook illustrations show the canceled vectors continuing along
> in space and continuing to be canceled. The Melles-Griot web page indicates
> that is not what happens. Canceled means canceled. Those rearward-facing
> fields cease to exist in the rearward direction and therefore, reverse
> direction just as the web page says. I am superposing E and H fields.
> You are superposing voltages and currents. The result will be identical
> assuming you and I account for all the energy.

>
> > The +18.93 V and -18.93 V (associated with the 7.17 + 7.17 W in the
above
> > equation) are the two rearward voltages in the 50 ohm line that "cancel"
in
> > the destructive interference process. Do these voltages and their
> > associated currents reverse direction and become forward voltages and
> > currents in the transformer section?
>
> The canceled voltages and their associated currents have an associated
> energy. When the voltages and currents vectorially add to zero, the
> energy components in those two canceled waves reverses direction (i.e. is
> re-reflected) and join the forward E and H fields in the transformer
section
> thus contributing to the total forward voltage and forward current.

The only point that I would make here is that one of the rearward traveling voltages/currents in the 50 ohm line is not associated with a rearward wave arriving at the junction from the transformer section, so it can't be "re-reflected".

One of the rearward traveling waves in the 50 ohm line originates as an initial reflection (t=0) on the 50-ohm side of the junction due to the forward source wave arriving at the junction, at t=0.

The rearward wave arriving at the junction from the transformer section has a power of 7.735 W. The original rearward traveling reflection on the 50 ohm side of the junction has a power 7.18 W. The initial forward power in the transformer section is 92.831 W.

So, I presume that you would conclude that the 7.735 W is "re-reflected" and the initial reflection at the junction (7.18 W) is no longer "reflected", since it now travels forward. Thus, your power equation would actually look more like 92.831 W + 7.735 W + 7.18 W = 107.746 W, which would really make for an interesting voltage equation. See how easy it is to re-write a "power" equation and change our steady state "interpretation".

>I don't
> consider it necessary that the energy reversing direction be a separate
voltage/
> current wave but there is no mathematical reason not to consider the
energy
> from the canceled wave to be a third voltage/current wave adding to the
other
> two. I believe that is what Mr. Maxwell is doing.
>

Well, I don't believe you can have a forward traveling power without an associated forward traveling voltage and current.

Take a look at the following: start at t=0 and establish the initial conditions. Then look at the voltages, currents and powers at the time when

the first reflection arrives at the junction. Your power and voltage equations are not so easy to manipulate in this case. Its not so easy to separate the voltage and power components.

I really have to go.

Steve VE9SRB

2290. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 19:44:41 UTC
From: Bob Dixon <Bob_Dixon@osu.edu>
Message-ID: <Bob_Dixon-B8A190.14444130012003@nntp.service.ohio-state.edu>
Source record: 125779

Here is the current status of my Titanex beam. I got good advice from several hams, and had extensive correspondence with W3FRG. He and I both now agree that the element lengths are set wrong. But I can't get up there to change them until the weather gets better in Spring.

To review the problem, the instructions are ambiguous, and give two possible sets of element lengths. I corresponded with Titanex several times, and they told me which was the correct set of lengths, and that is what I used. It now appears that their advice was wrong, perhaps due to a language problem.

The problem is related to the unusual twin side-by-side boom design. It is not at all obvious where to start measuring the element lengths at the center. The booms are about 3 inches apart. Half of the elements start on one of the booms and extend outward. The other half of the elements start out on one boom, and pass over the top of the other boom and then stick out the other side. Thus the ambiguity of whether you measure from halfway between the booms, or from the boom where the element is fastened, or from the other boom where it crosses over.

Bob W8ERD

2291. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 19:47:35 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E3981A8.C02C687F@att.net>
Source record: 125780

Cecil,

Let's take a slightly different approach to exactly the same problem.
And yes, I am trying to be helpful.

I believe that everyone agrees completely with your analysis of the
problem in terms of the magnitudes of V1, V2, V3, and V4.

I will make the problem slightly more generic by noting that there are
four wave components, let's say G1, G2, G3, and G4 (arbitrary letter
used in order to avoid any issues with V and P). Each wave component is
associated with a specific voltage and a specific power.

Following your lead to look at these components separately:

V1 = 89.55V P1 = 92.831W
V2 = 6.93V P2 = 0.555W
V3 = 18.93V P3 = 7.170W
V4 = -18.93V P4 = 7.170W

At the match point, but conceptually just before the match occurs, we
have G1, G2, G3, and G4 preparing to interact. Just after the match
occurs we have only G1 and G2, since G3 and G4 have annihilated each
other.

The summations before the match are:

V = V1 + V2 + V3 + V4 = 96.59V
P = P1 + P2 + P3 + P4 = 107.736W

Life is good!

After the match we have only G1 and G2 left, so the summations are:

V = V1 + V2 = 96.59V
P = P1 + P2 + "something" = 107.736W

Life is still good, but we need to identify the "something".

Possibilities:

A) "Something" comes from another wave that is not explicitly shown.
B) G1 and G2 have somehow become Super-Sized, with P1 and P2 also
Super-Sized in some manner.
C) G1 and G2 are not the same before and after the match.
D) Even though G3 and G4 are annihilated, their legacy lives on.
E) The concept of adding power in this fashion is flawed.
F) None of the above

Dilemmas:

A) It is not clear just what the hidden wave might be.
B) I don't understand the mechanism, but throw it in for completeness.
C) There has been no suggestion that G1 and G2 are changed after the
match.
D) Same as A, the mechanism is not identified.
E) Causes great disagreement in RRAA.
F) TBD

You have repeatedly noted that conservation of energy must occur, and
certainly everyone agrees with the overall principle. You have argued
that the destructively interfered waves are essential for energy
balance, and that this energy appears in the constructive wave. Sounds
good, but where is this constructive wave?

The ultimate question is:

Which possible answer reflects your view?

_
|_| A

_
|_| B

_
|_| C

_
|_| D

_
|_| E

_
|_| F

Extra credit given for explaining A, B, C, or D.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> VE9SRB wrote:
> > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> >>P1 + P2 + P3 + P4 = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W
> >
> > Does this equation represent FORWARD traveling power in the transformer
> > section.
>
> Yes, it represents the cross product of the E and H fields.
>
> > If it does, please state explicitly the associated forward voltage equation
> > in the transformer section.
>
> First I will show the voltage equation *AT* the match point, Steve.

> The superposition theorem predicts four voltage components *AT* the
> match point. They are 89.66V, 6.93V, 18.93V, and 18.93V corresponding
> to V1, V2, V3, and V4. V3 and V4 are 180 degrees out of phase so the
> voltage equation *AT* the match point is:
>
> Vmatch = 89.66V + 6.93V + 18.93V - 18.93V = 96.59V
> Pmatch = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W
> Since V3 and V4 cancel, the VFtotal equation becomes:
> VFtotal = 89.66V + 6.93V = 107.736V (just like yours)
>
> The V3 and V4 voltage waves are canceled at the match point. The energy
> in those two waves joins the E and H fields to allow VFtotal to exist.
> --
> cheers, CAM http://www.qsl.net/w5dxp

2292. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:02:06 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E3984BE.E6AEA0C1@uci.edu>
Source record: 125781

The commonly agreed problem with the Feynman lectures is that often times, the student is given the impression that he fully understands the concepts that are being discussed. But when put to the challenge of trying to solve a problem on the material, much difficulty is encountered. For example:

Richard Clark wrote:
> Two distinct kinds of Energy: The Potential Energy for Newton's apple
> has a vector straight down called gravity. Gravity is stated in terms
> of distance per timeï¿½, a vector.

Acceleration is stated in terms of distance per time squared. Gravity has units of force, which includes units of mass and acceleration.

> The Kinetic Energy for Newton's
> apple was also straight down in describing its motion, a vector,
> which balances the remaining Potential Energy at every quantum step in
> the fall.
> conservation of Energy = PE + KE

That an equation for total energy. Conservation of energy is PE1 + KE1 = PE2 + KE2. Energy total before equals energy total after. It's a 'what goes up must come down' kinda deal.

ac6xg

2293. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:16:03 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E398803.C0CA23AF@uci.edu>
Source record: 125783

Gene,

You're really close on this, and you have precisely identified the spot where the confusion lies. G3 and G4 cancel in the reverse direction, but the energy cannot really be "anihilated". That would violate conservation of energy.
Besides, even with particle/anti-particle anihilation, the energy remains. I think it's apparent the energy can't go rearward, and so it must go forward - adding together with the other forward wave components and illuminating the load. It really is as simple and elegant as that.

73, Jim AC6XG

Gene Fuller wrote:
>
> Cecil,
>
> Let's take a slightly different approach to exactly the same problem.
> And yes, I am trying to be helpful.
>
> I believe that everyone agrees completely with your analysis of the
> problem in terms of the magnitudes of V1, V2, V3, and V4.
>
> I will make the problem slightly more generic by noting that there are
> four wave components, let's say G1, G2, G3, and G4 (arbitrary letter
> used in order to avoid any issues with V and P). Each wave component is
> associated with a specific voltage and a specific power.
>
> Following your lead to look at these components separately:
>
> V1 = 89.55V P1 = 92.831W
> V2 = 6.93V P2 = 0.555W
> V3 = 18.93V P3 = 7.170W
> V4 = -18.93V P4 = 7.170W
>
> At the match point, but conceptually just before the match occurs, we
> have G1, G2, G3, and G4 preparing to interact. Just after the match
> occurs we have only G1 and G2, since G3 and G4 have annihilated each
> other.
>
> The summations before the match are:
>
> V = V1 + V2 + V3 + V4 = 96.59V
> P = P1 + P2 + P3 + P4 = 107.736W
>

> Life is good!
>
> After the match we have only G1 and G2 left, so the summations are:
>
> V = V1 + V2 = 96.59V
> P = P1 + P2 + "something" = 107.736W
>
> Life is still good, but we need to identify the "something".
>
> Possibilities:
>
> A) "Something" comes from another wave that is not explicitly shown.
> B) G1 and G2 have somehow become Super-Sized, with P1 and P2 also
> Super-Sized in some manner.
> C) G1 and G2 are not the same before and after the match.
> D) Even though G3 and G4 are annihilated, their legacy lives on.
> E) The concept of adding power in this fashion is flawed.
> F) None of the above
>
> Dilemmas:
>
> A) It is not clear just what the hidden wave might be.
> B) I don't understand the mechanism, but throw it in for completeness.
> C) There has been no suggestion that G1 and G2 are changed after the
> match.
> D) Same as A, the mechanism is not identified.
> E) Causes great disagreement in RRAA.
> F) TBD
>
> You have repeatedly noted that conservation of energy must occur, and
> certainly everyone agrees with the overall principle. You have argued
> that the destructively interfered waves are essential for energy
> balance, and that this energy appears in the constructive wave. Sounds
> good, but where is this constructive wave?
>
> The ultimate question is:
>
> Which possible answer reflects your view?
> _
> |_| A
> _
> |_| B
> _
> |_| C
> _
> |_| D
> _
> |_| E
> _
> |_| F

>
> Extra credit given for explaining A, B, C, or D.
>
> 73,
> Gene
> W4SZ
>
> OC_CAM's Razor wrote:
> >
> > VE9SRB wrote:
> > > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> > >>P1 + P2 + P3 + P4 = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W
> > >
> > > Does this equation represent FORWARD traveling power in the transformer
> > > section.
> >
> > Yes, it represents the cross product of the E and H fields.
> >
> > > If it does, please state explicitly the associated forward voltage equation
> > > in the transformer section.
> >
> > First I will show the voltage equation *AT* the match point, Steve.
> > The superposition theorem predicts four voltage components *AT* the
> > match point. They are 89.66V, 6.93V, 18.93V, and 18.93V corresponding
> > to V1, V2, V3, and V4. V3 and V4 are 180 degrees out of phase so the
> > voltage equation *AT* the match point is:
> >
> > Vmatch = 89.66V + 6.93V + 18.93V - 18.93V = 96.59V
> > Pmatch = 92.831W + 0.555W + 7.17W + 7.17W = 107.736W
> > Since V3 and V4 cancel, the VFtotal equation becomes:
> > VFtotal = 89.66V + 6.93V = 107.736V (just like yours)
> >
> > The V3 and V4 voltage waves are canceled at the match point. The energy
> > in those two waves joins the E and H fields to allow VFtotal to exist.
> > --
> > cheers, CAM http://www.qsl.net/w5dxp

2294. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:28:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3j2ni9onhfq5b@corp.supernews.com>
Source record: 125782

You may have put your finger on the essence of the problem.

We can indeed treat forward and reverse voltage and current waves separately and come to valid conclusions about the total voltage and current. I can do all voltage and current calculations with the forward and reverse waves and add them, or with the totals, and get exactly the same result.

But inferring from this that we can first multiply the voltages and currents in each traveling wave, then add or subtract the results to get the total product, can lead to some conclusions that aren't correct. That we can treat the traveling voltage and current waves separately does not at all mean that we can treat traveling power or energy waves separately.

The math sure is simplified if we ignore the phase angles of the components, or make the unjustifiable assumption that we can ignore the time-varying property of power and energy, or invent rules for how traveling average power waves should interfere. And we might or might not get lucky and get some final results that are correct. But if we do, it's not because we really understand what's happening. And, depending on which bits of inconvenient information we choose to ignore, we can come to different conclusions. Which, it sure looks to me, is exactly what's happened.

Indeed I'm complicating the math -- by not cavalierly throwing away this or that piece of data because it's a nuisance. But even so I haven't had to use any math I didn't learn in high school, so I'll live with the "unnecessary complication", thank you.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Um, if you know what you're doing with phasors, you realize that when
>> you multiply voltage and current phasors to get power, you don't get a
>> phasor. (At least not at the same frequency as the V and I phasors, so
>> it can't be used in mixed calculations.) But it's still a time-varying
>> function. The only rigorous way I know of to make the calculation of
>> power is to multiply the time v and i functions themselves. That's how
>> it's done in the textbooks I have, and for good reason. The result of
>> multiplying those time functions is the time function of power.
>
>
> If you follow the wave reflection model, the forward voltage is in phase

> with the forward current and the reflected voltage is in phase with the
> reflected current. That makes the power math a scalar product instead of
> a vector product. It is admittedly a short cut simplification, but it
> works. AC voltages and currents in phase can then be treated like DC
> voltages and currents since there is no reactance present (if we ignore
> the small reactance present in Z0).
>
> Following the wave reflection model in a transmission line with
> reflections,
> the forward and reflected (reverse) wave components can be treated
> separately.
> Since the component voltage is always in phase or 180 degrees out of phase
> with the associated component current, cos(theta) is always equal to 1
> which
> simplifies the match considerably.
>
> You are attempting to deal with total voltage and total current and that's
> perfectly OK but you are complicating the math because cos(theta) is no
> longer always equal to 1. Many references indicate that it is valid to
> treat the forward wave and the reflected wave separately, thus simplifying
> the math and obtaining the correct results. One such reference is Johnson's
> "Transmission Lines and Networks".

2295. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:35:05 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <l4KdnfHIb-LkEaSjXTWcpg@comcast.com>
Source record: 125784

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:Bcc_9.4342$hG6.141151@twister.southeast.rr.com...
..... Would not a base loaded
> 3/4 wl antenna with the actual radiator length significantly longer than
1/2
> wl and signifcantly shorter than 3/4 be identical in constuction to a
5/8.
> Yes or no.
>
I think we are using different semantics here. A 3/4 vertical would have a
radiating element of 3/4, and be neither shorter nor longer than 3/4
wavelength.

Tam/WB2TT

2296. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:35:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3j347a1qvgqf8@corp.supernews.com>
Source record: 125785

You're absolutely correct, Cecil, on both counts. I hope most of the readers have by this time understood that I'm talking about total V and I -- hopefully Richard is the only one remaining who hasn't gotten it.

Yes, I'm complicating the math (clear to high school level). But no one needs to pay any attention. Readers who prefer simpler explanations need only refer to the hundreds of previous postings on this and other threads for a complete, concise, simple, and easy to understand explanation of what's really happening. And they can surely see for themselves just how clear and easy to understand it all is when you don't drag in all that complicated math.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> This is true only when the voltage and current are in phase. And
>> they're only in phase if the load is matched to the Z0 of the line (or
>> at particular points along the line otherwise). I described the
>> various possibilities some time ago, but I see it's time to do it again.
>
>
> Roy, you guys have a disconnect. Richard is describing the boundary
> conditions set by the wave reflection model where the forward voltage
> is always in phase with the forward current and the reflected voltage
> is always in phase with the reflected current no matter what the
> impedance of the load (as long as Z0 is resistive).
>
> You are obviously talking about total voltage and total current and
> that's OK. But it complicates the math to such a point that you are
> going to lose a lot of readers.

2297. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:41:27 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <X5g_9.5520$hG6.166879@twister.southeast.rr.com>
Source record: 125786

I am not so sure that part of the definition of loading is that it changes the current distibution on an antenna . AS others have said and I already knew, A coil located at the base of an antenna does not significantly disturb the current distibution in the antenna. to me loading is making a raditor that exhibts a complex impedance at a desire freq resistive at that freq by adding reactance that cancels out the reactive componet of the antennas impedace.Matching means coversion from one resistive impedance to another. I realize that there is very little difference in these two meanings and I may be totally wrong about them but it certainly seems like over the years this is the way they have been used . This may be an oversimplication. Perhaps I should look at loading as part of the matching process. With loading taking care of the reactive component and matching taking care of the resistive. Hmmm, kind of sounds like what I aleady said. Thanks for yor input it certainly gave me a new way of looking at it.

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E39718C.A3483A75@attbi.com...
> Jimmy, let me jump in.
>
> When an antenna is 'loaded' the current distribution[s] on the antenna
> change. If I place an inductor 1/2 way along an antenna I change the
> 'self inductance' of the antenna and the current changes both above and
> below the inductor. If I now move the inductor the currents change to
> satisfy the conditions imposed by the new location.
>
> Impedance matching requires, as a minimum, two different reactive
> components; an inductor and a capacitor. This comprises an 'L' section,
> or with three components a 'TEE' section, or a 'PI' section;
> additionally you may use a tapped inductor, a split capacitor etc.
>
> A 5/8 wavelength vertical antenna has an end point Load Impedance of
> approximately 120-j400 Ohms. For most amateur radios this has to be
> converted to a 50 ohm load. the purpose of the matching section is to
> accomplish the impedance transformation.
>
> Now it is possible to do both with a tapped inductor at the base of the
> antenna. Remember the antenna has capacitance to 'ground'. So with the
> antenna and coil inductance and the capacitor to ground effect it is
> possible to achieve a 50 ohm load.
>
> The impedance looking into the matching section is approximately:
>
> R = Q*SQRT[L/C]
>

> So, antenna Q, and suitable values of Inductance and Capacitance will
> transform 120-j400 to 50 ohms.
>
> Conclusion: 1) Loading changes the current distribution on the antenna
****** I 'm not so sure about this, at least not with base loading.
> 2) Matching transforms one impedance to another.
Yes, does this mean transforming complex impedances to resistive impedances
too. (ie making an antenna resonate at a freq it was not designed.

>
> 73, Deacon Dave, W1MCE

2298. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:44:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E398EB2.4050600@ieee.org>
Source record: 125787

VE9SRB wrote:
> I'm not sure how you can have it both ways, i.e. superposition gives the
> correct answers but it really doesn't work.

Superposition gives the correct answers for voltages and currents.
Your brand of superposition of power just doesn't work. The conservation
of energy principle will NOT allow you to get more energy out of two waves
than exists in the two waves. That's a no-brainer. If you think that you
are getting 133.33W out of two (and only two) waves of 75W and 8.33W, you
are deceiving yourself. There's 50 joules/sec of re-reflected energy
constructively interfering in your superposition process. If you would
only draw the voltage phasors for *both* sides of the match point, the
equal magnitudes of destructive and constructive interference on each
side of the match point would jump off the paper at you. There are four
sources of energy predicted by the superposition theorem. In a matched
system, all four of those energy sources contribute to the E and H fields
associated with the Pfwd2/PFtotal forward wave flowing toward the load.
You have taken only two of those energy sources into account. No wonder
you come up lacking.

> The only point that I would make here is that one of the rearward traveling
> voltages/currents in the 50 ohm line is not associated with a rearward wave
> arriving at the junction from the transformer section, so it can't be
> "re-reflected".

Do you really think that Pfwd1(Rho^2) is not reflected? Do you really
think that Pref2(1-Rho^2) is not reflected? Steve, both of these waves
have their voltages 180 degrees out of phase with their currents and
they are both traveling toward the source. Therefore, both of these wave
components have been reflected. The energy in both of those reflected
waves reverses direction during wave cancellation. That's re-reflection
of two reflected waves and that's a no-brainer.

This is not rocket science, Steve. In a single source system, all energy
traveling toward the source is reflected energy. All energy traveling
toward the load has either never been reflected or has been re-reflected.

Every time the energy from the source changes direction, you can multiply
the power subscript by -1. If it changes direction two times (re-reflected)
you multiply by another -1 to get +1. That's why P(+) flows toward the load
and P(-) flows toward the source.

> One of the rearward traveling waves in the 50 ohm line originates as an
> initial reflection (t=0) on the 50-ohm side of the junction due to the
> forward source wave arriving at the junction, at t=0.

Yep, that's a reflected wave. If the energy in that wave reverses
direction, that energy is re-reflected.

> The rearward wave arriving at the junction from the transformer section has
> a power of 7.735 W. The original rearward traveling reflection on the 50
> ohm side of the junction has a power 7.18 W. The initial forward power in
> the transformer section is 92.831 W.
>
> So, I presume that you would conclude that the 7.735 W is "re-reflected" and
> the initial reflection at the junction (7.18 W) is no longer "reflected",
> since it now travels forward.

Travels forward toward the source????? Shirely, you jest! In a single source
system, forward is toward the load and rearward is toward the source. The answer
to your above presumption is "Absolutely not!" And I resent your assumptions
based on your false presumptions. That's an unfair debating technique. Of course
it is still a reflected wave. It's voltage and current are 180 degrees out of
phase and it is flowing toward the source in a single-source system. It is a
reflected wave by definition.

> Thus, your power equation would actually look
> more like 92.831 W + 7.735 W + 7.18 W = 107.746 W, ...

Not a nice thing to do, Steve. Where I come from that is called
mind fornication. My power equation looks nothing like that. You
have made a wrong assumption based on your wrong presumption. Please
don't do that. Both the "rearward-traveling waves 1 and 2" are reflected
waves that get re-reflected.

> Well, I don't believe you can have a forward traveling power without an
> associated forward traveling voltage and current.

Oh really? OK, take a 100W IC-706, set it for 50 watts output into a
dummy load. Now connect it to a 50 ohm transmission line and show us
how to transfer 50 joules/sec without a voltage and a current. If you
can do that, you might win me over.

> Take a look at the following: start at t=0 and establish the initial
> conditions. Then look at the voltages, currents and powers at the time when
> the first reflection arrives at the junction.

Johnson has already done that for me, Steve. If you make the feedlines
each one second long and keep up with the joules, everything will become
clear to you. Let's not try to complicate things beyond human understanding.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2299. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:50:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E399004.7030303@ieee.org>
Source record: 125790

VE9SRB wrote:
> I have never added the "source voltage" (as Walter
> defines it) to the "reflected voltage". Walter is incorrectly stating the
> two voltages I add, thus misrepresenting my superposition analysis, and then
> claims that it is wrong.

You misstated my energy equation and then claimed it was wrong. :-)
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2300. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:52:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3j44po9l06b0c@corp.supernews.com>
Source record: 125788

I couldn't quickly find the posting where I said this, to get the full context. The statement should have been accompanied by a statement that the total power in one direction is greater than the power in the other direction when power is being moved to the load (i.e., the load includes a finite resistance). Imagine, for example, a power waveform that looks like a sine wave of 200 watts p-p value, centered around 50 watts. For about 3/4 of the cycle, the power is greater than zero, moving power toward the load. The maximum rate, at the peak, is 150 watts. For the remainder of the cycle, the power is less than zero, which means power is moving the other way (at a maximum rate of 50 watts). The power is zero for two instants each cycle, as the waveform crosses zero when reversing direction. It's evident either from inspection or by doing the math that the average power flowing to the load is simply the DC offset value -- 50 watts in this case. That's the power that's getting dissipated by the load.

An analysis of any resonant circuit will show the same characteristics, of power flowing back and forth, with only a portion of it being dissipated each cycle. The average value of the power flowing but not getting dissipated is often called "reactive" power.

When the load is matched, the average value is exactly 1/2 the p-p value, so power flow is in one direction for the entire cycle.

I made a posting yesterday that might explain it a little better.

Roy Lewallen, W7EL

Jim Kelley wrote:
>
> Roy Lewallen wrote:
>
>>And, actually, the energy in any line not terminated in its
>>characteristic impedance alternates between being moved and being
>>stored, i.e., the power is one direction for a while, zero for a while,
>>and in the other direction for a while, each cycle.
>
>
> If that happened, how could the power ever get anywhere? ;-) Seems
> like a pretty good reason NOT to think of power as something that
> moves.
>
> ac6xg

2301. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:53:56 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <Ehg_9.5628$hG6.168584@twister.southeast.rr.com>
Source record: 125789

Can you do anything but make idle insults?. I guess this is what improves
your self esteem.

"Fred Hambrecht Sr" <w4jle@charter.net> wrote in message
news:v3it5dcp800vdb@corp.supernews.com...
> Oh the glory of outcome based education. One can define terms to mean
> anything they want them to (see Alice in wonderland) and no one is
supposed
> to point out that the world has agreed on certain principals. Why!,
because
> it may hurt their self-esteem to point out they lack knowledge.
>
> Gee Jimmy, your really close 2+2 is almost 5 so you get a smiley face...
>
>
> "'Doc" <w5lz@cwis.net> wrote in message news:3E391722.AEF393ED@cwis.net...
> >
> >
> > Jimmy,
> > Very simply, if the coil is 'above' the feed point
> > of the antenna, it's a loading coil. If it's below
> > the feed point of the antenna it's changing the antenna's
> > input impedance. There can also be a third option, where
> > a loding coil and impedance matching coil can be combined
> > at the base of an antenna. It may not be much of a distinction
> > to you, but where the coil is in relation to the feed point of
> > the antenna does make a difference. Can you see the distinction
> > I'm making? As to whether Roy agrees with me, or has the same
> > view of it, you'll have to ask him...
> > 'Doc
>
>

2302. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 20:56:57 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39912F.49BB4C88@attbi.com>
Source record: 125791

Jim, you/we can disagree with the definition of loading.

However, the ARRL Antenna book devotes an entire chapter, chapter 16
[18th edition], to the issue. They explicitly indicate that loading
changes the current distribution in the antenna. The same chapter also
discusses Impedance Matching.

Try your local library and see if you can read the chapter.

73, Deacon Dave, W1MCE

Jimmy wrote:
>
> I am not so sure that part of the definition of loading is that it changes
> the current distibution on an antenna . AS others have said and I already
> knew, A coil located at the base of an antenna does not significantly
> disturb the current distibution in the antenna. to me loading is making a
> raditor that exhibts a complex impedance at a desire freq resistive at that
> freq by adding reactance that cancels out the reactive componet of the
> antennas impedace.Matching means coversion from one resistive impedance to
> another. I realize that there is very little difference in these two
> meanings and I may be totally wrong about them but it certainly seems like
> over the years this is the way they have been used . This may be an
> oversimplication. Perhaps I should look at loading as part of the matching
> process. With loading taking care of the reactive component and matching
> taking care of the resistive. Hmmm, kind of sounds like what I aleady said.
> Thanks for yor input it certainly gave me a new way of looking at it.
>
> "Dave Shrader" <david.shrader@attbi.com> wrote in message
> news:3E39718C.A3483A75@attbi.com...
> > Jimmy, let me jump in.
> >
> > When an antenna is 'loaded' the current distribution[s] on the antenna
> > change. If I place an inductor 1/2 way along an antenna I change the
> > 'self inductance' of the antenna and the current changes both above and
> > below the inductor. If I now move the inductor the currents change to
> > satisfy the conditions imposed by the new location.
> >
> > Impedance matching requires, as a minimum, two different reactive
> > components; an inductor and a capacitor. This comprises an 'L' section,
> > or with three components a 'TEE' section, or a 'PI' section;
> > additionally you may use a tapped inductor, a split capacitor etc.
> >
> > A 5/8 wavelength vertical antenna has an end point Load Impedance of
> > approximately 120-j400 Ohms. For most amateur radios this has to be

> > converted to a 50 ohm load. the purpose of the matching section is to
> > accomplish the impedance transformation.
> >
> > Now it is possible to do both with a tapped inductor at the base of the
> > antenna. Remember the antenna has capacitance to 'ground'. So with the
> > antenna and coil inductance and the capacitor to ground effect it is
> > possible to achieve a 50 ohm load.
> >
> > The impedance looking into the matching section is approximately:
> >
> > R = Q*SQRT[L/C]
> >
> > So, antenna Q, and suitable values of Inductance and Capacitance will
> > transform 120-j400 to 50 ohms.
> >
> > Conclusion: 1) Loading changes the current distribution on the antenna
> ****** I 'm not so sure about this, at least not with base loading.
> > 2) Matching transforms one impedance to another.
> Yes, does this mean transforming complex impedances to resistive impedances
> too. (ie making an antenna resonate at a freq it was not designed.
>
> >
> > 73, Deacon Dave, W1MCE

2303. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:01:30 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39923F.300CB6B6@attbi.com>
Source record: 125792

Gee!! If I watch my fluorescent lamps closely I can see some flutter!!
Does that support the claim that the power cycles through zero ?

YOU BET IT DOES!

Professional photographers HATE Fluorescent lamps because they/[I] have
to use SLOW shutter speeds for ambient light photography.

Deacon Dave, W1MCE

Jim Kelley wrote:
>
> Roy Lewallen wrote:
> >
> > And, actually, the energy in any line not terminated in its
> > characteristic impedance alternates between being moved and being
> > stored, i.e., the power is one direction for a while, zero for a while,
> > and in the other direction for a while, each cycle.
>
> If that happened, how could the power ever get anywhere? ;-) Seems
> like a pretty good reason NOT to think of power as something that
> moves.
>
> ac6xg

2304. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:05:26 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E399396.95C70865@uci.edu>
Source record: 125795

Roy Lewallen wrote:
>
> I couldn't quickly find the posting where I said this, to get the full
> context. The statement should have been accompanied by a statement that
> the total power in one direction is greater than the power in the other
> direction when power is being moved to the load (i.e., the load includes
> a finite resistance). Imagine, for example, a power waveform that looks
> like a sine wave of 200 watts p-p value, centered around 50 watts. For
> about 3/4 of the cycle, the power is greater than zero, moving power
> toward the load. The maximum rate, at the peak, is 150 watts. For the
> remainder of the cycle, the power is less than zero, which means power
> is moving the other way (at a maximum rate of 50 watts). The power is
> zero for two instants each cycle, as the waveform crosses zero when
> reversing direction. It's evident either from inspection or by doing the
> math that the average power flowing to the load is simply the DC offset
> value -- 50 watts in this case. That's the power that's getting
> dissipated by the load.

Yes, at the load. There's power being generated at the source,
dissipated by the load, and energy flowing at a rate determined by that
power through the transmission line. That's what actually happens.

There's really no problem in calculating the effective power at any
point along the way. Certainly that power would make itself available
there if an energy conversion device were to be positioned at that
point. So there's really no harm in thinking that power is 'changing
its location'. But in point of fact, it is really energy which is being
conveyed from one point to another.

> An analysis of any resonant circuit will show the same characteristics,
> of power flowing back and forth, with only a portion of it being
> dissipated each cycle. The average value of the power flowing but not
> getting dissipated is often called "reactive" power.

The heat energy that shows up in a light bulb isn't moving back and
forth with the electrons in the lamp cord, Roy. It's either there, or
it's still at the power plant. It's a small point, and certainly isn't
worth making enemies over. I'm sure you agree.

73, Jim AC6XG

2305. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:14:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3j5dh7v4nda90@corp.supernews.com>
Source record: 125793

Gravitational intensity or field strength (almost always denoted 'g')
has units of acceleration (about 9.8 m/sec^2 or 32 ft/sec^2), as Richard
said. See for example Weidner & Sells, _Elementary Classical Physics_,
Vol. 1, p. 373; or Resnick & Halliday, _Physics_, Part 1, p. 339.

The force gravity applies on an object of mass m is mg, which does have
the proper dimensions of force. This is "weight", which is of course
different for objects of different mass.

Roy Lewallen, W7EL

Jim Kelley wrote:
> The commonly agreed problem with the Feynman lectures is that often
> times, the student is given the impression that he fully understands the
> concepts that are being discussed. But when put to the challenge of
> trying to solve a problem on the material, much difficulty is
> encountered. For example:
>
> Richard Clark wrote:
>
>>Two distinct kinds of Energy: The Potential Energy for Newton's apple
>>has a vector straight down called gravity. Gravity is stated in terms
>>of distance per timeï¿½, a vector.
>
>
> Acceleration is stated in terms of distance per time squared. Gravity
> has units of force, which includes units of mass and acceleration.
> . . .

2306. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:16:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E39961F.870C69AF@uci.edu>
Source record: 125797

Roy Lewallen wrote:
>
> Gravitational intensity or field strength (almost always denoted 'g')
> has units of acceleration (about 9.8 m/sec^2 or 32 ft/sec^2), as Richard
> said. See for example Weidner & Sells, _Elementary Classical Physics_,
> Vol. 1, p. 373; or Resnick & Halliday, _Physics_, Part 1, p. 339.

Gravity, usually referred to as the universal gravitational constant and denoted by big G is a force, and as such has units of force. You are being confused by the acceleration due to gravity, which is not universal, and happens to be 9.8 meters per second squared at sea level here on Earth. (Same text.)

> The force gravity applies on an object of mass m is mg, which does have
> the proper dimensions of force. This is "weight", which is of course
> different for objects of different mass.

Force is force. Acceleration is acceleration.

Some of the folks where I work make a living measuring big G. I build some of their apparatus for them.

73, Jim AC6XG

2307. Re: I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:18:09 UTC
From: Jay <jay@hotmail.com>
Message-ID: <IEg_9.63265$GX4.2592508@news2.east.cox.net>
Source record: 125794
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Murray is such a asshole. He thinks he rules the newsgroup and in reality he is just another turd in the dustbowl of Texas.

"Smokey" <smokey@truck.stop> wrote in message news:3e3b26e8.79491893@news.easynews.com...
> On Thu, 30 Jan 2003 06:52:33 -0600, Murray Neece <radioranch@qth.com>
> wrote:
>
> >That YOU IDIOTS would carry this conversation on these groups indicates your disdain
> >for any rules of decency on the groups...You and Scott should get on a chat group
> >for socially un acceptable computer geeks and leave the radio groups alone. AMERICA
> >unite and blast these guys at thier home email sites...PLEASE!!
> >
>
> Why is this such a problem for you? If you don't like the
> subject, don't read it. No one is forcing you to read anything on
> Usenet If anyone needs to be blasted, its you. Please don't post
> messages with your VCF attachment, this is not a binaries news group.
> By the way, you started this off topic thread. Your such an IDIOT
> that you would carry on this conversation on these groups indicates
> your disdain for any rules of decency on the groups.
>

2308. VHF antenna for F/G RV?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:26:18 UTC
From: lgagnon@sherrittoil.com
Message-ID: <1d3b4598.0301301326.4dac4ba8@posting.google.com>
Source record: 125796

I am considering my options for a 2 meter VHF antenna for a fiberglass body RV and would like to hear from hams who have had REAL experience mounting and using antennas on such a vehicle.

My RV is a 22' Class C with a mostly fiberglass body, other than the Ford E350 cab. One easy option would be a 5/8 wave, hood lip mounted, but the cabover part of the RV would almost touch the antenna so the radiation pattern would probably be lousy, as would any engine noise.

The other options I am considering are:

1) 5/8 wave mounted to top of side mirror frame (like truckers do)
2) 1/2 wave on top of RV but that means drilling holes through roof
3) 1/2 wave glass mount on upper side window of RV body
4) 1/4 wave on RV roof with homemade mesh ground plane (but again that means drilling roof holes).

Anyone out there tried anything similar and what are your experiences? Also, what have you done to ensure a waterproof rubber roof after drilling holes for antenna mounts. Hope to hear from you.

Larry VE6MK

2309. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:33:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <v93j3vs0ulgq34reslh6uogtlrg71gmc0r@4ax.com>
Source record: 125798

On Thu, 30 Jan 2003 09:53:19 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>My QEX article will be 'qexart1.htm'
>and it is not ready yet.

Hi Cecil,

Not ready yet? What was it the editors declined to publish - your
fantasy?

Cecil, this is still your standard playing fast and loose with us. It
reveals a consistent attitude of contempt for us. You've been coyly
offering this has been in the pipeline FOR MONTHS. And here we find
>and it is not ready yet.
which is something I forecast when you trotted out this lame excuse of
the editors sitting on your work.

Was it ready for them? Your spin puts a twist in your shorts when we
examine what this rubber crutch of the "editors" has been. If it
wasn't ready for them, was it such a good technical case in the first
place? The quality of discussion in these threads would suggest a
resounding NO. Let's try the same question from another angle: If it
WAS ready for them, was it such a good technical case in the first
place? Oooh, that smarts!

My guess is that I hit the nail on the head with the two metrics
observed in your work, and that those metrics proved an amazing,
continuing, dulling consistency in the quality of writing: death
certificates written in crayon. I can well imagine the mind-numbing,
endless repetition that inhabits those hidden pages because you've
regaled us with that identical style here in these threads. I can
foresee the countless jabs at Steve through out those clandestine
writings that probably put those editors to sleep - it is ingrained
throughout your every comment made in this group, even when not
topical.

Cecil, you've put a lot of milage sitting on the shoulders of those
poor editors using them as your cat's paw to evade direct answers to
my questions in the past. And you are continuing to evade them now
that you've dropped the bluff.

Ad hominem? You make it easy when you paper the wall with promises,
but have nothing to offer but excuses. This is of a class of
accomplishment comparable to the various challenges from fraudtenna.
Now, I will allow that is Ad hominem, and I will repeat it so you can
truly complain: your promises are as empty as those offered by

fraudtenna and as far as I am concerned are meant not to serve the technical discussion so much as to keep the pot boiling. Complain to your heart's content, but I would offer you "might" find more succor if you visit the chaplain. Try responding in kind, but you know and I know you will lose that game, you don't have the range, depth, or stylistic horsepower. Unfortunately the only remaining gambit is to respond in faith to technical questions. Surprise us and try it as something new. Bore us by whining you've been pursuing that all along.

>just don't like the writing style?
"Like" is an entertainment value and if you want grading in that regard, no, it is not very entertaining. I don't know how you've managed to miss that throughout my correspondence - I'm not shy about saying it. You've repeatedly admitted your style sucks and I simply agree by being specific rather than offering the simple condescension of agreeing mindlessly with you. You write sleeping pills, small and large. What can I say but what is observable? You've admitted to it, what's the point?

If you don't like these Theater notices, stop acting. If you can't stop acting, don't expect an Oscar.

73's
Richard Clark, KB7QHC

2310. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:36:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E399AE7.5030806@ieee.org>
Source record: 125800

Gene Fuller wrote:
> At the match point, but conceptually just before the match occurs, we
> have G1, G2, G3, and G4 preparing to interact. Just after the match
> occurs we have only G1 and G2, since G3 and G4 have annihilated each
> other.

So you believe the energy in G3 and G4 is annihilated? If so, it has been nice talking to you. :-) I might be wrong but I don't believe annihilation is the appropriate word. Destructive interference in the rearward direction and enhanced intensity in the forward direction is what the Melles-Griot web page says. "Enhanced intensity" is just another way of saying constructive interference.

> Possibilities:
> D) Even though G3 and G4 are annihilated, their legacy lives on.

> D) Same as A, the mechanism is not identified.

That's where you are wrong, Gene. The mechanism is identified in spades on the Melles-Griot web page: "Clearly, if the wavelength of the incident light and the thickness of the film are such that a phase difference exists between reflections of p, then REFLECTED WAVEFRONTS INTERFERE DESTRUCTIVELY, and overall reflected intensity is a minimum. If the two reflections are of equal amplitude, then this amplitude (and hence intensity) minimum will be zero. In the absence of absorption or scatter, the PRINCIPLE OF CONSERVATION OF ENERGY indicates all "LOST" REFLECTED INTENSITY will appear as ENHANCED INTENSITY (constructive interference) in the transmitted beam. The sum of the reflected and transmitted beam intensities is always equal to the incident intensity. This important FACT has been confirmed experimentally."

The two waves involved in the non-glare interference pattern are canceled by destructive interference yet their legacy lives on as "enhanced intensity (constructive interference) in the transmitted beam." That sounds pretty clear to me. The slight difference in the words chosen doesn't change the meaning.

> You have repeatedly noted that conservation of energy must occur, and
> certainly everyone agrees with the overall principle. You have argued
> that the destructively interfered waves are essential for energy
> balance, and that this energy appears in the constructive wave. Sounds
> good, but where is this constructive wave?

The energy is the "enhanced intensity" talked about on the Melles-Griot web page. I've never said it was a constructive "wave" although it could be thought of in that fashion. It is constructive interference of the forward facing E and H fields just like the web page implies.

> The ultimate question is:
> Which possible answer reflects your view?

The one reflected on the Melles-Griot web page. Have you read it?

> Extra credit given for explaining A, B, C, or D.

See answer - above.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2311. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:40:39 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E399C28.19945C75@att.net>
Source record: 125799

Jim,

You added words, but little understanding to the issue. Absolutely no one believes that overall conservation of energy is violated. The entire issue is how to perform the detailed balance.

Simply saying the energy has to go forward does not add anything to the analysis. How does it show up in the forward wave? Your statement "adding together with the other forward wave components" sounds good, but how does this happen? Does this energy create an added wave component? Does it modify the existing G1 and G2? Does the energy show up in some non-wave form? One would expect some sort of physical reality.

Which answer from A to F would you pick?

Hint. Everything works perfectly if you select answer E. It only requires that you accept the longstanding principle that the field components must be summed first, and then the energy balance can be checked.

Since the Melles-Griot handbook seemingly has become the RRAA bible on this topic, I will again point out that they say exactly the same thing. Fields first, then energy.

73,
Gene
W4SZ

Jim Kelley wrote:
>
> Gene,
>
> You're really close on this, and you have precisely identified the spot
> where the confusion lies. G3 and G4 cancel in the reverse direction,
> but the energy cannot really be "anihilated". That would violate
> conservation of energy.
> Besides, even with particle/anti-particle anihilation, the energy
> remains. I think it's apparent the energy can't go rearward, and so it
> must go forward - adding together with the other forward wave components
> and illuminating the load. It really is as simple and elegant as that.
>
> 73, Jim AC6XG
>

> Gene Fuller wrote:

[snip]

> >
> > Possibilities:
> >
> > A) "Something" comes from another wave that is not explicitly shown.
> > B) G1 and G2 have somehow become Super-Sized, with P1 and P2 also
> > Super-Sized in some manner.
> > C) G1 and G2 are not the same before and after the match.
> > D) Even though G3 and G4 are annihilated, their legacy lives on.
> > E) The concept of adding power in this fashion is flawed.
> > F) None of the above

[snip]

> > The ultimate question is:
> >
> > Which possible answer reflects your view?
> > _
> > |_| A
> > _
> > |_| B
> > _
> > |_| C
> > _
> > |_| D
> > _
> > |_| E
> > _
> > |_| F
> >
> > Extra credit given for explaining A, B, C, or D.
> >
> > 73,
> > Gene
> > W4SZ

2312. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:44:58 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E399CDA.8080107@ieee.org>
Source record: 125802

Roy Lewallen wrote:
> And they can surely see for
> themselves just how clear and easy to understand it all is when you
> don't drag in all that complicated math.

:-) I didn't say not to do it, Roy. I just made the observation,
based on experience, if you get any more complicated than 1+1=2,
you will get complaints. :-)
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2313. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:51:15 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7n7j3vks0fiv2m32fm3f01iggu6d910ru4@4ax.com>
Source record: 125801

On Thu, 30 Jan 2003 14:44:41 -0500, Bob Dixon <Bob_Dixon@osu.edu>
wrote:

>Here is the current status of my Titanex beam. I got good advice from
>several hams, and had extensive correspondence with W3FRG. He and I both
>now agree that the element lengths are set wrong. But I can't get up
>there to change them until the weather gets better in Spring.
>
>To review the problem, the instructions are ambiguous, and give two
>possible sets of element lengths. I corresponded with Titanex several
>times, and they told me which was the correct set of lengths, and that
>is what I used. It now appears that their advice was wrong, perhaps due
>to a language problem.
>
>The problem is related to the unusual twin side-by-side boom design. It
>is not at all obvious where to start measuring the element lengths at
>the center. The booms are about 3 inches apart. Half of the elements
>start on one of the booms and extend outward. The other half of the
>elements start out on one boom, and pass over the top of the other boom
>and then stick out the other side. Thus the ambiguity of whether you
>measure from halfway between the booms, or from the boom where the
>element is fastened, or from the other boom where it crosses over.
>
> Bob W8ERD

Hi Bob,

This certainly demands a picture. I found one at:
http://www.antennex.com/preview/New/pict02.gif
that seems to respond to your issues.

I would have to agree, there is a certain amount of unneeded
complexity with the basket weave in their line and elements.

73's
Richard Clark, KB7QHC

2314. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:51:58 UTC
From: ac6la@arrl.net
Message-ID: <960228f1.0301301351.1a5b2f25@posting.google.com>
Source record: 125803

Wes Stewart <n7ws@#arrl.net> wrote
> First you must remember that the feedpoint impedance is normally given
> as a series equivalent. (We do call it an impedance rather than an
> admittance).

[snip lots]

Wes described one way to think about how a hairpin transforms the source impedance. And BTW, his photos showed the neat trick of using one-half of the hairpin tube as a sleeve balun. Very slick.

There's another way to think about hairpins. Since the hairpin is placed *in parallel* with the antenna feed point, you can determine the *parallel equivalent* of the antenna source impedance and then work from there. Wes and I didn't plan this, but it just so happens that one of the illustrated examples for MultiNEC walks through the steps that are needed.

Not exactly light reading, but available at
www.qsl.net/ac6la/mnex5.html .

Dan
www.qsl.net/ac6la/

2315. Re: By Special Request...for Murray only

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 21:59:33 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <9fh_9.8264$Tu2.25996@news-server.bigpond.net.au>
Source record: 125804
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

```
Vito wrote:
> Ahhh, something on topic: digital communications!
>

ROFLOL :)

Nice one - Steve

> Scott wrote:
>>
>> For someone who thinks his poop smells like roses...
>>
>> *******
>> * *
>> * *
>> *********
>> * *
>> * *
>> * *
>> ******* *******
>> * * * *
>> * * * ******
>> * * * * *
>> ****** * * * * *
>> * * * * * * * *
>> * * * *
>> * * *
>> * *
>> * *
>> * *
>> * *
>> * *
>>
>> From the USENET newsgroups that you pissed on.
```

2316. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 22:01:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39A0BA.3030906@ieee.org>
Source record: 125806

Richard Clark wrote:
> Cecil, this is still your standard playing fast and loose with us. It
> reveals a consistent attitude of contempt for us. You've been coyly
> offering this has been in the pipeline FOR MONTHS. And here we find
>
>>and it is not ready yet.
>
> which is something I forecast when you trotted out this lame excuse of
> the editors sitting on your work.
>
> Was it ready for them?

Of course, it was ready for them in Microsoft Word format. You
want it in HTML format and it is not ready yet. What is it about
that statement that you are incapable of comprehending? Have you
ever experienced what happens when you store a Word file in
HTML format? It's not pretty.

> I can well imagine the mind-numbing,
> endless repetition that inhabits those hidden pages because you've
> regaled us with that identical style here in these threads.

That's your whole problem, Richard. You imagine things.

I have presented virtually all of the material in my article on
this newsgroup and on my web page and I have submitted my article
to other ham publications.

Do you have any technical objections to my material?
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2317. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 22:04:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <a18j3v4nugltoedvjjld7sgag529tk5rg1@4ax.com>
Source record: 125805

On Thu, 30 Jan 2003 09:42:44 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Why do you need this diversion

Hi Cecil,

>>My physics book doesn't handle energy as a vector.
Describes a poor Physics book, there are no two ways about that. Do
you defend such a poor reference by throwing around the sobriquet of
"diversion?" That describes a poor defense of a poor Physics book.

73's
Richard Clark, KB7QHC

2318. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 22:09:01 UTC
From: w3frg <w3frg@comcast.net>
Message-ID: <ibycnTfSgcwdP6SjXTWcow@comcast.com>
Source record: 125807

The photo you really want to look at is at :
http://www.titanex.de/frames/about.html
It gives the whole story in one picture.

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:7n7j3vks0fiv2m32fm3f01iggu6d910ru4@4ax.com...
> On Thu, 30 Jan 2003 14:44:41 -0500, Bob Dixon <Bob_Dixon@osu.edu>
> wrote:
>
> >Here is the current status of my Titanex beam. I got good advice from
> >several hams, and had extensive correspondence with W3FRG. He and I
both
> >now agree that the element lengths are set wrong. But I can't get up
> >there to change them until the weather gets better in Spring.
> >
> >To review the problem, the instructions are ambiguous, and give two
> >possible sets of element lengths. I corresponded with Titanex several
> >times, and they told me which was the correct set of lengths, and
that
> >is what I used. It now appears that their advice was wrong, perhaps
due
> >to a language problem.
> >
> >The problem is related to the unusual twin side-by-side boom design.
It
> >is not at all obvious where to start measuring the element lengths at
> >the center. The booms are about 3 inches apart. Half of the elements
> >start on one of the booms and extend outward. The other half of the
> >elements start out on one boom, and pass over the top of the other
boom
> >and then stick out the other side. Thus the ambiguity of whether you
> >measure from halfway between the booms, or from the boom where the
> >element is fastened, or from the other boom where it crosses over.
> >
> > Bob W8ERD
>
> Hi Bob,
>
> This certainly demands a picture. I found one at:
> http://www.antennex.com/preview/New/pict02.gif
> that seems to respond to your issues.
>
> I would have to agree, there is a certain amount of unneeded
> complexity with the basket weave in their line and elements.

>
> 73's
> Richard Clark, KB7QHC

2319. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 22:10:00 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E39A309.57FDA7A8@att.net>
Source record: 125808

Cecil,

I know this is utterly useless, but what the heck.

I specifically added the notation for waves to avoid the issue of saying in advance that the voltage or power was cancelled or annihilated.

Do you agree that the waves G3 and G4 are completely gone after the matching occurs? If not, where are they? Forget about power for the moment. Are the waves gone or do they still exist?

No one, again no one, has ever claimed that overall conservation of energy is violated. All that is being asked is to show just how the energy balance is achieved.

I agree 100% with the Melles-Griot material. However, they say absolutely nothing about the detailed addition of reflections, re-reflections, re-re-reflections, forward components, reverse components, and so on. They deal entirely with the simple system of incident, reflected, and transmitted waves.

You are adding your own twist to the M-G material. Please try to find even one statement in the M-G material that supports your contention that they are adding subcomponent energies in the way you do.

Feel free to add highlighting, but "explaining" their wording by twisting it into yours won't help.

I have dealt with M-G for decades. I have CD-ROMs filled with their technical material and catalogs. I wish you luck.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > At the match point, but conceptually just before the match occurs, we
> > have G1, G2, G3, and G4 preparing to interact. Just after the match
> > occurs we have only G1 and G2, since G3 and G4 have annihilated each
> > other.
>
> So you believe the energy in G3 and G4 is annihilated? If so, it
> has been nice talking to you. :-) I might be wrong but I don't
> believe annihilation is the appropriate word. Destructive interference
> in the rearward direction and enhanced intensity in the forward direction

> is what the Melles-Griot web page says. "Enhanced intensity" is just another
> way of saying constructive interference.
>
> > Possibilities:
> > D) Even though G3 and G4 are annihilated, their legacy lives on.
>
> > D) Same as A, the mechanism is not identified.
>
> That's where you are wrong, Gene. The mechanism is identified in spades
> on the Melles-Griot web page: "Clearly, if the wavelength of the incident
> light and the thickness of the film are such that a phase difference exists
> between reflections of p, then REFLECTED WAVEFRONTS INTERFERE DESTRUCTIVELY,
> and overall reflected intensity is a minimum. If the two reflections are of
> equal amplitude, then this amplitude (and hence intensity) minimum will be
> zero. In the absence of absorption or scatter, the PRINCIPLE OF CONSERVATION
> OF ENERGY indicates all "LOST" REFLECTED INTENSITY will appear as ENHANCED
> INTENSITY (constructive interference) in the transmitted beam. The sum of the
> reflected and transmitted beam intensities is always equal to the incident
> intensity. This important FACT has been confirmed experimentally."
>
> The two waves involved in the non-glare interference pattern are canceled
> by destructive interference yet their legacy lives on as "enhanced intensity
> (constructive interference) in the transmitted beam." That sounds pretty
> clear to me. The slight difference in the words chosen doesn't change the
> meaning.
>
> > You have repeatedly noted that conservation of energy must occur, and
> > certainly everyone agrees with the overall principle. You have argued
> > that the destructively interfered waves are essential for energy
> > balance, and that this energy appears in the constructive wave. Sounds
> > good, but where is this constructive wave?
>
> The energy is the "enhanced intensity" talked about on the Melles-Griot
> web page. I've never said it was a constructive "wave" although it could
> be thought of in that fashion. It is constructive interference of the
> forward facing E and H fields just like the web page implies.
>
> > The ultimate question is:
> > Which possible answer reflects your view?
>
> The one reflected on the Melles-Griot web page. Have you read it?
>
> > Extra credit given for explaining A, B, C, or D.
>
> See answer - above.
> --
> 73, Cecil, W5DXP
>
> ----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
> http://www.newsfeed.com The #1 Newsgroup Service in the World!

> -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2320. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 22:12:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39A33D.1000601@ieee.org>
Source record: 125809

Richard Clark wrote:
>>>My physics book doesn't handle energy as a vector.
>>
> Describes a poor Physics book, there are no two ways about that.

I guess energy wasn't a vector back in the 50's like it is now.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2321. Re: W9INN Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 22:30:08 UTC
From: Ed Senior <eseniors@earthlink.net>
Message-ID: <QHh_9.5353$wd2.421895@newsread2.prod.itd.earthlink.net>
Source record: 125810

Hi Stig -

Bill (W9INN) is very much in business, and makes excellent antennas.
But he doesn't do web pages or even emails... just good old fashioned
landline and snail mail.

Ed, W6LOL

"Stig Frederiksen" <oz5u@cool.dk> wrote in message
news:b18klp$1jra$1@news.cybercity.dk...
> Hello
>
> Anyone knows wether W9INN still is in the antenna market, is yes, does he
> have a web page that works ??
>
> 73's
>
> Stig Frederiksen
> OZ5U
>
>

2322. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 22:52:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39ACA9.10908@ieee.org>
Source record: 125812

Gene Fuller wrote:
> Do you agree that the waves G3 and G4 are completely gone after the
> matching occurs? If not, where are they? Forget about power for the
> moment. Are the waves gone or do they still exist?

The waves are gone (canceled) in the direction of the source. The energy in those waves cannot be gone and there's only one other direction - toward the load. Since those waves were already reflected waves traveling toward the source, that's a re-reflection.

> No one, again no one, has ever claimed that overall conservation of
> energy is violated. All that is being asked is to show just how the
> energy balance is achieved.

Why do you guys keep putting modifiers on the conservation of energy principle? You use modifiers like "overall", "net", "total", etc. Why does the conservation of energy principle need to be modified by your modifiers?

I have shown how the energy balance is achieved, Gene. Destructive interference from one side of the match point becomes constructive interference (enhanced intensity) on the other side. Perhaps you missed it.

> You are adding your own twist to the M-G material. Please try to find
> even one statement in the M-G material that supports your contention
> that they are adding subcomponent energies in the way you do.

All I'm using the M-G web page to prove is that the energy involved in the canceled waves, i.e. destructive interference winds up reversing direction and flowing toward the load as "enhanced intensity". That's enough to prove that, in a matched system, all the reflected power is re-reflected. "Reflected" and "re-reflected" are just words to describe a change in direction of energy flow in a transmission line. That's the standard words that hams use. You wouldn't expect the optical engineers to use the same words that hams use. That would be just too much to ask, don't you agree?

Read the M-G web page again, Gene, and this time, put your glasses on. :-)
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2323. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 22:55:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3jbbe6vaid941@corp.supernews.com>
Source record: 125811

I hope the ARRL Antenna book doesn't say that base loading changes the current distribution. If so, I'd appreciate it very much if you'd email me the exact quote and where it appears, so I can send it to the editor for correction. A quick look at the 17th Edition shows correct explanations -- that the current distribution is changed if the loading is done other than at the base, but not that it's changed by base loading.

Roy Lewallen, W7EL

Dave Shrader wrote:
> Jim, you/we can disagree with the definition of loading.
>
> However, the ARRL Antenna book devotes an entire chapter, chapter 16
> [18th edition], to the issue. They explicitly indicate that loading
> changes the current distribution in the antenna. The same chapter also
> discusses Impedance Matching.
>
> Try your local library and see if you can read the chapter.
>
> 73, Deacon Dave, W1MCE

2324. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:03:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bo9j3v0a3nmoaglrrftr6e0v6n5m935kb0@4ax.com>
Source record: 125813

On Thu, 30 Jan 2003 14:12:13 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>>>>My physics book doesn't handle energy as a vector.
>>>
>> Describes a poor Physics book, there are no two ways about that.
>
>I guess energy wasn't a vector back in the 50's like it is now.

E X A C T L Y !

Your text dates from an era that preceded a critical sea-change in the expression of units and dimensions. In the late 50's to mid 60's there were a number of phenomenon that underwent definition changes to reconcile with the unification of measure under the System Internationale. During this shift in expression, a tightening up of loose ends that spanned a myriad ways of measuring the same thing, old terms got shuffled around.

One example offered from that time: what is the difference between Speed and Velocity? One is a scalar, the other a vector and yet we casually associate both in miles per hour (while for Velocity neglecting direction). You could not trust this differentiation would be observed before 1960 where the two terms were treated either way.
I will also offer some lecture notes from my era, post-1960:
"...we now define a "vector" as a quantity having both magnitude and direction which obeys the parallelogram law of combination. Of course for vectors other than displacement, the length of the arrow is measured on a scale other than length.
Examples of vectors are velocity, acceleration, and force.
(Things like gravity and friction should not be called vectors because they are phenomena rather than quantities which measure phenomena. On the other hand, the *force* of gravity and frictional *force* are vectors.) An example of a quantity having magnitude and direction but not a vector is a rotation. The direction of rotation is the angle of rotation but the rotations do not combine by the parallelogram law."

73's
Richard Clark, KB7QHC

2325. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:06:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39B00C.4030807@ieee.org>
Source record: 125814

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>I guess energy wasn't a vector back in the 50's like it is now.
>
> E X A C T L Y !

I wonder which is easier - turning a scalar into a vector or
turning a vector into a scalar? If we circumcise a vector,
does it become a scalar?
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2326. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:19:22 UTC
From: richardharrison@webtv.net
Message-ID: <7256-3E39B2FA-363@storefull-2313.public.lawson.webtv.net>
Source record: 125719

Roy Lewallen wrote:
"Indeed I`m complicating the math by not cavalierly throwing away this or that piece of data because it`s a nuisance."

Phasors describing magnitudes on angles are every bit as accurate as values plotted on X/Y scales.

For the composition and resolution of forces or the solution of a-c electrical problems the use of vectors (phasors) are more convenient. No data are lost.

Phasors represent fixed magnitudes and phase angles between voltages and currents. Proportional arrows and angles between them work fine.

In a transition period, variables may change at different rates. Events may not be recurrent. Phasors may not be the right tool. But, for most situations we are seeking steady-state solutions. We know that waves get reflected from mismatched loads and if energy bounced on the first pass, about the same percentage bite gets taken from it on the second pass, and soforth on an ever declining original increment when this remnant has subsequent goes at the load. We can accurately calculate the values. But, why?

As Einstein is reputed to have said:
"Make it simple, but not too simple.

Best regards, Richard Harrison, KB5WZI

2327. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:20:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bacj3votd036lbesjq92omh7oiugp0c42o@4ax.com>
Source record: 125815

On Thu, 30 Jan 2003 21:01:30 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>Gee!! If I watch my fluorescent lamps closely I can see some flutter!!
>Does that support the claim that the power cycles through zero ?
>
>YOU BET IT DOES!
>

Sorry OM,

It proves nothing to the point, unless you are jacked up on crack.

All mains supplied fluorescent lamps flash at a 120 Hz rate, much too fast to be directly perceived (by which I mean I can vary that rate, say up or down 10 Hz and you unerringly identify which direction).

My current work is with the US Army in building an instrument that is designed to measure what is called "Critical Flicker Fusion Frequency." That is the frequency of a blinking light that appears to be "fused" or steadily on. The entire population exhibits an average in the 30's. Athletes in training exhibit values as high as 50's as do proficient practitioners of a craft or skill. Those that are medicated, or drunk, depressed, and so on; they show values in the teens and 20's. In other words, the fusion frequency is directly correlatable to alertness (I have a stack of research papers two feet thick spanning 50 years).

At 120 Hz you must be nearly schizoid living 6 sigma out from the center of the population curve. My guess is you are seeing gas mixing artifacts of a bad tube (especially if the flutter is kind of swirly).

73's
Richard Clark, KB7QHC

2328. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:28:54 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E39B587.E4AAE86F@att.net>
Source record: 125816

Cecil,

OK, you win. I have given up hope.

But before I go, one last question.

Exactly how does the "toward the load" energy actually show up in the equations?

- Are the original waves 1 and 2 modified in some manner?
- Is the energy content contained in waves 1 and 2 different after the match, even if the voltages are unchanged?
- Is there an additional wave component not previously discussed?
- Does the energy just 'exist' without any particular manifestation?

You can call up all the oblique reference material in the world, but until you make the equations work, you have not solved the problem.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Do you agree that the waves G3 and G4 are completely gone after the
> > matching occurs? If not, where are they? Forget about power for the
> > moment. Are the waves gone or do they still exist?
>
> The waves are gone (canceled) in the direction of the source. The energy
> in those waves cannot be gone and there's only one other direction - toward
> the load. Since those waves were already reflected waves traveling toward
> the source, that's a re-reflection.
>
> > No one, again no one, has ever claimed that overall conservation of
> > energy is violated. All that is being asked is to show just how the
> > energy balance is achieved.
>
> Why do you guys keep putting modifiers on the conservation of energy
> principle? You use modifiers like "overall", "net", "total", etc.
> Why does the conservation of energy principle need to be modified
> by your modifiers?
>
> I have shown how the energy balance is achieved, Gene. Destructive
> interference from one side of the match point becomes constructive
> interference (enhanced intensity) on the other side. Perhaps you

> missed it.
>
> > You are adding your own twist to the M-G material. Please try to find
> > even one statement in the M-G material that supports your contention
> > that they are adding subcomponent energies in the way you do.
>
> All I'm using the M-G web page to prove is that the energy involved
> in the canceled waves, i.e. destructive interference winds up
> reversing direction and flowing toward the load as "enhanced intensity".
> That's enough to prove that, in a matched system, all the reflected power
> is re-reflected. "Reflected" and "re-reflected" are just words to
> describe a change in direction of energy flow in a transmission
> line. That's the standard words that hams use. You wouldn't expect
> the optical engineers to use the same words that hams use. That
> would be just too much to ask, don't you agree?
>
> Read the M-G web page again, Gene, and this time, put your glasses on. :-)
> --
> 73, Cecil, W5DXP

2329. Re: gravity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:42:52 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E39B8CE.A180C4FB@att.net>
Source record: 125817

Jim,

The "big G" in gravity certainly does not have units of force. Richard
and Roy are not confused.

73,
Gene
W4SZ

Jim Kelley wrote:
>
> Roy Lewallen wrote:
> >
> > Gravitational intensity or field strength (almost always denoted 'g')
> > has units of acceleration (about 9.8 m/sec^2 or 32 ft/sec^2), as Richard
> > said. See for example Weidner & Sells, _Elementary Classical Physics_,
> > Vol. 1, p. 373; or Resnick & Halliday, _Physics_, Part 1, p. 339.
>
> Gravity, usually referred to as the universal gravitational constant and
> denoted by big G is a force, and as such has units of force. You are
> being confused by the acceleration due to gravity, which is not
> universal, and happens to be 9.8 meters per second squared at sea level
> here on Earth. (Same text.)
>
> > The force gravity applies on an object of mass m is mg, which does have
> > the proper dimensions of force. This is "weight", which is of course
> > different for objects of different mass.
>
> Force is force. Acceleration is acceleration.
>
> Some of the folks where I work make a living measuring big G. I build
> some of their apparatus for them.
>
> 73, Jim AC6XG

2330. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:43:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <h7dj3vkk27it1h9b8bk2en2kvsdtmq2nan@4ax.com>
Source record: 125818

On Thu, 30 Jan 2003 14:01:30 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>> Was it ready for them?
>
>Of course, it was ready for them in Microsoft Word format. You
>want it in HTML format and it is not ready yet. What is it about
>that statement that you are incapable of comprehending? Have you
>ever experienced what happens when you store a Word file in
>HTML format? It's not pretty.

Hi Cecil,

You sure stumble over the simplest of things. I've saved my Word documents to HTML 7 years ago. I've been publishing on the net for that long too, and used Word as my HTML editor for the first two years. I also discovered Word saves to what is called the Rich Text Format. If you cannot manage that, you could try saving the file ("Save As") as a text file.

You really weren't ready - this should have been a knock-off given all the time you've put to painting its frame.

73's
Richard Clark, KB7QHC

2331. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:47:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5jej3vst7mcp4uh8m75b0ais3go912nvud@4ax.com>
Source record: 125720

On Thu, 30 Jan 2003 17:09:01 -0500, "w3frg" <w3frg@comcast.net> wrote:

>The photo you really want to look at is at :
>http://www.titanex.de/frames/about.html
>It gives the whole story in one picture.
>
>
Hi OM,

A plumber's dream.

73's
Richard Clark, KB7QHC

2332. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:52:22 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E39BAB6.88DD0C53@uci.edu>
Source record: 125722

Gene Fuller wrote:
>
> Jim,
>
> You added words, but little understanding to the issue. Absolutely no
> one believes that overall conservation of energy is violated. The entire
> issue is how to perform the detailed balance.

Hi Gene,

Sorry you didn't understand. I found the Melles-Griot informative on
this point, so I didn't requote it.

> Simply saying the energy has to go forward does not add anything to the
> analysis. How does it show up in the forward wave? Your statement
> "adding together with the other forward wave components" sounds good,
> but how does this happen?

It happens by reflection.

> Does this energy create an added wave
> component?

If I understand your question correctly, I'd have to say the best answer
is: they're already there.

>Does it modify the existing G1 and G2?

No.

> Does the energy show
> up in some non-wave form?

Same waves, different direction.

> One would expect some sort of physical
> reality.

Physical reality is it's strong suit.

> Which answer from A to F would you pick?

I didn't really spot a choice I liked at a glance. Poor signal to noise
ratio.

> Hint. Everything works perfectly if you select answer E. It only
> requires that you accept the longstanding principle that the field
> components must be summed first, and then the energy balance can be
> checked.

I'd say it works almost perfectly, Gene. The exception is the one that Cecil has been clamoring on about. I think he's right.

> Since the Melles-Griot handbook seemingly has become the RRAA bible on
> this topic, I will again point out that they say exactly the same thing.
> Fields first, then energy.

No argument. You just have to make sure both sides of the energy equation are balanced. That's really the only revelation here. It's appears to be derived from the optics texts. Principles of Optics, Electromagnetic Theory of Propagation Interference and Diffraction of Light by Born and Wolf is more detailed on the subject.

73, Jim AC6XG

2333. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-30 23:54:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4tej3vctvtjvvu4bv8rmuq19oq9gmnp7cg@4ax.com>
Source record: 125721

On Thu, 30 Jan 2003 14:52:25 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Why does the conservation of energy principle need to be modified
>by your modifiers?

And this from one who wants to clip the balance and not consider the
weight of the antenna? Such puffery in response comes back to haunt
the searcher of TRUTH dare I say.

Cecil, you circumscribe completeness to satisfy your argument too.

73's
Richard Clark, KB7QHC

2334. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:04:59 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39BDAB.7080701@ieee.org>
Source record: 125723

Gene Fuller wrote:
> Exactly how does the "toward the load" energy actually show up in the
> equations?

The problem is that it doesn't show up in the QEX article equations.
75 joules/sec + 8.33 joules/sec simply does not equal 133.33 joules/sec.
In the above inequality, the constructive interference supplies an
additional 50 joules/sec that balances the equation. What is it about
133.33W = 133.33W that you don't understand?

> - Are the original waves 1 and 2 modified in some manner?

I assume that changing direction modifies the direction of the waves.

> - Is the energy content contained in waves 1 and 2 different after the
> match, even if the voltages are unchanged?

What voltages? The voltages in the direction of travel cancel and
go to zero.

> - Is there an additional wave component not previously discussed?

Nope, I've discussed them all including the ones that were ignored
in the QEX article.

> - Does the energy just 'exist' without any particular manifestation?

Gene, can you take a 75W transmitter and an 8.33W transmitter and
combine them in any fashion whatsoever to get a total of 133.33W
out of them? If you can, you can supply the world with free energy.
I'm certain you can finally figure out why that won't work.

> You can call up all the oblique reference material in the world, but
> until you make the equations work, you have not solved the problem.

What is it about PFtotal = P1 + P2 + P3 + P4 (for matched systems)
that is so hard for you to understand? 133.33W = 133.33W works for me.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2335. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:19:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39C10D.5060208@ieee.org>
Source record: 125725

Richard Clark wrote:
> You sure stumble over the simplest of things.

If I send you a .gif file, will you show me how to import it into
Word and save it as an HTML file without losing half the lines?
How do you handle the greek letter 'Rho' which appears in 100
places in the Word file but will not translate to HTML? The
subscripts and superscripts do not translate correctly. That's
a few of about 20 problems I have with Microsoft Office 95 HTML.
I am not a PC whiz and I do stumble over a lot of things. I
am reduced to cutting and pasting my Word documents to Notepad
and writing native HTML.

Have you found anything technically wrong with my stuff yet?
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2336. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:21:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39C196.4050209@ieee.org>
Source record: 125726

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Why does the conservation of energy principle need to be modified
>>by your modifiers?
>
> And this from one who wants to clip the balance and not consider the
> weight of the antenna?

If you want to consider the weight of your antenna as potential
RF energy, who am I to disagree?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2337. Re: VHF antenna for F/G RV?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:23:45 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <0fdj3vgdt5mo96jl2db0gk9dqc3uc8a1fu@4ax.com>
Source record: 125724

On 30 Jan 2003 13:26:18 -0800, lgagnon@sherrittoil.com (Larry Gagnon) wrote:

>I am considering my options for a 2 meter VHF antenna for a fiberglass
>body RV and would like to hear from hams who have had REAL experience
>mounting and using antennas on such a vehicle.
>
>My RV is a 22' Class C with a mostly fiberglass body, other than the
>Ford E350 cab. One easy option would be a 5/8 wave, hood lip mounted,
>but the cabover part of the RV would almost touch the antenna so the
>radiation pattern would probably be lousy, as would any engine noise.
>
>The other options I am considering are:
>
>1) 5/8 wave mounted to top of side mirror frame (like truckers do)
>2) 1/2 wave on top of RV but that means drilling holes through roof
>3) 1/2 wave glass mount on upper side window of RV body
>4) 1/4 wave on RV roof with homemade mesh ground plane (but again that
>means drilling roof holes).
>
>Anyone out there tried anything similar and what are your experiences?
>Also, what have you done to ensure a waterproof rubber roof after
>drilling holes for antenna mounts. Hope to hear from you.
>
>Larry VE6MK

larry,

i have a 35' class a and have mounted a number of antennas on the body and rear ladder including a vhf/uhf dual bander (above the driver's door), scanner antenna (located above the passenger's front window, another vvhf/uhf dual bander), cb antenna (that's on the roof), one for our weather alert receiver (again on the body of the rv), cell phone (glass mount) and my hf screwdriver (yaesu, on the rear ladder).

can't say much about the cb antenna as that came from the factory. the others were all installed by me. ground plane? not much but the mounts are grounded to the frame of the rv. i don't have 'trucker style mirrors' on this rv and i didn't want to use glass mount..(what can i tell ya...a permanently mounted antenna is a beautiful thing).

performance? cb is cb...i can talk and hear for 1-2 miles in each direction and that's all i care about. the scanner? not bad. i can easily monitor local services from at least 15 miles away. i base that on being able to hear units here at home from the other side of the county and that transmitter site is at least 15 miles away.

2m/440? well, at 65 mph i can hold a simplex contact with a vehicle moving in the opposite direction for maybe 5-6 minutes..maybe a little longer. hf? excellent. the yaesu screwdriver (40-10m on hf, 6m and 2m/440) performs very well. the hf rig is an icom 706 mkiig.

hth

73
rich, n9dko

2338. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:28:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39C329.4000104@ieee.org>
Source record: 125728

Jim Kelley wrote:
> No argument. You just have to make sure both sides of the energy
> equation are balanced.

I have been accused of committing a lot of different atrocities
but all I have done is, after the application of the wave reflection
model and after the application of the superposition principle, I
have taken a close look based on the conservation of energy principle
and found a certain QEX article lacking in energy balance.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2339. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:34:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3jh3o8vp8as2e@corp.supernews.com>
Source record: 125727

Newton's gravitation law is F = G * (m1 * m2)/r^2, where m1 and m2 are masses, r is the distance between them, F is the resulting force, and G is the universal gravitation constant you're speaking of (and which I'm most certainly not confusing with gravitational intensity or acceleration g). It's obvious from the law that G = F * r^2/(m1 * m2), so it has the dimensions not of force, but force times length squared divided by mass squared. Force has dimensions of length times mass divided by time squared, so the dimensions of G are L^3/(M*T^2) (L = length, M = mass, T = time), while force is M*L/T^2.

Newton's law shows that the gravitational force (F) isn't a constant, but depends in a simple way on the masses of the bodies and the separation between them. If the folks you work for are looking for a universal constant force, I suspect they'll be at it for a while.

Roy Lewallen, W7EL

Jim Kelley wrote:
>
> Roy Lewallen wrote:
>
>>Gravitational intensity or field strength (almost always denoted 'g')
>>has units of acceleration (about 9.8 m/sec^2 or 32 ft/sec^2), as Richard
>>said. See for example Weidner & Sells, _Elementary Classical Physics_,
>>Vol. 1, p. 373; or Resnick & Halliday, _Physics_, Part 1, p. 339.
>
>
> Gravity, usually referred to as the universal gravitational constant and
> denoted by big G is a force, and as such has units of force. You are
> being confused by the acceleration due to gravity, which is not
> universal, and happens to be 9.8 meters per second squared at sea level
> here on Earth. (Same text.)
>
>
>>The force gravity applies on an object of mass m is mg, which does have
>>the proper dimensions of force. This is "weight", which is of course
>>different for objects of different mass.
>
>
> Force is force. Acceleration is acceleration.
>
> Some of the folks where I work make a living measuring big G. I build
> some of their apparatus for them.
>
> 73, Jim AC6XG

2340. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:38:50 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39C51B.10380114@attbi.com>
Source record: 125729

Here comes Vector Calculus again!! ... Oh my!!

Divergence of the Curl = scalar or vector?

Gradient of the Divergence = vector or scalar?

I hope I even remembered the terms correctly never mind the correct relationships <grin>. Where is my Vector Calculus or Advanced Electromagnetic Fields Books?? I know I packed them somewhere!!

I'll have to ask LaPlace. < double grin for a double chin > :-)) >

Deacon Dave, W1MCE

PS: Theology is much simpler than EM Fields. You are either right or wrong and the answers change tomorrow.

2341. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:39:13 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pjhj3vk3jkl41ur2bmu0c9ie6sta1srnae@4ax.com>
Source record: 125730

On Thu, 30 Jan 2003 16:21:42 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Why does the conservation of energy principle need to be modified
>>>by your modifiers?
>>
>> And this from one who wants to clip the balance and not consider the
>> weight of the antenna?
>
>If you want to consider the weight of your antenna as potential
>RF energy, who am I to disagree?

Who indeed by that presumption.

2342. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:40:21 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <VBj_9.5578$wd2.440705@newsread2.prod.itd.earthlink.net>
Source record: 125731

VE9SRB <srbest@att.net> wrote in message
news:69d_9.12729$rq4.909655@bgtnsc05-news.ops.worldnet.att.net...
>
> "Walter Maxwell" <w2du@iag.net> wrote in message
> news:Hzc_9.4886$wd2.378072@newsread2.prod.itd.earthlink.net...
> > Steve, you're not paying attention to the math I showed that proves that
> > addition of reflected voltage and source voltage doesn't establish the
> > forward voltage. The addition shown in Johnson yields the voltage at any
> > point along a mismatched line. You may recall that this is the VOLTAGE
> > STANDING WAVE, NOT THE FORWARD VOLTAGE.
> >
>
> If you read Johnson very carefully, you will see that he explicitly states
> that the equation for TOTAL voltage is comprised of two terms. Johnson
> explicitly states that one term represents the FORWARD voltage and one
term
> represents the REARWARD voltage. If you look at Johnson's derivation
> carefully, you will see that the total FORWARD voltage term is derived
from
> the direct superposition of the initial forward voltage (determined at
t=0)
> and all of the forward traveling re-reflected voltages created at the
> source. Note that these re-reflected terms are directly determined from
the
> source reflection coefficient. Its right in the equation.
>
> The above is simply fact that is easily verified by anyone else reading
> Johnson's text. If you disagree with Johnson on this, then I would not
> expect you to understand my superposition analysis and further discussion
is
> pointless.

Steve, there's no other way to read Johnson except very carefully. You may also be reading him carefully, but you're not hearing what you're reading. Johnson's Eqs 423 and 424 yield total line voltage, the sum of the forward and reflected voltages at any point on the line. The total line voltage varies periodically and is known as the standing wave. The forward voltage is constant along a lossless line. The Johnson equations derive the varying voltage, the standing wave--they do NOT derive the foward wave.

It is clearly evident that I totally agree with Johnson, but it is you who are totally misinterpreting his equations, as you have for the entire two years that I've been trying to convince you otherwise. So you're right--it's pointless to continue further discussion until you interpret Johnson in the manner he intended.

Walt, W2DU

2343. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:41:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3jhi53ar2au96@corp.supernews.com>
Source record: 125732

Given voltage and current phasors _V_ = |V| /_ A1 and _I_ = |I| /_ A2
("/_" means "angle"), what is the value of _V_ * _I_? (Hint: It's not
|V|*|I| /_ (A1 + A2). Anyone who thinks it is doesn't understand what
phasors are.) Please show how I can work this simple problem using phasors.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:
> "Indeed I`m complicating the math by not cavalierly throwing away this
> or that piece of data because it`s a nuisance."
>
> Phasors describing magnitudes on angles are every bit as accurate as
> values plotted on X/Y scales.
>
> For the composition and resolution of forces or the solution of a-c
> electrical problems the use of vectors (phasors) are more convenient. No
> data are lost.
>
> Phasors represent fixed magnitudes and phase angles between voltages and
> currents. Proportional arrows and angles between them work fine.
>
> In a transition period, variables may change at different rates. Events
> may not be recurrent. Phasors may not be the right tool. But, for most
> situations we are seeking steady-state solutions. We know that waves get
> reflected from mismatched loads and if energy bounced on the first pass,
> about the same percentage bite gets taken from it on the second pass,
> and soforth on an ever declining original increment when this remnant
> has subsequent goes at the load. We can accurately calculate the values.
> But, why?
>
> As Einstein is reputed to have said:
> "Make it simple, but not too simple.
>
> Best regards, Richard Harrison, KB5WZI
>

2344. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 00:49:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vqhj3v86bvj0grukrqa5mmod7r8il0iljk@4ax.com>
Source record: 125733

On Thu, 30 Jan 2003 16:34:02 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

> If the folks you work for are looking for a
>universal constant force, I suspect they'll be at it for a while.
>
>Roy Lewallen, W7EL

Hi Roy,

In spades. My bible for the subject is
Gravitation
Misner, Charles W.; Wheeler, John Archibald; and Thorne, Kip S.

Gravity detectors, small earth bound models, consist of a solid
cylinder of metal (3 - 6 feet in diameter, a dozen to 16 feet long)
spinning at several thousand RPM. Even the best of these hardly
offers a sensitivity above the "theoretical" noise level. And given
no implementation even nears "theoretical," results have been cryptic
at best.

Recent news offered a space-based method of detection with several
satellites. I didn't read the article, but I simply noted the
superficial details.

73's
Richard Clark, KB7QHC

2345. Re: I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:02:32 UTC
From: la8ak.xnd@online.no
Message-ID: <3e39caeb.281430463@news.online.no>
Source record: 125736
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

suppose the newsgroup is not intended for kids?

On Thu, 30 Jan 2003 21:18:09 GMT, "Jay" <jay@hotmail.com> wrote:

>... is such a asshole. He thinks...
--
remove ,xnd to reply

2346. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:04:39 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301301704.4f7b3cd9@posting.google.com>
Source record: 125734

'Doc <w5lz@cwis.net> wrote in message news:<3E395166.6C0E37A2@cwis.net>...
> Ken,
> Can't say about the performance of that antenna, I've
> never had one. I can comment about the 'close' windings
> of the coil. It shouldn't affect the performance of the
> antenna at all. The power handling capability, yes.
> 'Doc

Hmmmm, the closeness of the coil windings increases the
capacitive component, obviously something changes if only
the settings for a particular frequency. I would be surprised
if difference in radiation was noticable though bandwidth change
may well be observed. Since required voltage spacings on the
coil is spread over the number of coils max power capability
changes will probably not be obvious.
Never had a mobile antenna so many opinions should be sort,
as Shultz would say ' I know nothing" (Hogans heroes)
Art

2347. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:04:52 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39CB34.6EC7EE0B@attbi.com>
Source record: 125735

First off, I strongly object to the negative implications regarding 'crack'. It was a derogatory statement. I forgive you for it. Please be careful in the future.

Secondly, professional photographers for years have had to limit shutter speeds under fluorescent lighting to compensate for the varying light intensity in an exposure. The 120 cycle rate can significantly impact an exposure where the shutter speed is high. Current professional cameras, Nikon N90S, Nikon F100, etc. have shutter speeds as high as 1/8000th of a second. Ambient light photographs routinely require 1/250th or 1/500th of a second etc. Therefore they must adjust exposure by limiting shutter speed to less than 1/125th or add Neutral Density filters [Note: adding ND filters may further aggravate color shift from the color temperature of the lamp]. Anyway, it is a transmission line problem.

My comment is accurate in that Florescence constantly flicker at 2X line rate and the flicker indicates a period of no delivered [energy] power in a transmission line system. Hopefully you agree that the USA power grid is a synchronized transmission system where a 1/2 wavelength is about 1500 miles.

The comment was an assertion that there are intervals of no energy in a transmission line that is delivering watts [joules/second] to a load.

A very interesting excursus would be to change from the two source model that QEX presented and move into a spider web with a power source at each intersection delivering distributed power at all points along the continuum of the web. Once that's solved then move on to the problem of who gets the bill?

I've said my piece.

Deacon Dave

2348. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:15:02 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E39CE16.E1986361@uci.edu>
Source record: 125740

Richard Clark wrote:
>
> On Thu, 30 Jan 2003 16:34:02 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
> > If the folks you work for are looking for a
> >universal constant force, I suspect they'll be at it for a while.

> >Roy Lewallen, W7EL

They're out to about 15 decimal places on the value at the moment. It's known to a pretty fair precision. Rocket scientists and astronomers have always found the gravitational constant to be a fairly useful number. It's been around since Newton.

> Hi Roy,
>
> In spades. My bible for the subject is
> Gravitation
> Misner, Charles W.; Wheeler, John Archibald; and Thorne, Kip S.

Yes, it probably mentions that gravity is one of the _forces_ of nature.

> Gravity detectors, small earth bound models, consist of a solid
> cylinder of metal (3 - 6 feet in diameter, a dozen to 16 feet long)
> spinning at several thousand RPM. Even the best of these hardly
> offers a sensitivity above the "theoretical" noise level. And given
> no implementation even nears "theoretical," results have been cryptic
> at best.

I expect Kip Thorne mentions Joe Webers name in his book somewhere. In Carl Sagans PBS series The Astronomers, Kip said with regard to gravity waves "First there was Einstein, then there was Joe Weber." I spent many hours chatting with Joe until he passed away a couple years ago. Radio was Dr. Webers first love.

ac6xg

2349. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:15:40 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39CDBB.5416E2A9@attbi.com>
Source record: 125737

Bob, interesting comments.

I use a Tennadyne LP [T-8] and it totally eliminates this type of assembly confusion. Very simple and straight forward assembly. It takes about 4 leisurely [I'm retired] hours.

BTW: my measured VSWR is less than 1.7:1 across the full frequency range of 13.5 to 33 MHz [MFJ 259]. Twelve meters is the highest VSWR; ten meters is essentially flat at 1.2:1. 20, 17 and 15 meters are between 1.2 and 1.4:1 anyplace on the band.

Deacon Dave, W1MCE

2350. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:16:21 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39CDE4.2380558A@attbi.com>
Source record: 125738

You are correct AGAIN --- DD

Roy Lewallen wrote:
>
> I hope the ARRL Antenna book doesn't say that base loading changes the
> current distribution. If so, I'd appreciate it very much if you'd email
> me the exact quote and where it appears, so I can send it to the editor
> for correction. A quick look at the 17th Edition shows correct
> explanations -- that the current distribution is changed if the loading
> is done other than at the base, but not that it's changed by base loading.
>
> Roy Lewallen, W7EL
>
> Dave Shrader wrote:
> > Jim, you/we can disagree with the definition of loading.
> >
> > However, the ARRL Antenna book devotes an entire chapter, chapter 16
> > [18th edition], to the issue. They explicitly indicate that loading
> > changes the current distribution in the antenna. The same chapter also
> > discusses Impedance Matching.
> >
> > Try your local library and see if you can read the chapter.
> >
> > 73, Deacon Dave, W1MCE

2351. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:22:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <saij3v0ns9632mtk58oeaacnabq4mq27hn@4ax.com>
Source record: 125739

On Thu, 30 Jan 2003 16:19:25 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> You sure stumble over the simplest of things.
>
>If I send you a .gif file, will you show me how to import it into
>Word and save it as an HTML file without losing half the lines?
>How do you handle the greek letter 'Rho' which appears in 100
>places in the Word file but will not translate to HTML? The
>subscripts and superscripts do not translate correctly. That's
>a few of about 20 problems I have with Microsoft Office 95 HTML.
>I am not a PC whiz and I do stumble over a lot of things. I
>am reduced to cutting and pasting my Word documents to Notepad
>and writing native HTML.
>
>Have you found anything technically wrong with my stuff yet?

Hi Cecil,

Word95 has a macro designed specifically for HTML that I used for two
years. I dropped Word as a Web editor when they integrated the macro
into Word98 because smaller packages did just as well, if not better.

I searched www.microsoft.com and found all traces of this macro lost
to the ages. It is a large one, around 1MB and it would do the job
you need done. Wasn't elegant (the Word95 implementation) but it did
work.

I browsed Ask Jeeves to find hope tho":
http://www.ask.com/main/metaAnswer.asp?t=ai&s=a&MetaEngine=directhit&en=te&eo=3&o=0&frames
=True&url=http%3A%2F%2Fwww%2Ehszk%2Ebme%2Ehu%2F%7Egb002%2Fsac%2Dutiltext%2Ehtm&ac=6&adcat=
tech&pt=utiltext&dm=http%3A%2F%2Fwww%2Ehszk%2Ebme%2Ehu%2F%7Egb002%2Fsac%2Dutiltext%2Ehtm&i
o=1&qid=F2D12F1E44EF6848A13C3CAADB1530A5&back=ask%3Dword95%2Bhtml%2Bmacro%26o%3D0%26x%3D0%
26y%3D0&ask=word95+html+macro&dt=030130171257&amt=&pg=1&qsrc=0

or simply search the terms
word95 html macro

this returns a list of files, many of which would suit you, and one
that certainly was that tool I used long ago.

converte.zip
HTML Converter Macro v1.1 - HTML 2 Winword doc macro conv.

convtx23.zip
Convert v2.3 - Convert text formats (HTML,RTF,TXT) for Win

doc2html.zip
DOC 2 HTML Converter (VB macro written)

doc2txt.zip
Slice MS Word/Excel/PowerPoint documents

and so on down the line.

73's
Richard Clark, KB7QHC

2352. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:41:13 UTC
From: tdonaly@aol.com
Message-ID: <20030130204113.10859.00000019@mb-ma.aol.com>
Source record: 125741

Deacon Dave wrote,
>
>Deacon Dave, W1MCE
>
>PS: Theology is much simpler than EM Fields. You are either right or
>wrong and the answers change tomorrow.
>

You mean this discussion isn't about theology? You'd never know it
judging by the unattested assertions and the vehement defense of
propositions judged true solely on the basis of faith.
73,
Tom Donaly, KA6RUH

2353. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:41:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39D461.8000108@ieee.org>
Source record: 125742

OC_CAM's Razor wrote:
> VE9SRB wrote:
>> Well, I don't believe you can have a forward traveling power without an
>> associated forward traveling voltage and current.
>
> Oh really? OK, take a 100W IC-706, set it for 50 watts output into a
> dummy load. Now connect it to a 50 ohm transmission line and show us
> how to transfer 50 joules/sec without a voltage and a current. If you
> can do that, you might win me over.

Well, I really blew that one. I completely missed the negative.
So please forgive and ignore this idiotic response of mine.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2354. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:52:17 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <lFk_9.5728$qg1.976143@news20.bellglobal.com>
Source record: 125744

"Jim Kelley"
> ...probably mentions that gravity is one
> of the _forces_ of nature.

It should state that it is one of the _fields_ of nature. It only creates a force when an appropriate object is appropriately placed into the field. I suppose one might call it a "force field", but still...

PS: This thread is so overwhelmingly-long and deeply-indented that it is presently in third place for the world record.

2355. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:55:26 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39D707.665C15C0@attbi.com>
Source record: 125743

Another imprecise statement!! I hope they will end soon.

" Rocket scientists have always found the gravitational constant to be a fairly useful number. It's been around since Newton."

Hmmm ... I offer the following hypothesis: A derivative your statement yields the conclusion that the moon was not in a 'stable' orbit around the earth until Newton!! And further, people were not earthbound until Newton!!

I suspect an error of imprecise language.

The earth's gravitational constant has been around since the earth was formed. It was quantified in Newton's time. Ah ... the benefits of discovery.

Deacon Dave, W1MCE

2356. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:55:37 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E39D799.B903EE7D@uci.edu>
Source record: 125749

Dave Shrader wrote:
> My comment is accurate in that Florescence constantly flicker at 2X line
> rate and the flicker indicates a period of no delivered [energy] power
> in a transmission line system. Hopefully you agree that the USA power
> grid is a synchronized transmission system where a 1/2 wavelength is
> about 1500 miles.

> The comment was an assertion that there are intervals of no energy in a
> transmission line that is delivering watts [joules/second] to a load.

It's an infinitely small time interval, but it's true. Not only that,
there's a period of total darkness just before the arrival of every
photon! :-)

73, Jim AC6XG

2357. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:55:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39D7A5.2060407@ieee.org>
Source record: 125745

Richard Clark wrote:
> Word95 has a macro designed specifically for HTML that I used for two
> years. I dropped Word as a Web editor when they integrated the macro
> into Word98 because smaller packages did just as well, if not better.

I have to confess - I don't know how to use macros. I didn't even use
macros when I was a microcontroller jock at Intel. I didn't use compilers
either. I'm a machine language type of guy.

> this returns a list of files, many of which would suit you, and one
> that certainly was that tool I used long ago.
>
> converte.zip
> HTML Converter Macro v1.1 - HTML 2 Winword doc macro conv.
>
> convtx23.zip
> Convert v2.3 - Convert text formats (HTML,RTF,TXT) for Win
>
> doc2html.zip
> DOC 2 HTML Converter (VB macro written)
>
> doc2txt.zip
> Slice MS Word/Excel/PowerPoint documents

Thanks for the suggestions. My daughter is a webmaster and I remember
buying her $10K of software to get her business started. One of those
might also do the job.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2358. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 01:57:29 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39D809.6060802@ieee.org>
Source record: 125746

Tdonaly wrote:
> You mean this discussion isn't about theology? You'd never know it
> judging by the unattested assertions and the vehement defense of
> propositions judged true solely on the basis of faith.

A likely story from someone who cannot even prove he exists. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2359. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 02:01:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E39D8F4.9020805@ieee.org>
Source record: 125748

Dave Shrader wrote:
> Hmmm ... I offer the following hypothesis: A derivative your statement
> yields the conclusion that the moon was not in a 'stable' orbit around
> the earth until Newton!!

That sounds completely consistent with the uncertainty principle.
Actually, the moon is not in a stable orbit - it is receding and
will someday reverse that movement. Better find your crash helmets.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2360. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 02:01:48 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <hulj3v4q3dpehaal2f4bmus4n1fsetlb4r@4ax.com>
Source record: 125747

On Thu, 30 Jan 2003 14:44:41 -0500, Bob Dixon <Bob_Dixon@osu.edu>
wrote:

|Here is the current status of my Titanex beam. I got good advice from
|several hams, and had extensive correspondence with W3FRG. He and I both
|now agree that the element lengths are set wrong. But I can't get up
|there to change them until the weather gets better in Spring.
|
|To review the problem, the instructions are ambiguous, and give two
|possible sets of element lengths. I corresponded with Titanex several
|times, and they told me which was the correct set of lengths, and that
|is what I used. It now appears that their advice was wrong, perhaps due
|to a language problem.
|
|The problem is related to the unusual twin side-by-side boom design. It
|is not at all obvious where to start measuring the element lengths at
|the center. The booms are about 3 inches apart. Half of the elements
|start on one of the booms and extend outward. The other half of the
|elements start out on one boom, and pass over the top of the other boom
|and then stick out the other side. Thus the ambiguity of whether you
|measure from halfway between the booms, or from the boom where the
|element is fastened, or from the other boom where it crosses over.
|
| Bob W8ERD

Forgive me but I thought that one reason for using LPDs was the
continous frequency coverage within the design range. How come the
element lengths are so picky?

And I'm really curious about how their boom design increases gain.

2361. FS: GAP TITAN DX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 02:14:37 UTC
From: Rich <rmo7hatespam@cfl.rr.com>
Message-ID: <h_k_9.12436$IL1.337903@twister.tampabay.rr.com>
Source record: 125750

I have it brand new in the box in Central Florida area. $250.00

$340 at AES in Orlando.

Description below.

Thanks,
Rich

TITAN DX
8 Band Multiband DX Antenna

SPECIFICATIONS

Bands
10m 12m 15m 17m 20m 30m 40m and 100 KHz on 80m
Bandwidth -- Under 2:1
Entire band on 40m 30m 20m 17m 15m 12m 10m
100KHz on 80m
Height -- 25 ft
Weight -- 25 lbs
Mount : All hardware supplied except the 1 1/4" O.D. steel mast
Counterpoise : 4 rigid counterpoises 80" long each
Ground Area Required : None

THE TITAN DX
Your latest requests have been for an antenna that's easy to setup, needs no radials, covers 10m-80m in addition to all the WARC bands and uses the same GAP technology found in our other products. In response to these requests GAP is proud to announce the newest addition to the family, the Titan.

The Titan is a center fed GAP vertical, that provides a host of benefits in a rugged, yet manageable form. The Titan offers broad, continuous frequency coverage in a no tune, easy to assemble format. Designed to work in a limited space or as the perfect compliment to an antenna farm.

One of the primary virtues of the Titan is the GAP center feed. By elevating the feed the earth loss is dramatically decreased, which means the RF is going out to make the contact instead of into the ground to warm the earth. Reducing the earth loss eliminates the need for a radial system. The Titan requires NO RADIALS.

Another key benefit the Titan provides is the ability to go virtually anywhere in the HF amateur spectrum, at anytime without having to make any adjustments. The Titan is the ONLY antenna marketed with total continuous

coverage under 2:1 on 10m 12m 15m 17m 20m 30m 40m and 100 KHz on 80m. Titan's broad bandwidth and no tune feature make it an ideal antenna for getting those multipliers during contests or switching frequencies as band conditions change.

The Titan is a respectable 25' tall and weighs a solid 25 pounds. The Titan is configured to mount easily on a 11/4" O.D. mast. This mast can be a length of your choosing and since the feedpoint is elevated this mast can be as short as a foot.

The first 8' of the antenna is comprised of double wall tubing and where the Titan mounts to the mast the antenna is triple wall! Which means guys are not a necessity.

2362. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 02:17:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5lmj3vslkubetki867ukid8qj6s2pf1bi7@4ax.com>
Source record: 125751

On Thu, 30 Jan 2003 19:55:49 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Word95 has a macro designed specifically for HTML that I used for two
>> years. I dropped Word as a Web editor when they integrated the macro
>> into Word98 because smaller packages did just as well, if not better.
>
>I have to confess - I don't know how to use macros. I didn't even use

you just open the package and it installs itself. The Macro adds more
editor functions and style conventions that have new menu selections
added to the usual Word95 package. It only kicks in if you open or
originate an HTML file.

The point of the matter is to get past the first stage of
transformation by getting the HTML tags in place of the Word95 tags.
You can then swap over to a smaller better suited HTML editor (you
could even use Netscape or IE page editors).

>macros when I was a microcontroller jock at Intel. I didn't use compilers
>either. I'm a machine language type of guy.

I've been writing assembly for the past 6 months. Product to date:
12KB application + 4KB monitor.

>
>> this returns a list of files, many of which would suit you, and one
>> that certainly was that tool I used long ago.
>>
>> converte.zip
>> HTML Converter Macro v1.1 - HTML 2 Winword doc macro conv.
>>
>> convtx23.zip
>> Convert v2.3 - Convert text formats (HTML,RTF,TXT) for Win
>>
>> doc2html.zip
>> DOC 2 HTML Converter (VB macro written)
>>
>> doc2txt.zip
>> Slice MS Word/Excel/PowerPoint documents
>
>Thanks for the suggestions. My daughter is a webmaster and I remember
>buying her $10K of software to get her business started. One of those
>might also do the job.

Hi Cecil,

That may do well in the future, a couple days hence; but you should look into these converters first to get you out of the .DOC straightjacket. Your daughter's new tools may not understand the neaderthalic Word95 (Microsoft once bounced a Word95 file back at me for being "foreign" - When Windows 3 came out, they told me my Microsoft mouse was not compatible).

73's
Richard Clark, KB7QHC

2363. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 02:22:44 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E39DD68.6F87D01D@attbi.com>
Source record: 125752

CAM I did put 'stable' in quotes!! --- DD

OC_CAM's Razor wrote:
>
> Dave Shrader wrote:
> > Hmmm ... I offer the following hypothesis: A derivative your statement
> > yields the conclusion that the moon was not in a 'stable' orbit around
> > the earth until Newton!!
>
> That sounds completely consistent with the uncertainty principle.
> Actually, the moon is not in a stable orbit - it is receding and
> will someday reverse that movement. Better find your crash helmets.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2364. mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 02:40:02 UTC
From: paulfriedman@attbi.com
Message-ID: <6ml_9.94748$_s4.40866@rwcrnsc54>
Source record: 125753

Semi-brand new ham here (licensed in 10/01). I am interested in setting up an HF mobile station. The vehicle is far from ideal, but it is what I have. <grin>

Vehicle: Saab sedan with sunroof

Interests: mostly 40, 20 and 17 meters. Obviously, more bands would be nice, but that's where I usually hang out. Bandwidth is an issue -- particularly on 20m where I operate from 14.190 all the way up.

Location: cold, snowy Minnesota. I do a far amount of road tripping and would want to operate while driving.

I will be running 100w -- no plans or desire at this point to run power mobile.

So, the questions are: what type of antenna and where to mount it?

Easiest mount, of course, would be to install a trailer hitch and mount directly to that. From what I've read, that seems to be poor.

Thanks in advance. By the way, I've read what I could find -- including most of ARRL's Antenna Compendiums, but I would greatly appreciate your advice.

73

Paul ab0si

2365. Re: I cant believe you guys COMPUTER BULLSHIT THREAD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 03:11:13 UTC
From: Jay <jay@hotmail.com>
Message-ID: <IPI_9.65618$GX4.2718619@news2.east.cox.net>
Source record: 125754
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

suppose you are the newsgroup cop? Take of your own kids don't worry about
others as it is none of you damned business.

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e39caeb.281430463@news.online.no...
> suppose the newsgroup is not intended for kids?
>
> On Thu, 30 Jan 2003 21:18:09 GMT, "Jay" <jay@hotmail.com> wrote:
>
> >... is such a asshole. He thinks...
> --
> remove ,xnd to reply

2366. Re: By Special Request...for Murray only

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 03:12:57 UTC
From: Jay <jay@hotmail.com>
Message-ID: <ZQI_9.65640$GX4.2720093@news2.east.cox.net>
Source record: 125755
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Good one. I understand Murray likes to sit on digital communications.

"Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
news:9fh_9.8264$Tu2.25996@news-server.bigpond.net.au...
>
>
> Vito wrote:
> > Ahhh, something on topic: digital communications!
> >
>
> ROFLOL :)
>
> Nice one - Steve
>
>
> > Scott wrote:
> >>
> >> For someone who thinks his poop smells like roses...
> >>
> >> *******
> >> * *
> >> * *
> >> *********
> >> * *
> >> * *
> >> * *
> >> ******* *******
> >> * * * *
> >> * * * ******
> >> * * * * *
> >> ****** * * * * *
> >> * * * * * * *
> >> * * * *
> >> * * *
> >> * *
> >> * *
> >> * *
> >> * *
> >> * *
> >>
> >> From the USENET newsgroups that you pissed on.
>
>

2367. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:03:18 UTC
From: Craig Buck <k4ia@cox.net>
Message-ID: <aAm_9.128190$ui1.2612799@news1.east.cox.net>
Source record: 125756

If you are willing to go one band at a time and not be hopping all over, get some hamsticks. I used a Diamond trunk lip mount and it worked great. It is cheap and easy.

When you get more sophisticated and want to try something with more flexibility, you will graduate to a screwdriver of some sort. The hamsticks will keep you busy and give plenty of time to experiment and decide on your ultimate solution.
--
Radio K4ia
Craig "Buck"
Fredericksburg, VA USA
FISTS 6702 cc 788 Diamond 64

<paulfriedman@attbi.com> wrote in message
news:6ml_9.94748$_s4.40866@rwcrnsc54...
> Semi-brand new ham here (licensed in 10/01). I am interested in setting up
> an HF mobile station. The vehicle is far from ideal, but it is what I
have.
> <grin>
>
> Vehicle: Saab sedan with sunroof
>
> Interests: mostly 40, 20 and 17 meters. Obviously, more bands would be
> nice, but that's where I usually hang out. Bandwidth is an issue --
> particularly on 20m where I operate from 14.190 all the way up.
>
> Location: cold, snowy Minnesota. I do a far amount of road tripping and
> would want to operate while driving.
>
> I will be running 100w -- no plans or desire at this point to run power
> mobile.
>
> So, the questions are: what type of antenna and where to mount it?
>
> Easiest mount, of course, would be to install a trailer hitch and mount
> directly to that. From what I've read, that seems to be poor.
>
> Thanks in advance. By the way, I've read what I could find -- including
most
> of ARRL's Antenna Compendiums, but I would greatly appreciate your advice.
>
> 73
>
> Paul ab0si

>
>

2368. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:09:16 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1csta$8h5$2@sparta.btinternet.com>
Source record: 125757

"Art wrote -

> Hmmmm, the closeness of the coil windings increases the
> capacitive component, ...

==========

Actually, turns-per-inch and wire diameter of a single-layer multi-turn solenoid does not affect its self-capacitance. Self-capacitance is primarily a function of a coil's overall length and diameter.

The (equivalent) capacitance I refer to is the value when connected across the ends of a coil of known (eg., already calculated) inductance resonates it to its self-resonant frequency.

It is sometimes useful to calculate the self-resonant frequency of a coil from its diameter, length and number of turns. The job is as good as done when L and C have been separately calculated.

As an example, if a short vertical antenna is coil-loaded very near to its top with only a very low capacitance rod or hat above it, then the resonant frequency of the antenna will be only slightly lower than the self-resonant frequency of the coil itself. The coil will be physically large and of large inductance - the capacitance of the rod to ground being only a fraction of the self-capacitance of the coil.

This results in a very large current circulating round the coil and its shunt self-capacitance which radiates nothing. Power is lost in the coil resistance and efficiency of the whole system falls excessively. With antennas and coils of ordinary proportions, such as used on vehicles, this effect limits the height of loading coils to about 2/3 of overall antenna height. In some cases the improvement due to a raised coil may not be worth the mechanical inconvenience of raising it above the base. Locating the coil in the tuner has the advantage of allowing multi-band operation. Only screwdrivers offer the best of both worlds by locating the tuner in the antenna itself.

Program LOADCOIL allows a loading coil to slide up/down a vertical shorter than 1/4-wavelength searching for maximum efficiency. Watch what happens when the loading coil gets very near to the top. See how frequently maximum efficiency occurs with the coil so low down it's not worth the trouble of taking it out of the tuner box.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com

==========

2369. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:17:24 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v3ju90ssm2v49e@corp.supernews.com>
Source record: 125759

Most useful piece of test equipment: field strength meter.
I find it amazing how so many people ignore it in favor of their fantasies.

2370. Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:17:51 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3E39F8EE.1C21C5FE@raytheon.com>
Source record: 125758

OC_CAM's Razor wrote:

> Richard Clark wrote:
> > Another observation from Feynman's "Lectures on Physics,":
> > Chapter 4, Conservation of Energy
> > "Conservation of energy can be understood only if
> > we have the formula for all of its forms."
> > This is found in his discussion of Potential Energy which is followed
> > by his discussion of Kinetic Energy. The conservation of energy is
> > incumbent upon having BOTH kinds known and directly expressed.
>
> We know what kind of energy exists in a transmission line, Richard. Why
> do you need this diversion away from the topic at hand which is RF in
> the form of dynamic joules/sec?

Perhaps it's worth taking a look at how energy is accounted for in a transmission line operating in the TEM mode.

Assuming MKS units, and for simplicity, a cascaded transmission line system with characteristics which do not change with time:

dE(x,t)/dx = 1/2 * [C(x) * V(x,t)^2 + L(x) * I(x,t)^2]

where:

dE(x,t)/dx is the stored energy density in Joules/meter at position x, and time t

C(x) is the capacitance per unit length of transmission line in Farads/meter at point x

L(x) is the inductance per unit length of transmission line in Henries/meter at point x

V(x,t) is the voltage at position x, and time t. This is the actual voltage present between conductors and represents the amount of energy which would be gained (or lost) by a unit charge being moved from one conductor to the other.

I(x,t) is the current at position x, and time t. This is the actual current flow, which is the rate of charge movement along the conductors.

Note that the energy density is _not_ linearly proportional to either the voltage or current, and is insensitive to the sign of the polarity or direction of current flow.

The instantaneous power at point x and time t is expressed: P(x,t) = V(x,t) * I(x,t)

The law of conservation of energy states that the total power entering (leaving) a closed system is equal to the rate of change of energy stored in the system plus the rate of creation (dissipation) of power internal to the system. For the idealized case of lossless TEM transmission lines, the law can be simplified as follows:

Given two points, x1 and x2 arbitrarily located anywhere along the transmission line, including the ends:

[V(x1,t) * I(x1,t)] + [V(x2,t) * I(x2,t)] = integral from x1 to x2 of [1/2 * (C(x) * V(x,t)^2 + L(x) * I(x,t)^2)] for all t.

A variety of methods are available for determining the voltage, V(x,t), and current, I(x,t) consistent with the system parameters. The most common method is to decompose the voltage and current into one or more 'forward' and 'reverse' traveling waves, all of which are solutions to the wave equation for the specified transmission line characteristics. Suitable values of voltage and current are determined to simultaneously satisfy all of the imposed boundary conditions. The actual voltage and currents are then calculated from the linear superposition of the arbitrarily chosen components. Once the voltages and currents are known, it is easy to show verify the law of conservation of energy is satisfied using the above formulation.

Another popular approach is to assume the voltage and currents can be represented by a linear combination of spatially stationary sinusoidal functions. These sinusoidal basis functions are usually chosen to be harmonically related to the lowest frequency where the system could be resonant, depending on the boundary conditions. This is called the normal mode decomposition and sometimes offers useful physical intuition not readily available from the traveling wave decomposition. In particular, all of the normal modes are orthogonal and the total energy in the system is the sum of the energies in each normal mode. This is particularly handy when keeping track of the number of photons in the respective modes of a laser.

Both approaches result in the system being 'solved' for any realizable input and initial state. Each suggests a different physical interpretation, but they are both equally 'real', even though they appear radically different. Methods exist (fourier transform) to convert from one formulation to another when needed. Typically the traveling wave approach is the most convenient for solving transmission line problems, thanks to the ability to trivially calculate the reflection coefficient. The normal mode approach is commonly used when viewing the system in terms of it's energy storage characteristics, or as a resonator.

bart
wb6hqk

2371. Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:18:32 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3E39F918.AB8EAE2D@raytheon.com>
Source record: 125760

OC_CAM's Razor wrote:

> Richard Clark wrote:
> > Another observation from Feynman's "Lectures on Physics,":
> > Chapter 4, Conservation of Energy
> > "Conservation of energy can be understood only if
> > we have the formula for all of its forms."
> > This is found in his discussion of Potential Energy which is followed
> > by his discussion of Kinetic Energy. The conservation of energy is
> > incumbent upon having BOTH kinds known and directly expressed.
>
> We know what kind of energy exists in a transmission line, Richard. Why
> do you need this diversion away from the topic at hand which is RF in
> the form of dynamic joules/sec?

Perhaps it's worth taking a look at how energy is accounted for in a transmission line operating in the TEM mode.

Assuming MKS units, and for simplicity, a cascaded transmission line system with characteristics which do not change with time:

dE(x,t)/dx = 1/2 * [C(x) * V(x,t)^2 + L(x) * I(x,t)^2]

where:

dE(x,t)/dx is the stored energy density in Joules/meter at position x, and time t

C(x) is the capacitance per unit length of transmission line in Farads/meter at point x

L(x) is the inductance per unit length of transmission line in Henries/meter at point x

V(x,t) is the voltage at position x, and time t. This is the actual voltage present between conductors and represents the amount of energy which would be gained (or lost) by a unit charge being moved from one conductor to the other.

I(x,t) is the current at position x, and time t. This is the actual current flow, which is the rate of charge movement along the conductors.

Note that the energy density is _not_ linearly proportional to either the voltage or current, and is insensitive to the sign of the polarity or direction of current flow.

The instantaneous power at point x and time t is expressed: P(x,t) = V(x,t) * I(x,t)

The law of conservation of energy states that the total power entering (leaving) a closed system is equal to the rate of change of energy stored in the system plus the rate of creation (dissipation) of power internal to the system. For the idealized case of lossless TEM transmission lines, the law can be simplified as follows:

Given two points, x1 and x2 arbitrarily located anywhere along the transmission line, including the ends:

[V(x1,t) * I(x1,t)] + [V(x2,t) * I(x2,t)] = integral from x1 to x2 of [1/2 * (C(x) * V(x,t)^2 + L(x) * I(x,t)^2)] for all t.

A variety of methods are available for determining the voltage, V(x,t), and current, I(x,t) consistent with the system parameters. The most common method is to decompose the voltage and current into one or more 'forward' and 'reverse' traveling waves, all of which are solutions to the wave equation for the specified transmission line characteristics. Suitable values of voltage and current are determined to simultaneously satisfy all of the imposed boundary conditions. The actual voltage and currents are then calculated from the linear superposition of the arbitrarily chosen components. Once the voltages and currents are known, it is easy to show verify the law of conservation of energy is satisfied using the above formulation.

Another popular approach is to assume the voltage and currents can be represented by a linear combination of spatially stationary sinusoidal functions. These sinusoidal basis functions are usually chosen to be harmonically related to the lowest frequency where the system could be resonant, depending on the boundary conditions. This is called the normal mode decomposition and sometimes offers useful physical intuition not readily available from the traveling wave decomposition. In particular, all of the normal modes are orthogonal and the total energy in the system is the sum of the energies in each normal mode. This is particularly handy when keeping track of the number of photons in the respective modes of a laser.

Both approaches result in the system being 'solved' for any realizable input and initial state. Each suggests a different physical interpretation, but they are both equally 'real', even though they appear radically different. Methods exist (fourier transform) to convert from one formulation to another when needed. Typically the traveling wave approach is the most convenient for solving transmission line problems, thanks to the ability to trivially calculate the reflection coefficient. The normal mode approach is commonly used when viewing the system in terms of it's energy storage characteristics, or as a resonator.

bart
wb6hqk

2372. Re: gravity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:21:30 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301302021.45869b50@posting.google.com>
Source record: 125761

Objects falling from the top of the Tower of Pizza arrived at the
ground at the same time regardless of weight or mass if my memory
serves me correctly.
Impact energy which does vary with mass was not part of his
observations
but would have been observed if he was positioned on the ground.
Art

Gene Fuller <W4SZzzzzz@att.net> wrote in message news:<3E39B8CE.A180C4FB@att.net>...
> Jim,
>
> The "big G" in gravity certainly does not have units of force. Richard
> and Roy are not confused.
>
> 73,
> Gene
> W4SZ
>
> Jim Kelley wrote:
> >
> > Roy Lewallen wrote:
> > >
> > > Gravitational intensity or field strength (almost always denoted 'g')
> > > has units of acceleration (about 9.8 m/sec^2 or 32 ft/sec^2), as Richard
> > > said. See for example Weidner & Sells, _Elementary Classical Physics_,
> > > Vol. 1, p. 373; or Resnick & Halliday, _Physics_, Part 1, p. 339.
> >
> > Gravity, usually referred to as the universal gravitational constant and
> > denoted by big G is a force, and as such has units of force. You are
> > being confused by the acceleration due to gravity, which is not
> > universal, and happens to be 9.8 meters per second squared at sea level
> > here on Earth. (Same text.)
> >
> > > The force gravity applies on an object of mass m is mg, which does have
> > > the proper dimensions of force. This is "weight", which is of course
> > > different for objects of different mass.
> >
> > Force is force. Acceleration is acceleration.
> >
> > Some of the folks where I work make a living measuring big G. I build
> > some of their apparatus for them.
> >
> > 73, Jim AC6XG

2373. Re: Velocity Factors in various metals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:29:40 UTC
From: Jeremy Taylor <jeremy.taylor@tait.co.nz>
Message-ID: <3E39FBB4.BE63733B@tait.co.nz>
Source record: 125762

Roy Lewallen wrote:

> your signal strength. That's where modeling can help. Unfortunately,
> EZNEC doesn't have built-in wire loss values for any steels -- I didn't
> include them because of the tremendous number of alloys there are, and
> the fact that they vary all over the map. DC resistivity or conductivity

It was only at this point did it register in my brain that "Roy Lewallen" seemed familiar because it pops up in the splash screen whenever I run EZNEC. It's nice being able to get this sort of help from the horses mouth as it were - not to imply you are a horse or anything! :-)

>
> isn't too hard to find for most alloys, but permeability is. Some
> ballpark values you could use to get a rough idea are:
>
> Non-magnetic stainless (e.g., 302, 304):
> Resistivity 7.4E-7 ohm-m
> Rel. Permeability 1
> Magnetic stainless (e.g., 410, 420):
> Resistivity 5.6E-7 ohm-m
> Rel. Permeability ?

>
>
> The only information I could readily find on the permeability of
> magnetic stainless steels was for some varieties specially fabricated
> for magnetic purposes. It has a permeability of 700 - 1200. I suspect

Really? The permeability of non mag stainless is 1, and mag stainless is 700+? I don't understand the factors involved here, but that seems a massive jump for materials that are reasonably similar alloys...

I did your tutorial, thanks Roy... I have a better grasp on the practical relationship between metal materials and element lengths now, thanks to the help of you *all* - thank you all very much.

Jeremy

2374. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:30:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1cu4m$1tv$1@helle.btinternet.com>
Source record: 125763

"Roy Lewallen" wrote -

> Given voltage and current phasors _V_ = |V| /_ A1 and _I_ = |I| /_ A2
> ("/_" means "angle"), what is the value of _V_ * _I_? (Hint: It's not
> |V|*|I| /_ (A1 + A2).

>Anyone who thinks it is doesn't understand what
> phasors are.)

==========

That's the stuff Roy. Don't stand any nonsense. Bang their heads together.

2375. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:39:29 UTC
From: k3bu@aol.com
Message-ID: <20030130233929.00823.00000060@mb-fp.aol.com>
Source record: 125764

Interesting how discussions twist and threads wonder around.
I have not received explanation or correction to what I was trying to say, or question Roy's statement that
"base loading ... Unlike top loading, it has no
effect at all on the characteristics of the antenna itself. Therefore,
it doesn't make the antenna "electrically longer" in the same sense that
top loading does."

Forgive me, but let me try again and to break it into steps, to make sure we are on the same (electrical :-) wavelength:

Lets take the quarter wave vertical radiator (Cecil is familiar with mobile stuff and I measured it) so we have the constant - ground plane car body or radial field. If that radiator is connected directly to ground, it has certain impedance (low) and resonant frequency. Can we call the length of the radiator (besides physical) electrical length (corresponds to resonant frequency)?

Now I will break the connection between the radiator and car body and I insert a coil and connect it between the bottom of the radiator and car body. Can we say we loaded the radiator? (If not what do we call it?) Doesn't the resonant frequency of the radiator change, get lower? (I found it does.) Doesn't that change the electrical length of the radiator? (As reflected in change in resonant frequency?) I am not arguing by how much, length of the coil, length of the wire, length of ....
Now for the purpose of matching, I can find point on the coil, where between the ground of the coil and and few turns up, I can find 50 ohm point for the coax. I know when I do that, say on 20m mobile, my resonant frequency drops, doesn't that mean that electrical length of the radiator changed?
Are we not changing electrical length of conductors by inserting inductance or capacitance somewhere in the conductor? Isn't "loading" loading regardles where and how it is applied?
Where am I wrong?

Yuri, K3BU

ps
In AC6LU example in Multinec I see that resonant frequency (dip in SWR curve) with hairpin match dropped, indicating shift in resonant frequency = change in electrical length?

Roy, W7EL wrote:
>But base loading an antenna doesn't change either the current
>distribution or the radiation resistance. Unlike top loading, it has no
>effect at all on the characteristics of the antenna itself. Therefore,
>it doesn't make the antenna "electrically longer" in the same sense that
>top loading does. All it does is to modify the feedpoint reactance. Some

>people might regard the reactance change as making the antenna appear
>longer, but all it's really doing is modifying the reactance seen by the
>source. Because the current distribution isn't modified, the pattern
>shape will be unaltered by base loading.

If I add, say 3 turn coil at the base of the 20m mobile antenna, I can see the shift of resonant frequency down. Isn't the electrical length of the radiator extended by the wire/tubing in the coil? It appears to me that we are extending the radiator (making it electrically longer) and tapping onto the higher impedance point. True, it doesn't change the pattern, but sure makes the radiator appear longer. Same goes for Beta matches on Yagis (hairpin). Driven element has to be shortened to compensate for the "loading" effect of the hairpin, to maintain resonance.

Yuri, K3BU

2376. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 04:56:45 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301302056.7887b960@posting.google.com>
Source record: 125765

Roy Lewallen <w7el@eznec.com> wrote in message news:<v3jbbe6vaid941@corp.supernews.com>...
> I hope the ARRL Antenna book doesn't say that base loading changes the
> current distribution. If so, I'd appreciate it very much if you'd email
> me the exact quote and where it appears, so I can send it to the editor
> for correction. A quick look at the 17th Edition shows correct
> explanations -- that the current distribution is changed if the loading
> is done other than at the base, but not that it's changed by base loading.
>
> Roy Lewallen, W7EL

I have the 16th edition. "1992". It seems correct also. In that chapter, I see no discussion of current distribution for 5/8 wave antennas, unless I missed it quickly reading through it. Only a couple of 5/8 GP antenna projects. The only mention of loading coils changing current distribution is as it applies to short loaded verticals. IE: mobile antennas. They mention to improve the current distribution, you must raise the coil up the whip, or add a capacitance hat. Seems my version is about the same as yours. MK

2377. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 05:04:33 UTC
From: paulfriedman@attbi.com
Message-ID: <Btn_9.96208$_s4.42452@rwcrnsc54>
Source record: 125766

OK, sir. Help me out here. I get a meter and find out the setup ain't filling the either with strong RF. Now that I know that, what can I do about it?

Paul

"H. Adam Stevens" <solo@totalaccess.net> wrote in message news:v3ju90ssm2v49e@corp.supernews.com...
> Most useful piece of test equipment: field strength meter.
> I find it amazing how so many people ignore it in favor of their fantasies.
>
>

2378. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 05:05:38 UTC
From: paulfriedman@attbi.com
Message-ID: <Cun_9.96262$rM2.48286@rwcrnsc53>
Source record: 125767

Thanks, hamstick is exactly what I was thinking about. Thanks also for the point to the diamond trunk mount.

Paul

"Craig Buck" <k4ia@cox.net> wrote in message news:aAm_9.128190$ui1.2612799@news1.east.cox.net...
> If you are willing to go one band at a time and not be hopping all over, get
> some hamsticks. I used a Diamond trunk lip mount and it worked great. It
> is cheap and easy.
>
> When you get more sophisticated and want to try something with more
> flexibility, you will graduate to a screwdriver of some sort. The hamsticks
> will keep you busy and give plenty of time to experiment and decide on your
> ultimate solution.
> --
> Radio K4ia
> Craig "Buck"
> Fredericksburg, VA USA
> FISTS 6702 cc 788 Diamond 64
>
> <paulfriedman@attbi.com> wrote in message
> news:6ml_9.94748$_s4.40866@rwcrnsc54...
> > Semi-brand new ham here (licensed in 10/01). I am interested in setting up
> > an HF mobile station. The vehicle is far from ideal, but it is what I
> have.
> > <grin>
> >
> > Vehicle: Saab sedan with sunroof
> >
> > Interests: mostly 40, 20 and 17 meters. Obviously, more bands would be
> > nice, but that's where I usually hang out. Bandwidth is an issue --
> > particularly on 20m where I operate from 14.190 all the way up.
> >
> > Location: cold, snowy Minnesota. I do a far amount of road tripping and
> > would want to operate while driving.
> >
> > I will be running 100w -- no plans or desire at this point to run power
> > mobile.
> >
> > So, the questions are: what type of antenna and where to mount it?

> >
> > Easiest mount, of course, would be to install a trailer hitch and mount
> > directly to that. From what I've read, that seems to be poor.
> >
> > Thanks in advance. By the way, I've read what I could find -- including
> most
> > of ARRL's Antenna Compendiums, but I would greatly appreciate your
advice.
> >
> > 73
> >
> > Paul ab0si
> >
> >
>
>

2379. Re: VHF antenna for F/G RV?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 05:14:36 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e3a07eb_3@news1.prserv.net>
Source record: 125768

Larry:
When I had a Winnebago, it had a flat roof, and I installed a 4" aluminum channel across the top which I fastened at each end to existing hardware, and mounted the VHF/UHF antennas on it. Brought all the cables to the end of the channel and inside next to a vent pipe which I thoroughly resealed. HF was on the rear bumper, scanner on the mirror. CB was part of the AM/FM radio antenna.

--
Crazy George
Remove NO and SPAM from return address
"Larry Gagnon" <lgagnon@sherrittoil.com> wrote in message
news:1d3b4598.0301301326.4dac4ba8@posting.google.com...
> I am considering my options for a 2 meter VHF antenna for a fiberglass
> body RV and would like to hear from hams who have had REAL experience
> mounting and using antennas on such a vehicle.
>
> My RV is a 22' Class C with a mostly fiberglass body, other than the
> Ford E350 cab. One easy option would be a 5/8 wave, hood lip mounted,
> but the cabover part of the RV would almost touch the antenna so the
> radiation pattern would probably be lousy, as would any engine noise.
>
> The other options I am considering are:
>
> 1) 5/8 wave mounted to top of side mirror frame (like truckers do)
> 2) 1/2 wave on top of RV but that means drilling holes through roof
> 3) 1/2 wave glass mount on upper side window of RV body
> 4) 1/4 wave on RV roof with homemade mesh ground plane (but again that
> means drilling roof holes).
>
> Anyone out there tried anything similar and what are your experiences?
> Also, what have you done to ensure a waterproof rubber roof after
> drilling holes for antenna mounts. Hope to hear from you.
>
> Larry VE6MK

2380. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 05:56:24 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301302156.5176f2fd@posting.google.com>
Source record: 125669

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:<X5g_9.5520$hG6.166879@twister.southeast.rr.com>...
> I am not so sure that part of the definition of loading is that it changes
> the current distibution on an antenna . AS others have said and I already
> knew, A coil located at the base of an antenna does not significantly
> disturb the current distibution in the antenna. to me loading is making a
> raditor that exhibts a complex impedance at a desire freq resistive at that
> freq by adding reactance that cancels out the reactive componet of the
> antennas impedace.Matching means coversion from one resistive impedance to
> another. I realize that there is very little difference in these two
> meanings and I may be totally wrong about them but it certainly seems like
> over the years this is the way they have been used . This may be an
> oversimplication. Perhaps I should look at loading as part of the matching
> process. With loading taking care of the reactive component and matching
> taking care of the resistive. Hmmm, kind of sounds like what I aleady said.
> Thanks for yor input it certainly gave me a new way of looking at it.

As far as the loading coil on a 5/8 whip, I think it should really be
called a matching coil. In fact, I used to call it a matching coil,
but changed to be "politically correct". Maybe I should change
back...:/ For that type of coil to change the pattern, or current
distribution, it would have to actually make the element longer. But,
this is not the case as most of these coils are small and short.
Changing current distribution on a short whip is a totally different
matter the way I see it. Why? Because maximum current is always at the
base on a shorter than 1/4 wave whip. The only way you can change this
is to either add top capacitance which will give you a fairly linear
current distribution through the whip, or to raise the coil up from
the base to "draw" current up through the coil. The current at both
ends of the coil are appx the same. So this means the current
distribution improves from the base up to the point of the top of the
coil. It then diminishes when it gets to the capacitance, IE: whip or
hat or both. Using the top hat is the preferred way to go. Coil
position matters little in a case like that. Current distribution is
fairly linear no matter where the coil is. In that case, it would make
more sense to have the coil at the base to have the least number of
turns.
But, if you use the placement of the coil to improve current
distribution, the current will not be linear up the whip, and reduces
sharply once you get past the coil. To see why the current raises off
the base, note that the current in such a short whip with no hat is
max at the base. ALWAYS!!! If you have a ten ft whip base loaded with
a 80m coil with say 50 turns that took 50 ft, remember that the max is
at the base. Where does it go next? Through 50 ft of wire. Thats where

your current max remains, and it's basically unchanged from a unloaded whip. Remember, it diminishes fairly fast as it sees the capacitive whip. Now of you raise the coil up 5 ft, current is still max at the base, but what does it see first? 5 ft of mast. Only then does it see the 50 ft of wire in the coil. So being that current is fairly equal at the bottom and top of the coil, you have fairly steady distribution from the base, up the mast, and through the coil. Only then does it see capacitance and start to diminish.
All the best mobile antennas use a large top hat. It's not really to lower the number of turns needed in the coil, although that is one bonus. It's mainly to give a fairly linear current distribution through the whip. Very important on the low bands for the best results. Your radiation resistance also increases greatly with good top loading. Hopefully some of this makes sense...:/ MK

2381. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 05:57:35 UTC
From: "Jamie R. Dean" <W4JRD@hotmail.com>
Message-ID: <kt3k3v4ahtt0m0lp5je8sthls9iri3qu47@4ax.com>
Source record: 125670

On Fri, 31 Jan 2003 02:40:02 GMT, <paulfriedman@attbi.com> wrote:

>Semi-brand new ham here (licensed in 10/01). I am interested in setting up
>an HF mobile station. The vehicle is far from ideal, but it is what I have.
><grin>
>

Paul,
Most people here in the area I live use a screwdriver antenna. You
can get coverage from 80m to 6m on some but most 60m to 10m.. This
antenna can be mounted pretty easy on the back of the car with a
trailer hitch on under botton mount.

hope this helps,
Jamie R. Dean - W4JRD
http://www.jamierdean.com/radio/
http://www.jamierdean.com/webcam.html

>Vehicle: Saab sedan with sunroof
>
>Interests: mostly 40, 20 and 17 meters. Obviously, more bands would be
>nice, but that's where I usually hang out. Bandwidth is an issue --
>particularly on 20m where I operate from 14.190 all the way up.
>
>Location: cold, snowy Minnesota. I do a far amount of road tripping and
>would want to operate while driving.
>
>I will be running 100w -- no plans or desire at this point to run power
>mobile.
>
>So, the questions are: what type of antenna and where to mount it?
>
>Easiest mount, of course, would be to install a trailer hitch and mount
>directly to that. From what I've read, that seems to be poor.
>
>Thanks in advance. By the way, I've read what I could find -- including most
>of ARRL's Antenna Compendiums, but I would greatly appreciate your advice.
>
>73
>
>Paul ab0si
>

2382. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 06:06:15 UTC
From: Scott Vanzandt <zandt@midsouth.rr.com>
Message-ID: <af4k3vo1lardfbi5brgh0j2gq0atiq4edg@4ax.com>
Source record: 125671

You didn't say what radio you would be using, but the Yaesu
screwdriver antenna is really low profile, and it covers 70 CM - 40M.
If you want to use it on something other than a Yaesu, MFJ or AMCON
make controllers for it. Great looking antenna and those I've talk to
that have them love em.

Scott
N2WMD

On Fri, 31 Jan 2003 02:40:02 GMT, <paulfriedman@attbi.com> wrote:

>Semi-brand new ham here (licensed in 10/01). I am interested in setting up
>an HF mobile station. The vehicle is far from ideal, but it is what I have.
><grin>
>
>Vehicle: Saab sedan with sunroof
>
>Interests: mostly 40, 20 and 17 meters. Obviously, more bands would be
>nice, but that's where I usually hang out. Bandwidth is an issue --
>particularly on 20m where I operate from 14.190 all the way up.
>
>Location: cold, snowy Minnesota. I do a far amount of road tripping and
>would want to operate while driving.
>
>I will be running 100w -- no plans or desire at this point to run power
>mobile.
>
>So, the questions are: what type of antenna and where to mount it?
>
>Easiest mount, of course, would be to install a trailer hitch and mount
>directly to that. From what I've read, that seems to be poor.
>
>Thanks in advance. By the way, I've read what I could find -- including most
>of ARRL's Antenna Compendiums, but I would greatly appreciate your advice.
>
>73
>
>Paul ab0si
>

2383. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 06:19:07 UTC
From: paulfriedman@attbi.com
Message-ID: <vzo_9.97390$VU6.54383@rwcrnsc52.ops.asp.att.net>
Source record: 125672

Thanks, Jamie. My concern is how a motorized antenna would hold up to the winters (snow, ice, salt, more salt, then some salt.)

Paul

"Jamie R. Dean" <W4JRD@hotmail.com> wrote in message news:kt3k3v4ahtt0m0lp5je8sthls9iri3qu47@4ax.com...
>
> On Fri, 31 Jan 2003 02:40:02 GMT, <paulfriedman@attbi.com> wrote:
>
> >Semi-brand new ham here (licensed in 10/01). I am interested in setting up
> >an HF mobile station. The vehicle is far from ideal, but it is what I have.
> ><grin>
> >
>
>
> Paul,
> Most people here in the area I live use a screwdriver antenna. You
> can get coverage from 80m to 6m on some but most 60m to 10m.. This
> antenna can be mounted pretty easy on the back of the car with a
> trailer hitch on under botton mount.
>
> hope this helps,
> Jamie R. Dean - W4JRD
> http://www.jamierdean.com/radio/
> http://www.jamierdean.com/webcam.html
>
>
>
>
>
>
>
> >Vehicle: Saab sedan with sunroof
> >
> >Interests: mostly 40, 20 and 17 meters. Obviously, more bands would be
> >nice, but that's where I usually hang out. Bandwidth is an issue --
> >particularly on 20m where I operate from 14.190 all the way up.
> >
> >Location: cold, snowy Minnesota. I do a far amount of road tripping and
> >would want to operate while driving.
> >
> >I will be running 100w -- no plans or desire at this point to run power

> >mobile.
> >
> >So, the questions are: what type of antenna and where to mount it?
> >
> >Easiest mount, of course, would be to install a trailer hitch and mount
> >directly to that. From what I've read, that seems to be poor.
> >
> >Thanks in advance. By the way, I've read what I could find -- including
most
> >of ARRL's Antenna Compendiums, but I would greatly appreciate your
advice.
> >
> >73
> >
> >Paul ab0si
> >
>

2384. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 06:22:35 UTC
From: paulfriedman@attbi.com
Message-ID: <LCo_9.30673$to3.41251@rwcrnsc51.ops.asp.att.net>
Source record: 125673

Haven't decided on the rig yet. The antenna seems more important to me.

Thanks

"Scott Vanzandt" <zandt@midsouth.rr.com> wrote in message
news:af4k3vo1lardfbi5brgh0j2gq0atiq4edg@4ax.com...
> You didn't say what radio you would be using, but the Yaesu
> screwdriver antenna is really low profile, and it covers 70 CM - 40M.
> If you want to use it on something other than a Yaesu, MFJ or AMCON
> make controllers for it. Great looking antenna and those I've talk to
> that have them love em.
>
> Scott
> N2WMD
>
> On Fri, 31 Jan 2003 02:40:02 GMT, <paulfriedman@attbi.com> wrote:
>
> >Semi-brand new ham here (licensed in 10/01). I am interested in setting
up
> >an HF mobile station. The vehicle is far from ideal, but it is what I
have.
> ><grin>
> >
> >Vehicle: Saab sedan with sunroof
> >
> >Interests: mostly 40, 20 and 17 meters. Obviously, more bands would be
> >nice, but that's where I usually hang out. Bandwidth is an issue --
> >particularly on 20m where I operate from 14.190 all the way up.
> >
> >Location: cold, snowy Minnesota. I do a far amount of road tripping and
> >would want to operate while driving.
> >
> >I will be running 100w -- no plans or desire at this point to run power
> >mobile.
> >
> >So, the questions are: what type of antenna and where to mount it?
> >
> >Easiest mount, of course, would be to install a trailer hitch and mount
> >directly to that. From what I've read, that seems to be poor.
> >
> >Thanks in advance. By the way, I've read what I could find -- including
most
> >of ARRL's Antenna Compendiums, but I would greatly appreciate your
advice.
> >

> >73
> >
> >Paul ab0si
> >
>

2385. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 06:41:32 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3k6krkc3a8m16@corp.supernews.com>
Source record: 125674

No, but it does make me feel better when dealing with complete and utter
idiots. Sorry Jimmy but your teachers did you no favors trying to increase
your self-esteem.

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:Ehg_9.5628$hG6.168584@twister.southeast.rr.com...
>
> Can you do anything but make idle insults?. I guess this is what improves
> your self esteem.
>
> "Fred Hambrecht Sr" <w4jle@charter.net> wrote in message
> news:v3it5dcp800vdb@corp.supernews.com...
> > Oh the glory of outcome based education. One can define terms to mean
> > anything they want them to (see Alice in wonderland) and no one is
> supposed
> > to point out that the world has agreed on certain principals. Why!,
> because
> > it may hurt their self-esteem to point out they lack knowledge.
> >
> > Gee Jimmy, your really close 2+2 is almost 5 so you get a smiley face...
> >
> >
> > "'Doc" <w5lz@cwis.net> wrote in message
news:3E391722.AEF393ED@cwis.net...
> > >
> > >
> > > Jimmy,
> > > Very simply, if the coil is 'above' the feed point
> > > of the antenna, it's a loading coil. If it's below
> > > the feed point of the antenna it's changing the antenna's
> > > input impedance. There can also be a third option, where
> > > a loding coil and impedance matching coil can be combined
> > > at the base of an antenna. It may not be much of a distinction
> > > to you, but where the coil is in relation to the feed point of
> > > the antenna does make a difference. Can you see the distinction
> > > I'm making? As to whether Roy agrees with me, or has the same
> > > view of it, you'll have to ask him...
> > > 'Doc
> >
> >
>
>

2386. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 06:53:33 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301302253.664c040f@posting.google.com>
Source record: 125675

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:<X5g_9.5520$hG6.166879@twister.southeast.rr.com>...
> I am not so sure that part of the definition of loading is that it changes
> the current distibution on an antenna . AS others have said and I already
> knew, A coil located at the base of an antenna does not significantly
> disturb the current distibution in the antenna. to me loading is making a
> raditor that exhibts a complex impedance at a desire freq resistive at that
> freq by adding reactance that cancels out the reactive componet of the
> antennas impedace.Matching means coversion from one resistive impedance to
> another. I realize that there is very little difference in these two
> meanings and I may be totally wrong about them but it certainly seems like
> over the years this is the way they have been used . This may be an
> oversimplication. Perhaps I should look at loading as part of the matching
> process. With loading taking care of the reactive component and matching
> taking care of the resistive. Hmmm, kind of sounds like what I aleady said.
> Thanks for yor input it certainly gave me a new way of looking at it.

More thoughts on current distribution. And how it can have a big
effect on a mobile antenna. When you look at a graph of current
distribution for a 1/4 wave, it's naturally max at the base, and
decreases in an orderly military manner until it's appx zero at the
tip. The current distribution of a short whip acts much the same, and
it all starts at the base. According to a graph in the antenna
handbook, on a 1/4 wave whip, 50 % current is at the 60 degree point
up the whip. "90% total height". I'm not sure how this changes on say
a 10 ft whip for 80m, but would be easily modeled... But anyway, the
current normally is fairly strong even halfway up the whip. "about 65%
for a 1/4 wave". So if you have a base loaded 10 ft whip, and the
first 50 ft of the antenna is loading coil in a 1 ft or so form
height, thats where the first 50 ft of strong current distribution
will be. In the coil...Bummer overall... :(
This is why I went to the trouble of raising my mobile coil from appx
25 inches from the base to now about 64 inches. That first 5 ft of
lower whip is where the strongest current is starting from the base.
And it's fairly uniform from the base until you get to the top of the
coil, where it starts to diminish as it see's the capacity. Remember
the graph and how current gradually decreases up the whip starting at
the base...
It's much better having that first 5 ft being whip, than it is to be
at the base of a loading coil consisting of a few turns of wire. Which
sounds like it would radiate the best? I'll take the mast any day...
BTW, the change did seem to be worthwhile. My performance on 80m shot
up quite a bit. And naturally, better on all the other bands too. MK

2387. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 06:56:59 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3k7hvjscaa5d9@corp.supernews.com>
Source record: 125676

Yuri Blanarovich wrote:
> . . .
> Forgive me, but let me try again and to break it into steps, to make sure we
> are on the same (electrical :-) wavelength:
>
> Lets take the quarter wave vertical radiator (Cecil is familiar with mobile
> stuff and I measured it) so we have the constant - ground plane car body or
> radial field. If that radiator is connected directly to ground, it has certain
> impedance (low) and resonant frequency. Can we call the length of the radiator
> (besides physical) electrical length (corresponds to resonant frequency)?

That's the whole problem. I can't find "electrical length" in the indexes of any of the several antenna textbooks I have, in the IEEE dictionary, or even the ARRL Antenna Book. It means different things to different people, and can mean just about anything you want it to. If all it means to you is a way of describing feedpoint reactance, then yes, you're right on track.

"Electrical length" is used with transmission lines to describe the effect of different propagation velocities. Transmission lines of the same electrical length will have the same current distribution, and changing the electrical length has exactly the same effect as changing the physical length. So an antenna effect more (but not entirely) analagous to the transmission line usage is the effect of top loading, where you actually change the current distribution and therefore make the antenna behave like a longer radiator. The radiation resistance also increases, just like it would if you made the antenna physically longer. So some people tend to regard this as changing the "electrical length". Base loading, by contrast, doesn't change the antenna at all. It doesn't change the current distribution, radiation pattern, effective length, gain, or anything else. All it does is add reactance to the feedpoint impedance.

You're certainly free to use whatever terms you like in any way you like. But it would be a lot less ambiguous if you just said that by adding a base inductor you were changing the feedpoint reactance. That statement is correct and not subject to misinterpretation. If your objective is to communicate, the listener is a lot more likely to understand what you mean if you use this terminology to describe the effect of base loading, rather than saying you've made the antenna "electrically longer".

> Now I will break the connection between the radiator and car body and I insert
> a coil and connect it between the bottom of the radiator and car body. Can we
> say we loaded the radiator? (If not what do we call it?)

Yes, that's common and well understood terminology for what you've done.

> Doesn't the resonant
> frequency of the radiator change, get lower? (I found it does.)

Yes.

Doesn't that
> change the electrical length of the radiator? (As reflected in change in
> resonant frequency?) I am not arguing by how much, length of the coil, length
> of the wire, length of ....

The problem is in the parentheses, as I elaborated on above.

> Now for the purpose of matching, I can find point on the coil, where between
> the ground of the coil and and few turns up, I can find 50 ohm point for the
> coax. I know when I do that, say on 20m mobile, my resonant frequency drops,
> doesn't that mean that electrical length of the radiator changed?
> Are we not changing electrical length of conductors by inserting inductance or
> capacitance somewhere in the conductor?

See above.

Isn't "loading" loading regardles where
> and how it is applied?

Yes.

> Where am I wrong?

I wouldn't say you're wrong, just using terminology that has more than
one meaning. Again, it's your choice. But if you really want to
communicate, unambiguous terminology is better.

Roy Lewallen, W7EL

2388. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 06:59:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3k7mtk7jaqc2c@corp.supernews.com>
Source record: 125677

Reg Edwards wrote:
>
> That's the stuff Roy. Don't stand any nonsense. Bang their heads together.
>

I dunno, Reg. I think that just makes the heads numb.

Roy Lewallen, W7EL

2389. Re: MFJ 1786 Magnetic Loop antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 08:42:01 UTC
From: veha <veha32@hotmail.com>
Message-ID: <b1dcu3$3c$1@news-reader11.wanadoo.fr>
Source record: 125678

Dirk, ik heb al jaren de AEA loop in gebruik, die volgens mij ongeveer gelijk is. De resultaten zijn soms verbluffend. Hij staat gewoon in de tuin op 50cm hoogte. Soms zijn de signalen sterker dan mijn lange draad of zelfs de Hygain beam, maar dat kan in korte tijd erg wisselen. Ik heb ook eens verbinding gemaakt met IZ5BBS die een eigen bouw loop voor 40m gebruikte en die mij nog een flop met ontwerpprogrammaatje heeft gestuurd. Mocht je dat willen hebben kan ik dat misschien per e-mail doorsturen; Hij werkte heel europa vanaf zijn balkon. Voor echt DX is het ding niet zo erg geschikt, vanwege de niet zo lage opstraalhoek. Hoe zo'n loop ondanks de zeer lage stralingsweerstand nog goede resultaten levert blijft ook voor experts onduidelijk, waarschijnlijk gaan metalen objecten in de buurt ook meestralen.
Succes, 73, Victor F5VEA, exPA3DAJ

"Dirk Schuurs" <pa3gwl@amsat.org> wrote in message
news:b1ajpahve2@news.hccnet.nl...
> Hi,
>
> I'm looking for a very small, but good HF-antenna.
> My eye catched the MFJ 1786 Magnetic Loop antenna.
>
> Can somebody tell me their results with this antenna.
> It's for indoor or balcony use, just abt 5 meters above groundlevel.....
> Other tips for good and small HF-antenna's are welcome too !
>
>
>
> Regards,
> Dirk PA3GWL
>
>
>

2390. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 10:36:31 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <Pks_9.3739$qi3.870700@twister.southeast.rr.com>
Source record: 125679

I have the book in my own library
I saw no mention of where this is a mandatory condition of loading. It does say that the effect is more pronounce as you move the coil up the antenna. I also know that it is the least at the base which is the most effective place to load an antenna.Hmmm, interesting. Seems like current redistribution is more of a by product of loading. Isnt this why 5/8 antennas have there coil at the base, So as not to disturb the distribution of current on the length of the radiator. Other wise you could place it anywhere on the antenna to tune out the reactive componet of the antenna.

"Dave Shrader" <david.shrader@attbi.com> wrote in message news:3E39912F.49BB4C88@attbi.com...
> Jim, you/we can disagree with the definition of loading.
>
> However, the ARRL Antenna book devotes an entire chapter, chapter 16
> [18th edition], to the issue. They explicitly indicate that loading
> changes the current distribution in the antenna. The same chapter also
> discusses Impedance Matching.
>
> Try your local library and see if you can read the chapter.
>
> 73, Deacon Dave, W1MCE
>
> Jimmy wrote:
> >
> > I am not so sure that part of the definition of loading is that it changes
> > the current distibution on an antenna . AS others have said and I already
> > knew, A coil located at the base of an antenna does not significantly
> > disturb the current distibution in the antenna. to me loading is making a
> > raditor that exhibts a complex impedance at a desire freq resistive at that
> > freq by adding reactance that cancels out the reactive componet of the
> > antennas impedace.Matching means coversion from one resistive impedance to
> > another. I realize that there is very little difference in these two
> > meanings and I may be totally wrong about them but it certainly seems like
> > over the years this is the way they have been used . This may be an
> > oversimplication. Perhaps I should look at loading as part of the matching
> > process. With loading taking care of the reactive component and matching

> > taking care of the resistive. Hmmm, kind of sounds like what I aleady
said.
> > Thanks for yor input it certainly gave me a new way of looking at it.
> >
> > "Dave Shrader" <david.shrader@attbi.com> wrote in message
> > news:3E39718C.A3483A75@attbi.com...
> > > Jimmy, let me jump in.
> > >
> > > When an antenna is 'loaded' the current distribution[s] on the antenna
> > > change. If I place an inductor 1/2 way along an antenna I change the
> > > 'self inductance' of the antenna and the current changes both above
and
> > > below the inductor. If I now move the inductor the currents change to
> > > satisfy the conditions imposed by the new location.
> > >
> > > Impedance matching requires, as a minimum, two different reactive
> > > components; an inductor and a capacitor. This comprises an 'L'
section,
> > > or with three components a 'TEE' section, or a 'PI' section;
> > > additionally you may use a tapped inductor, a split capacitor etc.
> > >
> > > A 5/8 wavelength vertical antenna has an end point Load Impedance of
> > > approximately 120-j400 Ohms. For most amateur radios this has to be
> > > converted to a 50 ohm load. the purpose of the matching section is to
> > > accomplish the impedance transformation.
> > >
> > > Now it is possible to do both with a tapped inductor at the base of
the
> > > antenna. Remember the antenna has capacitance to 'ground'. So with the
> > > antenna and coil inductance and the capacitor to ground effect it is
> > > possible to achieve a 50 ohm load.
> > >
> > > The impedance looking into the matching section is approximately:
> > >
> > > R = Q*SQRT[L/C]
> > >
> > > So, antenna Q, and suitable values of Inductance and Capacitance will
> > > transform 120-j400 to 50 ohms.
> > >
> > > Conclusion: 1) Loading changes the current distribution on the antenna
> > ****** I 'm not so sure about this, at least not with base loading.
> > > 2) Matching transforms one impedance to another.
> > Yes, does this mean transforming complex impedances to resistive
impedances
> > too. (ie making an antenna resonate at a freq it was not designed.
> >
> > >
> > > 73, Deacon Dave, W1MCE

2391. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 10:39:45 UTC
From: richardharrison@webtv.net
Message-ID: <20137-3E3A5271-1@storefull-2314.public.lawson.webtv.net>
Source record: 125680

Roy Lewallen wrote:
"I think that stuff just makes the heads numb."

I can`t read Roy`s problem. I can make out: Given voltage and current phasors , and what is the value of VI?

Convention says the vertical axis, or Y axis, is used for reactance.

Convention says the horizontal axis, or X axis, is used for the real or resistive values.

Inductive reactance gets the up direction. That puts capacitive reactance below the origin.

Positive resistance goes to the right of the origin. If we have any negative resistance, it goes to the left of the origin.

Say we have a series circuit containing a 20-ohm resistor and an inductor with 10 ohms of inductive reactance. It`s an a-c circuit of whatever frequency is required for 10 ohms of reactance.

We draw a line of 10 units up on our vertical axis. We also draw a line of 20 units to the right of our origin on our horizontal axis.

Graphically we can place a point at Y = 10 and at X = 20. Connect this point with the origin. The number of units in this diagonal line is the number of ohms the impedance made up of the inductor and resistor have in their series combination.

By geometric proof or by observation we can see that the diagonal line we drew is identical to the hypotenuse of a right triangle which has the values of the resistance and reactance for legs.

Pythagoras lets us calculate the value of the diagonal line or impedance, or hypotenuse by taking the square root of the sum of the squares of the resistance and the reactance legs. In our example it is 22.36 ohms. We don`t need graphics to measure the total impedance. We can calculate the value.

We define the angle our resultant (the line we drew) makes with the real axis as the phase angle, customarily called theta. Trigonometry tells us that the real or resistive value is the cosine of the phase angle theta times our resultant circuit impedance. Trigonometry also tells us that the reactive value has a magnitude equal to the sine of the phase angle times the resultant circuit impedance.

In a series circuit, the same current goes through all components. Voltage drop across each is equal to its impedance times the current.

Voltage drop across the entire circuit is its impedance times the current. Since resistance and reactance are at right angles, the voltages add vectorially as we demonstrated in our graphic example above with the impedances, so the sum is not a simple arithmetic sum, but it is the vector sum which gives the voltage across the entire circuit.

We call the (volts)(amps) of the entire circuit the apparent power. We call the volts across the reactance, times the amps, the reactive volt amperes.

We call the (volts)(amps) of the resistor, the real power in the circuit.

Theta can be found without the graphics. We can use trigonometry. Cosine theta is equal to the real power divided by the apparent power.

Cosine theta is called the power factor.

Power factor = Isquared(R) / apparent power

Power factor = R/Z

Power factor = Cos theta

Whatever Roy`s question is, I believe it can be solved with no more than the trigonometry of a right triangle.

Best regards, Richard Harrison, KB5WZI

2392. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 10:53:45 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <ZAs_9.3822$qi3.873383@twister.southeast.rr.com>
Source record: 125681

Just the kind of fellow you are.

"Fred Hambrecht Sr" <w4jle@charter.net> wrote in message
news:v3k6krkc3a8m16@corp.supernews.com...
> No, but it does make me feel better when dealing with complete and utter
> idiots. Sorry Jimmy but your teachers did you no favors trying to increase
> your self-esteem.
>
>
> "Jimmy" <Gfender@carolina.rr.com> wrote in message
> news:Ehg_9.5628$hG6.168584@twister.southeast.rr.com...
> >
> > Can you do anything but make idle insults?. I guess this is what
improves
> > your self esteem.
> >
> > "Fred Hambrecht Sr" <w4jle@charter.net> wrote in message
> > news:v3it5dcp800vdb@corp.supernews.com...
> > > Oh the glory of outcome based education. One can define terms to mean
> > > anything they want them to (see Alice in wonderland) and no one is
> > supposed
> > > to point out that the world has agreed on certain principals. Why!,
> > because
> > > it may hurt their self-esteem to point out they lack knowledge.
> > >
> > > Gee Jimmy, your really close 2+2 is almost 5 so you get a smiley
face...
> > >
> > >
> > > "'Doc" <w5lz@cwis.net> wrote in message
> news:3E391722.AEF393ED@cwis.net...
> > > >
> > > >
> > > > Jimmy,
> > > > Very simply, if the coil is 'above' the feed point
> > > > of the antenna, it's a loading coil. If it's below
> > > > the feed point of the antenna it's changing the antenna's
> > > > input impedance. There can also be a third option, where
> > > > a loding coil and impedance matching coil can be combined
> > > > at the base of an antenna. It may not be much of a distinction
> > > > to you, but where the coil is in relation to the feed point of
> > > > the antenna does make a difference. Can you see the distinction
> > > > I'm making? As to whether Roy agrees with me, or has the same
> > > > view of it, you'll have to ask him...

> > > > 'Doc
> > >
> > >
> >
> >
>
>

2393. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 11:01:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3klt0819jmoa5@corp.supernews.com>
Source record: 125682

Richard Harrison wrote:
> . . .

> Whatever Roy`s question is, I believe it can be solved with no more than
> the trigonometry of a right triangle.
>
> Best regards, Richard Harrison, KB5WZI
>

Sorry, it can't.

Roy Lewallen, W7EL

2394. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 11:27:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3A5D9A.3050802@ieee.org>
Source record: 125683

Richard Harrison wrote:
> Whatever Roy`s question is, I believe it can be solved with no more than
> the trigonometry of a right triangle.

And if one is using the wave reflection model at a match point,
the cosine theta is always equal to plus or minus 1. No trig required.
At a match point, all the voltages and currents are either in phase
or 180 degrees out of phase, i.e. cos(theta) = +1 or -1
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2395. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 11:41:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3A60DD.7030505@ieee.org>
Source record: 125684

Reg Edwards wrote:
> "Roy Lewallen" wrote -
>>Given voltage and current phasors _V_ = |V| /_ A1 and _I_ = |I| /_ A2
>>("/_" means "angle"), what is the value of _V_ * _I_? (Hint: It's not
>>|V|*|I| /_ (A1 + A2).
>
>>Anyone who thinks it is doesn't understand what
>>phasors are.)
>
> That's the stuff Roy. Don't stand any nonsense. Bang their heads together.

Of course Roy is right but there's an easier way. Most ham systems are matched, i.e. the reflected energy incident upon the source has been reduced to a minimum at a match point. At a perfectly matched point using the wave reflection model, the forward and reflected voltage and current phasors all lie on the same line, i.e. any phase angle is either zero or 180 degrees and all the phasors can be plotted on the 'X' axis. Under those conditions, even a DC analysis will work.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2396. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 11:48:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3kojmein0veff@corp.supernews.com>
Source record: 125685

Who said anything about a match point? Or even about a transmission line? It's just a very simple problem, involving nothing but a single voltage phasor and a single current phasor. No reflections. No non-dissipative resistors. No re-reflections. No traveling power waves. No virtual short circuits. Just V times I, nothing else.

Richard didn't understand the question, but it looks like you did, Cecil. So what's the product, and how did you solve it with phasors? C'mon, you can do it.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Richard Harrison wrote:
>
>> Whatever Roy`s question is, I believe it can be solved with no more than
>> the trigonometry of a right triangle.
>
>
> And if one is using the wave reflection model at a match point,
> the cosine theta is always equal to plus or minus 1. No trig required.
> At a match point, all the voltages and currents are either in phase
> or 180 degrees out of phase, i.e. cos(theta) = +1 or -1

2397. question on MFJ 931 artificial ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 12:06:44 UTC
From: Dimitris Mylonopoulos <mylond@otenet.gr>
Message-ID: <b1dose$8hn$1@usenet.otenet.gr>
Source record: 125686
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.shortwave

I 've recently bought a used MFJ931 artificial ground and I wand to use it
with a receiver.
what's the proper set up for maximun performance, if any?
dimitris

2398. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 12:29:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3A6C11.8040608@ieee.org>
Source record: 125687

Roy Lewallen wrote:
> Who said anything about a match point? Or even about a transmission
> line? It's just a very simple problem, involving nothing but a single
> voltage phasor and a single current phasor. No reflections. No
> non-dissipative resistors. No re-reflections. No traveling power waves.
> No virtual short circuits. Just V times I, nothing else.
>
> Richard didn't understand the question, but it looks like you did,
> Cecil. So what's the product, and how did you solve it with phasors?
> C'mon, you can do it.

I'm sorry, your posting hasn't reached my news-server yet. All I have
is Reg's reply in which you said:

> Given voltage and current phasors _V_ = |V| /_ A1 and _I_ = |I| /_ A2
> ("/_" means "angle"), what is the value of _V_ * _I_? (Hint: It's not
> |V|*|I| /_ (A1 + A2).

I hope I understand all the strange ASCII stuff. Do you want the dot
product or the cross product?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2399. Re: question on MFJ 931 artificial ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 12:49:49 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3ks7aai2kf94d@corp.supernews.com>
Source record: 125688
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.shortwave

Like any tuner, it is adjusted for best conditions. The manual should give
you the proper procedure.

Stoka lo

"Dimitris Mylonopoulos" <mylond@otenet.gr> wrote in message
news:b1dose$8hn$1@usenet.otenet.gr...
> I 've recently bought a used MFJ931 artificial ground and I wand to use it
> with a receiver.
> what's the proper set up for maximun performance, if any?
> dimitris
>
>

2400. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 13:58:20 UTC
From: w3frg <w3frg@comcast.net>
Message-ID: <WvednZb3u4VhHaejXTWcpw@comcast.com>
Source record: 125689

A good dissertation on the LPDA, whether it be planar, pyramidal,
coplanar, etc., can be found at the following web page for those
unfamiliar with the intimate LP design and the possible results
obtainable.
http://www.conformity.com/0005emc.html
Enjoy reading.

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:hulj3v4q3dpehaal2f4bmus4n1fsetlb4r@4ax.com...
> On Thu, 30 Jan 2003 14:44:41 -0500, Bob Dixon <Bob_Dixon@osu.edu>
> wrote:
>
> |Here is the current status of my Titanex beam. I got good advice from
> |several hams, and had extensive correspondence with W3FRG. He and I
both
> |now agree that the element lengths are set wrong. But I can't get up
> |there to change them until the weather gets better in Spring.
> |
> |To review the problem, the instructions are ambiguous, and give two
> |possible sets of element lengths. I corresponded with Titanex several
> |times, and they told me which was the correct set of lengths, and
that
> |is what I used. It now appears that their advice was wrong, perhaps
due
> |to a language problem.
> |
> |The problem is related to the unusual twin side-by-side boom design.
It
> |is not at all obvious where to start measuring the element lengths at
> |the center. The booms are about 3 inches apart. Half of the elements
> |start on one of the booms and extend outward. The other half of the
> |elements start out on one boom, and pass over the top of the other
boom
> |and then stick out the other side. Thus the ambiguity of whether you
> |measure from halfway between the booms, or from the boom where the
> |element is fastened, or from the other boom where it crosses over.
> |
> | Bob W8ERD
>
> Forgive me but I thought that one reason for using LPDs was the
> continous frequency coverage within the design range. How come the
> element lengths are so picky?
>
> And I'm really curious about how their boom design increases gain.

>

2401. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 14:03:13 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v3l0jjnqr12ne6@corp.supernews.com>
Source record: 125690

Experiment.
You will finally settle on a large, resonant, center loaded antenna without a tuner but with matched impedances (I use a toroid)..
You will also drill holes in your car. ;^)
H.
NQ5H

<paulfriedman@attbi.com> wrote in message
news:Btn_9.96208$_s4.42452@rwcrnsc54...
> OK, sir. Help me out here. I get a meter and find out the setup ain't
> filling the either with strong RF. Now that I know that, what can I do about
> it?
>
> Paul
>
>
> "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> news:v3ju90ssm2v49e@corp.supernews.com...
> > Most useful piece of test equipment: field strength meter.
> > I find it amazing how so many people ignore it in favor of their
> fantasies.
> >
> >
>
>

2402. WTB:MIDLAND RADIOS

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 14:32:09 UTC
From: n2ion@aol.com
Message-ID: <20030131093209.23250.00000073@mb-bd.aol.com>
Source record: 125691

I'M LOOKING TO BUY A FEW MIDLAND RADIOS
MODEL# 70-565B, OR 70-530A, OR 70-526A&B
THE RADIOS MUST BE CAPABLE OF GOING DOWN TO THE 430 MHz PORTION OF THE BAND.
MUST HAVE MICROPHONE AND MOUNTING BRACKETS.

IF YOU HAVE ANY OF THESE RIGS, EMAIL ME WITH THE CORRESPONDING DETAILS.

THANKS IN ADVANCE

2403. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 14:35:07 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <680l3vsobo12afnd92flpqdfilfg6ehi4b@4ax.com>
Source record: 125693

On 31 Jan 2003 04:39:29 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

|Interesting how discussions twist and threads wonder around.

Welcome to usenet <g>

|In AC6LU example in Multinec I see that resonant frequency (dip in SWR curve)
|with hairpin match dropped, indicating shift in resonant frequency = change in
|electrical length?

I guess there are a lot of ways to look at this, but remember that an
additional reactance (the stub) has been added. The point of lowest
SWR no longer necessarily indictes the "resonant frequency" of the
element.

Furthermore, the stub is not a lumped inductance but a transmission
line that has its own frequency sensitive characteristics.

2404. Re: question on MFJ 931 artificial ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 14:37:22 UTC
From: Piotr Balcerzak <bpiotrek@yahoo.com>
Message-ID: <%Pv_9.249729$C8.854372@nnrp1.uunet.ca>
Source record: 125692
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.shortwave

"Dimitris Mylonopoulos" <mylond@otenet.gr> wrote in message
news:b1dose$8hn$1@usenet.otenet.gr...
> I 've recently bought a used MFJ931 artificial ground and I wand to use it
> with a receiver.
> what's the proper set up for maximun performance, if any?
> dimitris
>

I think you will have to tune the thing every time you
change the band. It may not be very convenient to use
if you like jumping from one frequency to another on
different bands.

Such artificial 'grounds' work by cancelling (or rather:
compansating) inductive or capacitive reactances of
available grounds (like water pipes, etc.).

I'm not sure it will make a big difference for _receiving_
signals, though.

73, Piotr

2405. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 14:43:02 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <8p2l3vkbmcoulrjbr0qjpnig2kqbsd1mjk@4ax.com>
Source record: 125694

On Fri, 31 Jan 2003 08:58:20 -0500, "w3frg" <w3frg@comcast.net> wrote:

|A good dissertation on the LPDA, whether it be planar, pyramidal,
|coplanar, etc., can be found at the following web page for those
|unfamiliar with the intimate LP design and the possible results
|obtainable.
|http://www.conformity.com/0005emc.html
|Enjoy reading.

Seen that before.

But when they say, "Only recently was it realized that the log
periodic was one of a class of antennas known as fractal antennas
which are now at the cutting edge of antenna development.", one takes
pause <g>.

2406. Weight of F12 C3S?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 15:33:49 UTC
From: Richard <richard.uk@talk21.com>
Message-ID: <b1e50a$2jp$1@newsg4.svr.pol.co.uk>
Source record: 125695

Hi

Does anyone know the weight of the Force 12 C3S beam, I have looked on the spec sheet and can't see anything.

TIA

Richard

2407. Re: Weight of F12 C3S?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 15:43:36 UTC
From: paulfriedman@attbi.com
Message-ID: <IQw_9.103551$VU6.54701@rwcrnsc52.ops.asp.att.net>
Source record: 125696

26 lbs per their website

Paul

"Richard" <richard.uk@talk21.com> wrote in message
news:b1e50a$2jp$1@newsg4.svr.pol.co.uk...
> Hi
>
> Does anyone know the weight of the Force 12 C3S beam, I have looked on the
> spec sheet and can't see anything.
>
> TIA
>
> Richard
>
>
>

2408. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 15:44:22 UTC
From: k3bu@aol.com
Message-ID: <20030131104422.08953.00000001@mb-cg.aol.com>
Source record: 125697

Roy W7EL wrote:
>
>"Electrical length" is used with transmission lines to describe the
>effect of different propagation velocities. Transmission lines of the
>same electrical length will have the same current distribution, and
>changing the electrical length has exactly the same effect as changing
>the physical length. So an antenna effect more (but not entirely)
>analagous to the transmission line usage is the effect of top loading,
>where you actually change the current distribution and therefore make
>the antenna behave like a longer radiator. The radiation resistance also
>increases, just like it would if you made the antenna physically longer.
>So some people tend to regard this as changing the "electrical length".
>Base loading, by contrast, doesn't change the antenna at all. It doesn't
>change the current distribution, radiation pattern, effective length,
>gain, or anything else. All it does is add reactance to the feedpoint
>impedance.
>
>You're certainly free to use whatever terms you like in any way you
>like. But it would be a lot less ambiguous if you just said that by
>adding a base inductor you were changing the feedpoint reactance. That
>statement is correct and not subject to misinterpretation. If your
>objective is to communicate, the listener is a lot more likely to
>understand what you mean if you use this terminology to describe the
>effect of base loading, rather than saying you've made the antenna
>"electrically longer".
>

Thanks Roy, looks like we are getting closer :-)

But... I am kind of surprised (or confused) by what you are saying, sounds to me like trying to define what IS is.
We might be nit picking or perhaps looking at the problem through different glasses -. I have a problem with flat statement that "electrical length of antenna doesn't change" by loading.
I understand situation with coax and electrical vs. physical length, but I fail to see the difference if the same thing is applied to the antenna radiator.
Bill Orr in his Radio Handbook, 20th edition, page 24.8 explains doublet (half wave dipole), resonant frequency, electrical length, physical length and their relations. So neglecting matching, feeding, patterns, etc. if we want to maintain the resonant frequency of a dipole, and we change the thickness of the conductor or insert capacitance or inductance in the wire, we change the resonant frequency, which I still believe changes the electrical length and if we want to maintain resonance on design frequency we have to compensate by changing physical length.

"All it does is add reactance to the feedpoint impedance." - but that also changes the resonant frequency of the radiator, therefore it's electrical length. So seems to me it is not "all". Yes, it may not be significant in radiation properties of the antenna, but if the resonant frequency is important to me, I better know about it and compensate for it.

The electrical length of antenna element is important especially in parasitic arrays. We can change it by changing the thickness of conductor, using insulated wire, proximity of ground or objects or inserting reactances (hairpin, capacitance, inductance, top hat, fractal kinks). I am pleased that at least "some" people see it that way, but what is the problem with the rest of them? :-)

Another statement that "base loading doesn't change the antenna at all," seems to me a bit questionable. If inserting coil in the base of vertical changes the resonant frequency down, then it makes it electrically longer and that is the CHANGE. Or are we into "fuzzy logics" or making Johnny feel good - "it's close enough"? I know that when I insert few turns into the base of my 20m mobile whip, it shifts the resonant frequency below the band edge. It is perhaps "close enough" for Cecil and his doublet and open wire feedline/matching, but for parasitic array design it matters if there is a change in electrical length in a piece of wire.

For one, I am eternally grateful for antenna modeling software, because allows me to find the resonant frequencies of parasitic elements out of the array, build them, check the resonant frequency out of array, trim them (tune their electrical length) if needed and be able to replicate or scale the design as close as possible. This is helpful in situations when (my) modeling software cannot accommodate precisely all variables (ignoring Q and space impedance :-).

I guess my "problem" might be that I learned from Bill Orr that resonant frequency is tied to the electrical length of the adiator.

Yuri, K3BU

2409. Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 15:56:23 UTC
From: Bart Rowlett <bart@wb6hqk.ampr.org>
Message-ID: <3E3A9CA7.205AF0C8@wb6hqk.ampr.org>
Source record: 125698

Disregard my posts 3E39F8EE.1C21C5FE@raytheon.com and
<3E39F918.AB8EAE2D@raytheon.com>, they were posted inadvertently and
contain significant errors.

OC_CAM's Razor wrote:

> Richard Clark wrote:
> > Another observation from Feynman's "Lectures on Physics,":
> > Chapter 4, Conservation of Energy
> > "Conservation of energy can be understood only if
> > we have the formula for all of its forms."
> > This is found in his discussion of Potential Energy which is followed
> > by his discussion of Kinetic Energy. The conservation of energy is
> > incumbent upon having BOTH kinds known and directly expressed.
>
> We know what kind of energy exists in a transmission line, Richard. Why
> do you need this diversion away from the topic at hand which is RF in
> the form of dynamic joules/sec?

Perhaps it's worth taking a look at how energy is accounted for in a
transmission line operating in the TEM mode.

Assuming MKS units, and for simplicity, a cascaded transmission line
system
with characteristics which do not change with time:

dE(x,t)/dx = 1/2 * [C(x) * V(x,t)^2 + L(x) * I(x,t)^2]

where:

dE(x,t)/dx is the stored energy density in Joules/meter at position x,
and
time t

C(x) is the capacitance per unit length of transmission line in
Farads/meter at point x

L(x) is the inductance per unit length of transmission line in
Henries/meter at point x

V(x,t) is the voltage at position x, and time t. This is the actual
voltage present between conductors and represents the amount of energy
which would be gained (or lost) by a unit charge being moved from one
conductor to the other.

I(x,t) is the current at position x, and time t. This is the actual
current flow, which is the rate of charge movement along the conductors.

Note that the energy density is _not_ linearly proportional to either the
voltage or current, and is insensitive to the sign of the polarity or
direction of current flow.

The instantaneous power at point x and time t is expressed: P(x,t) =
V(x,t) * I(x,t).

Suppose we exploit superposition and decompose the voltage wave into two
constituitants, V1(x,t) and V2(x,t) such that V1(x,t) + V2(x,t) =
V(x,t). Doing the same for the current, and with the understanding that
both voltages and currents are a function of x and t:

V = V1 + V2
I = I1 + I2

P = V * I = (V1 + V2) * (I1 + I2) = V1*I1 + V1*I2 + V2*I1 + V2*I2

A little shuffling gives:

P = V1*I1 + V2*I2 + [V1*I2 + V2*I1]

The first two terms represent the fictitious power associated with the
two component waves V1,I1 and V2,I2.

The second two terms, the, represent the degree of coherence between
V1,I1 and V2,I2. The two waves are said to be orthogonal if the
integral of the second terms over some arbitrarily specified interval
equals zero.

Clearly the power is equal to the sum of the fictitious component powers
only in the special case where the two waves are orthogonal, or
'relatively coherent'. Attempting to apply the principal of energy
conservation is tricky because the second two terms must be properly
taken into account. Often the second terms cannot be completely
evaluated until _after_ the system has already been solved, though
careful measurement of the standing wave pattern may provide the
necessary information in some cases.

The law of conservation of energy states that the total power entering
(leaving) a closed system is equal to the rate of change of energy
stored
in the system plus the rate of creation (dissipation) of power internal
to
the system. For the idealized case of lossless TEM transmission lines,
the
law can be simplified as follows:

Given two points, x1 and x2 arbitrarily located anywhere along the
transmission line, including the ends:

[V(x1,t) * I(x1,t)] + [V(x2,t) * I(x2,t)] =
d/dt [integral from x1 to x2 of [1/2 * (C(x) * V(x,t)^2 + L(x) *
I(x,t)^2)] dx]
for all t.

A variety of methods are available for determining the voltage, V(x,t), and
current, I(x,t) consistent with the system parameters. The most common
method is to decompose the voltage and current into one or more 'forward'
and 'reverse' traveling waves, all of which are solutions to the wave
equation for the specified transmission line characteristics. Suitable
values of voltage and current are determined to simultaneously satisfy all
of the imposed boundary conditions. The actual voltage and currents are
then calculated from the linear superposition of the arbitrarily chosen
components. Once the voltages and currents are known, it is easy to show
verify the law of conservation of energy is satisfied using the above
formulation.

Another popular approach is to assume the voltage and currents can be
represented by a linear combination of spatially stationary sinusoidal
functions. These sinusoidal basis functions are usually chosen to be
harmonically related to the lowest frequency where the system could be
resonant, depending on the boundary conditions. This is called the normal
mode decomposition and sometimes offers useful physical intuition not
readily available from the traveling wave decomposition. Because all of
the normal modes are orthogonal, the total energy in the system
is the sum of the energies contained in each individual mode. This is
particularly
useful when keeping track of the number of photons in the respective
modes of a
laser resonator.

Both approaches result in the system being 'solved' for any realizable
input and initial state. Each suggests a different physical
interpretation, but they are both equally 'real', even though they appear
radically different. Methods exist (fourier transform) to convert from one
formulation to another when needed. Typically the traveling wave approach
is the most convenient for solving transmission line problems, thanks to
the ability to trivially calculate the reflection coefficient. The normal
mode approach is commonly used when viewing the system in terms of it's
energy storage characteristics, or as a resonator.

bart
wb6hqk

2410. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 16:00:47 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <j17l3vkkd17ajq31s279ec54cljqu71n5n@4ax.com>
Source record: 125699

On Fri, 31 Jan 2003 06:22:35 GMT, <paulfriedman@attbi.com> sent into
the ether:

>Haven't decided on the rig yet. The antenna seems more important to me.
>
>Thanks

>>
>> On Fri, 31 Jan 2003 02:40:02 GMT, <paulfriedman@attbi.com> wrote:
>>
>> >Semi-brand new ham here (licensed in 10/01). I am interested in setting
>up
>> >an HF mobile station. The vehicle is far from ideal, but it is what I
>have.
>> ><grin>
>> >
>> >Vehicle: Saab sedan with sunroof
>> >
>> >Interests: mostly 40, 20 and 17 meters. Obviously, more bands would be
>> >nice, but that's where I usually hang out. Bandwidth is an issue --
>> >particularly on 20m where I operate from 14.190 all the way up.
>> >
>> >Location: cold, snowy Minnesota. I do a far amount of road tripping and
>> >would want to operate while driving.
>> >
>> >I will be running 100w -- no plans or desire at this point to run power
>> >mobile.
>> >
>> >So, the questions are: what type of antenna and where to mount it?
>> >
>> >Easiest mount, of course, would be to install a trailer hitch and mount
>> >directly to that. From what I've read, that seems to be poor.
>> >
>> >Thanks in advance. By the way, I've read what I could find -- including
>most
>> >of ARRL's Antenna Compendiums, but I would greatly appreciate your
>advice.
>> >
>> >73
>> >
>> >Paul ab0si
>> >
>>
>
Hi Paul,

If you are going with the Hamsticks and a solid mount, use a spring with it. They stick up farther than you are used to and you will probably hit a few things. I use Hamsticks on a large 3 mag mount on top of my Cherokee and have knocked it off a few times. They work good for me on the 10/15/20/40 bands with a 706MKIIG. I am going to pick up a screwdriver eventually. If you are going to go with a screwdriver, research the antenna groups for controller ideas. The store bought ones are overpriced all to hell. There are several guys with web page details for screwdriver controllers that cost under $25.00.

Good luck
Dan
Need a construction safety person?
Direct hire or contract.
Safe Today - Here Tomorrow
Don't Just Say It - Live It
Remove left x for direct reply

2411. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 16:04:24 UTC
From: k3bu@aol.com
Message-ID: <20030131110424.08953.00000002@mb-cg.aol.com>
Source record: 125700

Wes N7WS writes:
>
>I guess there are a lot of ways to look at this, but remember that an
>additional reactance (the stub) has been added. The point of lowest
>SWR no longer necessarily indictes the "resonant frequency" of the
>element.
>

True, there are other factors too, but I believe some of the electrical
"lengthening" is reflected in it.

>Furthermore, the stub is not a lumped inductance but a transmission
>line that has its own frequency sensitive characteristics.
>

Yea, but doesn't shorted "hairpin part" of the stub look to the radiator like
an inductance of the hairpin, and therefore lengthens the electrical length of
the radiator (as in Beta match)?

I know when I was P40A and tried to use sloping dipole from the hotel roof, had
no match boxes and my IC706 wasn't happy with low impedance, I simply made the
Beta match or hairpin out of the wire at the feedpoint and in order to maintain
the resonance within the band, I had to shorten the wires of the dipole. So to
me, it changed the electrical length of the radiator (it "loaded it") and it
acted like I inserted whatever inductance into the radiator. If you use Beta
match, you have to compensate for it by shortening the element (like in 402BA)
so the effect is we are "loading" or lengthening the element besides matching
it to coax.

Is this something new that "some" people don't know?

Yuri, K3BU

2412. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 16:27:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3AA3F8.7060806@ieee.org>
Source record: 125701

Bart Rowlett wrote:
> The normal
> mode approach is commonly used when viewing the system in terms of it's
> energy storage characteristics, or as a resonator.

That's true but I think I can prove that the wave reflection
model is perfectly consistent from an energy standpoint. My
EE prof did that in the 50's but apparently forgot to
write it down for posterity.

One can take a perfect 100% efficient transformer and feed
it with 75W and 8.33W signals whose voltage/current ratios
are 50 ohms. Assuming the output of the transformer is
driving 50 ohms, the maximum output we can achieve is
83.33W onto 50 ohms. So how can someone take those same
two (and only two) signals and, inside a transmission line,
somehow combine them (and only them) to get 133.33W out?
That's 160% efficiency. Why don't the power companies use
that technique? [rhetorical]

The Melles-Griot web page indicates that it is acceptable,
using the wave reflection model, for two waves traveling in
the same direction to destructively interfere such that their
combined energy components reverse direction and appear as
enhanced intensity (constructive interference) in the transmitted
beam. Therefore, in addition to opens, shorts, and pure reactances,
simple wave cancellation can cause 100% reflection (assuming one
is using the wave reflection model).
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2413. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 16:34:46 UTC
From: Bart Rowlett <bart@wb6hqk.ampr.org>
Message-ID: <3E3AA5A6.2D859B8E@wb6hqk.ampr.org>
Source record: 125702

Please disregard post <3E39F8EE.1C21C5FE@raytheon.com> and
<3E39F918.AB8EAE2D@raytheon.com>.

They are identical and contain significant errors. I inadvertently
posted them to usenet while intending only to forward to my computer at
home for further editing.

bart
wb6hqk

2414. 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 16:37:56 UTC
From: Toni - ec3dds <ec3dds@hotmail.com>
Message-ID: <h99l3v8kb3co0rsjo0obmov5jbjvl54m89@4ax.com>
Source record: 125703

Hi all,

Would it be a crazy idea to build an HF discone for the higher bands (something like 10m~20m)? I've never read on the gain of a discone, but I imagine that it must be a little less than an equivalent groundplane. OTOH it wouldn't be much bigger than an equivalent trapped vertical.

Opinions? I know this is probably not a good idea for a beginner but I would really like to build my own antenna and I think a trapped vertical is too much for me (I don't have space for normal dipoles).

Could it be better than a fanned inverted-v? It would probably be the same size except for the hat.

Thanks

Toni - ec3dds

2415. Re: Finally... a fractal application that makes sense...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 16:59:50 UTC
From: k3bu@aol.com
Message-ID: <20030131115950.08953.00000003@mb-cg.aol.com>
Source record: 125704

Nice!
and it resonates from DC to light, just hook the coax to it.

I would hate to repair brocken frac inside of it :-)

Lets see how long will it take before they are sued by you know who :-)

Yuri

2416. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 17:11:31 UTC
From: larryc@northwest.com
Message-ID: <3E3AAE43.754E8D8F@northwest.com>
Source record: 125705

it's not such a crazy idea, Toni. Tho, the vertical height required for a 20m discone might be more than you think. Also, the real estate required for the discone is much more. Picture a nose cone, with a base diameter as wide as the height of the discone. I have some plans for a 20M (and up) discone, out of an older ham radio book. I can scan the diagram and email it to you.

larryc, n3ccw
==========

Toni - ec3dds wrote:

> Hi all,
>
> Would it be a crazy idea to build an HF discone for the higher bands
> (something like 10m~20m)? I've never read on the gain of a discone,
> but I imagine that it must be a little less than an equivalent
> groundplane. OTOH it wouldn't be much bigger than an equivalent
> trapped vertical.
>
> Opinions? I know this is probably not a good idea for a beginner but I
> would really like to build my own antenna and I think a trapped
> vertical is too much for me (I don't have space for normal dipoles).
>
> Could it be better than a fanned inverted-v? It would probably be the
> same size except for the hat.
>
> Thanks
>
> Toni - ec3dds

2417. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 17:17:14 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3AAF9A.6010407@ieee.org>
Source record: 125706

Bart Rowlett wrote:
> Both approaches result in the system being 'solved' for any realizable
> input and initial state. Each suggests a different physical
> interpretation, but they are both equally 'real', even though they
> appear radically different.

That's true but that's not what my part of the discussion is all about. Let's say two people choose identical models. Shouldn't they get the same results? I am going to follow the QEX article model as closely as I can and then ask a couple of questions. Please tell me where I go wrong. The following assumes the wave reflection model and the superposition principle.

Here's the steady-state configuration:

100W---50 ohm feedline--x--150 ohm feedline---50 ohm load
Pfwd1=100W, Pref1=zero Pfwd2=133.33W, Pref2=33.33W
|Rho| = 0.5, Rho^2 = 0.25, (1-Rho^2) = 0.75

Note that no energy is flowing toward the source in the 50 ohm feedline, i.e. all energy flowing into the match point flows toward the load in the 150 ohm feedline. There is 100W + 33.33W flowing into the match point and 133.33W flowing out of the match point.

Using the superposition theorem:

P1 = Pfwd1(1-Rho^2) = 100W*0.75 = 75W
P2 = Pref2(Rho^2) = 33.33W*0.25 = 8.33W
P3 = Pfwd1(Rho^2) = 100W*0.25 = 25W
P4 = Pref2(1-Rho^2) = 33.33W*0.75 = 25W

These are all steady-state values predicted by the superposition theorem.

P1+P2+P3+P4 = Pfwd1+Pref2 = 133.33W = power flowing into the match point.

We know that power flowing into the match point equals power flowing out of the match point so Pfwd2 = P1+P2+P3+P4 = 133.33W

The QEX article says Pfwd2 = P1+P2+2*sqrt(P1)sqrt(P2) and that is mathematically a true statement because 2*sqrt(P1)*sqrt(P2) = P3+P4 I prove that on my web page.

But the QEX article says that only P1 + P2 (75W+8.33W) are being combined to get Pfwd2. What happened to P3+P4? (25W+25W)? We know all power winds up flowing toward the load so P3+P4 winds up flowing toward the load. Why does the QEX article choose to

ignore the destructive interference, P3+P4, and apparently attempt
to disguise P3+P4 as components of P1+P2 by inserting the
2*sqrt(P1)*sqrt(P2) fudge factor? Why not just say
Pfwd2 = P1+P2+P3+P4 = Pfwd1+Pref2?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2418. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 17:49:45 UTC
From: Bart Rowlett <bart@wb6hqk.ampr.org>
Message-ID: <3E3AB739.4C352CCD@wb6hqk.ampr.org>
Source record: 125708

OC_CAM's Razor wrote:
>
> Bart Rowlett wrote:
> > The normal
> > mode approach is commonly used when viewing the system in terms of it's
> > energy storage characteristics, or as a resonator.
>
> That's true but I think I can prove that the wave reflection
> model is perfectly consistent from an energy standpoint.

Most anyone who has spent any time studying transmission line problems has taken the time to develop such a proof to satisfy their own curiosity. At a minimum, they have verified that energy is conserved for one or more particular cases. It's important part of establishing a sound foundation of the applicable physics, and I encourage you to do so yourself. Plenty of competent help is available on this newsgroup to help you work though any rough spots you encounter.

> My
> EE prof did that in the 50's but apparently forgot to
> write it down for posterity.

It's really not a new concept.

> One can take a perfect 100% efficient transformer and feed
> it with 75W and 8.33W signals whose voltage/current ratios
> are 50 ohms.

> Assuming the output of the transformer is
> driving 50 ohms, the maximum output we can achieve is
> 83.33W onto 50 ohms.

Of course, but why restrict the scenario to 50 ohms? The average output will equal the average input power no matter what the impedance levels might be.

> So how can someone take those same
> two (and only two) signals and, inside a transmission line,
> somehow combine them (and only them) to get 133.33W out?

Who claims they can do that? In spite of what you claim, Steve Best never claimed it's possible for a transformer (or transmission line system for that matter) to deliver more average power than was input. Anyone with any technical competence at all would immediately know such a scenario is impossible. It may be useful to bear in mind that the transmission lines are capable of storing energy in much more complex ways than the usual idealized transformer. In fact, the simplest model

of a transformer completely neglects energy storage, in which case the instantaneous input power is equal to the instantaneous output power.

> That's 160% efficiency. Why don't the power companies use
> that technique? [rhetorical]

Why don't you publicly demonstrate Steve's claim is inconsistent with the principal of energy conservation? Begin with a rigorous statement of the energy conservation principal utilizing an appropriate mathematical formulation, and then show Steve's analysis is inconsistent? [rhetorical]

bart
wb6hqk

2419. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 17:49:58 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <sv8l3vo31ugs2s8u74onqm90pa9109rdie@4ax.com>
Source record: 125709

On 31 Jan 2003 16:04:24 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

|Wes N7WS writes:
|>
|>I guess there are a lot of ways to look at this, but remember that an
|>additional reactance (the stub) has been added. The point of lowest
|>SWR no longer necessarily indictes the "resonant frequency" of the
|>element.
|>
|
|True, there are other factors too, but I believe some of the electrical
|"lengthening" is reflected in it.
|
|>Furthermore, the stub is not a lumped inductance but a transmission
|>line that has its own frequency sensitive characteristics.
|>
|
|Yea, but doesn't shorted "hairpin part" of the stub look to the radiator like
|an inductance of the hairpin, and therefore lengthens the electrical length of
|the radiator (as in Beta match)?

You're missing my point. Yes, the stub looks link an inductor;
however, it is a frequency sensitive inductor. An inductor made from a
coil of wire that is small in terms of wavelength has a fixed value of
inductance. If it is 1 microhenry at 1 MHz, it is still 1 microhenry
at 10 MHz.

A shorted stub (< 90 deg) is a distributed inductor; it is not small
in terms of wavelength. As the frequency changes, so does the
inductive reactance. The reactance of a shorted stub is found from:

Xl = Zo * tan(L)

where L is the length in electrical degrees

Clearly, with a fixed physical length, as the frequency changes the
electrical length changes, hence the reactance changes.

|
|I know when I was P40A and tried to use sloping dipole from the hotel roof, had
|no match boxes and my IC706 wasn't happy with low impedance, I simply made the
|Beta match or hairpin out of the wire at the feedpoint and in order to maintain
|the resonance within the band, I had to shorten the wires of the dipole. So to
|me, it changed the electrical length of the radiator (it "loaded it") and it
|acted like I inserted whatever inductance into the radiator. If you use Beta
|match, you have to compensate for it by shortening the element (like in 402BA)

|so the effect is we are "loading" or lengthening the element besides matching
|it to coax.
|
|Is this something new that "some" people don't know?

Let me try one more time to convince you that the matching function is not "loading" the antenna.

Let's go back to my three-element Yagi example and assume for the moment that I have adjusted the DE length make the feedpoint impedance 25 +j0 at Fo.

I split the DE in the middle and connect a zero-length perfect balun and a half-wavelength of lossless transmission line to the element. At the other end of the line I add a weatherproof box that has two connectors. One connects to the line going to the antenna, the other to a 50-ohm line going to the transmitter.

In the box I add two components. A capacitor with reactance -j25 is connected between the two connectors. An inductor with reactance +j50 is shunted across the connector that connects to the transmitter.

You should agree that at Fo, this is nothing more than an impedance repeating line and an L transmission line-matching network. None of this is affecting the resonant frequency of the antenna. A measurement of impedance at the input connector yields 50 +j0.

Now if I remove the half-wavelength line and put the box at the feedpoint, *nothing* changes. The components in the box are still just performing an impedance matching function. The DE is still naturally resonant at Fo and radiates accordingly. A measurement of impedance at the input connector yields 50 +j0.

Now I say to myself, "Self, you could get rid of that expensive capacitor by shortening the DE to present the same capacitive reactance." So by analysis or cut-and-try, I shorten the element to make the impedance 25 -j25. (I know R will change too but bear with me) The "natural" resonant frequency has increased by some factor (k) and the radiation properties have changed slightly.

I install a jumper wire in the box to replace the capacitor and again, at a Fo, *nothing* is different. A measurement of impedance at the input connector yields 50 +j0.

Now I say to myself, "You could get rid of that box and inductor and replace it with a stub that doesn't need waterproofing." So I do that too and *nothing* changes. If I'm clever enough (ahem) I can run the transmission line through one of the stub tubes and perform the balun function without adding any components. A measurement of impedance at the feedpoint at Fo yields 50 +j0. The "natural" resonant frequency is still k * Fo and the radiation properties remain the same.

So three components and a box have been eliminated and there is no measurable difference. The feedpoint is matched at Fo and the element is resonant at k * Fo. No loading has taken place.

73,

Wes N7WS

2420. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 18:32:42 UTC
From: Kona <konastan@pinoymail.com>
Message-ID: <ejz_9.6482$ce4.1289314@twister.socal.rr.com>
Source record: 125710

I would like to see what this would look like also

larryc@northwest.com wrote:

> it's not such a crazy idea, Toni. Tho, the vertical height required for a
> 20m discone might be more than you think. Also, the real estate required
> for the discone is much more. Picture a nose cone, with a base diameter as
> wide as the height of the discone. I have some plans for a 20M (and up)
> discone, out of an older ham radio book. I can scan the diagram and email
> it to you.
>
> larryc, n3ccw
> ============
>
> Toni - ec3dds wrote:
>
>> Hi all,
>>
>> Would it be a crazy idea to build an HF discone for the higher bands
>> (something like 10m~20m)? I've never read on the gain of a discone,
>> but I imagine that it must be a little less than an equivalent
>> groundplane. OTOH it wouldn't be much bigger than an equivalent
>> trapped vertical.
>>
>> Opinions? I know this is probably not a good idea for a beginner but I
>> would really like to build my own antenna and I think a trapped
>> vertical is too much for me (I don't have space for normal dipoles).
>>
>> Could it be better than a fanned inverted-v? It would probably be the
>> same size except for the hat.
>>
>> Thanks
>>
>> Toni - ec3dds

2421. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 18:33:17 UTC
From: Bart Rowlett <bart@wb6hqk.ampr.org>
Message-ID: <3E3AC16D.41A7C1FF@wb6hqk.ampr.org>
Source record: 125711

OC_CAM's Razor wrote:
>
> Bart Rowlett wrote:
> > Both approaches result in the system being 'solved' for any realizable
> > input and initial state. Each suggests a different physical
> > interpretation, but they are both equally 'real', even though they
> > appear radically different.
>
> That's true but that's not what my part of the discussion is all
> about.

Please note I introduced the post as a new topic, not necessarily
related to any particular thread.

I was inspired by the lack of rigor and cavalier brandishing of
fundamental principals, such as the law of energy conservation. As far
as I am concerned, this amounts to the technical equivalent of 'name
dropping' and is just puffery. Your claims that Steve's analysis
violates the principal of energy conservation is baseless at this point
since you have not applied the fundamental law in a technically credible
way.

> Let's say two people choose identical models. Shouldn't
> they get the same results?

Assuming they both truly adhere to the same rules and semantics. The
beauty of the physical world is that it isn't even necessary they use
the same mathematical model as long as the underlying math and physical
assumptions are equivalent.

> I am going to follow the QEX article
> model as closely as I can and then ask a couple of questions.
> Please tell me where I go wrong. The following assumes the wave
> reflection model and the superposition principle.
>
> Here's the steady-state configuration:
>
> 100W---50 ohm feedline--x--150 ohm feedline---50 ohm load
> Pfwd1=100W, Pref1=zero Pfwd2=133.33W, Pref2=33.33W
> |Rho| = 0.5, Rho^2 = 0.25, (1-Rho^2) = 0.75

> Note that no energy is flowing toward the source in the 50
> ohm feedline, i.e. all energy flowing into the match point
> flows toward the load in the 150 ohm feedline.

What precisely do you mean? The average power everywhere in the system
is 100 watts toward the load. Am I missing something important?

> There is
> 100W + 33.33W flowing into the match point and 133.33W
> flowing out of the match point.

Really? Anywhere I place a voltmeter and ammeter, I find the time
averaged power to be 100 watts. How would I go about making a
measurement of 133 watts, and what _precisely_ would it mean?

> Using the superposition theorem:
>
> P1 = Pfwd1(1-Rho^2) = 100W*0.75 = 75W
> P2 = Pref2(Rho^2) = 33.33W*0.25 = 8.33W
> P3 = Pfwd1(Rho^2) = 100W*0.25 = 25W
> P4 = Pref2(1-Rho^2) = 33.33W*0.75 = 25W

Looks like you are saying 'component' powers you defined earlier are
scaled by one minus the square of the voltage relection coefficient. I
don't see how this is related to the usual rules of superposition.
Please state what you are referring to as 'the superposition theorem' to
help resolve any semantic difficulties we may be having.

> These are all steady-state values predicted by the superposition
> theorem.

> P1+P2+P3+P4 = Pfwd1+Pref2 = 133.33W = power flowing into the match point.

On what basis do you claim the sum of the powers defined above equals
the power flowing into the match point? I can measure the actual power
at the match point but the others are a little more obscure.

> We know that power flowing into the match point equals power flowing
> out of the match point so Pfwd2 = P1+P2+P3+P4 = 133.33W

Well it's true that power flowing into the match point equals power
flowing out of the match point but why?

I'll be happy to continue this discussion as long as it remains
educational, but only one or two steps at a time. I simply don't have
the time, energy, or disposition to deal with the constant introduction
of both technical and logical fallacies which have characterized this
and other similar threads.

bart
wb6hqk

2422. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 18:43:57 UTC
From: sideband <KRNO8SPAMLR@cac.net>
Message-ID: <3E3AB646.2080901@cac.net>
Source record: 125707

http://www.qsl.net/kr8lr/TruckPics/

Maybe that solution isn't for you, but it'll at least give another
option... (Instead of going around the car, you could just go from
tail to nose about 4 feet away from the sheet metal...)

de KR8LR, Chris

paulfriedman@attbi.com wrote:
> Semi-brand new ham here (licensed in 10/01). I am interested in setting up
> an HF mobile station. The vehicle is far from ideal, but it is what I have.
> <grin>
>
> Vehicle: Saab sedan with sunroof
>
> Interests: mostly 40, 20 and 17 meters. Obviously, more bands would be
> nice, but that's where I usually hang out. Bandwidth is an issue --
> particularly on 20m where I operate from 14.190 all the way up.
>
> Location: cold, snowy Minnesota. I do a far amount of road tripping and
> would want to operate while driving.
>
> I will be running 100w -- no plans or desire at this point to run power
> mobile.
>
> So, the questions are: what type of antenna and where to mount it?
>
> Easiest mount, of course, would be to install a trailer hitch and mount
> directly to that. From what I've read, that seems to be poor.
>
> Thanks in advance. By the way, I've read what I could find -- including most
> of ARRL's Antenna Compendiums, but I would greatly appreciate your advice.
>
> 73
>
> Paul ab0si
>
>

2423. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:02:59 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3AC863.24B82CD3@cwis.net>
Source record: 125712

Mark,
And it seems to me that you definitely have made
a case for 'where' to put the coil in the body of
the antenna. It also seems to me that the fact that
the position of the coil doesn't make it an impedance
matching coil anymore, but a 'loading' coil, changing
the 'electrical' length of the antenna. If the 'physical'
length of the antenna isn't changed to change it's
electrical properties, then I would think that it would
be proper to say that it's 'electrical' length has changed
to have those properties that are desired. Yes, or no?
'Doc

2424. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:03:28 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <4Mz_9.516$6P2.73887@newsread1.prod.itd.earthlink.net>
Source record: 125714

> Walter,
>
> You have again misinterpreted how I apply superposition.
>
> > I don't have all the data being used in this thread, so please let me
> revert
> > to the numbers in Steve's network problem in his same article. The load
> > mismatch is 3:1 for a reflection coefficient 0.5. With 100 w delivered
by
> > the source the voltage entering the system is 70.71 v and the current is
> > 1.414 a.
> >
> > However, for 33.33 w on the 50-ohm line, the reflected voltage is 40.82
> > volts. Adding this to the source voltage 70.71 v, as Steve does, we get
> > 111.53 v. on a 50-ohm line. This voltage would bring the forward power
to
> > 248.8 w, an impossibility, because the forward current would have to be
> 2.23
> > a, while the true forward current is 1.63 a. This is what happens when
the
> > reflected voltage is incorrectly added to the source voltage, totally
> > invalidating the superposition of source and reflected voltages, because
> > there is only one source that can't deliver 2.23 a. Two separate sources
> are
> > required for superposition of voltages to be valid.
> >
> > On the other hand, superposing the reflected voltage 40.28 v on the true
> > forward voltage, 81.65 v, yields the maximum of the standing wave, and
> > subtracting the 40.28 v from the forward voltage yields the minimum of
the
> > standing wave. Check out my data and discover that Steve's claim that
> > superposition of source and reflected voltage to determine forward power
> is
> > invalid.
> >
> > Walt, W2DU
> >
>
> Walter, please read the QEX article again very carefully and correctly
> identify the two *forward* voltages that I superimpose. You criticize my
> use of superposition but you don't even correctly identify the two forward
> voltages that I superimpose. How can you validly criticize my work when
you
> don't even understand it???

Sorry, Steve, I misspoke myself when I referred above to your network example. What I mean't to say is an example where the load mismatch is 3:1 on a 50-ohm line matched at the input with 100 watts delivered to the line. In this corrected case the numbers I used above correctly illustrate the problem with your Eq 9, which is invalid for use with addition of reflected waves to source waves. However, your Eq 9 is valid and used universally for superposition of voltages delivered by two separate sources.

As I have told you repeatedly, the correct equation for handling reflected waves in conjunction with source waves is also in Johnson. He derives Eq 6.17 starting on Page 149, continues on P 150 to complete the derivation. The use of this equation conforms exactly with readings taken with in-line wattmeters such as the Bird, but your Eq 9 does not. Please try to understand the significance of Johnson's Eq 6.17.

Walt

2425. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:04:27 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <%Mz_9.14336$rq4.1045612@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125713

"Walter Maxwell" <w2du@iag.net> wrote in message
news:VBj_9.5578$wd2.440705@newsread2.prod.itd.earthlink.net...
>
> Steve, there's no other way to read Johnson except very carefully. You may
> also be reading him carefully, but you're not hearing what you're reading.
> Johnson's Eqs 423 and 424 yield total line voltage, the sum of the forward
> and reflected voltages at any point on the line. The total line voltage
> varies periodically and is known as the standing wave. The forward voltage
> is constant along a lossless line. The Johnson equations derive the
varying
> voltage, the standing wave--they do NOT derive the foward wave.

You just stated that the total voltage is the sum of the forward and
rearward voltage.

Do you think that Johnson's equations for total voltage somehow don't
include the terms for forward and rearward voltage?

Do you think that Johnson's equations for total voltage include the
individual terms for total forward and total rearward voltage?

I.e. Are Johnson's equations of the form Vtotal = Vforward + Vrearward?

They either include the terms for forward and rearward voltage or they
don't. I think they do.

> It is clearly evident that I totally agree with Johnson, but it is you who
> are totally misinterpreting his equations, as you have for the entire two
> years that I've been trying to convince you otherwise. So you're
right--it's
> pointless to continue further discussion until you interpret Johnson in
the
> manner he intended.
>
> Walt, W2DU
>
>

The total line voltage at any point on the line (E) is the sum of the
forward voltage (E+) and rearward voltage (E-) at that point. We agree on
that.

Now here's exactly what Johnson says about his 4.23 equation for total
voltage E:

"The result is again of the form E+ + E-, where E+ is the net incident
[forward] wave composed of the sum of all individual waves that travel

towards the load, and E- is the net reflected [rearward] wave composed of all the individual waves that travel towards the generator."

I interpret Johnson's equation 4.23 for total voltage as being the sum of the forward voltage and the rearward voltage.

I interpet Johnson's statement that E+, the net or total forward voltage is the sum of all the individual forward voltages as meaning that you can add the individual forward voltages to determine the total forward voltage, which is in fact voltage superposition, something you said could not be done.

How do you interpret Johnson's voltage equation in terms of forward and rearward voltage?

Steve VE9SRB

2426. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:09:39 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3AC9F3.9687F57C@cwis.net>
Source record: 125715

Toni,
Speaking only about the desire to build a discone
antenna, I don't think the idea is 'crazy' at all.
The discone may not perform as well as another type
of antenna(?), but it will perform. An alternative
is to learn more about making 'traps' so that you
would be able to build a trap vertical, if that's
what you want to do.
'Doc

2427. Re: mobile newbie question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:23:19 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3ACD27.A1804F9B@cwis.net>
Source record: 125716

Paul,
As with any antenna, a build up of snow, ice, or
salt isn't 'good' for it from either an electrical
view point or a physical one. The 'wider' the antenna
the more build up, so a screwdriver antenna would tend
to have a larger build up than a narrower one such as
a hamstick. The solution in either case is to remove
the build up. The salt would be more of a problem
than the snow/ice with a screwdriver antenna, I would
think, since it will eventually affect the operation
of the motor in a more harmful way. I would think
the solution would be to first keep the salt out of
the antenna by using a coil shield, then washing the
salt off of the antenna (just like you do your car).
Maintenance of a mobile antenna is required no matter
what kind you use, and is just a part of using a mobile
radio...
'Doc

2428. Re: VHF antenna for F/G RV?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:31:32 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3ACF14.307A67F1@cwis.net>
Source record: 125717

Larry,
Installing a groundplane for a 2 meter antenna doesn't
mean that you will have to drill any holes, especially if
you're dealing with a fibreglass roof. Simply lay down
the mesh or radials and cover them with a layer of new
fibreglass. A sheet of 'clothe' then the resin should do
it. It may take some imagination to make the actual mount
that the antenna will bolt to, but it shouldn't be ~that~
difficult. It's another alternative, anyway...
'Doc

2429. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:34:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3ACFE1.5030805@ieee.org>
Source record: 125619

Bart Rowlett wrote:
> I was inspired by the lack of rigor and cavalier brandishing of
> fundamental principals, such as the law of energy conservation. As far
> as I am concerned, this amounts to the technical equivalent of 'name
> dropping' and is just puffery. Your claims that Steve's analysis
> violates the principal of energy conservation is baseless at this point
> since you have not applied the fundamental law in a technically credible
> way.

I have used the models presented in Steve's QEX article. Is something
wrong with those models?

>>Note that no energy is flowing toward the source in the 50
>>ohm feedline, i.e. all energy flowing into the match point
>>flows toward the load in the 150 ohm feedline.
>
> What precisely do you mean? The average power everywhere in the system
> is 100 watts toward the load. Am I missing something important?

Apparently, you are missing the model presented in the QEX article
where there's 100W forward and zero W reflected on the 50 ohm
feedline. There's 133.33W forward and 33.33W reflected on the
150 ohm line, all according to the QEX article. The fact that
Vtot*Itot*cos(theta)=100W everywhere in the system is irrelevant
to the wave reflection model presented in the QEX article. I
don't recall that observation being mentioned anywhere in the
QEX article.

>>There is
>>100W + 33.33W flowing into the match point and 133.33W
>>flowing out of the match point.
>
> Really? Anywhere I place a voltmeter and ammeter, I find the time
> averaged power to be 100 watts. How would I go about making a
> measurement of 133 watts, and what _precisely_ would it mean?

A Bird wattmeter calibrated for 150 ohms would read 133.33W forward
power on the 150 ohm feedline. The QEX article asserts that there
is 133.33W of forward power on that line and 33.33W reflected by
the load which has a reflection coefficient of 0.5.

>>Using the superposition theorem:
>>
>>P1 = Pfwd1(1-Rho^2) = 100W*0.75 = 75W
>>P2 = Pref2(Rho^2) = 33.33W*0.25 = 8.33W
>>P3 = Pfwd1(Rho^2) = 100W*0.25 = 25W

>>P4 = Pref2(1-Rho^2) = 33.33W*0.75 = 25W
>
> Looks like you are saying 'component' powers you defined earlier are
> scaled by one minus the square of the voltage relection coefficient. I
> don't see how this is related to the usual rules of superposition.

This is all presented and explained in the QEX article. Have you read it?
I am merely adopting exactly the model presented in that article. After
calculating P1 and P2 above, Steve then calculates the associated V1 and
V2 and superposes them to obtain VFtotal while completely ignoring P3,
P4, V3, and V4.

> Please state what you are referring to as 'the superposition theorem' to
> help resolve any semantic difficulties we may be having.

It's explained in the QEX article. The two waves, Pfwd1 and Pref2, incident
upon the match point can be handled separately and the results superposed
to obtain the two waves, Pref1 and Pfwd2, flowing away from the match point.

>>P1+P2+P3+P4 = Pfwd1+Pref2 = 133.33W = power flowing into the match point.
>
> On what basis do you claim the sum of the powers defined above equals
> the power flowing into the match point? I can measure the actual power
> at the match point but the others are a little more obscure.

Don't you remember how you used back-to-back Bird wattmeters during the
75m mobile shootouts to obtain forward and reflected powers to and from
the mobile antennas? You subtracted the reflected power from the forward
power to get the power delivered to the mobile antenna.

Using four Bird wattmeters, two calibrated for 50 ohms and two calibrated
for 150 ohms, we can measure Pfwd1, Pref1, Pfwd2, and Pref2. Those are
the powers I started with in the example.

> Well it's true that power flowing into the match point equals power
> flowing out of the match point but why?

Conservation of energy principle? Steady-state average joules/sec over
one second equals joules?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2430. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:35:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3ljv8qs88e279@corp.supernews.com>
Source record: 125718

Are you saying that if voltage and current phasors (hence voltage and
current time waveforms) are in phase, then their product is DC?

Not hardly.

So let's make it simpler yet. What's the product of phasors _V_ and _I_
if they're in phase?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Reg Edwards wrote:
>
>> "Roy Lewallen" wrote -
>>
>>> Given voltage and current phasors _V_ = |V| /_ A1 and _I_ = |I| /_ A2
>>> ("/_" means "angle"), what is the value of _V_ * _I_? (Hint: It's not
>>> |V|*|I| /_ (A1 + A2).
>>
>>
>>> Anyone who thinks it is doesn't understand what
>>> phasors are.)
>>
>>
>> That's the stuff Roy. Don't stand any nonsense. Bang their heads
>> together.
>
>
> Of course Roy is right but there's an easier way. Most ham systems are
> matched, i.e. the reflected energy incident upon the source has been
> reduced to a minimum at a match point. At a perfectly matched point using
> the wave reflection model, the forward and reflected voltage and current
> phasors all lie on the same line, i.e. any phase angle is either zero or
> 180 degrees and all the phasors can be plotted on the 'X' axis. Under
> those conditions, even a DC analysis will work.

2431. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:45:55 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <TnA_9.24651$zF6.1777114@bgtnsc04-news.ops.worldnet.att.net>
Source record: 125620

"Walter Maxwell" <w2du@iag.net> wrote in message
news:4Mz_9.516$6P2.73887@newsread1.prod.itd.earthlink.net...
>
> As I have told you repeatedly, the correct equation for handling reflected
> waves in conjunction with source waves is also in Johnson. He derives Eq
> 6.17 starting on Page 149, continues on P 150 to complete the derivation.
> The use of this equation conforms exactly with readings taken with in-line
> wattmeters such as the Bird, but your Eq 9 does not. Please try to
> understand the significance of Johnson's Eq 6.17.
>
> Walt
>
>

I do understand equation 6.17.

It says the following: the net power delivered (PD) to the transmission line equals the forward power (PF) minus the reflected power (PR). A relationship valid only when Zo is a pure resistance.

Eq 6.17: PD = PF - PR

That's what it says. Nothing more, nothing less.

I presume that you define source power to be delivered power.

We've been through this before:

Now, you can mathematically rearrange 6.17 as follows:

PF = PD + PR

after which you interpet this mathematical rearrangement of 6.17 to mean that that the reflected power (PR) is totally re-reflected and adds to the delivered power (PD) resulting in the total forward power (PF).

Let's write 6.17 as

PR = PF - PD

How would you interpret that mathematical rearrangement of 6.17? Its no less mathematically valid than PF = PD + PR.

You are aware that the source power is not a forward traveling power. It is the net difference between the forward traveling power and the rearward traveling power. Its the end result of the reflection process. In a line with reflections and re-reflections, the source power changes as the system transitions from t = 0 to the t = steady state. It is not a constant value

until the steady state is reached.

Note as well that regardless of a match or a mismath on the line, PD always equals PF - PR. So, do you presume that a total re-reflection of power always occurs even without a match?

As for my eq (9), it is not an equation for PD, it is an equation for PF. It says: PF = |VF|^2/Zo, ie. the total forward power is equal to the magnitude of the total forward voltage squared divided by Zo. Funny but that exactly the same relationship that Johnson uses for forward power in his eq 6.17.

Your issue with my eq 9 is that it implies that the total forward voltage equals the sum of the individual forward voltages. We're right back to voltage superposition again, which Johnson uses to derive his eq 4.23.

I'll end this exchange now Walt.

Take care.

Steve

2432. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:49:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3lkqmpr9il704@corp.supernews.com>
Source record: 125621

I'll make it a word problem to eliminate the "strange ASCII stuff".

I have a voltage phasor I'll call VCAM. It has a magnitude V and a phase angle A1. And I have a current phasor I'll call ICAM, with a magnitude I and a phase angle A2. What is the product of VCAM and ICAM.

My textbooks all tell me that power [that is, P(t), not average power] is the product (not dot or cross, but simple product, since v(t) and i(t) aren't vectors) of v(t) and i(t). Richard has said, and you seem to have agreed, that this calculation can be done with phasors. So my question is, how? And, beginning with VCAM and ICAM, what's P(t) or the magnitude and angle of a power phasor PCAM representing P(t)? If you need to use a dot or cross product on the phasors to perform the simple multiplication of the time waveforms which VCAM and ICAM actually represent, well, then, that's fine, choose whatever operation you need to. It would be nice if you'd explain why you make the choice, but it's not really necessary.

Richard said the calculation could be done with a simple right triangle, but didn't give the result. A method without a result is hardly convincing -- I can think of even simpler methods if a I don't have to produce a result. Can either of you show how the method leads to the result, and what the result is?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Who said anything about a match point? Or even about a transmission
>> line? It's just a very simple problem, involving nothing but a single
>> voltage phasor and a single current phasor. No reflections. No
>> non-dissipative resistors. No re-reflections. No traveling power
>> waves. No virtual short circuits. Just V times I, nothing else.
>>
>> Richard didn't understand the question, but it looks like you did,
>> Cecil. So what's the product, and how did you solve it with phasors?
>> C'mon, you can do it.
>
>
> I'm sorry, your posting hasn't reached my news-server yet. All I have
> is Reg's reply in which you said:
>
>> Given voltage and current phasors _V_ = |V| /_ A1 and _I_ = |I| /_ A2
>> ("/_" means "angle"), what is the value of _V_ * _I_? (Hint: It's not
>> |V|*|I| /_ (A1 + A2).

>
>
> I hope I understand all the strange ASCII stuff. Do you want the dot
> product or the cross product?

2433. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 19:58:01 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3lla539239h27@corp.supernews.com>
Source record: 125622

Yuri Blanarovich wrote:
> Roy W7EL wrote:
> . . .
> I guess my "problem" might be that I learned from Bill Orr that resonant
> frequency is tied to the electrical length of the adiator.
>
> Yuri, K3BU

Careful readers of Orr's work will also learn that folding a unipole increases efficiency because of the muliplied radiation resistance. I pointed out this error to him many years ago, and got a nice postcard of acknowledgement in return. Then saw it again in his column not long after.

I see absolutely no point in arguing about the definition of a term that really has no definition. I don't personally care at all what interpretation you or others want to make of "electrical length", or whether people understand what you're trying to say. For myself, I'm generally interested in using my words to communicate. So I try to choose terms that aren't as easily misunderstood. And even so, I still fail with disappointing frequency to communicate.

Roy Lewallen, W7EL

2434. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 20:06:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3AD75C.8080904@ieee.org>
Source record: 125623

Roy Lewallen wrote:
> Are you saying that if voltage and current phasors (hence voltage and
> current time waveforms) are in phase, then their product is DC?
>
> Not hardly.

I didn't say their product is DC, Roy. I said that a DC analysis
would work if all the voltages are in phase or 180 degrees out of
phase with the currents. You have plus and minus signs in DC. All
you need when phasors are in phase or 180 degrees out of phase are
plus and minus signs - no phase angles are needed. In fact, you cannot
tell the match point RF equations from DC equations because they do
not necessarily contain any phase angles at all. Zero degrees equals
plus and 180 degrees equals minus in a one-dimensional system.

Since most ham systems are close to being matched, this is a
very valuable shortcut.

> So let's make it simpler yet. What's the product of phasors _V_ and _I_
> if they're in phase?

Same as if they are not in phase: V*I*cos(theta) assuming those are
RMS values of voltage and current. Cos(theta) equals one for in
phase _V_ and _I_ so it would be |V|*|I| for RMS values. If you
happen to be using peak values for _V_ and _I_, you would have
to divide the dot product by two.

I asked earlier if you wanted the dot product or the cross product.
You could take the cross product of the associated E and H fields
inside the feedline to obtain the Poynting Vector.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2435. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 20:13:18 UTC
From: richardharrison@webtv.net
Message-ID: <16206-3E3AD8DE-98@storefull-2315.public.lawson.webtv.net>
Source record: 125627

Bart, WB6HQK wrote:
"It may be useful to bear in mind that transmission lines are capable of storing energy in much more complex ways than the usual idealized transformer."

There are differences in the energy storage. The transformer has only half a cycle to charge its storage. Then it must give up the energy on the other half cycle.

The usual h-f coax line contains several cycles of energy as it is perhaps several wavelengths long.

Energy contained in coax is easy to calculate. Power is energy flow rate. So, multiply power times the time required to fill the transmission line and you have the energy contained in the line.

The time required to fill the line depends on energy velocity and the length of the line. 120,000 miles per second may be about the velocity in coax. This is about 634 ft / microsec.
Our 100-ft line takes about 0.158 microseconds to fill with energy.

If our line is fed 100 watts (100 joules per second), it stores 0.158 times 10 to the minus 6 joules, times 100 (joules) = 158 microjoules.

That energy storage seems trivial to me.

Best regards, Richard Harrison, KB5WZI

2436. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 20:22:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3lmo572e253f6@corp.supernews.com>
Source record: 125624

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Are you saying that if voltage and current phasors (hence voltage and
>> current time waveforms) are in phase, then their product is DC?
>>
>> Not hardly.
>
>
> I didn't say their product is DC, Roy. I said that a DC analysis
> would work if all the voltages are in phase or 180 degrees out of
> phase with the currents. You have plus and minus signs in DC. All
> you need when phasors are in phase or 180 degrees out of phase are
> plus and minus signs - no phase angles are needed. In fact, you cannot
> tell the match point RF equations from DC equations because they do
> not necessarily contain any phase angles at all. Zero degrees equals
> plus and 180 degrees equals minus in a one-dimensional system.
>
> Since most ham systems are close to being matched, this is a
> very valuable shortcut.
>
>> So let's make it simpler yet. What's the product of phasors _V_ and
>> _I_ if they're in phase?
>
>
> Same as if they are not in phase: V*I*cos(theta) assuming those are
> RMS values of voltage and current. Cos(theta) equals one for in
> phase _V_ and _I_ so it would be |V|*|I| for RMS values. If you
> happen to be using peak values for _V_ and _I_, you would have
> to divide the dot product by two.

Sorry, Cecil, that's not the product of phasors _V_ and _I_. You've calculated the average value of their product. That is, the integral over one cycle of the product, divided by the period. The question was what is the product?

Roy Lewallen, W7EL

2437. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 20:27:13 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <2cml3vofng8c0ekfmgrin128a4h0189d1k@4ax.com>
Source record: 125625

On Fri, 31 Jan 2003 11:58:01 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

|Yuri Blanarovich wrote:
|> Roy W7EL wrote:
|> . . .
|> I guess my "problem" might be that I learned from Bill Orr that resonant
|> frequency is tied to the electrical length of the adiator.
|>
|> Yuri, K3BU
|
|Careful readers of Orr's work will also learn that folding a unipole
|increases efficiency because of the muliplied radiation resistance. I
|pointed out this error to him many years ago, and got a nice postcard of
|acknowledgement in return. Then saw it again in his column not long after.

Yep. Almost anyone (even me <g>) can get something published. That
doesn't necessarily make it correct.
|
[snip]
| And even so, I still fail with disappointing frequency to communicate.

If I fail to understand something you wrote, I figure it's my lack of
comprehension, not your failure to communicate.

http://www.destgulch.com/movies/luke/luke18.wav

73,

Wes Stewart, N7WS

2438. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 20:32:07 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <n7nl3v0h2oi0ml2i5agf3ptoqhvobo7iem@4ax.com>
Source record: 125626

Oops,

I meant to say, "the stub looks 'like' an inductor..."

2439. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 20:50:34 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E3AE19A.498B265C@uci.edu>
Source record: 125632

Roy Lewallen wrote:
>
> I'll make it a word problem to eliminate the "strange ASCII stuff".
>
> I have a voltage phasor I'll call VCAM. It has a magnitude V and a phase
> angle A1. And I have a current phasor I'll call ICAM, with a magnitude I
> and a phase angle A2. What is the product of VCAM and ICAM.

How about this one, Roy:

VCAM*ICAM*cos(A1-A2)*(1-cos(2wt)) + VCAM*ICAM*sin(A1-A2)*sin(2wt)

(w=omega)

That's the one I would use to solve it anyway.

73, Jim AC6XG

2440. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 20:53:23 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v3lof5lqf90h40@corp.supernews.com>
Source record: 125628

Figure 3 (figure 11 in the original paper) in the referenced article has
errors. More than one paper has been written about that. The authors
seem not to have done the appropriate home work. The ARRL Antenna book
no longer shows that figure.
73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com

"w3frg" <w3frg@comcast.net> wrote in message
news:WvednZb3u4VhHaejXTWcpw@comcast.com...
> A good dissertation on the LPDA, whether it be planar, pyramidal,
> coplanar, etc., can be found at the following web page for those
> unfamiliar with the intimate LP design and the possible results
> obtainable.
> http://www.conformity.com/0005emc.html
> Enjoy reading.
>
>
> "Wes Stewart" <n7ws@#arrl.net> wrote in message
>

2441. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 20:54:58 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3AE2A2.2040709@ieee.org>
Source record: 125630

Roy Lewallen wrote:
> I have a voltage phasor I'll call VCAM. It has a magnitude V and a phase
> angle A1. And I have a current phasor I'll call ICAM, with a magnitude I
> and a phase angle A2. What is the product of VCAM and ICAM.

For RMS values, VCAM*ICAM*cos(theta), divide by two if using peak values.

> My textbooks all tell me that power [that is, P(t), not average power]
> is the product (not dot or cross, but simple product, since v(t) and
> i(t) aren't vectors) of v(t) and i(t). Richard has said, and you seem to
> have agreed, that this calculation can be done with phasors. So my
> question is, how?

You are probably familiar with the AC power equation V*I*cos(theta)
where theta is the phase angle between V and I. A shortcut for that
equation is to reference V at zero deg multiplied by
(I at theta deg times cos(theta)).
Represented in fixed ASCII format, the two phasors can be drawn:

```
/ Itot
/
/
/ theta
+---->-----------> Vtot
I(x)
```

I*cos(theta) can be grouped together as the I(x) component of Itot
and the power is I(x)*Vtot if we are using RMS values. See the
right triangle that Richard is talking about? Not shown is I(y).

> And, beginning with VCAM and ICAM, what's P(t) or the
> magnitude and angle of a power phasor PCAM representing P(t)? If you
> need to use a dot or cross product on the phasors to perform the simple
> multiplication of the time waveforms which VCAM and ICAM actually
> represent, well, then, that's fine, choose whatever operation you need
> to. It would be nice if you'd explain why you make the choice, but it's
> not really necessary.

Bart reminded me that we don't do cross products on phasors, only on
vectors. That's one of the differences between phasors and vectors.
If we want to use the cross product, we would take the cross product
of the E field and the H field which are vectors and obtain the
Poynting Vector as a result.

> Richard said the calculation could be done with a simple right triangle,
> but didn't give the result.

Drawing it in ASCII is rather difficult. Do you see the right triangle above?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2442. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 21:00:38 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <WtB_9.14464$rq4.1053285@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125629

Would a properly assembled 20-10 mtr discone need a
matching device? Couldn't you also use it on 2, 6 & 10
mtrs with/without a matching device?
"Toni - ec3dds" <ec3dds@hotmail.com> wrote in message
news:h99l3v8kb3co0rsjo0obmov5jbjvl54m89@4ax.com...
> Hi all,
>
> Would it be a crazy idea to build an HF discone for the higher bands
> (something like 10m~20m)? I've never read on the gain of a discone,
> but I imagine that it must be a little less than an equivalent
> groundplane. OTOH it wouldn't be much bigger than an equivalent
> trapped vertical.
>
> Opinions? I know this is probably not a good idea for a beginner but I
> would really like to build my own antenna and I think a trapped
> vertical is too much for me (I don't have space for normal dipoles).
>
> Could it be better than a fanned inverted-v? It would probably be the
> same size except for the hat.
>
> Thanks
>
> Toni - ec3dds
>

2443. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 21:01:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3AE413.2000107@ieee.org>
Source record: 125631

Roy Lewallen wrote:
> Sorry, Cecil, that's not the product of phasors _V_ and _I_. You've
> calculated the average value of their product. That is, the integral
> over one cycle of the product, divided by the period. The question was
> what is the product?

Is this some sort of trick question? Why are we not dealing with average values? (The instantaneous values would be better handled with exponential notation.)
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2444. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 21:28:05 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v3lqg750kh4fa@corp.supernews.com>
Source record: 125633

Dear Dr. Dixon:
Thanks for giving us much of the rest of the story. What an
unexpected way to connect the elements. So odd that I am still not sure
what is going on even after looking at the picture on their site.
Conventionally, LPDAs have symmetry about a plane that bisects, and
is normal to, the feeding TL. This is true whether the TL is also used
as a twin boom or the TL is separate from the boom. From your
description, it appears that your antenna does not have such symmetry,
which would make it confusing, or worst, to determine element lengths.
... it would be easy not to be feeding in the middle of each element!
Ouch.
Please do inform us of more details when you have them including
which of their antennas you have. Thanks again.
73, Mac N8TT
P.S. I left OSU some 40 years ago. It sure has changed. The
observatory about 5 miles from your house is apparently all gone.
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Bob Dixon" <Bob_Dixon@osu.edu> wrote in message
<snip>
>
> The problem is related to the unusual twin side-by-side boom design.
It
> is not at all obvious where to start measuring the element lengths at
> the center. The booms are about 3 inches apart. Half of the elements
> start on one of the booms and extend outward. The other half of the
> elements start out on one boom, and pass over the top of the other
boom
> and then stick out the other side. Thus the ambiguity of whether you
> measure from halfway between the booms, or from the boom where the
> element is fastened, or from the other boom where it crosses over.
>
> Bob W8ERD

2445. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 21:31:37 UTC
From: richardharrison@webtv.net
Message-ID: <26155-3E3AEB39-100@storefull-2316.public.lawson.webtv.net>
Source record: 125636

I wrote:
"If our line is fed 100 watts---, it stores 158 microjoules.

That energy storage seems trivial to me."

I did not include the possibility of 100% reflection which could double the energy storage. However, 316 microjoules seems trivial to me, too.

Best regards, Richard Harrison, KB5WZI

2446. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 21:33:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3AEBC1.4030005@ieee.org>
Source record: 125634

Roy Lewallen wrote:
> Sorry, Cecil, that's not the product of phasors _V_ and _I_. You've
> calculated the average value of their product. That is, the integral
> over one cycle of the product, divided by the period. The question was
> what is the product?

I forgot to ask. What is the physical significance of the instantaneous
product of an AC voltage and current. Why does anyone care?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2447. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 21:40:45 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v3lr82n0qsl964@corp.supernews.com>
Source record: 125635

Dear Mr. Stewart:
Ordinarily, increasing (or decreasing) all element lengths by a
constant multiple would do little more than shift down (or up) the large
band of frequencies over which the antenna is effective. In other
words, your concern is well taken.
It appears, however, that in this case the elements (or some of
the elements) may not be center fed. I expect that such off center
feeding will cause much larger changes in input impedance with changes
in frequency than will be the case with center fed LPDAs.
I do not have a clue as to how their boom design increases gain.
73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Wes Stewart" <n7ws@#arrl.net> wrote in message
<snip>
> Forgive me but I thought that one reason for using LPDs was the
> continous frequency coverage within the design range. How come the
> element lengths are so picky?
>
> And I'm really curious about how their boom design increases gain.
>

2448. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 21:45:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3lrkb21ng7039@corp.supernews.com>
Source record: 125637

That's a nice triangle, and the stuff about I(x), I(y), theta, and all
that are cool, too.

Is that your answer, VCAM times ICAM = I(x)*Vtot? The original phasors
had components V, I A1, and A2. This voltage and current aren't
functions of some x and y. What is VCAM times ICAM in terms of V, I, A1,
and A2?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> I have a voltage phasor I'll call VCAM. It has a magnitude V and a
>> phase angle A1. And I have a current phasor I'll call ICAM, with a
>> magnitude I and a phase angle A2. What is the product of VCAM and ICAM.
>
>
> For RMS values, VCAM*ICAM*cos(theta), divide by two if using peak values.
>
>> My textbooks all tell me that power [that is, P(t), not average power]
>> is the product (not dot or cross, but simple product, since v(t) and
>> i(t) aren't vectors) of v(t) and i(t). Richard has said, and you seem
>> to have agreed, that this calculation can be done with phasors. So my
>> question is, how?
>
>
> You are probably familiar with the AC power equation V*I*cos(theta)
> where theta is the phase angle between V and I. A shortcut for that
> equation is to reference V at zero deg multiplied by
> (I at theta deg times cos(theta)).
> Represented in fixed ASCII format, the two phasors can be drawn:
>
> / Itot
> /
> /
> / theta
> +---->-----------> Vtot
> I(x)
>
> I*cos(theta) can be grouped together as the I(x) component of Itot
> and the power is I(x)*Vtot if we are using RMS values. See the
> right triangle that Richard is talking about? Not shown is I(y).
>
>> And, beginning with VCAM and ICAM, what's P(t) or the magnitude and

>> angle of a power phasor PCAM representing P(t)? If you need to use a
>> dot or cross product on the phasors to perform the simple
>> multiplication of the time waveforms which VCAM and ICAM actually
>> represent, well, then, that's fine, choose whatever operation you need
>> to. It would be nice if you'd explain why you make the choice, but
>> it's not really necessary.
>
>
> Bart reminded me that we don't do cross products on phasors, only on
> vectors. That's one of the differences between phasors and vectors.
> If we want to use the cross product, we would take the cross product
> of the E field and the H field which are vectors and obtain the
> Poynting Vector as a result.
>
>> Richard said the calculation could be done with a simple right
>> triangle, but didn't give the result.
>
>
> Drawing it in ASCII is rather difficult. Do you see the right triangle
> above?
> --
> 73, Cecil, W5DXP
>
>
>
> ----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
> http://www.newsfeed.com The #1 Newsgroup Service in the World!
> -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers
> =-----

2449. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 21:56:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3ls847p1u580@corp.supernews.com>
Source record: 125638

No, it's not a trick question. I formulated the question because I was attempting to explain that power is a time varying quantity which couldn't be calculated from the constituent voltage and current phasors. Richard said it could, so I've just been trying to find out how he does it. He hasn't been able to show me, so I doubt that he really can.

I haven't been able to figure out why *you're* dealing with average values. I've seen no justification for simply looking at the average power and ignoring its time varying nature. You've even established rules for how these waves of average power add and subtract. We certainly pay attention to the time varying properties of voltage and current when analyzing how various waves interact. Why should we be absolved of this when dealing with power? Or, to put it another way, why don't we just do our analysis of the voltage and current waves with average values and not trouble ourselves with things like phase angles and their effect on wave interference? It would sure make a lot of that complicated math unnecessary.

Ok, I'll reformulate the problem in exponential notation. Given a voltage phasor VCAM times e raised to the minus jA1, and a current phasor ICAM times e raised to the minus jA2, what is VCAM times ICAM?

(Hint: It's not VCAM times ICAM times e raised to the minus j(A1 + A2).)

My goodness, it's hard to get a straight answer to a simple question.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Sorry, Cecil, that's not the product of phasors _V_ and _I_. You've
>> calculated the average value of their product. That is, the integral
>> over one cycle of the product, divided by the period. The question was
>> what is the product?
>
>
> Is this some sort of trick question? Why are we not dealing with average
> values? (The instantaneous values would be better handled with exponential
> notation.)
> --
> 73, Cecil, W5DXP
>
>
>
> ----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------

> http://www.newsfeed.com The #1 Newsgroup Service in the World!
> -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers
> =-----

2450. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:01:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3lsh48v5qnaf5@corp.supernews.com>
Source record: 125639

Wes Stewart wrote:
> . . .
> If I fail to understand something you wrote, I figure it's my lack of
> comprehension, not your failure to communicate.

Thanks, Wes. But when you actually get down to it, they amount to the
same thing.

Roy Lewallen, W7EL

2451. Re: Finally... a fractal application that makes sense...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:20:00 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <gEC_9.5562$nD1.1234679@news20.bellglobal.com>
Source record: 125642

"Yuri Blanarovich"
> ...sued by you know who :-)

Only about 6 hours and 40 minutes (ET) until "...the end of January 2003."
I've already alerted the PrePaid Legal staff that they might be working some
overtime this weekend.

2452. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:23:56 UTC
From: richardharrison@webtv.net
Message-ID: <23567-3E3AF77C-105@storefull-2312.public.lawson.webtv.net>
Source record: 125646

Roy Lewallen wrote:
"My textbooks all tell me that power (that is P(t), not average power) is the product (not dot or cross, but simple product since v(t) and i(t) aren`t vectors) of v(t) and i(t).

The instantaneous power P(t) is the product of the instantaneous volts, v(t) and the instantaneous amps, i(t) at a particular point in time if these are related by a resistance. The product is the instantaneous apparent power and a function of time with twice the frequency of v and i.

But, v and i aren`t required to be in phase to get some value of power and its wave will still have twice the frequency.

You have rms values of E and I as sine waves, and their product times the cosine of the angle between them is the average power being transferred or transformed in the circuit.

Best regards, Richard Harrison, KB5WZI

2453. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:24:13 UTC
From: jwkelley@uci.edu
Message-ID: <5da85be.0301311424.a4095c7@posting.google.com>
Source record: 125640

Dave Shrader <david.shrader@attbi.com> wrote in message
news:<3E39D707.665C15C0@attbi.com>...
> Another imprecise statement!! I hope they will end soon.
>
> " Rocket scientists have always found the gravitational constant to be a
> fairly useful number. It's been around since Newton."
>
> Hmmm ... I offer the following hypothesis: A derivative your statement
> yields the conclusion that the moon was not in a 'stable' orbit around
> the earth until Newton!! And further, people were not earthbound until
> Newton!!
>
> I suspect an error of imprecise language.
>
> The earth's gravitational constant has been around since the earth was
> formed. It was quantified in Newton's time. Ah ... the benefits of
> discovery.
>
> Deacon Dave, W1MCE

Okay, Dave. So maybe I did set myself up for some nit picking. I
agree, what's fair is fair.

From now on, I promise to stay quiet when people claim that the thing
that attracted Newtons apple to the earth was an acceleration.

:-)

73, Jim AC6XG

2454. Retractable antennas on portables - Help!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:24:20 UTC
From: will7370@yahoo.com
Message-ID: <e88e9b5a.0301311424.e6d86de@posting.google.com>
Source record: 125641

I need some guidance here on replacing retractable antennas on a few old portable receivers I just picked up. The highest freq any of them receives is UHF 512 MHz, and so I used the following formula to determine the *minimum* length I would need: K(feet)=486/Freq(MHz) which comes out as 486/512 = .91 foot. Any retractable replacement antenna can be set that short. So far, so good.

But my problem comes in trying to decide the *max* length I would need, since the lowest freq my receivers pick up is AM 540 kHz. This is where my math gets fuzzy. I didn't think it mattered on retractables down in the AM band, but then when I saw the numerous max lengths available (17.75", 22.75", 24", 28", 30.5", 34.375", 39.5" and 72"), I got to wondering maybe it might make a difference after all.

Anyway, any guidance here would be appreciated.

Robert
Portland, Oregon

2455. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:25:00 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <YIC_9.5565$nD1.1235939@news20.bellglobal.com>
Source record: 125643

"OC_CAM's Razor"
> My EE prof did that in the 50's but apparently
> forgot to write it down for posterity.

"For this, I have discovered a truly wondrous proof,
but the margin is too small to contain it." (*)

:-)

* Fermat, 1637

2456. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:32:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3AF98A.5010700@ieee.org>
Source record: 125645

Richard Harrison wrote:
> I wrote:
> "If our line is fed 100 watts---, it stores 158 microjoules.
>
> That energy storage seems trivial to me."
>
> I did not include the possibility of 100% reflection which could double
> the energy storage. However, 316 microjoules seems trivial to me, too.

However, it does explain where the power goes during the buildup to
steady state. That stored energy has been sourced but not sinked.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2457. Ringo ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:33:07 UTC
From: Kedrid <Kedrid@kedrid.com>
Message-ID: <b1etj2$3t3$1@slb9.atl.mindspring.net>
Source record: 125644

I got prob. a stupid question! but here it goes.

I just got a new Ringo ranger II antenna for 2M. I put it together. No Prob. there. but when I installed it on the mast. the top went up fine, but the bottom part has 3 elements. I was tightening them, and 1 broke. I was like if you over tighten a screw, and twist the top off. :(the bottom broke off. and I lost about (1/4") a quarter inch of the threaded part of 1 (ONE) element only. the question! Will this drasticly effect the performance of the antenna? or maybe just the radiation patern. This is my first Cushcraft antenna, and I used a wrench like the instructions said. I called the distributer, and they said I would have to contact the manufacturer. I am under the impression it shouldn't make a big difference in performance. Maybe mess with the tuning a little. but I am not sure? does it effect SWR? target freq.? or just radiation patern?? again it was only 1 (one) of the bottom elements. it was about 1 quarter inch, and it is the Ringo Ranger ARX-2B..

thanks

2458. Re: Retractable antennas on portables - Help!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:41:51 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <LYC_9.5573$nD1.1239817@news20.bellglobal.com>
Source record: 125648

"Robert Williams" needs
> ...some guidance here on replacing retractable antennas
> on a few old portable receivers I just picked up. <snip>
> But my problem comes in trying to decide the *max* length
> I would need, since the lowest freq my receivers pick up is
> AM 540 kHz.

You'll need a whip about 433 feet tall when fully extended...

;-)

Actually, those sorts of radios typically just use the internal ferrite core loopstick to receive the AM band, although in some case an external antenna jack (and therefore possibly the extendable whip as well, due to the way it is usually wired) might also be in the circuit to assist. This is usually true for the SW bands and only sometimes for the AM band.

The same length impracticality will present itself on most bands below about FM broadcast, so you might as well just find a replacement whip that fits the radio mechanically.

2459. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 22:44:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3AFC5D.5030407@ieee.org>
Source record: 125647

Roy Lewallen wrote:
> No, it's not a trick question. I formulated the question because I was
> attempting to explain that power is a time varying quantity which
> couldn't be calculated from the constituent voltage and current phasors.
> Richard said it could, so I've just been trying to find out how he does
> it. He hasn't been able to show me, so I doubt that he really can.

Richard is obviously talking about average power. You didn't say you
were talking about instantaneous power.

> I haven't been able to figure out why *you're* dealing with average
> values.

Anyone dealing with steady-state sine waves deals with average power
except from a purely academic standpoint.

> I've seen no justification for simply looking at the average
> power and ignoring its time varying nature.

That's great for pulsed radar. What is the application to ham CW
or transfer of 60 Hz power?

> Or, to put it another way, why
> don't we just do our analysis of the voltage and current waves with
> average values ...

That's exactly what the average engineer does. And I have not been
discussing instantaneous values of voltages and currents. Perhaps
you misunderstood that all my discussions involve RMS values of
voltage and current.

> Ok, I'll reformulate the problem in exponential notation. Given
> a voltage phasor VCAM times e raised to the minus jA1, and a current
> phasor ICAM times e raised to the minus jA2, what is VCAM times ICAM?

"Here's a quarter, call someone who cares." That's not a diversion.
That's a Country and Western song. :-) I could look it up but what
would be the purpose?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2460. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 23:25:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <f71m3vsbnunadrp09c6kk1upha5voesrid@4ax.com>
Source record: 125650

On Fri, 31 Jan 2003 17:37:56 +0100, Toni - ec3dds <ec3dds@hotmail.com>
wrote:

>Hi all,
>
>Would it be a crazy idea to build an HF discone for the higher bands
>(something like 10m~20m)? I've never read on the gain of a discone,
>but I imagine that it must be a little less than an equivalent
>groundplane. OTOH it wouldn't be much bigger than an equivalent
>trapped vertical.
>
>Opinions? I know this is probably not a good idea for a beginner but I
>would really like to build my own antenna and I think a trapped
>vertical is too much for me (I don't have space for normal dipoles).
>
>Could it be better than a fanned inverted-v? It would probably be the
>same size except for the hat.
>
>Thanks
>
>Toni - ec3dds

Hi Toni,

A close approximation to the discone would require about a dozen to 16
spokes in the top hat, and a like number in the skirt. You could do
it with 4 maybe - if they were tuned to 20M but then why call it a
discone, and why go to the trouble?

The gain, at the low end, will be comparable to a raised ground plane
vertical (for better or worse). At the high end, it will have a
little more gain (no different, or I should say no better/worse than
before, just a different frequency).

Visit my page:
http://www.qsl.net/kb7qhc/antenna/Discone/discone.htm
to observe how the angle of the skirt wires affects drive point Z over
frequency (the point of building one).

73's
Richard Clark, KB7QHC

2461. Re: Finally... a fractal application that makes sense...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 23:26:57 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <0c1m3vgalesr13v08m2od3nt5om4qielqv@4ax.com>
Source record: 125651

On Fri, 31 Jan 2003 17:20:00 -0500, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> sent into the ether:

>"Yuri Blanarovich"
>> ...sued by you know who :-)
>
>Only about 6 hours and 40 minutes (ET) until "...the end of January 2003."
>I've already alerted the PrePaid Legal staff that they might be working some
>overtime this weekend.
>
Hey, when exactly is Buffoonerama supposed to start? I want to be
sure I have enough popcorn and soda laid in before the opening gun,
oops, shouldn't have said gun, might freak him out.

Has there been a published date and time and I just missed it or what?

Dan
Need a construction safety person?
Direct hire or contract.
Safe Today - Here Tomorrow
Don't Just Say It - Live It
Remove left x for direct reply

2462. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 23:38:13 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <gf0m3vghss53ttq2bn9qh6l3i2gm3qg2jb@4ax.com>
Source record: 125652

On Fri, 31 Jan 2003 16:40:45 -0500, "J. McLaughlin"
<JCM@Power-Net.Net> wrote:

|Dear Mr. Stewart:
| Ordinarily, increasing (or decreasing) all element lengths by a
|constant multiple would do little more than shift down (or up) the large
|band of frequencies over which the antenna is effective. In other
|words, your concern is well taken.
| It appears, however, that in this case the elements (or some of
|the elements) may not be center fed. I expect that such off center
|feeding will cause much larger changes in input impedance with changes
|in frequency than will be the case with center fed LPDAs.
| I do not have a clue as to how their boom design increases gain.
| 73, Mac N8TT

Mac,

Look at the photo at:

http://www.titanex.de/frames/about.html

The way I view it, the closest element to the viewer is connected to
the right side boom. There appears to be a sleeve insulator on the
portion that rests on the element clamp on the left side boom. The
other element is the converse.

If you were to rotate the booms 90 degrees counterclockwise about a
line midway between and parallel to the booms, one boom (the right
one) would be above the other (the left one) as is often the way other
manufacturers (KMA, Tennadyne, et. al.) build them. If fact, it
appears that some of Titanex's short beams have the booms one above
the other.

So there is nothing magic about the Titanex. The elements are end-fed
and I resubmit that a length "error" of an inch or two should be in
the noise.

2463. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 23:40:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <sg2m3vo59kqnl8md27jk4b7j5d02rbi6gu@4ax.com>
Source record: 125653

On Fri, 31 Jan 2003 09:49:45 -0800, Bart Rowlett
<bart@wb6hqk.ampr.org> wrote:

>In spite of what you claim, Steve Best
>never claimed it's possible for a transformer (or transmission line
>system for that matter) to deliver more average power than was input.
>Anyone with any technical competence at all would immediately know such
>a scenario is impossible.

Hi Bart,

That's about as clear as it gets.

73's
Richard Clark, KB7QHC

2464. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-01-31 23:50:02 UTC
From: "Dee D. Flint" <deehays@qix.net>
Message-ID: <KYD_9.461$4y4.465271@newssvr28.news.prodigy.com>
Source record: 125649

"Toni - ec3dds" <ec3dds@hotmail.com> wrote in message
news:h99l3v8kb3co0rsjo0obmov5jbjvl54m89@4ax.com...
> Hi all,
>
> Would it be a crazy idea to build an HF discone for the higher bands
> (something like 10m~20m)? I've never read on the gain of a discone,
> but I imagine that it must be a little less than an equivalent
> groundplane. OTOH it wouldn't be much bigger than an equivalent
> trapped vertical.
>
> Opinions? I know this is probably not a good idea for a beginner but I
> would really like to build my own antenna and I think a trapped
> vertical is too much for me (I don't have space for normal dipoles).
>
> Could it be better than a fanned inverted-v? It would probably be the
> same size except for the hat.
>
> Thanks
>
> Toni - ec3dds
>

Theoretically, a discone (relative to a dipole) is a 1:1 gain. That is, no gain or loss compared to a dipole.

Dee Flint, N8UZE

2465. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 00:07:10 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <3E3B0FAE.C1BFE1FA@core.com>
Source record: 125654

The reason to go to the trouble is to see if the monster will work. That's what amateur radio is about. Nobody said that it has to be practical.

Dave WD9BDZ

Richard Clark wrote:

> On Fri, 31 Jan 2003 17:37:56 +0100, Toni - ec3dds <ec3dds@hotmail.com>
> wrote:
>
> >Hi all,
> >
> >Would it be a crazy idea to build an HF discone for the higher bands
> >(something like 10m~20m)? I've never read on the gain of a discone,
> >but I imagine that it must be a little less than an equivalent
> >groundplane. OTOH it wouldn't be much bigger than an equivalent
> >trapped vertical.
> >
> >Opinions? I know this is probably not a good idea for a beginner but I
> >would really like to build my own antenna and I think a trapped
> >vertical is too much for me (I don't have space for normal dipoles).
> >
> >Could it be better than a fanned inverted-v? It would probably be the
> >same size except for the hat.
> >
> >Thanks
> >
> >Toni - ec3dds
>
> Hi Toni,
>
> A close approximation to the discone would require about a dozen to 16
> spokes in the top hat, and a like number in the skirt. You could do
> it with 4 maybe - if they were tuned to 20M but then why call it a
> discone, and why go to the trouble?
>
> The gain, at the low end, will be comparable to a raised ground plane
> vertical (for better or worse). At the high end, it will have a
> little more gain (no different, or I should say no better/worse than
> before, just a different frequency).
>
> Visit my page:
> http://www.qsl.net/kb7qhc/antenna/Discone/discone.htm
> to observe how the angle of the skirt wires affects drive point Z over
> frequency (the point of building one).

>
> 73's
> Richard Clark, KB7QHC

2466. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 00:15:59 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0301311615.5fd4ccdb@posting.google.com>
Source record: 125655

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<7257-3E397468-98@storefull-2313.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "Say we have a collinear array---."
>
> I misspelled King`s name in the list of authors. The collinear story is
> in the 1945 book: "Transmission Lines and Wave Guides" from McGraw-Hill.
> Authors were three Ph.D`s at Harvard, ---- King, Mimno, and Wing.
>
> Best regards, Richard H.Harrison, KB5WZI

My library states that the book title is
Transmission lines,antennas and wave guides.
Same authors and publisher,is this correct ?
Art

2467. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 00:21:19 UTC
From: tdonaly@aol.com
Message-ID: <20030131192119.10719.00000033@mb-ma.aol.com>
Source record: 125656

Richard Clark wrote,
>
>On Fri, 31 Jan 2003 09:49:45 -0800, Bart Rowlett
><bart@wb6hqk.ampr.org> wrote:
>
>>In spite of what you claim, Steve Best
>>never claimed it's possible for a transformer (or transmission line
>>system for that matter) to deliver more average power than was input.
>>Anyone with any technical competence at all would immediately know such
>>a scenario is impossible.
>
>Hi Bart,
>
>That's about as clear as it gets.
>
>73's
>Richard Clark, KB7QHC
>

Hi Richard,
taking a small part of your opponent's argument,
purposely misinterpreting it, and then repeating it over and over
as false, is a favored rural debating technique. It's usually confined
to theological discussions, however, and not infrequently leads
to a mutual application of bare knuckles to the questions involved.
73,
Tom Donaly, KA6RUH

2468. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 00:39:52 UTC
From: richardharrison@webtv.net
Message-ID: <28925-3E3B1758-127@storefull-2317.public.lawson.webtv.net>
Source record: 125659

Hi Art,
Your library is absolutely correct. Some days I can`t even hit a keyboard. Sorry.

Best regards, Richard Harrison, KB5WZI

2469. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 00:41:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3m5tm49q7mm7c@corp.supernews.com>
Source record: 125657

You've definitely got the right idea. Your result is a little different
from mine, but you might have defined V and I a little differently.

For v(t) = V*cos(wt + A1)
and i(t) = I*cos(wt + A2)

v(t) * i(t) = V*I*cos(wt + A1)*cos(wt + A2)
= V*I/2 * (cos(A1 - A2) + cos(2wt + A1 + A2))

V and I are peak, not RMS values here.

It's a matter of simple trigonometry. But neither of us used phasors to
do the calculation -- we went back to the time waveforms. And the result
can't be expressed as a phasor of the same type as V and I, i.e., with
rotational frequency w. Which were the original points I was trying to make.

Roy Lewallen, W7EL

Jim Kelley wrote:
> Roy Lewallen wrote:
>
>>I'll make it a word problem to eliminate the "strange ASCII stuff".
>>
>>I have a voltage phasor I'll call VCAM. It has a magnitude V and a phase
>>angle A1. And I have a current phasor I'll call ICAM, with a magnitude I
>>and a phase angle A2. What is the product of VCAM and ICAM.
>
>
> How about this one, Roy:
>
> VCAM*ICAM*cos(A1-A2)*(1-cos(2wt)) + VCAM*ICAM*sin(A1-A2)*sin(2wt)
>
> (w=omega)
>
> That's the one I would use to solve it anyway.
>
> 73, Jim AC6XG

2470. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 00:44:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3m645rhvbmo09@corp.supernews.com>
Source record: 125658

If you care where and how energy is moving, you'd better care. Power moves back and forth each cycle, and so does energy. If you hope to understand how multiple "waves" of either one interact -- assuming that such things exist --, you'll have to take this into account.

Or, put it another way, what's the significance of the instantaneous value of voltage or current? Why does anyone care? Why don't we just take the average values of V and I, and do all our transmission line analyses with those? It would sure simplify the math. Avoid all those "unnecessary complications" as you put it.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Sorry, Cecil, that's not the product of phasors _V_ and _I_. You've
>> calculated the average value of their product. That is, the integral
>> over one cycle of the product, divided by the period. The question was
>> what is the product?
>
>
> I forgot to ask. What is the physical significance of the instantaneous
> product of an AC voltage and current. Why does anyone care?

2471. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 00:50:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3m6esi2l3bb22@corp.supernews.com>
Source record: 125660

Jim Kelley wrote:
>
> Okay, Dave. So maybe I did set myself up for some nit picking. I
> agree, what's fair is fair.
>
> From now on, I promise to stay quiet when people claim that the thing
> that attracted Newtons apple to the earth was an acceleration.
>
> :-)
>
> 73, Jim AC6XG

That's the whole point of Newton's experiment!

F = ma. If the force of gravity were constant, then different masses would be accelerated at different rates. (Actually, a feather would fall *faster* than a rock if the force were constant.) Newton's experiment showed that two objects of different mass are accelerated the same amount, as evidence that the acceleration, not the force, is constant for all objects.

Roy Lewallen, W7EL

2472. Re: Ringo ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 00:56:13 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E3B1B2D.F7FA149B@bloomer.net>
Source record: 125661

If I understand your description correctly, you now have one ground radial that is now 1/4" shorter than the others? If it is still attached so that you have the three radials, it shouldn't make a rat's butt difference. Have fun with it. I've had 2 of them for years now!

Scott
N0EDV

Kedrid wrote:
>
> I got prob. a stupid question! but here it goes.
>
> I just got a new Ringo ranger II antenna for 2M. I put it together. No Prob.
> there. but when I installed it on the mast. the top went up fine, but the
> bottom part has 3 elements. I was tightening them, and 1 broke. I was like
> if you over tighten a screw, and twist the top off. :(the bottom broke
> off. and I lost about (1/4") a quarter inch of the threaded part of 1 (
> ONE) element only. the question! Will this drasticly effect the
> performance of the antenna? or maybe just the radiation patern. This is my
> first Cushcraft antenna, and I used a wrench like the instructions said. I
> called the distributer, and they said I would have to contact the
> manufacturer. I am under the impression it shouldn't make a big difference
> in performance. Maybe mess with the tuning a little. but I am not sure? does
> it effect SWR? target freq.? or just radiation patern?? again it was
> only 1 (one) of the bottom elements. it was about 1 quarter inch, and it is
> the Ringo Ranger ARX-2B..
>
> thanks

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

2473. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 00:58:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3m6tt5j65hab6@corp.supernews.com>
Source record: 125662

Tdonaly wrote:
>
> Hi Richard,
> taking a small part of your opponent's argument,
> purposely misinterpreting it, and then repeating it over and over
> as false, is a favored rural debating technique. It's usually confined
> to theological discussions, however, and not infrequently leads
> to a mutual application of bare knuckles to the questions involved.
> 73,
> Tom Donaly, KA6RUH

I've found that it's also the primary form of persuasion on AM talk radio. And the nature of some of these discussions sure is reminiscent of that medium.

Roy Lewallen

2474. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 01:04:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3m78dtok1tjc7@corp.supernews.com>
Source record: 125663

An aside -- I've got a paperback version of "Transmission Lines, Antennas, and Wave Guides", published by Dover in 1965 (cover price $2.00!) It's a reprint of the 1945 book. I picked it up used at Powell's for $15.00. If you're interested in buying a copy, you might also look for this edition. It seems to be well-bound and pretty durable.

Roy Lewallen, W7EL

Art Unwin KB9MZ wrote:
> richardharrison@webtv.net (Richard Harrison) wrote in message news:<7257-3E397468-98@storefull-2313.public.lawson.webtv.net>...
>
>>Art, KB9MZ wrote:
>>"Say we have a collinear array---."
>>
>>I misspelled King`s name in the list of authors. The collinear story is
>>in the 1945 book: "Transmission Lines and Wave Guides" from McGraw-Hill.
>>Authors were three Ph.D`s at Harvard, ---- King, Mimno, and Wing.
>>
>>Best regards, Richard H.Harrison, KB5WZI
>
>
> My library states that the book title is
> Transmission lines,antennas and wave guides.
> Same authors and publisher,is this correct ?
> Art

2475. Re: MFJ 1786 Magnetic Loop antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 01:24:36 UTC
From: DHH <dhhnews0@hotmail.com>
Message-ID: <okF_9.5670$nD1.1280918@news20.bellglobal.com>
Source record: 125664

Dirk
The MFJ Loop would be a good antenna for your 'limited space' requirements.
I have used an old AEA Loop for a few years and have good success.
Bear in mind that the loop is not a high efficiency antenna - but works
better than short verticals/whips. The band width is quite narrow on the
lower frequencies.
I have worked all over the USA with the loop mounted on my deck on a 4 foot
pole running 5watts SSB from my Elecraft K2 QRP rig.
It wont burn holes in a pile up - but you will get out and with the high Q
keep RFI down
It is worth acquiring the auto tune accessory
73, Dan VA3MA va3ma@rac.ca

"Dirk Schuurs" <pa3gwl@amsat.org> wrote in message
news:b1ajpahve2@news.hccnet.nl...
> Hi,
>
> I'm looking for a very small, but good HF-antenna.
> My eye catched the MFJ 1786 Magnetic Loop antenna.
>
> Can somebody tell me their results with this antenna.
> It's for indoor or balcony use, just abt 5 meters above groundlevel.....
> Other tips for good and small HF-antenna's are welcome too !
>
>
>
> Regards,
> Dirk PA3GWL
>
>
>

2476. Re: Antenna Rotor Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 01:53:24 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <oMF_9.131038$ui1.2927027@news1.east.cox.net>
Source record: 125666

Is there a synchronization procedure for that particular rotor design?

Peter

"Sidney H. Engel" <engelsh@udel.edu> wrote in message
news:avu8m3$5o9$1@news.udel.edu...
> Been having a problem with a Channel Master antenna rotor not rotating the
> full 360 degrees and not reproducing a setting. Any thoughts?
>
>

2477. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 01:54:24 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v3ma3mjb6bmv57@corp.supernews.com>
Source record: 125665

Dear Mr. Stewart:
I agree with your assessment about the picture. I too looked at the
picture and then I re-read what Dr. Dixon wrote.
His description seems to indicate that not all elements use the
arrangement shown in the picture. In the absence of a clear and
complete description of how each of the (half) elements emanate from a
particular boom, I defaulted to the most simple hypothesis.
If, and neither of us is yet sure about this, all of the elements
are being center fed, then I quite agree that an HF LPDA is little
affected (afflicted?) by an element length "error" of an inch or two. I
believe that there might be more to the story than what is suggested by
the photograph you referenced.
73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Wes Stewart" <n7ws@#arrl.net> wrote in message

>
> Mac,
>
> Look at the photo at:
>
> http://www.titanex.de/frames/about.html
>
> The way I view it, the closest element to the viewer is connected to
> the right side boom. There appears to be a sleeve insulator on the
> portion that rests on the element clamp on the left side boom. The
> other element is the converse.
>
> If you were to rotate the booms 90 degrees counterclockwise about a
> line midway between and parallel to the booms, one boom (the right
> one) would be above the other (the left one) as is often the way other
> manufacturers (KMA, Tennadyne, et. al.) build them. If fact, it
> appears that some of Titanex's short beams have the booms one above
> the other.
>
> So there is nothing magic about the Titanex. The elements are end-fed
> and I resubmit that a length "error" of an inch or two should be in
> the noise.
>

2478. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 01:59:39 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <fSF_9.1035$6P2.127650@newsread1.prod.itd.earthlink.net>
Source record: 125667

Walter Maxwell wrote:
> > As I have told you repeatedly, the correct equation for handling
reflected
> > waves in conjunction with source waves is also in Johnson. He derives Eq
> > 6.17 starting on Page 149, continues on P 150 to complete the
derivation.
> > The use of this equation conforms exactly with readings taken with
in-line
> > wattmeters such as the Bird, but your Eq 9 does not. Please try to
> > understand the significance of Johnson's Eq 6.17.
> >
> > Walt
> >
> I do understand equation 6.17.
>
> It says the following: the net power delivered (PD) to the transmission
> line equals the forward power (PF) minus the reflected power (PR). A
> relationship valid only when Zo is a pure resistance.

> Eq 6.17: PD = PF - PR
>
> That's what it says. Nothing more, nothing less.

Correct. However, I would prefer the statement to read: the net power
delivered (PD) to the load equals the forward power (PF) minus the reflected
power (PR), which is equal to the power (PD) delivered to transmission line
if it is lossless.

>I presume that you define source power to be delivered power.

Also correct.

> We've been through this before:
>
> Now, you can mathematically rearrange 6.17 as follows:
>
> PF = PD + PR
>
> after which you interpet this mathematical rearrangement of 6.17 to mean
> that that the reflected power (PR) is totally re-reflected and adds to the
> delivered power (PD) resulting in the total forward power (PF).
>
> Let's write 6.17 as
>
> PR = PF - PD
>

> How would you interpret that mathematical rearrangement of 6.17? Its no
> less mathematically valid than PF = PD + PR.

Exactly, PF = PD + PR is precisely equal mathematically to 6.17

This means that forward power equals source power plus reflected power, a fact that you have always rejected. Does your statement above mean that you now accept the fact that forward power equals power delivered plus power reflected operationally?

> You are aware that the source power is not a forward traveling power. It
is
> the net difference between the forward traveling power and the rearward
> traveling power. Its the end result of the reflection process. In a line
> with reflections and re-reflections, the source power changes as the
system
> transitions from t = 0 to the t = steady state. It is not a constant
value
> until the steady state is reached.

You are exactly correct here.

> Note as well that regardless of a match or a mismath on the line, PD
always
> equals PF - PR. So, do you presume that a total re-reflection of power
> always occurs even without a match?

I have never said that it did. What I have always maintained is that total re-reflection of power requires a perfect match. It is you who have insisted that total re-reflection is not required for a perfect match to occur. You so state in Part 3 of your article. On the contrary, if any reflection travels rearward past the match point there is no perfect match.

> As for my eq (9), it is not an equation for PD, it is an equation for PF.
> It says: PF = |VF|^2/Zo, ie. the total forward power is equal to the
> magnitude of the total forward voltage squared divided by Zo. Funny but
> that exactly the same relationship that Johnson uses for forward power in
> his eq 6.17.

Steve, you are a mathematical wizard, and I envy you for that. So it's difficult for me to understand how you can say that PF = |VF|^2Zo = Johnson's Eq 6.17. This equality exists for only one condition, when VF = VR, when the line termination is totally reflective. Each term on the right in Eq 6.17 represents power. And from that equation it is evident that you cannot square the sum of the voltages and obtain the same answer as when following Eq 6.17 unless VF = VR. Plug some values into each equation and prove it to yourself.

> Your issue with my eq 9 is that it implies that the total forward voltage
> equals the sum of the individual forward voltages. We're right back to
> voltage superposition again, which Johnson uses to derive his eq 4.23.
>I'll end this exchange now Walt.

In your Eq 9 I assume that V1 is the source voltage and V2 is the reflected voltage after re-reflection, therefore also a forward voltage. If this is true then your Eq 9 does say that the total forward voltage is the sum of the individual forward voltages, which derives an incorrect answer in determining total forward power.

What say now?

Walt

2479. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 02:01:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3B2A6B.9090305@ieee.org>
Source record: 125668

Richard Clark wrote:
> On Fri, 31 Jan 2003 09:49:45 -0800, Bart Rowlett
> <bart@wb6hqk.ampr.org> wrote:
>
>
>>In spite of what you claim, Steve Best
>>never claimed it's possible for a transformer (or transmission line
>>system for that matter) to deliver more average power than was input.
>>Anyone with any technical competence at all would immediately know such
>>a scenario is impossible.
>
> That's about as clear as it gets.

It is? What does, "the forward source power of 92.831W combines in-phase
with the re-reflected power of 0.555W, resulting in a total forward-traveling
power of 107.736W" mean? All those power values are average powers.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2480. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 02:07:16 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3B2BD4.1080807@ieee.org>
Source record: 125569

Roy Lewallen wrote:
> If you care where and how energy is moving, you'd better care. Power
> moves back and forth each cycle, and so does energy.

Well, if you want to take it to that level, Roy, is the angular
momentum of the quarks conserved or not?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2481. Tx and Rx on the same Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 02:14:42 UTC
From: Peter Truman <ptruman@bigpond.com>
Message-ID: <OWF_9.37834$jM5.95851@newsfeeds.bigpond.com>
Source record: 125570

Hi

I'm new to this list so please bear with me.

I'm using VHF Tx and Rx modules from Radiometrix in the UK. 151.3MHz @ about 100mW

I want to be able to use the same antenna to Tx as I use to Rx. Obviously if I just hang the Rx and Tx off the end of the antenna I'm going to cause myself problems right?

I had thought I could use a simple small relay, as I will only Tx for a fraction of the time I will Rx but it occurs to me that at this frequency the signal path through the relay on an unbalanced line could be just as much a problem.

Does anyone know whet I can get a cheap, simple, solid state antenna switch in Australia that will do this for me?

Any other (simple) suggestions would be welcome.

Thank you for your help

Regards
Peter

2482. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 02:14:53 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <hO2dnTTuutl--aGjXTWc2Q@comcast.com>
Source record: 125522

Roy,

I think "Electrical Length" is advertizing hype that is being taken out of
context, if there, in fact, is a context for it.

Tam/WB2TT
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v3k7hvjscaa5d9@corp.supernews.com...
> That's the whole problem. I can't find "electrical length" in the
> indexes of any of the several antenna textbooks I have, in the IEEE
> dictionary, or even the ARRL Antenna Book. It means different things to
> different people, and can mean just about anything you want it to. If
> all it means to you is a way of describing feedpoint reactance, then
> yes, you're right on track.
>
> "Electrical length" is used with transmission lines to describe the
> effect of different propagation velocities. Transmission lines of the
> same electrical length will have the same current distribution, and
> changing the electrical length has exactly the same effect as changing
> the physical length. So an antenna effect more (but not entirely)
> analagous to the transmission line usage is the effect of top loading,
> where you actually change the current distribution and therefore make
> the antenna behave like a longer radiator. The radiation resistance also
> increases, just like it would if you made the antenna physically longer.
> So some people tend to regard this as changing the "electrical length".
> Base loading, by contrast, doesn't change the antenna at all. It doesn't
> change the current distribution, radiation pattern, effective length,
> gain, or anything else. All it does is add reactance to the feedpoint
> impedance.
>
> You're certainly free to use whatever terms you like in any way you
> like. But it would be a lot less ambiguous if you just said that by
> adding a base inductor you were changing the feedpoint reactance. That
> statement is correct and not subject to misinterpretation. If your
> objective is to communicate, the listener is a lot more likely to
> understand what you mean if you use this terminology to describe the
> effect of base loading, rather than saying you've made the antenna
> "electrically longer".
>
> > Now I will break the connection between the radiator and car body and I
insert
> > a coil and connect it between the bottom of the radiator and car body.
Can we
> > say we loaded the radiator? (If not what do we call it?)
>

> Yes, that's common and well understood terminology for what you've done.
>
> > Doesn't the resonant
> > frequency of the radiator change, get lower? (I found it does.)
>
> Yes.
>
> Doesn't that
> > change the electrical length of the radiator? (As reflected in change in
> > resonant frequency?) I am not arguing by how much, length of the coil,
length
> > of the wire, length of ....
>
> The problem is in the parentheses, as I elaborated on above.
>
> > Now for the purpose of matching, I can find point on the coil, where
between
> > the ground of the coil and and few turns up, I can find 50 ohm point for
the
> > coax. I know when I do that, say on 20m mobile, my resonant frequency
drops,
> > doesn't that mean that electrical length of the radiator changed?
> > Are we not changing electrical length of conductors by inserting
inductance or
> > capacitance somewhere in the conductor?
>
> See above.
>
> Isn't "loading" loading regardles where
> > and how it is applied?
>
> Yes.
>
> > Where am I wrong?
>
> I wouldn't say you're wrong, just using terminology that has more than
> one meaning. Again, it's your choice. But if you really want to
> communicate, unambiguous terminology is better.
>
> Roy Lewallen, W7EL
>

2483. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 02:15:05 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0301311815.417977d8@posting.google.com>
Source record: 125571

Toni - ec3dds <ec3dds@hotmail.com> wrote in message
news:<h99l3v8kb3co0rsjo0obmov5jbjvl54m89@4ax.com>...
> Hi all,
>
> Would it be a crazy idea to build an HF discone for the higher bands
> (something like 10m~20m)? I've never read on the gain of a discone,
> but I imagine that it must be a little less than an equivalent
> groundplane. OTOH it wouldn't be much bigger than an equivalent
> trapped vertical.
>
> Opinions? I know this is probably not a good idea for a beginner but I
> would really like to build my own antenna and I think a trapped
> vertical is too much for me (I don't have space for normal dipoles).
>
> Could it be better than a fanned inverted-v? It would probably be the
> same size except for the hat.

If I'm not mistaken discones become become serious cloud-warmers above
their lowest resonant frequency.

>
> Thanks
>
> Toni - ec3dds

w3rv

2484. Re: Ringo ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 02:20:13 UTC
From: Kedrid <Kedrid@kedrid.com>
Message-ID: <b1fass$9h8$1@slb3.atl.mindspring.net>
Source record: 125572

You understand correctly. Its one of the 3 Lower ground radials. Its intact, and in place. just about 1/4" shorter then the other 2, it broke on the threads, I didn't even screw it in very hard.. I was just making it snug. But it broke off., then I put it in anyway.

BTW Thank you very very much. I didn't think it would hurt to bad, but I wanted to check, and wondered what it would effect? I tuned it for 146.000 MHZ. I figured it could only change one of 3 peramiters. 1) SWR 2) target frequ. (instead of 146.000. it might have been 145.995 or 147.005..) or something like that. or 3) the radiation patern instead of compleat omni-directional, it might develop the slightest lobe in some off direction. none of which would be compleatly devistating. the SWR gets tuned any way! "The target freq." I guess really same as SWR>. a minor tuneing thing. or the lobe but again so minor, would never be detectable. prob. not even really seen with anything but the most highly sensitive field strengh meters.

"Scott" <acepilot@bloomer.net> wrote in message
news:3E3B1B2D.F7FA149B@bloomer.net...
> If I understand your description correctly, you now have one ground
> radial that is now 1/4" shorter than the others? If it is still
> attached so that you have the three radials, it shouldn't make a rat's
> butt difference. Have fun with it. I've had 2 of them for years now!
>
> Scott
> N0EDV
>
> Kedrid wrote:
> >
> > I got prob. a stupid question! but here it goes.
> >
> > I just got a new Ringo ranger II antenna for 2M. I put it together. No
Prob.
> > there. but when I installed it on the mast. the top went up fine, but
the
> > bottom part has 3 elements. I was tightening them, and 1 broke. I was
like
> > if you over tighten a screw, and twist the top off. :(the bottom
broke
> > off. and I lost about (1/4") a quarter inch of the threaded part of 1
(
> > ONE) element only. the question! Will this drasticly effect the
> > performance of the antenna? or maybe just the radiation patern. This is
my
> > first Cushcraft antenna, and I used a wrench like the instructions said.

I
> > called the distributer, and they said I would have to contact the
> > manufacturer. I am under the impression it shouldn't make a big
difference
> > in performance. Maybe mess with the tuning a little. but I am not sure?
does
> > it effect SWR? target freq.? or just radiation patern?? again it was
> > only 1 (one) of the bottom elements. it was about 1 quarter inch, and
it is
> > the Ringo Ranger ARX-2B..
> >
> > thanks
>
> --
>
> Scott
> http://corbenflyer.tripod.com
> http://groups.yahoo.com/group/ParasolAirplanes
> Building RV-4
> Gotta Fly or Gonna Die!

2485. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 02:20:21 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3B2EE5.2080807@ieee.org>
Source record: 125573

Walter Maxwell wrote:
> What I have always maintained is that total
> re-reflection of power requires a perfect match. It is you who have insisted
> that total re-reflection is not required for a perfect match to occur.

http://www.mellesgriot.com/products/optics/oc_2_1.htm

agrees with you Walt. When destructive interference of the reflected
wavefronts is total, all "lost" reflected intensity will appear as
enhanced intensity in the transmitted beam (forward wave).

Total destructive interference of the reflected wavefronts means
100% re-reflection of the reflected energy back into the forward
wave and certainly appears to be a necessary and sufficient
condition for a perfect match.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2486. Re: Finally... a fractal application that makes sense...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 02:25:42 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <DeG_9.20618$hw4.1249890@news20.bellglobal.com>
Source record: 125574

"Dan, danl, danny boy, Redbeard, actually Greybeard now"
> Has there been a published date and time and I just
> missed it or what?

Oh shoot - I had it wrong - my gawd - I'm very sorry - it was yesterday !!!
We're already about 21 hours into The New Era.

"The defendants in any future libel case are sufficiently numerous,
and their offenses are of large enough magnitude, that a court action
appears inevitable, subject to my 30 January 2003 offer for accepting
settlement."

2487. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 02:50:43 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3B3603.3060102@ieee.org>
Source record: 125575

Bart Rowlett wrote:
> OC_CAM's Razor wrote:
>>My EE prof did that in the 50's but apparently forgot to
>>write it down for posterity.
>
> It's really not a new concept.

What I said proves that it is not a new concept. I have known
it ever since I was in college, maybe even before you did.
Did you know that in 1957? :-)

>>So how can someone take those same
>>two (and only two) signals and, inside a transmission line,
>>somehow combine them (and only them) to get 133.33W out?
>
> Who claims they can do that? In spite of what you claim, Steve Best
> never claimed it's possible for a transformer (or transmission line
> system for that matter) to deliver more average power than was input.

Bart, I think you are mistaken about what Steve has said. The following
two quotes certainly seem to contradict one another.

Steve said:
"The total forward power increases as a direct result of the vector
superposition of forward voltage and current. This DOES NOT require a
corresponding destructive interference process (reduction of power
elsewhere) to balance the law of conservation of power ..."

Note he says no destructive interference is necessary to cause
enhanced intensity (constructive interference) in the transmitted
beam. He has previously said that superposition of two and only two
forward waves, his P1 and P2 waves, is all that is required.

Compare that to what the Melles-Griot web page has to say:
"Clearly, if the wavelength of the incident light and the thickness
of the film are such that a phase difference exists between reflections
of p, then reflected wavefronts interfere destructively, and overall
reflected intensity is a minimum. If the two reflections are of equal
amplitude, then this amplitude (and hence intensity) minimum will be
zero. In the absence of absorption or scatter, the principle of
conservation of energy indicates all "lost" reflected intensity will
appear as enhanced intensity in the transmitted beam. The sum of the
reflected and transmitted beam intensities is always equal to the incident
intensity. This important fact has been confirmed experimentally."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2488. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 03:04:38 UTC
From: artie <silli_artie@hotmail.com>
Message-ID: <3101200319043733 96%silli_artie@hotmail.com>
Source record: 125576

In article <h99l3v8kb3co0rsjo0obmov5jbjvl54m89@4ax.com>, Toni - ec3dds
<ec3dds@hotmail.com> wrote:

> Hi all,
>
> Would it be a crazy idea to build an HF discone for the higher bands
> (something like 10m~20m)? I've never read on the gain of a discone,
> but I imagine that it must be a little less than an equivalent
> groundplane. OTOH it wouldn't be much bigger than an equivalent
> trapped vertical.
>
> Opinions? I know this is probably not a good idea for a beginner but I
> would really like to build my own antenna and I think a trapped
> vertical is too much for me (I don't have space for normal dipoles).
>
> Could it be better than a fanned inverted-v? It would probably be the
> same size except for the hat.
>
> Thanks
>
> Toni - ec3dds

I did one for 10m, chicken wire for the cone. My favourite reference
for discones is the RSGB VHF/UHF manual, Fourth Edition, by Jessop
(well, that's a good introductory reference that doesn't start out with
Maxwell's equations). Discones are in section 8.38 through 8.40.

The impedance of a discone is set by the diameter of the top of the
cone and the spacing to the disc. Once you make the hub portion, which
sets the impedance, the length of the elements sets the lowest
frequency.

An important fact of life about discones -- yes, they are wide band.
But the take-off angle increases with frequency. In the legend on Fig
101 of Jessop, he states, "As the frequency increases above 2:1, the
pattern tends to rise above the horizontal lebel until at about 5:1 in
frequency the main direction of radiation is about 45 degrees from the
horizontal."

You could use that for your advantage for HF work, but that means
deliberately cutting the discone for a lower frequency, making it
larger.

And, they're pretty useless for satellite work, as the response
straight up is off -40dB or more -- this is also shown in Jessop in
Fig. 101. This means the signal from the bird you're monitoring flat

out goes away as it passes directly overhead.

Using the formulas in Jessop, the length of the sides of your cone for 20 meters (14.25 MHz) is 17.275 feet.

The diameter of the cone at the base, and of the disc, is 70% of that, or about 12.09 feet.

Cover it with cloth and call it a teepee!

Cheers and 73--

>

2489. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 04:31:32 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E3B4DFC.805E427@att.net>
Source record: 125577

Hi Cecil,

No arguments this time.

I have been carefully reading and re-reading the now-famous Steve Best QEX article in an effort to better understand the controversy.

Unfortunately I seem to have a blind spot, and I cannot find the quote you selected below. I would like to understand the context.

If you could point out the page number and column (left, center, right) it would be very helpful in my education.

73,
Gene
W4SZ

OC_CAM's Razor wrote:

[snip]

> Bart, I think you are mistaken about what Steve has said. The following
> two quotes certainly seem to contradict one another.
>
> Steve said:
> "The total forward power increases as a direct result of the vector
> superposition of forward voltage and current. This DOES NOT require a
> corresponding destructive interference process (reduction of power
> elsewhere) to balance the law of conservation of power ..."

2490. The New Era

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 04:34:30 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <ivim3v4jt3hrqjv7saio43ihou32b56ivi@4ax.com>
Source record: 125578

On Fri, 31 Jan 2003 21:25:42 -0500, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

>"Dan, danl, danny boy, Redbeard, actually Greybeard now"
>> Has there been a published date and time and I just
>> missed it or what?
>
>Oh shoot - I had it wrong - my gawd - I'm very sorry - it was yesterday !!!
>We're already about 21 hours into The New Era.
>
>"The defendants in any future libel case are sufficiently numerous,
> and their offenses are of large enough magnitude, that a court action
> appears inevitable, subject to my 30 January 2003 offer for accepting
> settlement."

Would that be a reverse class-action suit? Or a reverse-class action
suit? Or what?

The quote is an excellent example of How Not to Be Your Own Lawyer,
though.

2491. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 04:38:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3B4F59.9050808@ieee.org>
Source record: 125579

Bart Rowlett wrote:
> In spite of what you claim, Steve Best
> never claimed it's possible for a transformer (or transmission line
> system for that matter) to deliver more average power than was input.

Here's a collection of assertions by Steve Best over the past few weeks.
Compare his assertions to:
http://www.mellesgriot.com/products/optics/oc_2_1.htm

Steve said:
> ... the voltage and current associated with a wave of 75 W
> (determined when the wave exists individually) adds in phase with the
> voltage and current associated with a wave of 8.33 W (determined when the
> wave exists individually) resulting in a wave having a total voltage and
> current such that the resulting total power is 133.33 W.
>
> If you want to see an example where we have a 75w wave and an 8.33w wave
> superimposing to create a 133.33 w wave where there is NO corresponding
> destructive interference or "power cancellation" take a look at this
> example ...
>
> The total forward power increases as a direct result of the vector
> superposition of forward voltage and current. This DOES NOT require a
> corresponding destructive interference process (reduction of power
> elsewhere) to balance the law of conservation of power (The power
> dissipation in the source increases at the same time the forward power
> increases - it does not need to correspondingly decrease).
>
> In my opinion, it does not establish a requirement that the "lost power" in
> the destructive interference process must somehow reverse direction. If the
> power in the constructive interference process was determined as a direct
> function of the reversal of "lost power" in the destructive interference
> process, superposition would not work as it does ...
>
> Where we would disagree at this point, is if you come back and tell me that
> the "100 W" of forward traveling power "lost" in the destructive
> interference process somehow reverses direction and becomes a rearward
> traveling power in the 50 ohm line, such that it "joins" or "adds" to the
> "100 W and 25 W" of power already there to become the total 225 W of
> rearward traveling power.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!

------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2492. Re: Food for thought

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 05:08:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3B5663.8040308@ieee.org>
Source record: 125580

Gene Fuller wrote:
> Hi Cecil,
>
> No arguments this time.

Here's another quote of Steve's indicating that he is ignorant of the
information presented on the Melles-Griot web page.

> Steve said to Cecil:
>> Your interpretation requires me to accept that the energy involved in the
>> destructive interference somehow manages to reverse direction and join the
>> forward traveling energy. There is no physical mechanism that can cause
>> this to happen, so I simply disagree with your interpretation.

> I have been carefully reading and re-reading the now-famous Steve Best
> QEX article in an effort to better understand the controversy.
>
> Unfortunately I seem to have a blind spot, and I cannot find the quote
> you selected below. I would like to understand the context.
>
> If you could point out the page number and column (left, center, right)
> it would be very helpful in my education.

I didn't mean to imply that quote was from the QEX article. We have been
discussing Steve's article on this newsgroup for a long time and that quote
was from a posting to r.r.a.a in Dec. 2002, and was extremely long. The
following should be enough for you to be able to locate the entire posting
on Google.

>> From: VE9SRB (srbest@att.net)
>> Subject: Re: Forward/Reflected Power
>> Newsgroups: rec.radio.amateur.antenna
>> Date: 2002-12-11 06:56:18 PST

[Hundreds of lines trimmed]

>> 5. The total forward power increases as a direct result of the vector
>> superposition of forward voltage and current. This DOES NOT require a
>> corresponding destructive interference process (reduction of power
>> elsewhere) to balance the law of conservation of power (The power
>> dissipation in the source increases at the same time the forward power
>> increases - it does not need to correspondingly decrease). Voltage and
>> current superimpose in both directions - power is a resulting scalar
>> quantity. The law of conservation of power is satisfied in that the total
>> power delivered to the system is dissipated within the system.
>>

>> With that, I wish you all a Merry Christmas and Happy Holidays. I'll be off
>> for awhile (unless the impending fractal optimization is posted)
>>
>> Take care,
>>
>> Steve VE9SRB

I chided Steve on the above assertion because causing constructive interference
in the light from Alpha Centauri would require that star to immediately increase
its output and get that energy here faster than the speed of light.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2493. NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 05:31:53 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <eomm3vs787flstbbr8o1gan253m1la7e6u@4ax.com>
Source record: 125581

I haven't installed an NMO antenna mount in maybe 15 years. I am about to put one in the roof of my Jeep. Should any additional lubricant/sealer be applied to the NMO O'Ring when installing it? I know some lubricants will attack rubber, but isn't the O'Ring mostly made of silicon anyway?

73, Dick - W6CCD

2494. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 06:37:14 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0301312237.7bc7a1fd@posting.google.com>
Source record: 125582

'Doc <w5lz@cwis.net> wrote in message news:<3E3AC863.24B82CD3@cwis.net>...
> Mark,
> And it seems to me that you definitely have made
> a case for 'where' to put the coil in the body of
> the antenna. It also seems to me that the fact that
> the position of the coil doesn't make it an impedance
> matching coil anymore, but a 'loading' coil, changing
> the 'electrical' length of the antenna. If the 'physical'
> length of the antenna isn't changed to change it's
> electrical properties, then I would think that it would
> be proper to say that it's 'electrical' length has changed
> to have those properties that are desired. Yes, or no?
> 'Doc

Well, I guess yes and no. To me, when it comes to short loaded
verticals,
both base and center loaded coils increase the electrical length of
the whip I suppose. They both load the whip to where the input
impedance is purely resistive at a lower frequency than without the
coils. But just increasing the electrical length as you refer to it is
not the mechanism that improves current distribution. If you have a
base load, and a center load, and the coil is tapped to have each
resonant at the same frequency, I consider them equal lengths
electrically as far as the point of pure resistance. "resonance" They
have different current distributions though. But as Roy noted, only
the center or top loaded whip actually "acts" like it's a longer
radiator than it is. I can see how people view that adding coil turns,
adds electrical length. But it's a different thing than the
"electrical length" Roy is talking about.

Also, myself, I still consider a base mounted coil on a short
vertical as a "loading coil", not an impedance matching coil. I don't
think current distribution should be an issue whether or not a coil
qualifies as a "loading coil" or not. The only job of the coil on a
short vertical is to tune out capacitive reactance. Base or center
mounted, they are doing the same thing. A base loaded short whip will
still require impedance matching, as does the center loaded version.
On the 5/8's antenna, the base coil is the impedance matching coil. A
totally different animal...
Now, when you talk about "electrically lengthening" the radiator as
Roy talks about, improved current distribution and increased radiation
resistance will be required to qualify as such. Dunno...I think I'm
starting to chase my tail. I'll be good and confused if I keep this
up....I don't want to get to the point where I start spewing BS to try
to explain myself. :(MK

2495. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 06:52:40 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3B6EB8.73EF65E7@cwis.net>
Source record: 125583

Mark,
I don't question the fact that an antenna may require
impedance matching, and after 'filtering' all the rest
about current distribution, then your answer to my question
would seem to be, yes. Thank you.
'Doc

2496. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 08:39:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g21n3v8u0dp81aoaatrauuad253qim8ij8@4ax.com>
Source record: 125584

On Fri, 31 Jan 2003 18:07:10 -0600, "David G. Nagel" <nagel@core.com>
wrote:

>The reason to go to the trouble is to see if the monster will work. That's
>what amateur radio is about. Nobody said that it has to be practical.
>
>Dave WD9BDZ
>
>Richard Clark wrote:
>
>>You could do
>> it with 4 maybe - if they were tuned to 20M but then why call it a
>> discone, and why go to the trouble?
>>

Hi Dave,

You have a great tolerance to what constitutes the worth of trouble.
A four spoked discone? You didn't really offer an option of whether
or not it would work (which is arguable in that such a design is so
marginal to qualify as a discone); it wouldn't.

True, it could operate, in the same sense that bedsprings "would"
work, or a wire fence "would" work, but I wouldn't call the first an
array or the second a long wire either.

I've tried it (the discone) for field day with a 40 foot mast and all
necessary accoutrements: not very remarkable and still needed a tuner.
That came from the effort of constructing an eight spoke configuration
which was not a simple feat - 12 to 16 to come to useful design
wouldn't have been any simpler, nor resulted in any remarkable
improvement.

As far as practical goes, I have pages of design details for fractals
that I challenge you to construct just one of ANY of them, and then
report back here to tells us that value of practical.

>Nobody said that it has to be practical.
Practical is the name of the game in any language. HF is the acid
test. Are you sure you are in the right group?

73's
Richard Clark, KB7QHC

2497. Re: wattmeter readings Vs realityEX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 09:20:49 UTC
From: zoran <zkorolje@inet.hr>
Message-ID: <b1g3ic$348$1@sunce.iskon.hr>
Source record: 125585

fcaefcasd
Richard Clark <kb7qhc@attbi.com> wrote in message
news:vh2g3vse9h664bo3rkpin384tje54k62oo@4ax.com...
> On Wed, 29 Jan 2003 15:10:26 GMT, Gene Fuller <W4SZzzzzz@att.net>
> wrote:
>
> > My only reason for continuing to hammer on this
> >superposition principle
>
> Hi Gene,
>
> Its mostly amusing, but pointless. The citation offered agrees with
> long established concepts, those concepts have been gone over and
> agreed to by Cecil as evidenced by his choice of authority.
>
> Cecil, I still wait patiently to find out what it is that I said that
> so convinced you that I have made supporting comments.
>
> Well, it is true, I certainly pointed you in the direction of handling
> this issue with the senior science of Optics. You did seek out a
> competent authority in Melles-Griot. You did offer their treatment of
> the standard math that completely resolves the issue. And now we can
> all go back to a normal life - unless of course, you find some dispute
> with the notion that Powers do not add through Superposition and
> reject this same authority and its science which you held as the
> embodiment of your argument.
>
> But you haven't offered that, and I am content to observe in your
> citation
> >>*** total amplitude
> >>is given by the vector resultant, and intensity is given by the square
> >>of amplitude. ***
> that you now bow to the obvious logic and declaim your absurd comments
> that have been filling these threads.
>
> From this we can see that, Yes you do now accept that under the
> boundary conditions specified by Steve that x + y does in fact equal
> z.
>
> 73's
> Richard Clark, KB7QHC

2498. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 09:21:08 UTC
From: zoran <zkorolje@inet.hr>
Message-ID: <b1g3iv$34b$1@sunce.iskon.hr>
Source record: 125586

XA
Richard Clark <kb7qhc@attbi.com> wrote in message
news:812g3v86mt1ghdg65cemo79l3je8hhorh8@4ax.com...
> On Wed, 29 Jan 2003 05:59:09 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
> >Richard Clark wrote:
> >> I suppose this means we all hold off yet again on our long standing
> >> assessment of your outrageous violations of math and superposition and
> >> celebrate this minor affair first?
> >
> >It's hard to tell
>
> ;-)

2499. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 11:53:44 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3e3bb52f@news.netacc.net>
Source record: 125587

I have never used any addititves in the dozens I have put in. My personnel vehicle has three that have seen 6 years or Rochester winters and have had no problems. Just make sure there are no burrs around the hole where the seal sits.

Steve

"Dick" <rhughes33@cableone.net> wrote in message news:eomm3vs787flstbbr8o1gan253m1la7e6u@4ax.com...
> I haven't installed an NMO antenna mount in maybe 15 years. I am
> about to put one in the roof of my Jeep. Should any additional
> lubricant/sealer be applied to the NMO O'Ring when installing it? I
> know some lubricants will attack rubber, but isn't the O'Ring mostly
> made of silicon anyway?
>
> 73, Dick - W6CCD

2500. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 12:01:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3BB71E.1050006@ieee.org>
Source record: 125588

Dick wrote:
> I haven't installed an NMO antenna mount in maybe 15 years. I am
> about to put one in the roof of my Jeep. Should any additional
> lubricant/sealer be applied to the NMO O'Ring when installing it? I
> know some lubricants will attack rubber, but isn't the O'Ring mostly
> made of silicon anyway?

Just make sure the installation is clean. O'rings are designed to
function without lubricant/sealer. SCUBA divers know that lubricants
can actually cause the seal to be broken and sealer can cause the
O'ring to become rigid and malfunction.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2501. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 14:32:56 UTC
From: AC6V <none@nowhere.com>
Message-ID: <sUQ_9.16446$pY5.1477271@news1.west.cox.net>
Source record: 125589

Dick -- I would contact Larsen about this question -- see URL:
http://www.larsenantennas.com/ for contact info.
Mine sealed fine with the supplied materials. But a friend had leaks -- not sure what he used to seal it.

Also be very careful in drilling the hole as today's cars with thin sheetmetal and curved surfaces can cause dimples in the roof. I know as I did this. I understand Motorola has a tool for avoiding this -- here again I would contact Larsen.

In the old days we used a hole saw or a Greenlee punch -- these didn't work well on today's autos -- check if Larsen has recommendations.

But you can't beat a NMO mount for a good installation -- IMHO

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

-

"Dick" <rhughes33@cableone.net> wrote in message
news:eomm3vs787flstbbr8o1gan253m1la7e6u@4ax.com...
> I haven't installed an NMO antenna mount in maybe 15 years. I am
> about to put one in the roof of my Jeep. Should any additional
> lubricant/sealer be applied to the NMO O'Ring when installing it? I
> know some lubricants will attack rubber, but isn't the O'Ring mostly
> made of silicon anyway?
>
> 73, Dick - W6CCD

2502. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 14:54:35 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <slnn3v81uen1ods4mahkti987o9em52c3r@4ax.com>
Source record: 125590

That's a really good point. I WAS going to just drag out one of my
50-year-old chassis punches and use that. I forgot that I have a 3/4"
Unibit which would be the proper tool for today's cars. Thanks for
the reminder.

73, Dick - W6CCD

On Sat, 01 Feb 2003 14:32:56 GMT, "AC6V" <none@nowhere.com> wrote:

>Dick -- I would contact Larsen about this question -- see URL:
>http://www.larsenantennas.com/ for contact info.
>Mine sealed fine with the supplied materials. But a friend had leaks -- not
>sure what he used to seal it.
>
>Also be very careful in drilling the hole as today's cars with thin
>sheetmetal and curved surfaces can cause dimples in the roof. I know as I
>did this. I understand Motorola has a tool for avoiding this -- here again I
>would contact Larsen.
>
>In the old days we used a hole saw or a Greenlee punch -- these didn't work
>well on today's autos -- check if Larsen has recommendations.
>
>But you can't beat a NMO mount for a good installation -- IMHO

2503. Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 16:13:23 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0302010813.7168dd42@posting.google.com>
Source record: 125591
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate school independent study project. It will be able to handle power levels as high as 200W (thus comfortably handle the full 100W) and power levels as low as a small fraction of a watt.

As you know, SWR meters use transformers as sensors to sample the load current and voltage. Type 43 material looked like the best choice. Most of the SWR meter designs I have seen use type 43 toroids (FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives this material a frequency range of 1-50MHz.

I will be placing my order on Monday, and I am leaning towards FT50-43, since that seems to be the consensus of others who have built SWRmeters.

My three questions:
1. Should I use type 43 or type 61 material?
2. What size toroid should I use?

Regarding question 1:
I was all set to order several type 43 toroidal cores from Palomar Engineers only to find that they recommend type 61 at http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html. According to the Palomar web site, transformers should use type 43 material is for .01-10 MHz but type 61 material for .2-100 MHz. Bytemark lists the wide band frequency range of type 61 material as 10 to
200 MHz

Who is right? Palomar recommends type 61 while Bytemark and the consensus of homebrewers recommend type 43. Under what circumstances is type 61 better, and under what circumstances is type 43 better?

Regarding question 2:

I estimate that in the worst case scenarios (100-200W and a short circuit or open circuit for a load), the RF transformers may be subject up to 1-2 watts. This doesn't sound like much, but my Radio Shack resistors can only handle .5 watts.

I will be using either type 43 or type 61 ferrite material. I noticed that most cores used in other SWR meter designs are size FT-50, which is .50 in. outer diameter, .28 in. inner diameter, and .188 in. thickness. Larger cores take up more space and cost more, but I believe they can also handle more power. (Correct me if I am wrong.)

Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in. thick)? Is there any reason I should use a larger core? A smaller core?

Would using a larger (or smaller) core narrow the bandwidth or make it less sensitive? Remember: I want my device to work from 1.6 MHz to 30 MHz and at power levels as low as a fraction of a watt.

Also, I have heard that Amidon has a formula for estimating the maximum power a transformer can handle without heating up excessively. Can anyone have a link to this?

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com

2504. Re: Top band efficiencyW

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 16:34:50 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302010834.56572c7a@posting.google.com>
Source record: 125592

Roy, the reason I want to look at this book is to get some final
answers about the postings and what ARRL shows.
It is clear that a radio station is more concerned with ground wave
which dissapates over distance.Radiation patterns show half a lobe
which means some radiation tho diminished become a skywave.If on has a
selective radio one can pick up weak signals from low power radio
stations in other states and thus on the uncluttered amateur bands
could thus provide good DX results..
Looking at the radio pattern in the ARRL publication for a collinear
vertical it is shown similar to ground mounted vertical ie, half a
lobe
but with incresed gain and this I have trouble with. When I last got
on
160 using horizontal polarisation and on low power my radiation lobe
was high but again the (lower)edges of the lobe gave me a very
worthwhile signal according to other stations. So o my thinking is
that
the 'true' radiation pattern for a collinear should be a full lobe
at an angle above the horizontal with maybe some distortion on the
underside until the far field is reached, thus providing a DX signal
that would far surpass a vertical with radials.
I am not saying the ARRL is wrong or incorrect I just need more
information so that I may correctly adjust my views.
No E mail please guys my Inbox is malfunctioning.
Regards
Art

y Lewallen <w7el@eznec.com> wrote in message news:<v3m78dtok1tjc7@corp.supernews.com>...
> An aside -- I've got a paperback version of "Transmission Lines,
> Antennas, and Wave Guides", published by Dover in 1965 (cover price
> $2.00!) It's a reprint of the 1945 book. I picked it up used at Powell's
> for $15.00. If you're interested in buying a copy, you might also look
> for this edition. It seems to be well-bound and pretty durable.
>
> Roy Lewallen, W7EL
>
> Art Unwin KB9MZ wrote:
> > richardharrison@webtv.net (Richard Harrison) wrote in message
news:<7257-3E397468-98@storefull-2313.public.lawson.webtv.net>...
> >
> >>Art, KB9MZ wrote:
> >>"Say we have a collinear array---."
> >>
> >>I misspelled King`s name in the list of authors. The collinear story is

> >>in the 1945 book: "Transmission Lines and Wave Guides" from McGraw-Hill.
> >>Authors were three Ph.D`s at Harvard, ---- King, Mimno, and Wing.
> >>
> >>Best regards, Richard H.Harrison, KB5WZI
> >
> >
> > My library states that the book title is
> > Transmission lines,antennas and wave guides.
> > Same authors and publisher,is this correct ?
> > Art

2505. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 16:38:21 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <1KS_9.133068$ui1.3201659@news1.east.cox.net>
Source record: 125593

Bob,

why not ask a German or American ham who is fluently bi-linqual
in both languages to help you with your Titanex communications?

Pete

"Bob Dixon" <Bob_Dixon@osu.edu> wrote in message
news:Bob_Dixon-B8A190.14444130012003@nntp.service.ohio-state.edu...
> Here is the current status of my Titanex beam. I got good advice from
> several hams, and had extensive correspondence with W3FRG. He and I both
> now agree that the element lengths are set wrong. But I can't get up
> there to change them until the weather gets better in Spring.
>
> To review the problem, the instructions are ambiguous, and give two
> possible sets of element lengths. I corresponded with Titanex several
> times, and they told me which was the correct set of lengths, and that
> is what I used. It now appears that their advice was wrong, perhaps due
> to a language problem.

2506. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 17:06:49 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302010906.1f9d7575@posting.google.com>
Source record: 125594

'Doc <w5lz@cwis.net> wrote in message news:<3E3B6EB8.73EF65E7@cwis.net>...
> Mark,
> I don't question the fact that an antenna may require
> impedance matching, and after 'filtering' all the rest
> about current distribution, then your answer to my question
> would seem to be, yes. Thank you.
> 'Doc

I'm still not exactly sure which improved property it is you refer to
though.
Do you mean having the radiator be resonant, or the improved current
distribution? If you filtered the part about current distribution,
then I assume you mean the act of tuning out the capacitive reactance.
I guess you could say yes. You would need to electrically lengthen the
antenna per say in order for it to be resonant at a lower frequency.
But I would say no for the improved current part. I see the main gist
of Roy's post about this. He is using the term to mean another thing
than you are in this case. I guess his initial posts about it were to
warn not to confuse the two uses of the term. His use describes a case
say where you have a top loaded antenna. The current distribution is
linear, and the radiation resistance can rise as high as 4 times the
amount of the base load. The antenna "acts" like it's a taller
radiator than it really is as far as the current distribution. This is
a case as the term as he is using it describes.
I think anyway...I see what he's getting at anyway... MK

2507. Re: Finally... a fractal application that makes sense...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 17:10:32 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <2svn3vonfe981laugns0hfoqh79ur3vcdm@4ax.com>
Source record: 125595

On Fri, 31 Jan 2003 21:25:42 -0500, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> sent into the ether:

>"Dan, danl, danny boy, Redbeard, actually Greybeard now"
>> Has there been a published date and time and I just
>> missed it or what?
>
>Oh shoot - I had it wrong - my gawd - I'm very sorry - it was yesterday !!!
>We're already about 21 hours into The New Era.
>
>"The defendants in any future libel case are sufficiently numerous,
> and their offenses are of large enough magnitude, that a court action
> appears inevitable, subject to my 30 January 2003 offer for accepting
> settlement."
>
>
Oh no! Well I didn't have enough cheesecorn laid in anyway.
Dan, N9JBF
Amateur radio - What a hobby!
Remove left x for direct reply

2508. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 17:27:55 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3E3C039B.6E2ED979@mfi.net>
Source record: 125596
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

Jason Hsu wrote:
>
> I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
> school independent study project. It will be able to handle power
> levels as high as 200W (thus comfortably handle the full 100W) and
> power levels as low as a small fraction of a watt.
>
> As you know, SWR meters use transformers as sensors to sample the load
> current and voltage. Type 43 material looked like the best choice.
> Most of the SWR meter designs I have seen use type 43 toroids
> (FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives
> this material a frequency range of 1-50MHz.
>
> I will be placing my order on Monday, and I am leaning towards
> FT50-43, since that seems to be the consensus of others who have built
> SWRmeters.
>
> My three questions:
> 1. Should I use type 43 or type 61 material?
> 2. What size toroid should I use?
>
> Regarding question 1:
> I was all set to order several type 43 toroidal cores from Palomar
> Engineers only to find that they recommend type 61 at
> http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html.
> According to the Palomar web site, transformers should use type 43
> material is for .01-10 MHz but type 61 material for .2-100 MHz.
> Bytemark lists the wide band frequency range of type 61 material as 10
> to
> 200 MHz
>
> Who is right? Palomar recommends type 61 while Bytemark and the
> consensus of homebrewers recommend type 43. Under what circumstances
> is type 61 better, and under what circumstances is type 43 better?
>
> Regarding question 2:
>
> I estimate that in the worst case scenarios (100-200W and a short
> circuit or open circuit for a load), the RF transformers may be
> subject up to 1-2 watts. This doesn't sound like much, but my Radio
> Shack resistors can only handle .5 watts.
>

> I will be using either type 43 or type 61 ferrite material. I noticed
> that most cores used in other SWR meter designs are size FT-50, which
> is .50 in. outer diameter, .28 in. inner diameter, and .188 in.
> thickness. Larger cores take up more space and cost more, but I
> believe they can also handle more power. (Correct me if I am wrong.)
> Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in.
> thick)? Is there any reason I should use a larger core? A smaller
> core?
>
> Would using a larger (or smaller) core narrow the bandwidth or make it
> less sensitive? Remember: I want my device to work from 1.6 MHz to 30
> MHz and at power levels as low as a fraction of a watt.
>
> Also, I have heard that Amidon has a formula for estimating the
> maximum power a transformer can handle without heating up excessively.
> Can anyone have a link to this?
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

You might find more information at http://www.amidoncorp.com/

As far as the different materials, why not try it with both types?
Then you can include the data as part of your project to show which type
is better, and why.
--

Michael A. Terrell
Central Florida

2509. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 17:41:02 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <OET_9.15941$rq4.1163125@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125597

"Walter Maxwell" <w2du@iag.net> wrote in message
news:fSF_9.1035$6P2.127650@newsread1.prod.itd.earthlink.net...
>
>
> What say now?
>
> Walt
>
>

Two things.

1) You do not yet understand how I apply superposition with forward voltages.

I do not use "source voltage" as you define it as one of the "forward voltages."

I assume that your "source voltage" is the total voltage in the line in the steady state (VT), which is VF + VR. Is this your definition of "source voltage?

In any event, the two forward voltages that I use in superposition are the initial forward voltage in the line at t=0 and the steady state re-reflected voltage in the line. When I add these voltages I get the correct forward voltage VF and the correct forward power PF. Further discussion on this is only valuable once you fully understand how I apply superposition. Not understanding it and then telling me its wrong is of no value.

2) PD = PF - PR

There is only one interpretation of this equation.

The delivered power = forward power - reflected power.

This equation is valid when a match exists and when a match does not exist. You can't interpret it one way when a match exists and another way when a mismatch exists.

For example: wattmeter readings PF = 133.33 W, PR = 33.33

PD =100 W. The power delivered to the line is 100 W. What other interpretation is there? I can demonstrate these readings with a match or with a mismatch. The equation works under every condition but you cannot interpret anything about a match, mismatch or total re-reflection of power from this relationship.

If you read my articles again and understand how I apply superposition, I'll continue this discussion.

Steve VE9SRB

2510. Re: Portable 2 meter???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 17:46:11 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E3C07E3.F61C0542@osite.com.br>
Source record: 125598

E wrote:
>
> I'm looking for suggestions for a portable 2 meter antenna. I have a Yeasu

Try the portable quad in the Antenna Book. There's also lots
of Yagis. A bit of tinkering and you can disassemble in a
couple of minutes.
It depends on where you are or what you are planning, but
just a plain ground-plane may suffice.

--
Paulo E.P. Marcondes
pepm@osite.com.br

2511. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 17:59:06 UTC
From: ec3dds@hotmail.com
Message-ID: <ac007f55.0302010959.453e2368@posting.google.com>
Source record: 125599

Kona <konastan@pinoymail.com> wrote in message
news:<ejz_9.6482$ce4.1289314@twister.socal.rr.com>...
> I would like to see what this would look like also
>
> larryc@northwest.com wrote:
>
> > it's not such a crazy idea, Toni. Tho, the vertical height required for a
> > 20m discone might be more than you think. Also, the real estate required
> > for the discone is much more. Picture a nose cone, with a base diameter as
> > wide as the height of the discone. I have some plans for a 20M (and up)
> > discone, out of an older ham radio book. I can scan the diagram and email
> > it to you.
> >
> > larryc, n3ccw
> > ============

I would be grateful if you could send me those plans.

What I wanted to do is first build a VHF model with a similar
construction of what would be "the real thing", and then, if it works,
go for the big one.

As for the dimensions, I think it would be arround 4.5m (15 ft.) high
and 5m (16 ft.) diameter. Than is, in fact, smaller than the Diamond
or Ecoantenne multiband I was thinking about, They are taller and
require about the same real-state (but they go down to 40 and 80m
bands).

For the disk, I would try to find several CB whips or similar
self-supporting whips that donï¿½t offer much resistance to the wind.

What I wonder the most is how many wires should I use for the cone.
Would 6 or 8 be enought? I would probable try some not-so-round
arrangement so that I can hold the whole "thing" with only 3 or 4 guy
wires, as it would all be mounted on a buildingï¿½s roof.

Well, as I am writing this I keep seeing more and more difficulties. I
will probably try first to do the VHF model and see what happens.

73, Toni - ec3dds

2512. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 18:20:43 UTC
From: ec3dds@hotmail.com
Message-ID: <ac007f55.0302011020.2969d2bc@posting.google.com>
Source record: 125600

artie <silli_artie@hotmail.com> wrote in message
news:<310120031904373396%silli_artie@hotmail.com>...

> I did one for 10m, chicken wire for the cone. My favourite reference
> for discones is the RSGB VHF/UHF manual, Fourth Edition, by Jessop
> (well, that's a good introductory reference that doesn't start out with
> Maxwell's equations). Discones are in section 8.38 through 8.40.
>
> The impedance of a discone is set by the diameter of the top of the
> cone and the spacing to the disc. Once you make the hub portion, which
> sets the impedance, the length of the elements sets the lowest
> frequency.
>
> An important fact of life about discones -- yes, they are wide band.
> But the take-off angle increases with frequency. In the legend on Fig
> 101 of Jessop, he states, "As the frequency increases above 2:1, the
> pattern tends to rise above the horizontal lebel until at about 5:1 in
> frequency the main direction of radiation is about 45 degrees from the
> horizontal."
>
....
>
> Using the formulas in Jessop, the length of the sides of your cone for
> 20 meters (14.25 MHz) is 17.275 feet.
>
> The diameter of the cone at the base, and of the disc, is 70% of that,
> or about 12.09 feet.
>
....
>
>

I remember to have read somewhere that the practical frequency range
of a discone is about 3:1 to 4:1, so this means that the 20m one could
maybe work on 6m, but I wonï¿½t be able to test it (on TX) because I
donï¿½t have a license for that band. What I really want to see it
working is on 10-12-15-17 and 20. That would make a nice multiband
antenna out of some tv masts, wire and whips for the disc, even if it
needs to use the tuner to adjust SWR.

73, Toni - ec3dds

2513. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 18:34:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3C1336.2050109@ieee.org>
Source record: 125601

VE9SRB wrote:
> 1) You do not yet understand how I apply superposition with forward
> voltages.

The stumbling block seems to be that Mr. Maxwell does not believe
that the superposition principle applies to single-source systems.
Before the argument can proceed, he has to be convinced that superposition
works for single-source systems. If you or someone else cannot do that,
there's no reason to continue to argue with him. You rely on
superposition and he says it doesn't apply to single source systems
= argument stalemate until one side proves his assertion.

You argued for a long time that there was no destructive/constructive
interference occurring at a match point. I had to find a reference
that proved there was. Once you accept that you were wrong about the
destructive/constructive interference occurring at a match point (in a
system with reflections, except for orthogonal signals), you and I can
proceed to argue the details of that interference and how it supplies
your missing energy "lost" in the wave cancellation process.

Many readers of this newsgroup do not accept the wave reflection
model. You use the wave reflection model extensively. The only
argument you can mount with those readers is whether the wave
reflection model is valid or not. It doesn't do any good to
argue the details of a model with someone who doesn't accept
the model.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2514. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 18:54:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <dv5o3vgsii14hi29m6js6p5ee5r08065rl@4ax.com>
Source record: 125602

On Fri, 31 Jan 2003 20:07:16 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Roy Lewallen wrote:
>> If you care where and how energy is moving, you'd better care. Power
>> moves back and forth each cycle, and so does energy.
>
>Well, if you want to take it to that level, Roy, is the angular
>momentum of the quarks conserved or not?

Hi Cecil,

It is YOUR proposition that is being tested. It is thus YOUR question
to answer if you choose to delve into the quantum mechanics.

Many have repeatedly offered that your embellishments are unnecessary,
this one even more so. Why you should persist to mine for a dodge to
simpler questions is an expression of the vacuity of that proposition.

73's
Richard Clark, KB7QHC

2515. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 19:19:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pg6o3v0ffeaojk178g2mlbaf4evct2qf9e@4ax.com>
Source record: 125603

On Sat, 01 Feb 2003 01:59:39 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>Exactly, PF = PD + PR is precisely equal mathematically to 6.17
>
>This means that forward power equals source power plus reflected power, a
>fact that you have always rejected.

Hi All,

It is this single entry that has impelled me into the discussion that originated around the casual operation of re-arranging formulas to suit tastes.

Mathematics and its expression in the form of formulas is not an artifice of a high school memory short-cut for a final exam. Formulas are also formal, logical constructs. When you shuffle the terms as you both are very fond of doing, you are in fact creating NEW relationships that may have never existed in the original source's recitation. Your having done this invalidates ANY claim to that authority (you denied it yourself through your manipulations).

Can you in fact shuffle these terms? They all resolve to identical outcomes, true, but not for the same reasons if you start imparting rationales for why your formula is better than some one else's (or the authority's for that matter).

Without explaining the abbreviations (we can guess them anyway) and remaining content neutral, ask yourself:
PF = PD + PR
Is PF dependant upon PD and PR, allowing that PD and PR are independent of PF? Do either PD or PR follow PF, or do they lead it? If they (together, or independently) follow, they (together, or independently) are dependant, and on the wrong side of the equation.

I won't bother to triplicate this above for the remaining two variations. The form of my argument should be clear: a formula consists of a dependency on the left composed of (dependant upon) independent variables and constants on the right.

My guess is everyone would be content to live with any of the three forms offered, which leads to the logical conclusion that all three are dependencies of a fourth agent. You guys don't have all your oars in the water.

73's
Richard Clark, KB7QHC

2516. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 19:20:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bm7o3v0oeivvkth0gk1g34unvd6co818a3@4ax.com>
Source record: 125604

On Sat, 01 Feb 2003 17:41:02 GMT, "VE9SRB" <srbest@att.net> wrote:

>2) PD = PF - PR
>
>There is only one interpretation of this equation.
>

op. cit.

73's
Richard Clark, KB7QHC

2517. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 19:32:47 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3o86rcdup0ld2@corp.supernews.com>
Source record: 125605

My point exactly when I posted the following a couple of weeks ago:

Step 1: Let a=b.
Step 2: Then a^2 = ab,
Step 3: a^2 + a^2 = a^2 + ab,
Step 4: 2 a^2 = a^2 + ab,
Step 5: 2 a^2 - 2 ab = a^2 + ab - 2 ab,
Step 6: and 2 a^2 - 2 ab = a^2 - ab.

Step 7: This can be written as 2 (a^2 - a b) = 1 (a^2 - a b),
Step 8: and cancelling the (a^2 - ab) from both sides gives 1=2.

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:pg6o3v0ffeaojk178g2mlbaf4evct2qf9e@4ax.com...
> On Sat, 01 Feb 2003 01:59:39 GMT, "Walter Maxwell" <w2du@iag.net>
> wrote:
>
> Hi All,
>
> It is this single entry that has impelled me into the discussion that
> originated around the casual operation of re-arranging formulas to
> suit tastes.
>
> Mathematics and its expression in the form of formulas is not an
> artifice of a high school memory short-cut for a final exam. Formulas
> are also formal, logical constructs. When you shuffle the terms as
> you both are very fond of doing, you are in fact creating NEW
> relationships that may have never existed in the original source's
> recitation. Your having done this invalidates ANY claim to that
> authority (you denied it yourself through your manipulations).

2518. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 19:46:11 UTC
From: bowman <bowman@montana.com>
Message-ID: <b1h805$13cjmk$1@ID-159066.news.dfncis.de>
Source record: 125606
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:

> Is there any reason I should use a larger core? A smaller
> core?

Other than the electrical characteristics, there is the simple mechanics of getting the required number of turns on the core. A smaller unit is also easier to mount.

iirc, 43 mix is about 8 times more permeable than 61 and the formula is

turns = 1000 * sqrt(mH / A) where A is the inductance index which is proportional to the permeability for a given size.

Fewer turns, smaller size, possibly less distributed capacitance.

Then there is the junkbox factor -- the person who designed it had a bunch of T-50-43 cores at hand.

2519. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 20:15:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <379o3v0l0eucms1mp03kfs6smmmj5gi44t@4ax.com>
Source record: 125607
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

On 1 Feb 2003 08:13:23 -0800, jason_hsu@my-deja.com (Jason Hsu) wrote:

>I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
>school independent study project. It will be able to handle power
>levels as high as 200W (thus comfortably handle the full 100W) and
>power levels as low as a small fraction of a watt.
>
>As you know, SWR meters use transformers as sensors to sample the load
>current and voltage. Type 43 material looked like the best choice.
>Most of the SWR meter designs I have seen use type 43 toroids
>(FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives
>this material a frequency range of 1-50MHz.

This is an adequate short hand for the veteran, but is too vague for
your needs. You would be far more informed if you found the same spec
as a graph across frequency, especially with overlays of the spectrum
of core formulations. My Amidon references do this in spades.

>
>I will be placing my order on Monday, and I am leaning towards
>FT50-43, since that seems to be the consensus of others who have built
>SWRmeters.
>
>My three questions:
>1. Should I use type 43 or type 61 material?
>2. What size toroid should I use?

Buy $30 worth of an assortment of types (even beyond these two) and
core sizes (or binocular style). It is a cheap and vastly more
educating experience to settle down with an array of candidates and
ask them all one question, while measuring a variety of key
characteristics. Then change the something.... Run this loop a dozen
times and there will be damn few questions remaining.

>
>Regarding question 1:
>I was all set to order several type 43 toroidal cores from Palomar
>Engineers only to find that they recommend type 61 at
>http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html.

Again, a short hand specification.

>According to the Palomar web site, transformers should use type 43
>material is for .01-10 MHz but type 61 material for .2-100 MHz.

>Bytemark lists the wide band frequency range of type 61 material as 10
>to
>200 MHz
>
>Who is right? Palomar recommends type 61 while Bytemark and the
>consensus of homebrewers recommend type 43. Under what circumstances
>is type 61 better, and under what circumstances is type 43 better?

A graph would make this a slam dunk. Spend some effort in finding
that.

>
>Regarding question 2:
>
>I estimate that in the worst case scenarios (100-200W and a short
>circuit or open circuit for a load), the RF transformers may be
>subject up to 1-2 watts. This doesn't sound like much, but my Radio
>Shack resistors can only handle .5 watts.

On a weight basis, how many ï¿½W resistors are needed to equal the
weight of your core? This may seem absurd, but it is a first cut
approximation considering bulk alone. The amount of sense, beyond
that, is incumbent upon how like the two are. They aren't. So I
would offer that this is a lower limit because the cores have a
uniform composition.

Again, if you go hog wild in ordering cores; you can perform your own
stress test to destruction as part of your analysis (last test
presumably, unless you want to test the efficacy of epoxied ferrite
shards).

My guess is about two Watts for the usual core applied to RG-58
current BalUns. I would suppose 5W would be destructive, but would
love to hear from your results.
>
>I will be using either type 43 or type 61 ferrite material. I noticed
>that most cores used in other SWR meter designs are size FT-50, which
>is .50 in. outer diameter, .28 in. inner diameter, and .188 in.
>thickness. Larger cores take up more space and cost more, but I
>believe they can also handle more power. (Correct me if I am wrong.)
>Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in.
>thick)? Is there any reason I should use a larger core? A smaller
>core?

You don't want power in the core at all. You are probably over sizing
this. If you simply cracked open your rig and looked at its SWR
bridge, you would then see a design tolerant to the same criteria
you've put to your project - n'est pas?
>
>Would using a larger (or smaller) core narrow the bandwidth or make it
>less sensitive? Remember: I want my device to work from 1.6 MHz to 30
>MHz and at power levels as low as a fraction of a watt.

>
>Also, I have heard that Amidon has a formula for estimating the
>maximum power a transformer can handle without heating up excessively.
> Can anyone have a link to this?
>
>Jason Hsu, AG4DG
>usenet@@@@jasonhsu.com

Hi Jason,

Core size is material only for dimensional demands of the lines passing through its center. The point of most BalUn construction and bridge design is found in isolation. Large is good in that respect because it serves to separate. However, dimension, as a function of wavelength demands a conflicting requirement for shortness of lines.

As for:
>I am working on a better 1.6MHz-30MHz SWR/wattmeter
Better? What are you bringing to the table or is this a quest for enlightenment? Better is an advertising term, not an engineering specification.

73's
Richard Clark, KB7QHC

2520. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 20:36:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hrbo3v49i2n9lj4lfk01qhids6dosu7eif@4ax.com>
Source record: 125608

On Fri, 31 Jan 2003 13:27:13 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:
>http://www.destgulch.com/movies/luke/luke18.wav
>
>73,
>
>Wes Stewart, N7WS
>
Thanx Wes,

For the classic cultural touchstone. Strother Martin has always been
a most interesting character actor for me.

73's
Richard Clark, KB7QHC

2521. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 21:00:08 UTC
From: richardharrison@webtv.net
Message-ID: <28925-3E3C4368-297@storefull-2317.public.lawson.webtv.net>
Source record: 125618

Steve, VE9SRB wrote:
"For example:

Wattmeter readings PF = 133.33W

PR = 33.33(W)

PD = 100W."

That`s plenty clear!

Steve also wrote:
"---but you cannot interpret anything about a match---."

Not so clear. Steve must imply a match between the sender and transmission line is an unknown condition because PR indicates the severity of the mismatch between the load and the transmission line, given PF and PD.

Steve is right. PD = PF-PR. It`s true no matter how it`s rearranged by adding or subtracting the same value to both sides of the equation.

Best regards, Richard Harrison, KB5WZI

2522. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 21:09:48 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3C379C.6020508@ieee.org>
Source record: 125609

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Well, if you want to take it to that level, Roy, is the angular
>>momentum of the quarks conserved or not?
>
> It is YOUR proposition that is being tested. It is thus YOUR question
> to answer if you choose to delve into the quantum mechanics.

It is Dr. Best's proposition that is being tested. I have no proposition except that Dr. Best is mistreating energy. As Bart said, I have NOT invented anything new. This stuff is virtually a no-brainer and has been for at least half a century, maybe longer. "You can't get blood out of a turnip" comes to mind.

> Many have repeatedly offered that your embellishments are unnecessary,
> this one even more so. Why you should persist to mine for a dodge to
> simpler questions is an expression of the vacuity of that proposition.

Maybe you should review the humor of irony, Richard, and get back to us. You remember how to kid the kidder? How to flim-flam the flim-flam man? How to out-magic the magician? How to sting the con man?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2523. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 21:16:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3C3942.6050701@ieee.org>
Source record: 125610

Richard Clark wrote:
> My guess is everyone would be content to live with any of the three
> forms offered, which leads to the logical conclusion that all three
> are dependencies of a fourth agent. You guys don't have all your oars
> in the water.

I couldn't have said it better myself, I really couldn't. The fourth agent is destructive/constructive interference or wave cancellation/ enhanced intensity or whatever other handle one chooses to hang on it. At an impedance discontinuity, energy reverses direction except when the waves are orthogonal. All of the rearward-traveling energy reverses direction when the impedance discontinuity is a match point.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2524. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 21:18:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3C3993.90809@ieee.org>
Source record: 125612

Richard Clark wrote:
> On Sat, 01 Feb 2003 17:41:02 GMT, "VE9SRB" <srbest@att.net> wrote:
>>2) PD = PF - PR
>>There is only one interpretation of this equation.
>>
> op. cit.

Does that mean there might be an oppocite interpretation?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2525. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 21:19:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qjeo3v48lhc9271kk4thisk78qi39fq764@4ax.com>
Source record: 125611

On Sat, 01 Feb 2003 15:09:48 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Maybe you should review the humor of irony, Richard, and get back to
>us.

Hi Cecil,

*ï¿½
It is hard to imagine how you've missed my entertainment reviews - or
is this an invitation to satisfy a craving?

73's
Richard Clark, KB7QHC

2526. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 21:25:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3C3B36.4010704@ieee.org>
Source record: 125613

Fred Hambrecht Sr wrote:
> My point exactly when I posted the following a couple of weeks ago:
>
> Step 1: Let a=b.
> Step 2: Then a^2 = ab,
> Step 3: a^2 + a^2 = a^2 + ab,
> Step 4: 2 a^2 = a^2 + ab,
> Step 5: 2 a^2 - 2 ab = a^2 + ab - 2 ab,
> Step 6: and 2 a^2 - 2 ab = a^2 - ab.
>
> Step 7: This can be written as 2 (a^2 - a b) = 1 (a^2 - a b),
> Step 8: and cancelling the (a^2 - ab) from both sides gives 1=2.

You must have missed my posting, Fred. (a^2-ab) equals zero and
division by zero is undefined. 1/0 is undefined and 2/0 is
undefined so what you have is undefined = undefined. That might
or might not be true. Is Aleph(null) equal to Aleph(null)? If
I remember right, Aleph(null) is what you get when you divide
a natural number by zero. Aleph(null) is the smallest transfinite
cardinal number.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2527. Re: Ringo ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 21:43:55 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302011343.69d527b9@posting.google.com>
Source record: 125614

"Kedrid" <Kedrid@kedrid.com> wrote in message
news:<b1fass$9h8$1@slb3.atl.mindspring.net>...
> You understand correctly. Its one of the 3 Lower ground radials. Its
> intact, and in place. just about 1/4" shorter then the other 2, it broke on
> the threads, I didn't even screw it in very hard.. I was just making it
> snug. But it broke off., then I put it in anyway.
>
> BTW Thank you very very much. I didn't think it would hurt to bad, but I
> wanted to check, and wondered what it would effect? I tuned it for 146.000
> MHZ. I figured it could only change one of 3 peramiters. 1) SWR 2) target
> frequ. (instead of 146.000. it might have been 145.995 or 147.005..) or
> something like that. or 3) the radiation patern instead of compleat
> omni-directional, it might develop the slightest lobe in some off direction.
> none of which would be compleatly devistating. the SWR gets tuned any way!
> "The target freq." I guess really same as SWR>. a minor tuneing thing. or
> the lobe but again so minor, would never be detectable. prob. not even
> really seen with anything but the most highly sensitive field strengh
> meters.
>
>
There will probably be no detectable difference. The radials are for
feedline decoupling, and they aren't particularly critical. They are
not antenna elements per say, as in a true ground plane, and I doubt
any real skewing would occur. There is probably more distortion from
the phasing stub sticking out, than there would be from a .25 inch
difference in a decoupling radial. I guess you could tack a 1/4 inch
piece of metal on the end to make up for it. The stainless rods are
not going to be easy to solder to though...I wouldn't worry about it
myself. MK

2528. Re: Ringo ranger II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 21:51:50 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <kcX_9.7590$yU6.5170@fe01>
Source record: 125615

Won't make a diff on swr, or the radiation pattern. the original ringo ranger didn't have the ground radials, which allowed the coax to radiat slightly, warping the radiation pattern . A.E.A., the creator of the "ISO POLE" antenna made a big point about their antenna Not RADIATING A SIGNAL from the coax, because their ISOPOLE was "decoupled" the isopole looks like an inverted ice cream cone, with a 1/2 wave whip attached at the top of the cone. Cushcrafts reply was the ground radials , 1/2 wavelength down the mounting pole. this decouples the radiation from the coax. The test that was demonstrated at conventions, btw, was a loop of wire about 2 inchs in diameter, soldered to a lamp, and held next to the coax . but, again, you need not sweat this small error, as should have little or no effect on decoupleing rf from your coax. As Information, Jim NN7K

2529. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 21:59:56 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3ogqo181v6992@corp.supernews.com>
Source record: 125616

Duh!

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E3C3B36.4010704@ieee.org...
> Fred Hambrecht Sr wrote:
> > My point exactly when I posted the following a couple of weeks ago:
> >
> > Step 1: Let a=b.
> > Step 2: Then a^2 = ab,
> > Step 3: a^2 + a^2 = a^2 + ab,
> > Step 4: 2 a^2 = a^2 + ab,
> > Step 5: 2 a^2 - 2 ab = a^2 + ab - 2 ab,
> > Step 6: and 2 a^2 - 2 ab = a^2 - ab.
> >
> > Step 7: This can be written as 2 (a^2 - a b) = 1 (a^2 - a b),
> > Step 8: and cancelling the (a^2 - ab) from both sides gives 1=2.
>
> You must have missed my posting, Fred. (a^2-ab) equals zero and
> division by zero is undefined. 1/0 is undefined and 2/0 is
> undefined so what you have is undefined = undefined. That might
> or might not be true. Is Aleph(null) equal to Aleph(null)? If
> I remember right, Aleph(null) is what you get when you divide
> a natural number by zero. Aleph(null) is the smallest transfinite
> cardinal number.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2530. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 22:11:29 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <GuX_9.7690$yU6.3452@fe01>
Source record: 125617

Motorola, when supplying these same NMO mounts, supplies a small tube of silicon grease, tho normally these seal fine without applying it-- jim NN7K

> >Mine sealed fine with the supplied materials. But a friend had leaks -- not
> >sure what he used to seal it.

2531. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 22:17:58 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3ohsi8p5e082d@corp.supernews.com>
Source record: 125519

Whoops hit the key before I finished the message. I see your problem Cecil, there is no division, 2*0 does indeed equal 1*0 as any number multiplied by zero is zero. The fallacy lies in misstating the answer. I am not alone in this process is the point I was alluding to...

> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E3C3B36.4010704@ieee.org...
> > Fred Hambrecht Sr wrote:
> > > My point exactly when I posted the following a couple of weeks ago:
> > >
> > > Step 1: Let a=b.
> > > Step 2: Then a^2 = ab,
> > > Step 3: a^2 + a^2 = a^2 + ab,
> > > Step 4: 2 a^2 = a^2 + ab,
> > > Step 5: 2 a^2 - 2 ab = a^2 + ab - 2 ab,
> > > Step 6: and 2 a^2 - 2 ab = a^2 - ab.
> > >
> > > Step 7: This can be written as 2 (a^2 - a b) = 1 (a^2 - a b),
> > > Step 8: and cancelling the (a^2 - ab) from both sides gives 1=2.
> >
> > You must have missed my posting, Fred. (a^2-ab) equals zero and
> > division by zero is undefined. 1/0 is undefined and 2/0 is
> > undefined so what you have is undefined = undefined. That might
> > or might not be true. Is Aleph(null) equal to Aleph(null)? If
> > I remember right, Aleph(null) is what you get when you divide
> > a natural number by zero. Aleph(null) is the smallest transfinite
> > cardinal number.
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>

2532. Re: question on MFJ 931 artificial ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-01 22:20:12 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <SCX_9.7756$yU6.1768@fe01>
Source record: 125520
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.shortwave

Dimitris- this beast is tuned WHILE TRANSMITTING, for maximum current on the rf ground current meter, and like most meters, has much greater sensitivity at higher frequencies. MFJ's web page should have the manual for this (and other products of theirs). from what mine does , the "c" position of the inductor, seems to max with the capacitance control, the hightr freqs will be more like "F", or "G" to tune with the capacatance control . and dont grab the "ground" insulator, or wire to your counterpoise , as it can become a "VERY SHOCKING EXPERIENCE" !! Jim NN7K

"Dimitris Mylonopoulos" <mylond@otenet.gr> wrote in message news:b1dose$8hn$1@usenet.otenet.gr...
> I 've recently bought a used MFJ931 artificial ground and I wand to use it
> with a receiver.
> what's the proper set up for maximun performance, if any?
> dimitris
>
>

2533. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 00:02:40 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3e3c6223$1@news.netacc.net>
Source record: 125521

<Jimnn7k@reno.rmci.net> wrote in message news:GuX_9.7690$yU6.3452@fe01...
> Motorola, when supplying these same NMO mounts, supplies a small tube of
> silicon grease, tho normally these seal fine without applying it-- jim
NN7K
>
>

Must be buying from a different Mororola than we buy from. We have 60+ on hand and I have never seen a tube of anyting shipped with these mounts.

Steve

2534. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 00:59:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1hqhb$h1n$1@knossos.btinternet.com>
Source record: 125523

I hope nobody raises any objections if I suggest the following short note, perhaps with a little editting, be included in amateur "bibles". It may help to eradicate popular misconceptions relating to location of loading coils in short antennas.
==========
"Actually, turns-per-inch and wire diameter of a single-layer multi-turn solenoid does not affect its self-capacitance. Self-capacitance is primarily a function of a coil's overall length and diameter.

The (equivalent) capacitance I refer to is the value when connected across the ends of a coil of known (eg., already calculated) inductance resonates it to its self-resonant frequency.

It is sometimes useful to calculate the self-resonant frequency of a coil from its diameter, length and number of turns. The job is as good as done when L and C have been separately calculated.

As an example, if a short vertical antenna is coil-loaded very near to its top with only a very low capacitance rod or hat above it, then the resonant frequency of the antenna will be only slightly lower than the self-resonant frequency of the coil itself. The coil will be physically large and of large inductance - the capacitance of the rod to ground being only a fraction of he self-capacitance of the coil.

This results in a very large current circulating round the coil and its shunt self-capacitance which radiates nothing but heat. Power is lost in coil
resistance and efficiency of the whole system falls excessively. With antennas and coils of ordinary proportions, such as used on vehicles, this effect limits the height of loading coils to about 2/3 of overall antenna height. In some cases the improvement due to a raised coil may not be worth the mechanical inconvenience of raising it above the base. Locating the coil in the tuner has the advantage of allowing multi-band operation. Only screwdrivers offer the best of both worlds by locating the tuner in the antenna itself.

Program LOADCOIL allows a loading coil to slide up/down a vertical shorter than 1/4-wavelength searching for maximum efficiency. Watch what happens when the loading coil gets very near to the top. See how frequently maximum efficiency occurs with the coil so low down it's not worth the trouble of taking it out of the tuner box."
==========

PS: Another design application occurs in the case of a very short centre-loaded dipole which in my opinion is an underated 'balcony' antenna and is worth experimenting with. It is the counterpart of the 'magloop'.

Although efficiency is inevitably less it is more economical in construction and can be fed either via coax and a central link winding round the coil or over a twin line. Coil self-capacitance is an appreciable fraction of the total capacitance between the ends (the loading rods) of the antenna and must be taken into account. See program MIDLOAD which does all calculations including coil and rod dimensions.

PPS: Program SOLNOID2, basically a coil design, now a few years old, if I remember correctly also includes self-resonant frequency.

> ---
> ======================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
y> ======================
>
>

2535. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 00:59:38 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1hqhp$h1n$2@knossos.btinternet.com>
Source record: 125524

Cecil,

"Quarks" is an Irish name. Way back in 1947, while travelling on a N.Ireland railway train drawn by an ancient 0-4-2 steam engine, I was informed by a fellow traveller that Quarks lived under the seats.

If a passenger fell asleep while on a jouney (a likely event on account of railway slowness) Quarks would crawl out, painlessly bite your testicles and then crawl back under the seat again suitably refreshed.

Needless to say I kept myself wide awake for the next 30 miles and two hours.

There was a framed notice, under glass, on the wall above the seats. It ead -

"It is the opinion of many Doctors of Medicine, expectorating on the floor of this compartment may assist in the spread of disease. While travelling on this train gentlemen are respectfully reminded to bear this notice in mind. Thank you."

There was no warning about quarks.

It was not until many years later that I learned from the New Scientest weekly that Quarks are the basic constituents of all matter in the Universe and that they come in many varieties including up, down, in various colours, and queer.

But I'm none the wiser !

Reg

2536. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 01:01:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3C6DF1.3010401@ieee.org>
Source record: 125525

Fred Hambrecht Sr wrote:
> Whoops hit the key before I finished the message. I see your problem Cecil,
> there is no division, 2*0 does indeed equal 1*0 as any number multiplied by
> zero is zero. The fallacy lies in misstating the answer. I am not alone in
> this process is the point I was alluding to...
>
>>>>Step 8: and cancelling the (a^2 - ab) from both sides gives 1=2.

The problem seems to me to be with not knowing that "canceling
a^2-ab from both sides" *IS* division. "Canceling" in that context
means dividing both sides of the equation by a^2-ab=0. Shame on you.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2537. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 01:09:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3ortfkfuffr4c@corp.supernews.com>
Source record: 125526
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

With any of the ferrites of reasonable permeability, coupling isn't a problem in a transformer -- you'll get very close to a unity coefficient of coupling with any of them. So the issues are:

1. You need to have adequate winding impedance. That is, the impedance of a winding should be at least several times the impedance of the circuit it's connected across. Unless power dissipation is a problem (see #2, below), it doesn't matter what the angle of the impedance is. A resistive, as opposed to reactive, impedance is often more desirable because it stays relatively constant over a wide range of frequency.

2. Heating. The power the core dissipates due to each winding is approximately winding I^2 * R, where R is the resistive part of the winding impedance, and I is the signal current in the winding. You can keep this product in bounds by making R high. The heading will of course be less for larger cores. I've found that hysteresis or other amplitude-related loss isn't a concern for this sort of application. But you'd undoubtedly impress your professor by showing that you considered this, and the calculations you used to arrive at your conclusion.

The frequency ranges given for ferrites are often based on the frequency range over which their impedance is primarily reactive, i.e., the range over which they make decent inductors or tuned circuit elements. These aren't the criteria that are important for broad band transformers, however. The main properties you have to consider are the ones impacting the two considerations above. Ferrites like type 61 have lower R for a given impedance, but you might not be able to get enough impedance over the frequency range, especially when resonance effects are considered. Type 43, on the other hand, might have dissipation problems at 200 watts. Welcome to engineering!

A graduate student should be able to calculate the necessary value of winding impedance based on the design requirements. You can find the impedances of cores of various sizes and materials at the Fair-Rite web site. Estimation of temperature rise based on physical size and mounting is also something a grad student should be able to handle, at least approximately. (A simple lab test to show the validity of the calculations or approximations would be a plus.) If you submitted your work to me as evidence of your ability when interviewing for an engineering job, I'd put a lot of weight on how you came to make the choices you did. Perhaps your professors use different criterion for judging work, however.

Roy Lewallen, W7EL

Jason Hsu wrote:
> I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
> school independent study project. It will be able to handle power
> levels as high as 200W (thus comfortably handle the full 100W) and
> power levels as low as a small fraction of a watt.
>
> As you know, SWR meters use transformers as sensors to sample the load
> current and voltage. Type 43 material looked like the best choice.
> Most of the SWR meter designs I have seen use type 43 toroids
> (FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives
> this material a frequency range of 1-50MHz.
>
> I will be placing my order on Monday, and I am leaning towards
> FT50-43, since that seems to be the consensus of others who have built
> SWRmeters.
>
> My three questions:
> 1. Should I use type 43 or type 61 material?
> 2. What size toroid should I use?
>
> Regarding question 1:
> I was all set to order several type 43 toroidal cores from Palomar
> Engineers only to find that they recommend type 61 at
> http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html.
> According to the Palomar web site, transformers should use type 43
> material is for .01-10 MHz but type 61 material for .2-100 MHz.
> Bytemark lists the wide band frequency range of type 61 material as 10
> to
> 200 MHz
>
> Who is right? Palomar recommends type 61 while Bytemark and the
> consensus of homebrewers recommend type 43. Under what circumstances
> is type 61 better, and under what circumstances is type 43 better?
>
> Regarding question 2:
>
> I estimate that in the worst case scenarios (100-200W and a short
> circuit or open circuit for a load), the RF transformers may be
> subject up to 1-2 watts. This doesn't sound like much, but my Radio
> Shack resistors can only handle .5 watts.
>
> I will be using either type 43 or type 61 ferrite material. I noticed
> that most cores used in other SWR meter designs are size FT-50, which
> is .50 in. outer diameter, .28 in. inner diameter, and .188 in.
> thickness. Larger cores take up more space and cost more, but I
> believe they can also handle more power. (Correct me if I am wrong.)
> Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in.
> thick)? Is there any reason I should use a larger core? A smaller
> core?
>
> Would using a larger (or smaller) core narrow the bandwidth or make it

> less sensitive? Remember: I want my device to work from 1.6 MHz to 30
> MHz and at power levels as low as a fraction of a watt.
>
> Also, I have heard that Amidon has a formula for estimating the
> maximum power a transformer can handle without heating up excessively.
> Can anyone have a link to this?
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

2538. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 01:11:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3C7035.5020008@ieee.org>
Source record: 125527

Reg Edwards wrote:
> It was not until many years later that I learned from the New Scientest
> weekly that Quarks are the basic constituents of all matter in the Universe
> and that they come in many varieties including up, down, in various colours,
> and queer.

So Reg, do queer quarks hold their charm through an impedance discontinuity?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2539. Re: Portable 2 meter???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 01:20:32 UTC
From: arrow146@aol.com
Message-ID: <20030201202032.14588.00000406@mb-mw.aol.com>
Source record: 125528

```
<< E wrote:
>
> I'm looking for suggestions for a portable 2 meter antenna. I have a Yeasu
>>

<A HREF="http://ArrowAntennas.com/">ArrowAntennas.com</A>
```

2540. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 01:27:19 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3osvigdg3r347@corp.supernews.com>
Source record: 125529

No, I took your tact and stopped at step seven to get the answer I wanted
and ignored anything else that may prove me wrong.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E3C6DF1.3010401@ieee.org...
> Fred Hambrecht Sr wrote:
> > Whoops hit the key before I finished the message. I see your problem
Cecil,
> > there is no division, 2*0 does indeed equal 1*0 as any number multiplied
by
> > zero is zero. The fallacy lies in misstating the answer. I am not alone
in
> > this process is the point I was alluding to...
> >
> >>>>Step 8: and cancelling the (a^2 - ab) from both sides gives 1=2.
>
> The problem seems to me to be with not knowing that "canceling
> a^2-ab from both sides" *IS* division. "Canceling" in that context
> means dividing both sides of the equation by a^2-ab=0. Shame on you.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2541. How to connect antenna to FM radio

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 02:00:52 UTC
From: malibu.ron@verizon.net
Message-ID: <bed47a69.0302011800.65f04e66@posting.google.com>
Source record: 125530

I have a TERK AM/FM Q antenna. My AM/FM/SW radio only has an extension antenna and no plugs for the Terk to plug into. Is there a way to connect the Terk.

2542. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 02:09:43 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1hul6$52g$2@helle.btinternet.com>
Source record: 125531

> So Reg, do queer quarks hold their charm through an impedance
discontinuity?

==========

When it says so in the ARRL Handbook and the CIA twists my arm I'll
willingly agree to anything!

2543. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 02:10:54 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E3C7DB0.CFEAC78D@attbi.com>
Source record: 125532

Please confirm the plumbing is still where it's supposed to be!!!

DD., W1MCE

Reg Edwards wrote:
>
> Cecil,
>
> "Quarks" is an Irish name. Way back in 1947, while travelling on a N.Ireland
> railway train drawn by an ancient 0-4-2 steam engine, I was informed by a
> fellow traveller that Quarks lived under the seats.
>
> If a passenger fell asleep while on a jouney (a likely event on account of
> railway slowness) Quarks would crawl out, painlessly bite your testicles and
> then crawl back under the seat again suitably refreshed.
>
> Needless to say I kept myself wide awake for the next 30 miles and two
> hours.
>
> There was a framed notice, under glass, on the wall above the seats. It
> ead -
>
> "It is the opinion of many Doctors of Medicine, expectorating on the floor
> of this compartment may assist in the spread of disease. While travelling on
> this train gentlemen are respectfully reminded to bear this notice in mind.
> Thank you."
>
> There was no warning about quarks.
>
> It was not until many years later that I learned from the New Scientest
> weekly that Quarks are the basic constituents of all matter in the Universe
> and that they come in many varieties including up, down, in various colours,
> and queer.
>
> But I'm none the wiser !
> ---
> Reg

2544. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 02:28:50 UTC
From: dplatt@radagast.org
Message-ID: <v3p0j21d6djt9f@corp.supernews.com>
Source record: 125533

>Motorola, when supplying these same NMO mounts, supplies a small tube of
>silicon grease, tho normally these seal fine without applying it-- jim NN7K

A similar grease came with the replacement O-ring for my swimming-pool
filter - hence, a pool-equipment store might be a source for a supply
of such grease. The O-ring package bore a warning to use only this
sort of grease, and _not_ to use petroleum jelly as it would cause the
O-ring to deteriorate over time.

Another idea when installing NMO mounts - abrade off a bit of paint
from around the inside of the hole, where the inside ring of the mount
will grip the sheet metal, and then coat it with one of the conductive
anti-oxidant greases (Butternut's copper-loaded grease, or a similar
type). This ought to ensure a good connection to ground, which would
be less likely than an untreated connection to suffer from oxidation
(rusting) at the contact points between mount and sheet metal.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2545. Shared antenna problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 02:50:49 UTC
From: Peter Truman <ptruman@bigpond.com>
Message-ID: <Cy%_9.38582$jM5.97858@newsfeeds.bigpond.com>
Source record: 125534

Hi

I'm new to this list so please bear with me.

I'm using VHF Tx and Rx modules from Radiometrix in the UK. 151.3MHz @ about 100mW

I want to be able to use the same antenna to Tx as I use to Rx. Obviously if I just hang the Rx and Tx off the end of the antenna I'm going to cause myself problems right?

I had thought I could use a simple small relay, as I will only Tx for a fraction of the time I will Rx but it occurs to me that at this frequency the signal path through the relay on an unbalanced line could be just as much a problem.

Does anyone know whet I can get a cheap, simple, solid state antenna switch in Australia that will do this for me?

Any other (simple) suggestions would be welcome.

Thank you for your help

Regards
Peter

2546. Re: 5/8 wavelength antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 03:04:03 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302011904.5b95c617@posting.google.com>
Source record: 125535

'Doc <w5lz@cwis.net> wrote in message news:<3E3AC863.24B82CD3@cwis.net>...
If the 'physical'
> length of the antenna isn't changed to change it's
> electrical properties, then I would think that it would
> be proper to say that it's 'electrical' length has changed
> to have those properties that are desired. Yes, or no?
> 'Doc

After thinking about this a while, I would have to say yes, the
electrical length would have changed if say you used a coil or top hat
for loading. The structure is resonant at a lower freq than if the hat
were not there. It's kind of hard to avoid really if you add a
capacitance hat to the top of a vertical. And this would qualify as
"electrical lengthening" as far as Roy used the term in the case of
the hat. I guess what I was trying to get at, was that loading, or
"electrical lengthening" if some want to call it that ,or call it just
plain tuning out reactance, will not improve current distribution
alone. It's the act of placing it towards or at the top or end, that
is really doing the trick the way I see it. Maybe this will clarify my
answer to your question... MK

2547. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 04:03:54 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3C98AA.8010100@ieee.org>
Source record: 125536

Fred Hambrecht Sr wrote:
> No, I took your tact and stopped at step seven to get the answer I wanted
> and ignored anything else that may prove me wrong.

So what might prove me wrong?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2548. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 04:40:13 UTC
From: tdonaly@aol.com
Message-ID: <20030201234013.10719.00000050@mb-ma.aol.com>
Source record: 125537

Reg wrote,
>
>Cecil,
>
>"Quarks" is an Irish name. Way back in 1947, while travelling on a N.Ireland
>railway train drawn by an ancient 0-4-2 steam engine, I was informed by a
>fellow traveller that Quarks lived under the seats.
>
>If a passenger fell asleep while on a jouney (a likely event on account of
>railway slowness) Quarks would crawl out, painlessly bite your testicles and
>then crawl back under the seat again suitably refreshed.
>
>Needless to say I kept myself wide awake for the next 30 miles and two
>hours.
>

So, after all these years, I finally get to find out what James Joyce
was talking about when he mentioned quarks. Who said you can't learn anything
on the internet?
Thanks, Reg.
73,
Tom Donaly, KA6RUH

2549. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 05:45:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3pc3gsve46j34@corp.supernews.com>
Source record: 125538

Ah, yes, I've encountered those beasties before, and they behave just about the way you describe. But we called 'em "crabs". And they didn't crawl back under the seat after they'd had their fill.

Roy Lewallen, W7EL

Reg Edwards wrote:
> Cecil,
>
> "Quarks" is an Irish name. Way back in 1947, while travelling on a N.Ireland
> railway train drawn by an ancient 0-4-2 steam engine, I was informed by a
> fellow traveller that Quarks lived under the seats.
>
> If a passenger fell asleep while on a jouney (a likely event on account of
> railway slowness) Quarks would crawl out, painlessly bite your testicles and
> then crawl back under the seat again suitably refreshed.
>
> Needless to say I kept myself wide awake for the next 30 miles and two
> hours.
>
> There was a framed notice, under glass, on the wall above the seats. It
> ead -
>
> "It is the opinion of many Doctors of Medicine, expectorating on the floor
> of this compartment may assist in the spread of disease. While travelling on
> this train gentlemen are respectfully reminded to bear this notice in mind.
> Thank you."
>
> There was no warning about quarks.
>
> It was not until many years later that I learned from the New Scientest
> weekly that Quarks are the basic constituents of all matter in the Universe
> and that they come in many varieties including up, down, in various colours,
> and queer.
>
> But I'm none the wiser !
> ---
> Reg
>
>
>

2550. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 06:58:06 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <1cgp3vgbs3srabngrol9smohr883adqucl@4ax.com>
Source record: 125539
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Mon, 27 Jan 2003 13:43:41 -0800, Bill Turner <w7ti@dslextreme.com>
wrote:

>On 27 Jan 2003 13:16:40 -0800, cornytheclown@hotmail.com (cornytheclown)
>wrote:
>
>>http://www.warez.com/
>
>_____
>
>Fellas, take some advice learned the hard way. Don't go to any site
>which does "warez" or you may regret it. About a year ago I browsed
>over to one of them - don't remember which - and subscribed to a
>service. Ever since, the bast***s have been sending me spam of over ONE
>MEG in size every few weeks. Can not get rid of them. I only hope they
>will eventually get tired and go away.
>
Have your ISP block them for you...I think most can and will do it.
At least mine will.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>Forewarned is forearmed. :-(
>
>Bill, W7TI

2551. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 09:06:38 UTC
From: John Fletcher <johnfletch@2e1gmv.freeserve.co.uk>
Message-ID: <b1in36tds1@news8.svr.pol.co.uk>
Source record: 125540
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

http://www.bytemark.com/products/fermgprp.htm

this site is brill for all your toroid iron and ferrite tables, lists etc,
thanks for the URL!

2552. Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 12:19:57 UTC
From: Per Enocson <per.enocson@telia.com>
Message-ID: <N18%9.9188$LY2.547773@newsc.telia.net>
Source record: 125541

My 165 m long horizontal loops is at approx 15 m above ground. I am surprised at its performance, can work DX not only on the higher bands 20-10 m, but even on 160 m I have recently worked VK and S9 (Sao Tome) out of my nr Stockholm qth. And it is great for European/local contacts.

Now to my questions:

1. Which is the best feeding arrengement to minimize losses and to allow for kw power? I currently use an unbalanced RG -8 feeder (which is a bit heavy at the feeding point) and a Heathkit SA 2060 kw tuner. Could I use the lighter RG 58 for kw power, in order to reduce the coax weight load on the loop? Or would ladder line plus the balun input at the tuner be better?

2. With my current coax feed, I have fairly high SWR on the 30 and 15 m bands, also what I suppose is "RF in the schack", as my lap top computer shuts down immediately when I key down (even at less than 100 W power). Would a current balun help? Should the balun be at the tuner end or at the antenna feed point ? How can I build (or purchase) such a balun?

3. Suppose I switch to ladder line. I can of course run through it the window and then indooors to the balun input of my tuner? But which is the best and simplest balun arrangement, which allows me to use a short bit of coax out through the wall, then connect to the ladder line?

Thansk in advance for your input!

73ï¿½s de Per SM0WRA

2553. Solar Spectral Power Estimates, Design Question--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 13:48:41 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E3D2220.5FCC57B7@earthlink.net>
Source record: 125542

I posed a question on some solar values in a book I read on radio astronomy. Let me reprhase the
question.

The subject of the book's section is really how to determine the bandwidth of a receiver to observe the
sun. I guess where I am going with the my questions is that suppose I had some thought of observing M1
(planetary nebula in Taurus). I could design the receiver and antenna around the author's rough back of
the envelope calculations if I knew what the density (W/hz) and intensity (W/hz/m^2) values for M1
were. Basically, that's the question. That is, how does one *know* these for common radio sources?
--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

"I refuse to have a battle of wits with an unarmed person." -- Pogo

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

2554. Re: Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 14:06:27 UTC
From: KG4CYB <ebooth1@ec.rr.com>
Message-ID: <sp8q3v8j0gjr7m2v7cts1dtgl7fbghvv2m@4ax.com>
Source record: 125543

I am stuck living in an apartment with dick-wads for a management company. I am not allowed to put anything on my roof for what is quote " Cosmetic reasons" so I fixed them good. I made a temp mount on my Honda to hold a 4BTV (my car is my property) when I am finished, I take it down and bring it in the house. I have tuned up my gutters. For the low bands, I bought some 24 guage wire and strung up a long wire. My only hope is that a bird won't sit on it and give it away. Most of the time I go mobile. I'm very close to the beach and salt water is the best ground plane alround. I don't think I gave you an answer but I hope I gave you some ideas on getting alround it.
KG4CYB
On Fri, 24 Jan 2003 08:19:17 -0500, "Rickie / KC2KQQ"
<rickiev@hotmail.com> wrote:

>The management in my building doesn't allow anyone to place an antenna on
>the roof, but doesn't not explain why. I was told that there is a way to
>get a building management to allow an antenna but I dont know how..
>
>any help will be great!
>
> Rickie / KC2KQQ
>
>

2555. Re: Solar Spectral Power Estimates, Design Question--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 14:43:41 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <t8a%9.179$CF1.32488@news20.bellglobal.com>
Source record: 125544

"Wayne Watson"
> The subject of the book's section is really how
> to determine the bandwidth of a receiver to
> observe the sun.

Simple measurement with common test equipment.

> ...suppose I had some thought of observing M1
> (planetary nebula in Taurus). I could design the
> receiver and antenna around the author's rough
> back of the envelope calculations...

Sounds like a nice weekend project... ;-)

> ...if I knew what the density (W/hz) and intensity
> (W/hz/m^2) values for M1 were. Basically, that's
> the question. That is, how does one *know* these
> for common radio sources?

If you mean how would _you_ know, then the answer is
www.google.com
www.google.com/search?q=m1+hz+watts+taurus
First hit:
http://home.tiscali.se/pausch/comp/radfaq.html
See Item 12 for Taurus A (aka M1, Crab Nebula)

If your question is more philosophical, as in how _humans_ know the radio brightness, then that is simply a matter of calibrating the system and would be based on the theory of Black Body radiation (Physics 200 level topic). It becomes a matter of knowing the exact amplitude of the incoming signal. The calculation will include lots of "effective" parameters (as in effective capture area, effective efficiency, effective bandwidth, etc.) It would not only be easier to simply calibrate on a known object (like the Sun), it might be a requirement in order to have any confidence in the accuracy.

Too bad Chip is so busy with legal matters - this is his area of expertise.

2556. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 14:52:59 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3D30CB.E4D773D0@cwis.net>
Source record: 125545

Per,
I wouldn't use coax as a feed line at all. My first
choice would be a balanced line (ladder line, etc.). It's
been quite a while since I had a HeathKit tuner, but I
think they have a balun in most of them. If not, then a
short run of good quality coax to a balun outside should
work okay. That run of coax should be as short as possible,
and definitely not RG-58. It will have quite high voltages
on it because of reflected power.
'Doc

2557. Re: autek wm-1 manual

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 15:44:02 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0302020744.447c48e1@posting.google.com>
Source record: 125546

Thanks to those who replied direct....I've now got what I need.

Rich K2CPE

rckchp@comcast.net (rich a.) wrote in message
news:<6dc33f40.0301291815.576cb848@posting.google.com>...
> I've recently aquired a used Autek WM-1 swr/pwr meter. I'd like a copy
> of the owner's manual or instruction sheet. I'm willing to reimburse
> for copying/postage fees......or perhaps someone could scan it and
> send it via email? Any help will be appreciated. Thanks in advance.
>
> Rich K2CPE
> rckchp@comcast.net

2558. Re: autek wm-2 manual

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 16:08:13 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <b1k4sl$f5$2@reader11.wxs.nl>
Source record: 125470

http://bama.sbc.edu/

2559. Dipole mounting options

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 16:25:16 UTC
From: "Ron P." <rpackerii@neo.rr.com>
Message-ID: <MDb%9.91403$i73.21442083@twister.neo.rr.com>
Source record: 125547

Ok, I have been thinking about my problems with mounting my dipole, and I came up with a possible solution:

I have an old tripod for mounting antennas on a roof. I could put about 10 feet of mast into this mount and attach the balun to the end of the mast. One end will go towards the corner of the house, and the other end to a tree. Instead of the antenna running at 180 degrees, it would be more like a 150. The antenna would be an inverted Vee with about a 20 foot drop from balun to end at the house, and a 40 degree drop from balun to tree. Would this work ok? I am looking to run 160-10 on this antenna, and according to EZNEC (demo) it will load up ok, but what about the mounting? Thanks in advance!

Ron - kc8ulu

-.-. .-- .-.. .. ...- . ...

2560. Re: Solar Spectral Power Estimates, Design Question--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 16:40:57 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E3D4A2A.5880524C@earthlink.net>
Source record: 125548

Responses below.

"J. Harvey" wrote:

> "Wayne Watson"
> > The subject of the book's section is really how
> > to determine the bandwidth of a receiver to
> > observe the sun.
>
> Simple measurement with common test equipment.

He does it with some simple power values he associates with the Sun. Values such as W/Hz/m^2, i.e.,
Janskys, and W/Hz, which he calls spectral values. He then proceeds to use back-of-the-envelope
calcs. How would you do it with common test equipment?

>
>
> > ...suppose I had some thought of observing M1
> > (planetary nebula in Taurus). I could design the
> > receiver and antenna around the author's rough
> > back of the envelope calculations...
>
> Sounds like a nice weekend project... ;-)

Yes, many. :-)

> > ...if I knew what the density (W/hz) and intensity
> > (W/hz/m^2) values for M1 were. Basically, that's
> > the question. That is, how does one *know* these
> > for common radio sources?
>
> If you mean how would _you_ know, then the answer is
> www.google.com
> www.google.com/search?q=m1+hz+watts+taurus
> First hit:
> http://home.tiscali.se/pausch/comp/radfaq.html
> See Item 12 for Taurus A (aka M1, Crab Nebula)

Thanks for the search data, but I've been all over the web with Google. I have access to many such
tables and catalogs. Nevertheless, an interesting source you picked up. However, let me broaden my
question to the one I'm really after. Knowing the Janskys for a particular radio source, how does

one know what antenna size or capabilites and receiver capabilities need to detect the object?
Another way of putting this is, in optical astronomy, if I know the magnitude of the star, I can
pretty easily determine the size of the telescope mirror I will need to detect it by using some
relatively simple calculations.How do I do this for the radio sky?

>
> If your question is more philosophical, as in how _humans_ know the radio
> brightness, then that is simply a matter of calibrating the system and would
> be based on the theory of Black Body radiation (Physics 200 level topic).
> It becomes a matter of knowing the exact amplitude of the incoming signal.
> The calculation will include lots of "effective" parameters (as in effective
> capture area, effective efficiency, effective bandwidth, etc.) It would not
> only be easier to simply calibrate on a known object (like the Sun), it
> might be a requirement in order to have any confidence in the accuracy.

Definitely not philosophical, unless I'm framing this question too broadly. I think I pinned it down
in my response just above this among the comparison to optical astro remarks.

The insertion of the calibration idea is intriguing. In this case, what do you mean by calibrate
there? I'm familiar with the notion, but there are likely several ways to 'calibrate' something.

>
>
> Too bad Chip is so busy with legal matters - this is his area of expertise.

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

"I refuse to have a battle of wits with an unarmed person." -- Pogo

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

2561. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 17:16:42 UTC
From: David Cook <nospam.davepc2@oz.net>
Message-ID: <_nc%9.74355$to3.89821@rwcrnsc51.ops.asp.att.net>
Source record: 125549

I've always wanted to build one for HF ever since I saw a plan for one in my Radio Handbook (16th Edition, 1962). I've had excellent success with my Radio Shack discone on VHF/UHF. The Radio Handbook dimensions for a 20 thru 6 meter discone are:

Base radius: 18 feet
Height: 15 feet 7 inches
Cone element lengths: 18 feet
Top hat diameter: 12 feet
Distance from top of cone and top hat: 10 inches

It shows a 52 ohm coax feed with no balun or RF choke required. It quotes the original design from W2RYI in July 1950 CQ magazine. Quoting the book, "The top hat is constructed of 3/4 inch aluminum angle stock, the rods being bolted to an aluminum plate a the center of the structure. The tips of the rods are all connected together by lengths of #12 copper wire. The cone elements are made from #12 copper wire and act as guy wires for the discone structure. A 4x4 post can be used to support the discone structure."

Doesn't sound very difficult to build. I may have to give it a try myself one of these days! I hope this helps and good luck with your project.

73,
-- Dave, WA0TTN

"Toni - ec3dds" <ec3dds@hotmail.com> wrote in message news:h99l3v8kb3co0rsjo0obmov5jbjvl54m89@4ax.com...
> Hi all,
>
> Would it be a crazy idea to build an HF discone for the higher bands
> (something like 10m~20m)? I've never read on the gain of a discone,
> but I imagine that it must be a little less than an equivalent
> groundplane. OTOH it wouldn't be much bigger than an equivalent
> trapped vertical.
>
> Opinions? I know this is probably not a good idea for a beginner but I
> would really like to build my own antenna and I think a trapped
> vertical is too much for me (I don't have space for normal dipoles).
>
> Could it be better than a fanned inverted-v? It would probably be the
> same size except for the hat.
>
> Thanks
>
> Toni - ec3dds
>

2562. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 17:24:09 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302020924.230dea0d@posting.google.com>
Source record: 125550

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message n
>
> As an example, if a short vertical antenna is coil-loaded very near to its
> top with only a very low capacitance rod or hat above it, then the resonant
> frequency of the antenna will be only slightly lower than the self-resonant
> frequency of the coil itself. The coil will be physically large and of large
> inductance - the capacitance of the rod to ground being only a fraction of
> he self-capacitance of the coil.
>
> This results in a very large current circulating round the coil and its
> shunt self-capacitance which radiates nothing but heat. Power is lost in
> coil
> resistance and efficiency of the whole system falls excessively. With
> antennas and coils of ordinary proportions, such as used on vehicles, this
> effect limits the height of loading coils to about 2/3 of overall antenna
> height. In some cases the improvement due to a raised coil may not be worth
> the mechanical inconvenience of raising it above the base. Locating the coil
> in the tuner has the advantage of allowing multi-band operation. Only
> screwdrivers offer the best of both worlds by locating the tuner in the
> antenna itself.
>
> Program LOADCOIL allows a loading coil to slide up/down a vertical shorter
> than 1/4-wavelength searching for maximum efficiency. Watch what happens
> when the loading coil gets very near to the top. See how frequently maximum
> efficiency occurs with the coil so low down it's not worth the trouble of
> taking it out of the tuner box."
> ============================

The last sentence is the only one I wonder about. Using "vertload" ,
which I have used for mobile antenna designs, I never see max
efficiency with the coil anywhere near the base with an antenna that
has a "stinger" only, and no capacity hat. Vertload doesn't deal with
the hats naturally...Only whips above the coil. Now, I can agree that
on many higher bands, the coil placement doesn't really matter much.
IE: a 10m roof mounted vertical. But I've never seen a case of a lower
band antenna that had maximum efficiency with the coil at the base, or
that would even really compete with one that had the coil higher up
the mast.
The only way I could see this happening would be if you top loaded the
antenna with a capacity hat to produce linear current distribution. In
that case, then yes, I can see how having the coil at the base would
be the way to go, being it takes less turns to tune, and less coil
loss. I do agree, using enough capacitance above the coil is very
important. This is what kills many of the "hamsticks" that use short

stubby stinger whips. I wonder how you can say that having the coil
low can produce maximum efficiency in some cases, assuming no hat is
used on top of the antenna. I've never seen it happen once using
"vertload". Or in the real world for that matter. Like you say, it's
always been at the appx 2/3 to 3/4 point up the mast when modeled on a
computer. My present
antenna has the coil at the halfway point in the "driving" config, "5
ft up, on a 10 ft whip" . It's performance is a good bit better than
my older one with the coil at 2 ft from the base. The lower the freq,
the better it is, than the older antenna.
>
> PS: Another design application occurs in the case of a very short
> centre-loaded dipole which in my opinion is an underated 'balcony' antenna
> and is worth experimenting with.

I think it's quite viable, but myself, I would improve the current
distribution, by loading about 1/2 to 2/3 the way out the elements
with very hi-Q coils, and/or I would add hats to the ends. I would use
a center tapped coil for matching though. In other words, I would
design it the same as I do a bugcatcher. MK

2563. Re: Solar Spectral Power Estimates, Design Question--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 17:24:24 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <8vc%9.132$Zt4.77913@news20.bellglobal.com>
Source record: 125551

"Wayne Watson"
> The subject of the book's section is really how
> to determine the bandwidth of a receiver to
> observe the sun.

'J. Harvey'
> Simple measurement with common test equipment.

> He does it with some simple power values he associates
> with the Sun. Values such as W/Hz/m^2, i.e., Janskys,
> and W/Hz, which he calls spectral values. He then proceeds
> to use back-of-the-envelope calcs. How would you do it
> with common test equipment?

I'm referring to the determination of the BW of a receiver (trivial exercise). You need a signal generator and some method of accurately measuring the output. If you have a radio telescope (or an EME capable station), then you can use the Sun as your signal generator - but then you would have to tune across the output. I've seen quick and dirty sensitivity checks of an EME station using the Sun.

> However, let me broaden my question to the one I'm really after.
> Knowing the Janskys for a particular radio source, how does
> one know what antenna size or capabilites and receiver capabilities
> need to detect the object?

I happy to admit that you're reaching the bottom of my knowledge on this subject. Suffice to say, you need to do some searching on the topic of Amateur Radio Telescopes. Find someone (or their webpage) that has built one and then you'll easily see what is involved. I know that people sometimes use old TVRO Big Ugly Dishes in the 12' diameter range for this sort of hobby. They also tend to use homebuilt LNAs.

www.google.com/search?q=amateur+radio+telescope

I'll be off (Internet QRT) for a while due to a business trip to SoCal :-). Enjoy your research.

2564. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 17:51:15 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <nUc%9.3656$6P2.438855@newsread1.prod.itd.earthlink.net>
Source record: 125552

Richard Harrison wrote:

> Steve is right. PD = PF-PR. It`s true no matter how it`s rearranged by
> adding or subtracting the same value to both sides of the equation.
>
> Best regards, Richard Harrison, KB5WZI

But Richard, this is not the issue. The issue I've had with Steve for more than two lyears is that he says the rearranged expression PF = PD + PR is invalid, because he says reflected power does not add to source power. He says that reflected voltage adds to source voltage to determine forward power, which is not true.

Walt, W2DU

2565. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 18:29:36 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <fqoq3voa4nlea5m0pdrhnudo1r2dgj120h@4ax.com>
Source record: 125553

On Sun, 02 Feb 2003 12:19:57 GMT, "Per Enocson"
<per.enocson@telia.com> wrote:

>My 165 m long horizontal loops is at approx 15 m above ground. I am
>surprised at its performance, can work DX not only on the higher bands 20-10
>m, but even on 160 m I have recently worked VK and S9 (Sao Tome) out of my
>nr Stockholm qth. And it is great for European/local contacts.
>
>Now to my questions:
>
>1. Which is the best feeding arrengement to minimize losses and to allow for
>kw power? I currently use an unbalanced RG -8 feeder (which is a bit heavy
>at the feeding point) and a Heathkit SA 2060 kw tuner. Could I use the
>lighter RG 58 for kw power, in order to reduce the coax weight load on the
>loop? Or would ladder line plus the balun input at the tuner be better?
>
>2. With my current coax feed, I have fairly high SWR on the 30 and 15 m
>bands, also what I suppose is "RF in the schack", as my lap top computer
>shuts down immediately when I key down (even at less than 100 W power).
>Would a current balun help? Should the balun be at the tuner end or at the
>antenna feed point ? How can I build (or purchase) such a balun?
>
>3. Suppose I switch to ladder line. I can of course run through it the
>window and then indooors to the balun input of my tuner? But which is the
>best and simplest balun arrangement, which allows me to use a short bit of
>coax out through the wall, then connect to the ladder line?
>
>Thansk in advance for your input!
>
>73ï¿½s de Per SM0WRA

Hi ,
I would use open wire / balanced wire line to feed it not coax.. I
have a 160M (520 ft) loop here feeding it with KW 300 ohm line works
great..
73 Dave KC1DI

2566. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 18:36:34 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Syd%9.3744$6P2.433998@newsread1.prod.itd.earthlink.net>
Source record: 125554

Steve Best wrote:

> Two things.
>
> 1) You do not yet understand how I apply superposition with forward
> voltages.

I superpose forward voltages by adding them as complex phasors. How do you superpose them?

> I do not use "source voltage" as you define it as one of the "forward
> voltages."

How can the voltage delivered from the source be anything but a 'forward voltage?

> I assume that your "source voltage" is the total voltage in the line in
the
> steady state (VT), which is VF + VR. Is this your definition of "source
> voltage?

You assumed wrong. How could the source voltage be anything but that delivered by the source? Your expression above, VT = VF + VR is absurd.

> In any event, the two forward voltages that I use in superposition are the
> initial forward voltage in the line at t=0 and the steady state
re-reflected
> voltage in the line. When I add these voltages I get the correct forward
> voltage VF and the correct forward power PF.

By what mathematical sleight-of-hand do you get the correct answers using superposition of the source and reflected voltages? In a case where you deliver 100 w to a lossless line terminated in a 3:1 mismatch for a reflection coefficient of 0.5 and total reflection at the match point, the initial source voltage is 70.71 v and the steady-state reflected voltage is 40.82 v. Their sum is 111.53 v. If the total forward voltage is now 111.53 v, with a reflection coefficient of 0.5 the reflected voltage would now be 55.77v. When this new reflected voltage adds to the source voltage of 70.71 v we get a new forward voltage of 126.48 v, and when half of this voltage is reflected the new reflected voltage is 63.24 v.

Do you see where this is going?

So why don't you accept the fact that PF = PD + PR, which is the expression that is not only correct mathematically, it is correct as to the way the forward power is established in practice.

When the reflection coefficient is 0.5 the forward-power increase factor is 1.333, from the expression 1/(1 - rho^2). The forward-voltage and -current increase factor is the square root of the power increase factor, which in this case is 1.1547. You have earlier agreed that the forward voltage in this setup is 81.65 v. Note carefully that 70.71 x 1.1547 = 81.65 v.

Let's now look at the current. Source current for 100 w in a 50-ohm line is 1.414 a. Now multiply this by the current increase factor 1.1547, and we get 1.414 x 1.1547 = 1.633 a. Guess what? 81.65 v x 1.633 a = 133.33 w exactly. You will not get the correct values by adding reflected voltage to the source voltage.

To recap:

True forward voltage = 81.65 v
True forward current = 1.633 a
True forward power = 133.33 w

These values are correct both mathematically and in practice.

Your forward voltage 70.71 + 40.28 v = 111.53 v
With rho = 0.5 your reflected voltage would equal 55.77 v and on to absurdum.

Your values are patently incorrect.

> Further discussion on this is
> only valuable once you fully understand how I apply superposition. Not
> understanding it and then telling me its wrong is of no value.
>
> 2) PD = PF - PR
>
> There is only one interpretation of this equation.
>
> The delivered power = forward power - reflected power.
>
> This equation is valid when a match exists and when a match does not exist.
> You can't interpret it one way when a match exists and another way when a
> mismatch exists.
>
> For example: wattmeter readings PF = 133.33 W, PR = 33.33
>
> PD =100 W. The power delivered to the line is 100 W. What other
> interpretation is there? I can demonstrate these readings with a match or
> with a mismatch. The equation works under every condition but you cannot
> interpret anything about a match, mismatch or total re-reflection of power
> from this relationship.

Then why do you insist that 100 w of PD plus 33.33 w of PR is not the mechanism that establishes 133.33 w of PF?

Walt, W2DU

2567. Re: Shared antenna problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 19:08:58 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <WsucnSz3Zf9W8aCjXTWcqA@comcast.com>
Source record: 125555

Not sure what you mean by solid state switch, but the garden variety solid state switch will not work at RF, you would have to make one up out of PIN diodes. The simplest thing is to use a relay. I have seen several 2 meter (144 MHz) modules that use small relays on their PC boards for antenna switching. These tend to be the kind that are slightly bigger than 1/2 x 1 inch by about 1/4 high. I would use a DPDT, to short out the receiver input during transmit. Run coax right up to the relay terminals.

Tam/WB2TT
_____-
"Peter Truman" <ptruman@bigpond.com> wrote in message
news:Cy%_9.38582$jM5.97858@newsfeeds.bigpond.com...
> Hi
>
> I'm new to this list so please bear with me.
>
> I'm using VHF Tx and Rx modules from Radiometrix in the UK. 151.3MHz @
> about 100mW
>
> I want to be able to use the same antenna to Tx as I use to Rx. Obviously
if
> I just hang the Rx and Tx off the end of the antenna I'm going to cause
> myself problems right?
>
> I had thought I could use a simple small relay, as I will only Tx for a
> fraction of the time I will Rx but it occurs to me that at this frequency
> the signal path through the relay on an unbalanced line could be just as
> much a problem.
>
> Does anyone know whet I can get a cheap, simple, solid state antenna
switch
> in Australia that will do this for me?
>
> Any other (simple) suggestions would be welcome.
>
> Thank you for your help
>
> Regards
> Peter
>
>

2568. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 19:10:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3D6D13.8040305@ieee.org>
Source record: 125556

Walter Maxwell wrote:
> But Richard, this is not the issue. The issue I've had with Steve for more
> than two years is that he says the rearranged expression PF = PD + PR is
> invalid, because he says reflected power does not add to source power. He
> says that reflected voltage adds to source voltage to determine forward
> power, which is not true.

Consider a generalized impedance discontinuity:

Source---------Z01-----x--------Z02------------Load
Pfwd1, Pref1 Rho Pfwd2, Pref2

Technically, Steve considers the only re-reflected energy in the entire
system to be Pref2(Rho^2). The Melles-Griot web page says there is
more re-reflected energy than just Pref2(Rho^2). That web page says
that Pfwd1(Rho^2) and Pref2(1-Rho^2) are both re-reflected in a
matched system. Those are the energy components involved in Steve's
canceled "rearward-traveling waves 1 and 2" which, disagreeing with
the Melles-Griot web page, he doesn't consider to be re-reflected.
The web page says the energy components in those reflected waves are
involved in destructive interference (toward the source) and become
"enhanced intensity in the transmitted beam" (toward the load). That's
clearly a description of re-reflection.

So we should ask Steve what he considers those canceled reflected wave
energy components to be if not re-reflected. He says in his QEX article:
"For a total re-reflection of power to occur at a T-network, transmission
line theory requires that the physical or measurable impedance seen looking
rearward into the matching network be a short circuit, open circuit, or
purely reactive."

The Melles-Griot web page says there's a fourth thing that can cause
total re-reflection and that is wave cancellation in the form of
destructive interference. This probably cannot occur at a load but
certainly can and usually does occur at a match point where energy
is incident upon the match point from both directions thus setting
the stage for interference to occur.

Steve is either going to have to agree that total wave cancellation
(destructive interference) can cause 100% re-reflection or else disagree
with the Melles-Griot web page at:

http://www.mellesgriot.com/products/optics/oc_2_1.htm
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2569. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 19:17:29 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <a8CcnWGKacBX86CjXTWcqA@comcast.com>
Source record: 125557

I wouldn't connect copper wire to the aluminum. They must not have known
that in the 50s. It will corrode, and possibly fall apart in a year. Use Al
ground wire instead. I suspect the #8 Al is no heavier than the #14 Cu.

Tam/WB2TT
"David Cook" <nospam.davepc2@oz.net> wrote in message
news:_nc%9.74355$to3.89821@rwcrnsc51.ops.asp.att.net...
> I've always wanted to build one for HF ever since I saw a plan for one in
my
> Radio Handbook (16th Edition, 1962). I've had excellent success with my
> Radio Shack discone on VHF/UHF. The Radio Handbook dimensions for a 20
thru
> 6 meter discone are:
>
> Base radius: 18 feet
> Height: 15 feet 7 inches
> Cone element lengths: 18 feet
> Top hat diameter: 12 feet
> Distance from top of cone and top hat: 10 inches
>
> It shows a 52 ohm coax feed with no balun or RF choke required. It quotes
> the original design from W2RYI in July 1950 CQ magazine. Quoting the book,
> "The top hat is constructed of 3/4 inch aluminum angle stock, the rods
being
> bolted to an aluminum plate a the center of the structure. The tips of the
> rods are all connected together by lengths of #12 copper wire. The cone
> elements are made from #12 copper wire and act as guy wires for the
discone
> structure. A 4x4 post can be used to support the discone structure."
>
> Doesn't sound very difficult to build. I may have to give it a try myself
> one of these days! I hope this helps and good luck with your project.
>
> 73,
> -- Dave, WA0TTN
>
> "Toni - ec3dds" <ec3dds@hotmail.com> wrote in message
> news:h99l3v8kb3co0rsjo0obmov5jbjvl54m89@4ax.com...
> > Hi all,
> >
> > Would it be a crazy idea to build an HF discone for the higher bands
> > (something like 10m~20m)? I've never read on the gain of a discone,
> > but I imagine that it must be a little less than an equivalent
> > groundplane. OTOH it wouldn't be much bigger than an equivalent

> > trapped vertical.
> >
> > Opinions? I know this is probably not a good idea for a beginner but I
> > would really like to build my own antenna and I think a trapped
> > vertical is too much for me (I don't have space for normal dipoles).
> >
> > Could it be better than a fanned inverted-v? It would probably be the
> > same size except for the hat.
> >
> > Thanks
> >
> > Toni - ec3dds
> >
>
>

2570. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 19:27:27 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <zie%9.28038$zF6.2023567@bgtnsc04-news.ops.worldnet.att.net>
Source record: 125558

"Walter Maxwell" <w2du@iag.net> wrote in message
news:Syd%9.3744$6P2.433998@newsread1.prod.itd.earthlink.net...
>
> Then why do you insist that 100 w of PD plus 33.33 w of PR is not the
> mechanism that establishes 133.33 w of PF?
>
> Walt, W2DU
>
>
>

Walt,

Simple example with some simple questions:

Source*** 50 ohm Line ***$$*** 150 ohm line ***50 ohm load

"$$" represents the junction between the 50 and 150 ohm lines.

Forward wattmeter in the 150 ohm line reads 133.33 W

Rearward wattmeter in the 150 ohm line reads 33.33 W

Using PD = PF - PR, I conclude that 100 W of power is delivered to the 150 ohm line and 50 ohm load.

You said I don't understand the significance of PD = PF - PR in terms of the Zo match and a total re-reflection of power. All of the power information is here.

Beyond my interpretation, what do you conclude?

Do the power readings and the equation PD = PF - PR allow you to conclude anything about a Zo match, a mismatch and a total or non-total re-reflection of power at the junction?

This is the big equation and all the information used in the equation is here.

Does a Zo match exist at the junction?

What is the level of re-reflected power?

Steve

2571. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 19:38:45 UTC
From: richardharrison@webtv.net
Message-ID: <20137-3E3D73C5-419@storefull-2314.public.lawson.webtv.net>
Source record: 125559

Walter, W2DU wrote:
"The issue I`ve had with Steve for more than two years is that he says the rearranged expression PF = PD + PR is invalid."

I`ve used Bird, General Signal, and Sierra wattmeters for 40 years. All are similar directional inline wattmeters. They are accurate enough for practical instruments. Their principle is: PD = PF - PR.

Walter is right. The equation can`t be the issue.

Re-reflection at the generator has been argued for as long as I can remember. It makes no difference to the equationn. The reflected power could be all absorbed by the generator. In this case, all forward power is new. Or, all reflected power could be totally re-reflected at the generator. In this case, the forward power is the total of new generator power plus the re-reflected power.

The power delivered by the generator is only that being delivered to the load, according to the equation. The equation doesn`t say the generator delivers measured power to the load and to its internal impedance.

It makes no difference to the equation. Dissipation inside the generator is something else. Lowering the load impedance on the generator probably increases its current output, and its internal dissipation.

Best regards, Richard Harrison, KB5WZI

2572. Re: Solar Spectral Power Estimates, Design Question--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 19:59:08 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <5atq3vg2novl49s0frpnh96o9luhh1pfme@4ax.com>
Source record: 125560

On Sun, 02 Feb 2003 16:40:57 GMT, Wayne Watson
<mtnviews@earthlink.net> wrote:

|Responses below.
|
|"J. Harvey" wrote:
|
|> "Wayne Watson"
|> > The subject of the book's section is really how
|> > to determine the bandwidth of a receiver to
|> > observe the sun.
|>
|> Simple measurement with common test equipment.
|
|He does it with some simple power values he associates with the Sun. Values such as
W/Hz/m^2, i.e.,
|Janskys, and W/Hz, which he calls spectral values. He then proceeds to use
back-of-the-envelope
|calcs. How would you do it with common test equipment?

The problem with "simple power values associated with the Sun" is that
the output power of the Sun varies. So you're trying to measure an
unknown, i.e. receiver BW using an unknown for the signal source. Why
anyone would attempt this is beyond me.

You measure receiver BW with a CW source and an appropriate detector.
Noise BW is assumed to have an ideal rectangular shape factor but any
real filter will be less than ideal. This can be corrected for. Also,
corrections for the detector characteristics are often required.

2573. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 20:09:46 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3D7B0A.6040903@ieee.org>
Source record: 125561

VE9SRB wrote:
> What is the level of re-reflected power?

Steve, first you need to define what you mean by re-reflected power.
It is apparent from your posting that you define all re-reflected
power as only PrefL(Rho^2) where PrefL is the power reflected from the
load and Rho^2 is the physical reflection coefficient at the impedance
discontinuity. Melles-Griot seems to have a much broader definition
of re-reflected power even though they don't mention "re-reflections"
per se.

Assuming that you define re-reflected energy as only PrefL(Rho^2),
what do you call the energy in the two canceled reflected waves?
i.e. your "rearward-traveling waves 1 and 2" that the Melles-Griot
web page says is energy that reverses direction and contributes to
"enhanced intensity" of the forward wave. "Rearward-traveling waves
1 and 2" are both reflected waves. Their energy reverses direction.
What do you call that process if not re-reflection?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2574. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 20:35:38 UTC
From: Per Enocson <per.enocson@telia.com>
Message-ID: <uif%9.8935$FF4.549419@newsb.telia.net>
Source record: 125562

Thank you Doc and Dave! Suppose I run a short length of RG-8 through the wall and connect it to the ladder line. What kind of balun do you suggest? Voltage or current? Power handling capability? (I have a spare 2:1 voltage balun which handles 700 W at 2:1 SWR)

Another idea which came up is to put a 50 ohm load (eg a Heathkit Cantenna KW dummy load) at the remote corner of the loop, in order to provide an all band match for a coax feeder. Would it really help to handle impedance variations at the feed point? Wouldnï¿½t it also impair overall antenna effciency?

Great to get your valuable input through this newsgroup (I am an oldtimer who came back to ham radio after 25 years qrt, must say that the Internet makes the hobby even more exciting....)

73ï¿½s de Per / SM0WRA (excuse my bad spelling in my first message, to trigger happy ....)

"KC1DI" <elbc2@gwi.net> skrev i meddelandet
news:fqoq3voa4nlea5m0pdrhnudo1r2dgj120h@4ax.com...
> On Sun, 02 Feb 2003 12:19:57 GMT, "Per Enocson"
> <per.enocson@telia.com> wrote:
>
> >My 165 m long horizontal loops is at approx 15 m above ground. I am
> >surprised at its performance, can work DX not only on the higher bands
20-10
> >m, but even on 160 m I have recently worked VK and S9 (Sao Tome) out of
my
> >nr Stockholm qth. And it is great for European/local contacts.
> >
> >Now to my questions:
> >
> >1. Which is the best feeding arrengement to minimize losses and to allow
for
> >kw power? I currently use an unbalanced RG -8 feeder (which is a bit
heavy
> >at the feeding point) and a Heathkit SA 2060 kw tuner. Could I use the
> >lighter RG 58 for kw power, in order to reduce the coax weight load on
the
> >loop? Or would ladder line plus the balun input at the tuner be better?
> >
> >2. With my current coax feed, I have fairly high SWR on the 30 and 15 m
> >bands, also what I suppose is "RF in the schack", as my lap top computer
> >shuts down immediately when I key down (even at less than 100 W
power).

> >Would a current balun help? Should the balun be at the tuner end or at
the
> >antenna feed point ? How can I build (or purchase) such a balun?
> >
> >3. Suppose I switch to ladder line. I can of course run through it the
> >window and then indooors to the balun input of my tuner? But which is the
> >best and simplest balun arrangement, which allows me to use a short bit
of
> >coax out through the wall, then connect to the ladder line?
> >
> >Thansk in advance for your input!
> >
> >73ï¿½s de Per SM0WRA
>
> Hi ,
> I would use open wire / balanced wire line to feed it not coax.. I
> have a 160M (520 ft) loop here feeding it with KW 300 ohm line works
> great..
> 73 Dave KC1DI
>
>

2575. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 20:37:23 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <7kf%9.3975$6P2.462050@newsread1.prod.itd.earthlink.net>
Source record: 125563

Walter Maxwell wrote:

> > Then why do you insist that 100 w of PD plus 33.33 w of PR is not the
> > mechanism that establishes 133.33 w of PF?
> >
> > Walt, W2DU
> >
> >
> >
>
> Walt,
>
> Simple example with some simple questions:
>
> Source*** 50 ohm Line ***$$*** 150 ohm line ***50 ohm load
>
> "$$" represents the junction between the 50 and 150 ohm lines.
>
> Forward wattmeter in the 150 ohm line reads 133.33 W
>
> Rearward wattmeter in the 150 ohm line reads 33.33 W
>
> Using PD = PF - PR, I conclude that 100 W of power is delivered to the 150
> ohm line and 50 ohm load.
>
> You said I don't understand the significance of PD = PF - PR in terms of
the
> Zo match and a total re-reflection of power. All of the power information
> is here.
>
> Beyond my interpretation, what do you conclude?
>
> Do the power readings and the equation PD = PF - PR allow you to conclude
> anything about a Zo match, a mismatch and a total or non-total
re-reflection
> of power at the junction?
>
> This is the big equation and all the information used in the equation is
> here.
>
> Does a Zo match exist at the junction?

Yes
>
> What is the level of re-reflected power?

33.33 w

> Steve

Steve, you're still evading the issue. We've never had a problem with PD = PF - PR.

When can I get you to agree that the rearrangement of the equation is also valid?

That PF = PD + PR.

This is the key to our disgreement, because you won't admit that the total forward power is established by adding the reflected power to the source power. When are you going to get it straight?

Walt, W2DU

2576. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 20:48:05 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <qn0r3vkueimbmtl5rsvi85ss2bto698tuo@4ax.com>
Source record: 125564

On Sun, 02 Feb 2003 20:35:38 GMT, "Per Enocson"
<per.enocson@telia.com> wrote:

>Thank you Doc and Dave! Suppose I run a short length of RG-8 through the
>wall and connect it to the ladder line. What kind of balun do you suggest?
>Voltage or current? Power handling capability? (I have a spare 2:1 voltage
>balun which handles 700 W at 2:1 SWR)
>
>Another idea which came up is to put a 50 ohm load (eg a Heathkit Cantenna
>KW dummy load) at the remote corner of the loop, in order to provide an all
>band match for a coax feeder. Would it really help to handle impedance
>variations at the feed point? Wouldnï¿½t it also impair overall antenna
>effciency?
>
>Great to get your valuable input through this newsgroup (I am an oldtimer
>who came back to ham radio after 25 years qrt, must say that the Internet
>makes the hobby even more exciting....)
>
>73ï¿½s de Per / SM0WRA (excuse my bad spelling in my first message, to trigger
>happy ....)
The 50 ohm dummy load idea is not a good one unless you want to waste
power.. what would be the sense in that.. You can use a short run of
Coax to get you outside the building and a Balun.. You'll get lots of
advise on the balun but I would you a 1:1 Choke balun such as Radio
Works == MFJ sell one 4:1 I think not sure what the power capability
is.. our you could make your own with about 20 F.B. slipped over the
Rg-8. RG 58 will not handle the power you want to run.

Your Tuner should have a Balun built in and if possible I would bring
the Balanced line right to the tuner.

Anyway happy haming and hope to here you on 30 M some time ..

73 Dave Kc1di

2577. Re: Dipole mounting options

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 20:57:10 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3D8626.816F17DE@cwis.net>
Source record: 125565

Ron,
Dipoles can be mounted just about anyway and
work just fine. What you described should work.
'Doc

2578. Re: Solar Spectral Power Estimates, Design Question--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 20:59:58 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v3r1jjrkbuv631@corp.supernews.com>
Source record: 125566

Dear Mr. Watson:
I built the receiver used for one of the earliest, if not the first, absolute measurements in RA. It was called the HILLRAMS receiver and was connected to the end of a very long horn antenna. The horn antenna was inclined in a gully pointing north with an inclination such that Cassiopeia would drift through its beam once per sidereal day.
The construction of the horn antenna was a major achievement at the time. It involved welding large sheets of AL together so that the result was a (flat) plane. Outside bracing had to be used. A horn antenna is one of a very small set of antennas having properties (gain) that can be calculated from dimensions.
The receiver switched back and forth from a load resistor (submerged in a container of ice water) to the antenna, and measured the difference in temperature between the two "loads." One measurement was taken a day.
Once one knows the apparent temperature of Cassiopeia at a frequency, that number may be used to calibrate radio telescopes elsewhere in the Northern hemesphere. A number of people had measured the frequency dependence, and an average of those measured dependencies could be used to estimate effective temperature at a frequency other than the one we used. (I think that we used 1400 MHz, but I am not sure. This took place in the late 50s at Green Bank.)
So, first you need an antenna with a known gain and a narrow beamwidth if you wish to have a chance of making absolute measurements. The need for a known gain is obvious. A narrow beamwidth is needed so you "look" at only what you intend to look at.
A few books have been written on RA that include information on the instrumentation. My mentor, Kraus, has one.
As most everyone on this list will agree, making absolute measurements is difficult. Relative measurements are more easy.
73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Wayne Watson" <mtnviews@earthlink.net> wrote in message news:3E3D2220.5FCC57B7@earthlink.net...
> I posed a question on some solar values in a book I read on radio astronomy. Let me reprhase the
> question.
>
> The subject of the book's section is really how to determine the bandwidth of a receiver to observe the
> sun. I guess where I am going with the my questions is that suppose I

had some thought of observing M1
> (planetary nebula in Taurus). I could design the receiver and antenna
around the author's rough back of
> the envelope calculations if I knew what the density (W/hz) and
intensity (W/hz/m^2) values for M1
> were. Basically, that's the question. That is, how does one *know*
these for common radio sources?
> --
> Wayne T. Watson

2579. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 21:05:40 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3D8824.EE137437@cwis.net>
Source record: 125567

Per,
If it's a choice between a current or voltage balun,
I would suggest the currnet balun. The power rating
should be 1.5 to 2 times your normal power level, or
even more. You can't have a 'too high' power rating
for a balun, but you can certainly have 'too low' of
one.
If you want to 'play' with using a dummy load as an
impedance matching device, it should be a 'learning'
experience for you. It's also not going to be long
before you remove it (LOL). Yes, it will lower the
overall antenna efficiency. Have fun...
'Doc

2580. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 21:46:22 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Okg%9.4118$6P2.470523@newsread1.prod.itd.earthlink.net>
Source record: 125568

> Walter, W2DU wrote:
> "The issue I`ve had with Steve for more than two years is that he says
> the rearranged expression PF = PD + PR is invalid."
>
> I`ve used Bird, General Signal, and Sierra wattmeters for 40 years. All
> are similar directional inline wattmeters. They are accurate enough for
> practical instruments. Their principle is: PD = PF - PR.
>
> Walter is right. The equation can`t be the issue.
>
> Re-reflection at the generator has been argued for as long as I can
> remember. It makes no difference to the equationn. The reflected power
> could be all absorbed by the generator. In this case, all forward power
> is new. Or, all reflected power could be totally re-reflected at the
> generator. In this case, the forward power is the total of new generator
> power plus the re-reflected power.

Thanks for the support, Richard.

Walt

2581. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 21:52:46 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Oqg%9.4125$6P2.472514@newsread1.prod.itd.earthlink.net>
Source record: 125469

> On Sat, 01 Feb 2003 01:59:39 GMT, "Walter Maxwell" <w2du@iag.net>
> wrote:
>
> >Exactly, PF = PD + PR is precisely equal mathematically to 6.17
> >
> >This means that forward power equals source power plus reflected power, a
> >fact that you have always rejected.
>
> Hi All,
>
> It is this single entry that has impelled me into the discussion that
> originated around the casual operation of re-arranging formulas to
> suit tastes.
>
> Mathematics and its expression in the form of formulas is not an
> artifice of a high school memory short-cut for a final exam. Formulas
> are also formal, logical constructs. When you shuffle the terms as
> you both are very fond of doing, you are in fact creating NEW
> relationships that may have never existed in the original source's
> recitation. Your having done this invalidates ANY claim to that
> authority (you denied it yourself through your manipulations).
>
> Can you in fact shuffle these terms? They all resolve to identical
> outcomes, true, but not for the same reasons if you start imparting
> rationales for why your formula is better than some one else's (or the
> authority's for that matter).
>
> Without explaining the abbreviations (we can guess them anyway) and
> remaining content neutral, ask yourself:
> PF = PD + PR
> Is PF dependant upon PD and PR, allowing that PD and PR are
> independent of PF? Do either PD or PR follow PF, or do they lead it?
> If they (together, or independently) follow, they (together, or
> independently) are dependant, and on the wrong side of the equation.
>
> I won't bother to triplicate this above for the remaining two
> variations. The form of my argument should be clear: a formula
> consists of a dependency on the left composed of (dependant upon)
> independent variables and constants on the right.
>
> My guess is everyone would be content to live with any of the three
> forms offered, which leads to the logical conclusion that all three
> are dependencies of a fourth agent. You guys don't have all your oars
> in the water.

Richard, the expression PF = PD + PR is mathematically identical to Johnson's Eq 6.17, which says that total forward power equals source power plus reflected power. Are you saying I don't have all my oars in the water by asserting this indisputable expression to be a fact?

Walt, W2DU

2582. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 23:16:03 UTC
From: Terry O'Neill <rfmscpa@earthlink.net>
Message-ID: <TEh%9.4788$ek4.436548@newsread2.prod.itd.earthlink.net>
Source record: 125471

I have a 400+/- foot loop fed with 450 ohm ladder line. I avoid the balun issue with a link coupled tuner (Johnson Matchbox). Works FB on all bands.

2583. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-02 23:44:56 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <cn3p3vkjmvs1abk4p3jkqk4i3mgvdqdg2m@4ax.com>
Source record: 125472
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

On 1 Feb 2003 08:13:23 -0800 jason_hsu@my-deja.com (Jason Hsu) wrote:

>I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
>school independent study project. It will be able to handle power
>levels as high as 200W (thus comfortably handle the full 100W) and
>power levels as low as a small fraction of a watt.
>
>As you know, SWR meters use transformers as sensors to sample the load
>current and voltage.

If you're really interested in doing this a better way, you should study the Bird model 43 wattmeter. It uses NO ferrites and works well above a kilowatt. It uses no obvious transformer, although the transformer concept is there.

Once you understand how these work you would never again consider any kind of explicit transformer.

-

Jim Adney jadney@vwtype3.org
Madison, WI 53711 USA

2584. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 00:03:09 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <tdi%9.10640$yU6.843@fe01>
Source record: 125473

Probably from the SAME Source, but for a LONGER TIME! was radio-man for Southern Pacific, now part of Union Pacific for over 30 years, till disability got me retired about 2 years ago! BTW, if interested, ANDREW (correct, without the "S" when looking them up, or their web page) also supplies a tube (actually a small plastic pouch from both) of silicon grease with each of their antenna fittings, as well. only one not seen in their packageing is LARSON ! but at the cost they charge, vs. motorola (about 1/3 the price), who cares??? Jim NN7K

Steve Wrote:
> > Motorola, when supplying these same NMO mounts, supplies a small tube of
> > silicon grease, tho normally these seal fine without applying it-- jim
> NN7K
> >
> >
>
> Must be buying from a different Mororola than we buy from. We have 60+ on
> hand and I have never seen a tube of anyting shipped with these mounts.
>
> Steve
>
>

2585. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 00:10:51 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <yki%9.10684$yU6.9846@fe01>
Source record: 125474

Have you seen Motorolas, or larson's drill bit's for these? has extra rough edge outter ring on it's hole saw, to clean off the paint- not just a drill stop! but, dont keep drilling-- eventually, IT will go thru the metal,too, leaving too big a hole if you dont know better (the sign of a new "technician")
; >) Jim NN7K

Dave AE6EO wrote> Another idea when installing NMO mounts - abrade off a bit of paint
> from around the inside of the hole, where the inside ring of the mount
> will grip the sheet metal, and then coat it with one of the conductive
> anti-oxidant greases (> Dave Platt <dplatt@radagast.org>
AE6EO

2586. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 00:25:38 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E3DB756.11A35F83@att.net>
Source record: 125475

Cecil,

This is a true RRAA classic. You win the Debating Society award for this month.

73,
Gene
W4SZ

OC_CAM's Razor wrote:

[snip]

> Melles-Griot seems to have a much broader definition
> of re-reflected power even though they don't mention "re-reflections"
> per se.

2587. Re: Ideas on slingshot for installing antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 00:31:04 UTC
From: Ted Busky <busky@portone.com>
Message-ID: <3E3DB848.F04997E7@portone.com>
Source record: 125478

Hi,
Thanks for all your input. I thought I'd update you on what I have learned.

I bought some 2 oz tear drop fishing weights and painted them flourescent orange. I tied a loop at the end of the line and then threaded the loop through the hole in the weight then the weight through the loop. Once you get the hang of putting the weight on and taking it off, it makes very quck work of pulling back a mis-placed shot without the worry of tangling the line because of the weight swinging. The tear drop is easier to pull back over branches, but it still snags, breaks free then swings risking snagging. If the shot was bad, I let the weight take the line all the way to the ground then removed the weight and reeled the line in and re-installed the weight. If the line was going over branches and I wanted it to run straighter, I did not try to get the line to fall in a better location by pulling it back. Rather, I pulled the string up, then the rope. Now I tied a window weight to the rope and pulled that up past the obstruction and then let it fall straight down. It is harder to pull than a 2oz weight, but it did not snag, spring back and and tangle anywhere near what the fishing weight did.

I kept using my closed face reel since I had it clamped to the slingshot. (I have an open face reel that I might try sometime.) I wound string on the base of the bobbin, then loaded the 6 pound line on the string so the line filled the bobbin. The line pays out easier than if you wind the line just at the base of the bobbin.

The tapered bands broke so I replaced them with straight bands. The straight bands do have more power than the tapered bands.

I almost got blisters changing the bands even though I lubed one yoke with water and one yoke with alcohol before sliding the bands on. Replies from the hunting newsgroup suggested spitting on the yokes for lube. I will have to try that next time.

Also, I used a pulley at one end of the dipole for strain relief and tied a knot in the rope near the ground to attach to the weight. I realized the knot would work into the rope over time and I might not get it out if I had to replace the rope or re-adjust the antenna. I used a split bolt to clamp a scrap of rope with a loop tied in it to hang the weight from. I laid the scrap in the slip bolt first, then laid the antenna support rope in then the scrap again with the loop hanging down. This way I hope the antenna rope will not be damaged by the slip bolt.

Thanks again for you help.

Ted
N1XLW

2588. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 00:33:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3re69tjib8b69@corp.supernews.com>
Source record: 125476

Anyone who does want to use silicone (not silicon) grease on the O-rings can find it at any store that sells plumbing supplies.

In the Air Force long ago, we routinely used silicone grease on the O-rings used to seal waveguide flanges and similar things. This admittedly wasn't a very demanding application, since they only had to hold a very small amount of air pressure.

Roy Lewallen, W7EL

2589. ANTENNA HELP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 00:41:45 UTC
From: theplanters95@aol.comnospam
Message-ID: <20030202194145.10824.00000166@mb-ma.aol.com>
Source record: 125477

Finally, a rental with no antenna restrictions, but it is on a zero lot (no real estate). Any antenna suggestions? Anybody have a vertical that is cheap?

Randy ka4nma

2590. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 00:57:30 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E3DBECE.D1442D0B@att.net>
Source record: 125479

Cecil,

Let's suppose that everyone agrees with you 100%. Depending on the degree of match there is at least some portion of the rearward-traveling energy, and perhaps all of it, that reverses direction and joins the forward energy.

The issue then becomes quite straightforward.

What is the physical manifestation of this reflected energy? Where is it?

Using the long standard "problem" as a guide, we know there are two forward wave components, the infamous 75W wave, and the equally infamous 8.33W wave. Where is the missing energy that has been reversed?

Your model asserts that the 75W wave adds to the 8.33W wave to give 83.33W, not 133.33W. For the purposes of this discussion I will agree to that addition. Where is the remaining 50W? It must be traveling in a forward direction, since we know there is a total forward power of 133.33W.

Is there another wave? Are the two infamous wave components somehow modified? Is there yet another method to combine the 75W and 8.33W waves? Does the 50W somehow just "exist", with no associated wave?

This is an easy question, but it is absolutely fundamental to the issue at hand?

I have actually studied Steve's model and Walt's model quite extensively over the past week or so. I have come to the conclusion that each of their models are internally consistent. There may be remaining disagreement about the proper set-up of the problem and just how to add voltages and powers, but if you follow through each model there are no math errors.

In the case of your model there is still 50W remaining unidentified. You have argued that it reverses, you have argued that it must exist because of conservation of energy, and you have pulled in Melles-Griot and probably a few more references.

Ok, we believe you. The question still remains: Where is the reversed 50W?

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Richard Clark wrote:
> > My guess is everyone would be content to live with any of the three
> > forms offered, which leads to the logical conclusion that all three
> > are dependencies of a fourth agent. You guys don't have all your oars
> > in the water.
>
> I couldn't have said it better myself, I really couldn't. The fourth
> agent is destructive/constructive interference or wave cancellation/
> enhanced intensity or whatever other handle one chooses to hang on it.
> At an impedance discontinuity, energy reverses direction except when
> the waves are orthogonal. All of the rearward-traveling energy reverses
> direction when the impedance discontinuity is a match point.
> --
> cheers, CAM http://www.qsl.net/w5dxp

2591. Re: 40 m dipole on 15 m? Does it work?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 01:07:34 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <cvqdnX_-27ZFXaCjXTWcpw@comcast.com>
Source record: 125480

A 40 m dipole work on 15, and actually has more gain than on 40 m. You get sort of a cloverleaf pattern. A 40 m inverted V sucks on 15; most of the energy goes straight up, and according to EZNEC you lose about 5 db at 15 degrees elevation angle.

Tam/WB2TT
"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0301282050.19696f62@posting.google.com...
> fch <na@hle.com> wrote in message news:<3E343555.249421BA@hle.com>...
> > It is coax fed. How efficient of a radiator of RF is a 40 m
> > dipole being used on 15 m?
> > Is it almost or as efficient as a regular 15 m dipole?
> >
> > What other bands could a 80 m dipole be used on easily?
>
> Yes, it's about as efficient, but it has a different pattern as
> mentioned.
> I've always had good results using a coax fed 40m dipole on 15m. I
> mentioned a while back running dipoles at 10 ft high when camping. I
> used a 40m dipole at 10 ft high or less on 15m and worked JA's one
> after another in the late afternoon with low power. Also I ran this
> setup as a novice. The only problem is sometimes the SWR is a bit high
> for a solid state rig. I just stick a tuner inline usually if needed.
> The losses are low. A 40m will give decent results on 17m usually. 80m
> dipole??? Dunno...It's ok on 30m for one...I've used one on 20m with
> usable results also. The better "larger" the coax, the less loss in a
> mismatched scenario. When you have a large mismatch on a coax system,
> using fat rg-8 or 213, etc, pays off compared to thin rg-58. The
> losses will be a good bit less with the bigger coax. MK

2592. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 02:11:58 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <r0kr3vk300m6dmodr5ih05sd7es3s7vpsm@4ax.com>
Source record: 125481

On Sun, 02 Feb 2003 21:52:46 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>> On Sat, 01 Feb 2003 01:59:39 GMT, "Walter Maxwell" <w2du@iag.net>
>> wrote:
>>
>> >Exactly, PF = PD + PR is precisely equal mathematically to 6.17
>> >
>> >This means that forward power equals source power plus reflected power, a
>> >fact that you have always rejected.
>>
>> Hi All,
>>
>> It is this single entry that has impelled me into the discussion that
>> originated around the casual operation of re-arranging formulas to
>> suit tastes.
>>
>> Mathematics and its expression in the form of formulas is not an
>> artifice of a high school memory short-cut for a final exam. Formulas
>> are also formal, logical constructs. When you shuffle the terms as
>> you both are very fond of doing, you are in fact creating NEW
>> relationships that may have never existed in the original source's
>> recitation. Your having done this invalidates ANY claim to that
>> authority (you denied it yourself through your manipulations).
>>
>> Can you in fact shuffle these terms? They all resolve to identical
>> outcomes, true, but not for the same reasons if you start imparting
>> rationales for why your formula is better than some one else's (or the
>> authority's for that matter).
>>
>> Without explaining the abbreviations (we can guess them anyway) and
>> remaining content neutral, ask yourself:
>> PF = PD + PR
>> Is PF dependant upon PD and PR, allowing that PD and PR are
>> independent of PF? Do either PD or PR follow PF, or do they lead it?
>> If they (together, or independently) follow, they (together, or
>> independently) are dependant, and on the wrong side of the equation.
>>
>> I won't bother to triplicate this above for the remaining two
>> variations. The form of my argument should be clear: a formula
>> consists of a dependency on the left composed of (dependant upon)
>> independent variables and constants on the right.
>>
>> My guess is everyone would be content to live with any of the three

>> forms offered, which leads to the logical conclusion that all three
>> are dependencies of a fourth agent. You guys don't have all your oars
>> in the water.
>
>Richard, the expression PF = PD + PR is mathematically identical to
>Johnson's Eq 6.17, which says that total forward power equals source power
>plus reflected power. Are you saying I don't have all my oars in the water
>by asserting this indisputable expression to be a fact?
>
>Walt, W2DU
>

Hi Walt,

I don't have your reference so saying something is "mathematically identical to Johnson's Eq 6.17," instead of saying it IS Johnson's Eq 6.17 means, yes, you do not have all your oars in the water. As I explain why in the material quoted above, I don't have to repeat myself.

But not to worry, in this regard it appears you are in the same canoe with Steve.

73's
Richard Clark, KB7QHC

2593. IF only one wire antenna,

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 02:26:33 UTC
From: n0mzr@aol.com
Message-ID: <20030202212633.27027.00000657@mb-mq.aol.com>
Source record: 125482

It would be a G5RV hands down. Only with the matching section of 75 ohm twinlead to 50 ohm coaxial cable. n0mzr

2594. Gary Coffman: personal information

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 02:42:46 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <GGk%9.12649$xc.903293@twister.austin.rr.com>
Source record: 125483

Gary Coffman: personal information

NAME:
Gary Roland Coffman

AGE:
54

ADDRESS:
534 Shannon Way NW
Lawrenceville, GA 30044

HOMEPHONE:
770.963.8363

EMAIL:
ke4zv@bellsouth.net
ke4zv@radio.org

2595. Re: Gary Coffman: personal information

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 03:17:13 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e3de029_1@news1.prserv.net>
Source record: 125484

Where ya' been, Gary? Help desperately needed here to keep these characters straightened out on the subjects of grounds, lightning protection, and lots of others.

--
Crazy George
Remove NO and SPAM from return address
"Gary Coffman" <ke4zv@bellsouth.net> wrote in message news:GGk%9.12649$xc.903293@twister.austin.rr.com...
> Gary Coffman: personal information
>
> NAME:
> Gary Roland Coffman
>
> AGE:
> 54
>
> ADDRESS:
> 534 Shannon Way NW
> Lawrenceville, GA 30044
>
> HOMEPHONE:
> 770.963.8363
>
> EMAIL:
> ke4zv@bellsouth.net
> ke4zv@radio.org
>
>

2596. Sources for replacement retractable whips???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 03:31:16 UTC
From: will7370@yahoo.com
Message-ID: <e88e9b5a.0302021931.1c81c198@posting.google.com>
Source record: 125485

Other than Radio Shack (which doesn't have what I need) can someone point me to other online resources which sell replacement retractable (sectional) whip antennas? I need a couple about 6' long for a multiband portable receiver. My receiver brand (Aircastle) is long out of business, so going back to the manufacturer is not an option.

Appreciate the help,

Rob

2597. Tuning Multi-Band Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 04:07:05 UTC
From: Pete Ritter <cpritter@attbi.com>
Message-ID: <IVl%9.78927$to3.118896@rwcrnsc51.ops.asp.att.net>
Source record: 125486

Is there a way to determine the resonant frequencies of a multi-band
vertical with only an RF signal generator, a 'scope, a receiver and perhaps
a few components? I don't include a transmitter because I don't want to
put a signal on the air.

Thanks for any ideas or hints.

Pete WB5KLY

--
*
* This Space For Hire

2598. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 04:28:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3DEFE4.4070905@ieee.org>
Source record: 125487

Gene Fuller wrote:
> Cecil,
> This is a true RRAA classic. You win the Debating Society award for this
> month.

Well Gene, when two reflected waves undergo destructive interference and
their energy components change direction to cause enhanced intensity
in the transmitted wave, what would you call it except a re-reflection?
Just because optics uses a slightly different vocabulary from RF engineers
doesn't invalidate the concepts. It all EM waves.

>>Melles-Griot seems to have a much broader definition
>>of re-reflected power even though they don't mention "re-reflections"
>>per se.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2599. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 05:03:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3DF826.4060403@ieee.org>
Source record: 125488

Gene Fuller wrote:
> Cecil,
>
> Let's suppose that everyone agrees with you 100%. Depending on the
> degree of match there is at least some portion of the rearward-traveling
> energy, and perhaps all of it, that reverses direction and joins the
> forward energy.
>
> The issue then becomes quite straightforward.
>
> What is the physical manifestation of this reflected energy? Where is
> it?

From the Melles-Griot web page, it becomes "enhanced intensity in the transmitted beam", i.e. in ham lingo, it becomes constructive interference in the forward wave. What is needed in the 75W+8.33W=133.33W equation is 50W of constructive interference. The angle between V1 and V2 is less than 90 degrees. When I was in college, that was the definition of constructive interference. If the angle between V1 and V2 is greater than 90 degrees, the interference is destructive, by definition.

> Using the long standard "problem" as a guide, we know there are two
> forward wave components, the infamous 75W wave, and the equally infamous
> 8.33W wave. Where is the missing energy that has been reversed?

It comes from the infamous canceled "rearward-traveling waves 1 and 2". These are Pfwd1(Rho^2) and Pref2(1-Rho^2) both of which are reflected waves. From the Melles-Griot web page, "then reflected wavefronts interfere destructively" causing "enhanced intensity in the transmitted beam" which requires a reversal of direction of that energy.

> Your model asserts that the 75W wave adds to the 8.33W wave to give
> 83.33W, not 133.33W. For the purposes of this discussion I will agree to
> that addition. Where is the remaining 50W? It must be traveling in a
> forward direction, since we know there is a total forward power of
> 133.33W.

The 50W comes from the wave cancellation (destructive interference) of the two reflected waves on the source side of the match point.

Gene, please read the Melles-Griot web page. Here it is again with my comments added in brackets.

"Clearly, if the wavelength of the incident light and the thickness of the film are such that a phase difference exists between reflections of p, then reflected wavefronts interfere destructively, and overall

reflected intensity is a minimum. If the two reflections are of equal amplitude, then this amplitude (and hence intensity) minimum will be zero. In the absence of absorption or scatter, the principle of conservation of energy indicates all "lost" reflected intensity will appear as enhanced intensity [constructive interference] in the transmitted beam. The sum of the reflected and transmitted beam intensities is always equal to the incident intensity. This important fact has been confirmed experimentally."

> Is there another wave? Are the two infamous wave components somehow
> modified? Is there yet another method to combine the 75W and 8.33W
> waves? Does the 50W somehow just "exist", with no associated wave?
>
> This is an easy question, but it is absolutely fundamental to the issue
> at hand?

The answer depends on which variation of the model is being used. I am satisfied that the constructive interference provides an EH field energy foundation for the forward wave without which it could not exist as a 133.33 joules/sec wave actually delivering 100 joules/sec to the load. 75W + 8.33W = 83.33W and 100W is being delivered to the load. Constructive interference is providing the extra 16.67W plus 33.33W additional to support the reflected wave.

Someone else will assert that the extra 50W causes a third wave and that is perfectly consistent with the model. The total voltage would then be the square root of the sum of the squares of the three voltages. I believe Mr. Maxwell has adopted that approach. Whether the 50W becomes a separate wave or simply merges with the forward E and H fields is not a big deal. Either model works perfectly and there's not much to argue about.

> I have actually studied Steve's model and Walt's model quite extensively
> over the past week or so. I have come to the conclusion that each of
> their models are internally consistent. There may be remaining
> disagreement about the proper set-up of the problem and just how to add
> voltages and powers, but if you follow through each model there are no
> math errors.

Yet they assert conclusions proving the other wrong. Steve says all reflected power is not reflected at a match point. Walt says it is. They cannot both be correct. Someone has made a mental blunder. I say that the fact that no reflected power is incident upon the source is strong evidence that all the reflected power is indeed re-reflected. Where else can it go except back toward the load?

> In the case of your model there is still 50W remaining unidentified. You
> have argued that it reverses, you have argued that it must exist because
> of conservation of energy, and you have pulled in Melles-Griot and
> probably a few more references.
>
> Ok, we believe you. The question still remains: Where is the reversed
> 50W?

The superposition principle predicts four energy components. Steve's P1 and P2 are only two of the components. I call the others P3 and P4 and they are Pfwd1(Rho^2) and Pref2(1-Rho^2) which are 25W each. If Pref1 equals zero, i.e. no reflected energy reaches the source, then Pfwd2 has to be P1+P2+P3+P4 for a lossless system. There is simply no other place for that energy to go. Don't you think it quite a coincidence that 2 Sqrt(P1) Sqrt(P2) = P3+P4 = 50W? It is simply because P1*P2 equals P3*P4. Things are perfectly symmetrical around the match point.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2600. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 06:02:42 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E3E0651.D4DF08CA@att.net>
Source record: 125489

Cecil,

All you have said is that the energy gets reversed. Fine, we all agree. We even believe in destructive and constructive interference. The question still remains, where is the constructively interfered energy?

It is rather fruitless to say the missing energy could add to the waves, or it could show up as additional E x H terms, or appear in any of a number of possibilities. Your model, which has been promoted many times here, contains very specific P1, P2, Prefl, Pfwd, etc., not vague generalities. It should be straightforward to identify the physical entity that contains the reversed energy.

Again, the simple question is where does your model show the reversed energy?

It is not necessary to keep quoting the Melles-Griot material. There is no argument at all about that information. We know where the energy comes from. The question is where is it now? What is needed for closure is a clean statement on how the energy balances in *your* model.

My comment about the two models (Best and Maxwell) working self consistently simply means that if you accept the vector addition of voltages (Best) or if you accept the total reflection (Maxwell) then the energy math works out correctly. This does not say that either model is right or wrong, but it does say that the models do not contain internal errors of calculation.

It is not possible to learn whether your model makes sense until you complete it by identifying the missing energy. Until then the potential winners are Steve and Walt, since their models do fully account for all the energy.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Cecil,
> >
> > Let's suppose that everyone agrees with you 100%. Depending on the
> > degree of match there is at least some portion of the rearward-traveling
> > energy, and perhaps all of it, that reverses direction and joins the
> > forward energy.
> >

> > The issue then becomes quite straightforward.
> >
> > What is the physical manifestation of this reflected energy? Where is
> > it?
>
> From the Melles-Griot web page, it becomes "enhanced intensity in the
> transmitted beam", i.e. in ham lingo, it becomes constructive interference
> in the forward wave. What is needed in the 75W+8.33W=133.33W equation is
> 50W of constructive interference. The angle between V1 and V2 is less
> than 90 degrees. When I was in college, that was the definition of
> constructive interference. If the angle between V1 and V2 is greater
> than 90 degrees, the interference is destructive, by definition.
>
> > Using the long standard "problem" as a guide, we know there are two
> > forward wave components, the infamous 75W wave, and the equally infamous
> > 8.33W wave. Where is the missing energy that has been reversed?
>
> It comes from the infamous canceled "rearward-traveling waves 1 and 2".
> These are Pfwd1(Rho^2) and Pref2(1-Rho^2) both of which are reflected
> waves. From the Melles-Griot web page, "then reflected wavefronts interfere
> destructively" causing "enhanced intensity in the transmitted beam" which
> requires a reversal of direction of that energy.
>
> > Your model asserts that the 75W wave adds to the 8.33W wave to give
> > 83.33W, not 133.33W. For the purposes of this discussion I will agree to
> > that addition. Where is the remaining 50W? It must be traveling in a
> > forward direction, since we know there is a total forward power of
> > 133.33W.
>
> The 50W comes from the wave cancellation (destructive interference) of
> the two reflected waves on the source side of the match point.
>
> Gene, please read the Melles-Griot web page. Here it is again with my
> comments added in brackets.
>
> "Clearly, if the wavelength of the incident light and the thickness
> of the film are such that a phase difference exists between reflections
> of p, then reflected wavefronts interfere destructively, and overall
> reflected intensity is a minimum. If the two reflections are of equal
> amplitude, then this amplitude (and hence intensity) minimum will be zero.
> In the absence of absorption or scatter, the principle of conservation of
> energy indicates all "lost" reflected intensity will appear as enhanced
> intensity [constructive interference] in the transmitted beam. The sum
> of the reflected and transmitted beam intensities is always equal to the
> incident intensity. This important fact has been confirmed experimentally."
>
> > Is there another wave? Are the two infamous wave components somehow
> > modified? Is there yet another method to combine the 75W and 8.33W
> > waves? Does the 50W somehow just "exist", with no associated wave?
> > >

> > This is an easy question, but it is absolutely fundamental to the issue
> > at hand?
>
> The answer depends on which variation of the model is being used. I am
> satisfied that the constructive interference provides an EH field energy
> foundation for the forward wave without which it could not exist as
> a 133.33 joules/sec wave actually delivering 100 joules/sec to the load.
> 75W + 8.33W = 83.33W and 100W is being delivered to the load. Constructive
> interference is providing the extra 16.67W plus 33.33W additional to support
> the reflected wave.
>
> Someone else will assert that the extra 50W causes a third wave and that
> is perfectly consistent with the model. The total voltage would then be
> the square root of the sum of the squares of the three voltages. I believe
> Mr. Maxwell has adopted that approach. Whether the 50W becomes a separate
> wave or simply merges with the forward E and H fields is not a big deal.
> Either model works perfectly and there's not much to argue about.
>
> > I have actually studied Steve's model and Walt's model quite extensively
> > over the past week or so. I have come to the conclusion that each of
> > their models are internally consistent. There may be remaining
> > disagreement about the proper set-up of the problem and just how to add
> > voltages and powers, but if you follow through each model there are no
> > math errors.
>
> Yet they assert conclusions proving the other wrong. Steve says all reflected
> power is not reflected at a match point. Walt says it is. They cannot both
> be correct. Someone has made a mental blunder. I say that the fact that no
> reflected power is incident upon the source is strong evidence that all
> the reflected power is indeed re-reflected. Where else can it go except
> back toward the load?
>
> > In the case of your model there is still 50W remaining unidentified. You
> > have argued that it reverses, you have argued that it must exist because
> > of conservation of energy, and you have pulled in Melles-Griot and
> > probably a few more references.
> >
> > Ok, we believe you. The question still remains: Where is the reversed
> > 50W?
>
> The superposition principle predicts four energy components. Steve's P1
> and P2 are only two of the components. I call the others P3 and P4 and
> they are Pfwd1(Rho^2) and Pref2(1-Rho^2) which are 25W each. If Pref1
> equals zero, i.e. no reflected energy reaches the source, then Pfwd2
> has to be P1+P2+P3+P4 for a lossless system. There is simply no other
> place for that energy to go. Don't you think it quite a coincidence
> that 2 Sqrt(P1) Sqrt(P2) = P3+P4 = 50W? It is simply because P1*P2
> equals P3*P4. Things are perfectly symmetrical around the match point.
> --
> cheers, CAM http://www.qsl.net/w5dxp

2601. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 06:12:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3E084E.6070404@ieee.org>
Source record: 125490

Gene Fuller wrote:
> Cecil,
>
> Let's suppose that everyone agrees with you 100%. Depending on the
> degree of match there is at least some portion of the rearward-traveling
> energy, and perhaps all of it, that reverses direction and joins the
> forward energy.
>
> The issue then becomes quite straightforward.
>
> What is the physical manifestation of this reflected energy? Where is
> it?

I wish I could draw you a diagram, Gene, but first let's see if ASCII characters can do it. The four energy components predicted by the superposition principle are:

P1 = Pfwd1(1-Rho^2) = V1*I1
P2 = Pref2(Rho^2) = V2*I2
P3 = Pfwd1(Rho^2) = V3*I3
P4 = Pref2(1-Rho^2) = V4*I4

where Pfwd1 and Pref1 are the forward and reflected powers on the source side of an impedance discontinuity and Pfwd2 and Pref2 are the forward and reflected powers on the load side. It can be shown that P1*P2=P3*P4

Let's assume the system is unmatched and that V1 and V2 look like:

V2 Vfwd2=V1+V2 (phasor addition)
/
/ theta
+---------------V1

I assume that everyone knows how to find Vfwd2 from the phasor addition of these two values. It is exactly as Dr. Best does in his QEX article. What he seems to have missed is that the phasor addition of V1 and V2 within a Z0 transmission line requires constructive interference energy to make it happen. Theta is less than 90 degrees so constructive interference exists, by definition.

The impedance discontinuity is perfectly symmetrical and V3 and V4 will look like:

+-------V3
/ (180 deg - theta)
/
/
/

V4 Vref1=V3+V4 (phasor addition)

V1 and V3 are related to Vfwd1. V2 and V4 are related to Vref2. The phase angle between V3 and V4 will always be 180 deg minus the phase angle between V1 and V2. Since P1*P2=P3*P4, the destructive interference energy magnitude resulting from the phasor addition of V3 and V4 will *ALWAYS* equal the constructive interference energy magnitude resulting from the phasor addition of V1 and V2. If V1 is larger than V2, then V4 will be larger than V3. The constructive interference will always equal the destructive interference at an impedance discontinuity isolated from the source and load by transmission lines.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2602. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 06:29:40 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3E0C54.1080503@ieee.org>
Source record: 125491

Gene Fuller wrote:
> Again, the simple question is where does your model show the reversed
> energy?

Again, in the 75W+8.33W+50W = 133.33W, the 50W value is the reversed
energy originating from destructive interference in the wave cancellation.
Two 25W waves are canceled in the direction of the source in order to
achieve a match. That 50W of energy is re-reflected back toward the load.

> It is not necessary to keep quoting the Melles-Griot material. There is
> no argument at all about that information. We know where the energy
> comes from. The question is where is it now? What is needed for closure
> is a clean statement on how the energy balances in *your* model.

How can 75W + 8.33W + 50W = 133.33W be any plainer? I have called that
50W "destructive interference energy" ever since May of 2001 when Dr.
Best published his 75W + 8.33W = 133.33W inequality.

> It is not possible to learn whether your model makes sense until you
> complete it by identifying the missing energy. Until then the potential
> winners are Steve and Walt, since their models do fully account for all
> the energy.

Steve's model does not fully account for all the energy. That's what the
argument has been all about for a year and a half. Steve's model had
two and only two energy source waves adding 75W to 8.33W to obtain 133.33W.
I say there is enhanced intensity (constructive interference) pouring across
the match point from the destructive interference (wave cancellation) on the
source side. That's exactly what the Melles-Griot web page says.

For the umteenth time, the "missing energy" is not missing. It is Pfwd1(Rho^2)
plus Pref2(1-Rho^2). I don't know how to identify it any better than that.
Those are the two wave components predicted by the superposition theorem
and ignored by Dr. Best.

Please see my other posting where I attempted to draw phasor diagrams.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2603. Re: Tuning Multi-Band Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 07:59:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v3s8acigl3sld4@corp.supernews.com>
Source record: 125492

Connect the signal generator to the antenna feedline through a resistor of, say, 100 ohms or so. (Keep the leads short, and connect the signal generator ground to the feedline shield as directly as you can.) Look at the voltage on the antenna side of the resistor with your scope (scope ground to the coax shields). The voltage should show a pronounced dip at each resonant frequency. Resonance will be at the bottom of the dip. You can try changing the resistor value if the dip is so wide that it's difficult to tell where the bottom is. To avoid unnecessary interference, use the lowest level signal you can from the generator, that still allows you to make the measurement.

This method should be more than accurate enough for your purposes.

Roy Lewallen, W7EL

Pete Ritter wrote:
> Is there a way to determine the resonant frequencies of a multi-band
> vertical with only an RF signal generator, a 'scope, a receiver and perhaps
> a few components? I don't include a transmitter because I don't want to
> put a signal on the air.
>
> Thanks for any ideas or hints.
>
> Pete WB5KLY
>

2604. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 13:36:50 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Sfu%9.30519$zF6.2115203@bgtnsc04-news.ops.worldnet.att.net>
Source record: 125493

"Walter Maxwell" <w2du@iag.net> wrote in message
news:7kf%9.3975$6P2.462050@newsread1.prod.itd.earthlink.net...
>
> Walter Maxwell wrote:
>
> > > Then why do you insist that 100 w of PD plus 33.33 w of PR is not the
> > > mechanism that establishes 133.33 w of PF?
> > >
> > > Walt, W2DU
> >
> > Walt,
> >
> > Simple example with some simple questions:
> >
> > Source*** 50 ohm Line ***$$*** 150 ohm line ***50 ohm load
> >
> > "$$" represents the junction between the 50 and 150 ohm lines.
> >
> > Forward wattmeter in the 150 ohm line reads 133.33 W
> >
> > Rearward wattmeter in the 150 ohm line reads 33.33 W
> >
> > Using PD = PF - PR, I conclude that 100 W of power is delivered to the
150
> > ohm line and 50 ohm load.
> >
> > You said I don't understand the significance of PD = PF - PR in terms of
> the
> > Zo match and a total re-reflection of power. All of the power
information
> > is here.
> >
> > Beyond my interpretation, what do you conclude?
> >
> > Do the power readings and the equation PD = PF - PR allow you to
conclude
> > anything about a Zo match, a mismatch and a total or non-total
> re-reflection
> > of power at the junction?
> >
> > This is the big equation and all the information used in the equation is
> > here.
> >
> > Does a Zo match exist at the junction?

>
> Yes
> >
> > What is the level of re-reflected power?
>
> 33.33 w
>
> > Steve
>
>
> Steve, you're still evading the issue. We've never had a problem with PD =
> PF - PR.
>
> When can I get you to agree that the rearrangement of the equation is also
> valid?
>
> That PF = PD + PR.
>
> This is the key to our disgreement, because you won't admit that the total
> forward power is established by adding the reflected power to the source
> power. When are you going to get it straight?
>
> Walt, W2DU
>
>

Walter,

Thank you for that very specific answer. Given your conceptual interpretation of PD = PF - PR, it was the only answer you could give. I would like you to pay very close attention to the following discussion and examples:

What does PD = PF - PR mean conceptually? Nothing more than delivered power = forward power - reflected power. This relationship holds even if a Zo match does not exist at the input to the 150 ohm line. [Note that in this discussion "delivered power" and "source power" mean the same thing.]

Walter mathematically rewrites the equation for delivered power as PF = PD + PR, which, in and of itself, is not a problem from a mathematical perspective. Walter's conceptual interpretation of this mathematical rearrangement is the problem. Walter's interpretation of PF = PD + PR is that the reflected power (PR) is totally re-reflected and "adds" to the delivered power, the sum of which becomes the total forward power (PF). He concludes that this all comes about by establishing a Zo match at the junction - i.e. a total re-reflection of power occurs when a Zo match is established. (This last point is very significant to my example - it's why he concluded that a Zo match must exist at the input to the 150 ohm line.)

In the example I posed, PF = 133.33 W and PR = 33.33 W. PD = 100 W. Beyond that, there is really nothing else we know. The equation PD = PF - PR does not really tell us anything else. However, based on Walter's conceptual

interpretation of this power relationship, the only conclusion he could arrive at was the following: a Zo match must exist at the input to the 150 ohm line and a total re-reflection of power must occur at the junction.

Does a Zo match exist at the junction and does a total re-reflection of power occur at the junction as Walter claims? The correct answer: We don't know. The wattmeter readings don't tell us anything about the impedance at the junction (other than |rho| = 0.5). ALL the wattmeter readings really tell us is that the forward power in the 150 ohm line is 133.33 W, the reflected power in the 150 ohm line is 33.33 W and therefore, 100 W of power is delivered to the 150 ohm line. Nothing more, nothing less.

Let's consider PD = PF - PR from the following perspective:

What is the value of PR written in terms of PF? If we assume that our transmission lines are lossless, then PR will always equal |rho|^2 * PF. rho is the reflection coefficient of the load at the end of the 150 ohm line. In my example, |rho| = 0.5. The relationship that PR = |rho|^2 * PF is valid independent of whether or not a Zo match exists at the junction. So, we can write PD = PF - PR as follows:

PD = PF (1 - |rho|^2)

or

PF = PD / (1 - |rho|^2)

So, in my example, with |rho| = 0.5, PF = PD / (1 - 0.25);

PF = 1.33 * PD

So, if the power delivered to the 150 ohm line is set to be 100 W (independent of a Zo match condition), the forward power will always be equal to 133.33 W and the reflected power will always be equal to 33.33 W.

Conclusion: The wattmeter readings and the equation PD = PF - PR don't allow us to arrive at any conclusion regarding a Zo match or a total re-reflection of power at the junction. PD = PF - PR means nothing more than delivered power = forward power - reflected power.

Lets look at some specific solutions to my example:

1) The 150 ohm line is 1.0 WL long. Impedance at the input to the 150 ohm line is 50 ohms (Zo). Forward power in 50 ohm line is 100 W. Reflected power in the 50 ohm line is 0 W. Forward power in the 150 ohm line is 133.33 W. Reflected power in the 150 ohm line is 33.33 W. Delivered power is 100 W.

2) The 150 ohm line is 1.2 WL long. Impedance at the input to the 150 ohm line is 255.112 + j199.935 ohms. Forward power in 50 ohm line is 260.8 W. Reflected power in the 50 ohm line is 160.8 W. Forward power in the 150 ohm line is 133.33 W. Reflected power in the 150 ohm line is 33.33 W. Delivered power is 100 W.

3) The 150 ohm line is 0.25 WL long. Impedance at the input to the 150 ohm line is 450 ohms. Forward power in 50 ohm line is 277.77 W. Reflected power in the 50 ohm line is 177.77 W. Forward power in the 150 ohm line is 133.33 W. Reflected power in the 150 ohm line is 33.33 W. Delivered power is 100 W.

From just these two additional examples, it should be very obvious that the relationship PD = PF - PR has nothing to do with a Zo match at the input to the 150 ohm line. Mathematically rewriting this equation as PF = PD + PR is valid all the time, regardless of a Zo match or the "total re-reflection of power" concept. PF = PD + PR just doesn't mean anything conceptually.

The specifics of the relationship between PD, PF and PR are determined entirely by the |rho| as determined from the load terminating the 150 ohm line. If 100 W of power is delivered to the 150 ohm line in this example, the forward power will always be 133.33 W and the reflected power will always be 33.33 W. 100 W of delivered power = 133.33 of forward power - 33.33 W of reflected power has absolutely nothing to do with an impedance match being established at the input to the 150 ohm line or a total re-reflection of power occurring at the junction.

I'm done and will exit this discussion. You guys are welcome to "interpret" these power readings anyway that suits your fancy.

One final point Walt, I still recommend you look over the QEX articles to understand exactly what forward voltages I use in the superposition process.

Take care,

Steve VE9SRB

2605. Re: ANTENNA HELP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 14:34:13 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <F5v%9.2782$yK1.1383@nwrddc02.gnilink.net>
Source record: 125494

"Theplanters95" <theplanters95@aol.comnospam> wrote in message
news:20030202194145.10824.00000166@mb-ma.aol.com...
> Finally, a rental with no antenna restrictions, but it is on a zero lot
(no
> real estate). Any antenna suggestions? Anybody have a vertical that is
cheap?
>
> Randy ka4nma

IMAX-2000! It'll work far more than just 10/11-meters. Here are two links to help you judge for yourself. Good luck and enjoy.

http://www.eham.net/reviews/detail/1376

http://www.qsl.net/kg6aoh/imax2000/

--
73 de Bert
WA2SI

2606. 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 14:52:10 UTC
From: cprstn54zz@att.net
Message-ID: <3e3e8145.111522468@news-server.optonline.net>
Source record: 125495

I want to try some cast-off TV rabbit ears for 5 watt 2M SSB.

There is the usual 2 ft of 300 ohm twinlead and a 300-75 RX balun.

I have a separate 200 watt HF 4:1 balun rated 1.8-30 MHz.

Is there anything I can do with these components that will not fry my
finals?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2607. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 14:59:08 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E3E8416.6C9621DD@att.net>
Source record: 125496

Cecil,

I guess I have not been clear enough.

A standard test for ANY model is that it is internally self-consistent.

Steve's model is based on vector addition of voltages. You may or may not like his approach. However, if one gives him the benefit of the doubt and accepts vector addition, then everything else works out correctly, including energy balance. There are no conflicts in the math. Again, you may not agree with the setup of the problem, but the model is *internally* self-consistent.

Walt's model is based on virtual shorts and virtual opens, along with the total reflection of the rearward traveling wave. You may or may not like his approach. However, if one gives him the benefit of the doubt and accepts total reflection, then everything works out correctly, including energy balance. There are no conflicts in the math. The model is *internally* self-consistent.

The CAM model never explicitly balances the energy, so the math cannot be checked. Repeated arguments that the energy reverses, etc., etc., simply do not provide any resolution of where the energy ends up.

You note: "That 50W of energy is re-reflected back toward the load."

Fine. Where is it? A new wave? Modified waves? Shipped by FedEx? Hidden under the rug?

The CAM model is incomplete and therefore inconsistent.

This ox has fallen into the ditch. I think I will go QRT again.

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Again, the simple question is where does your model show the reversed
> > energy?
>
> Again, in the 75W+8.33W+50W = 133.33W, the 50W value is the reversed
> energy originating from destructive interference in the wave cancellation.
> Two 25W waves are canceled in the direction of the source in order to
> achieve a match. That 50W of energy is re-reflected back toward the load.
>

> > It is not necessary to keep quoting the Melles-Griot material. There is
> > no argument at all about that information. We know where the energy
> > comes from. The question is where is it now? What is needed for closure
> > is a clean statement on how the energy balances in *your* model.
>
> How can 75W + 8.33W + 50W = 133.33W be any plainer? I have called that
> 50W "destructive interference energy" ever since May of 2001 when Dr.
> Best published his 75W + 8.33W = 133.33W inequality.
>
> > It is not possible to learn whether your model makes sense until you
> > complete it by identifying the missing energy. Until then the potential
> > winners are Steve and Walt, since their models do fully account for all
> > the energy.
>
> Steve's model does not fully account for all the energy. That's what the
> argument has been all about for a year and a half. Steve's model had
> two and only two energy source waves adding 75W to 8.33W to obtain 133.33W.
> I say there is enhanced intensity (constructive interference) pouring across
> the match point from the destructive interference (wave cancellation) on the
> source side. That's exactly what the Melles-Griot web page says.
>
> For the umteenth time, the "missing energy" is not missing. It is Pfwd1(Rho^2)
> plus Pref2(1-Rho^2). I don't know how to identify it any better than that.
> Those are the two wave components predicted by the superposition theorem
> and ignored by Dr. Best.
>
> Please see my other posting where I attempted to draw phasor diagrams.
> --
> cheers, CAM http://www.qsl.net/w5dxp

2608. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 15:27:05 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E3E8A49.41EED9F5@cwis.net>
Source record: 125497

Ken,
Remove the 300 ohm twin lead. Replace it
with 50 ohm coax. Adjust the 'ears' for best
SWR.
'Doc

2609. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 15:43:00 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <4gCdnYBn5e-aE6OjXTWcow@comcast.com>
Source record: 125498

Ken,

The HF balun probably won't work. The TV balun will, but there is a chance you will burn it out. You could make some short transmissions through it, and see if it gets warm at all. Best to make a balun out of a 1/2 electrical wavelength of RG58 coax. This will be 27 inches of regular (not foam) coax. Connect the center conductor of your feedline and the center conductor of the RG58 (one end) to one side of the 300 ohm twinlead. Connect the other end of the RG58 to the other side of the 300 ohm twinlead. Connect the shield of the feedline to the shield of both ends of the RG58. Adjust the rabit ear so that each ear is about 18 - 19 inches. Expect the SWR to vary all over the place as you move the rabit ears. You would probably be better off making a horizontal dipole and hanging it up in the attic, or outside. Hook it up as above.

Tam/WB2TT
"Ken" <cprstn54zz@att.net> wrote in message
news:3e3e8145.111522468@news-server.optonline.net...
> I want to try some cast-off TV rabbit ears for 5 watt 2M SSB.
>
> There is the usual 2 ft of 300 ohm twinlead and a 300-75 RX balun.
>
> I have a separate 200 watt HF 4:1 balun rated 1.8-30 MHz.
>
> Is there anything I can do with these components that will not fry my
> finals?
>
> Ken KC2JDY
>
>
> Ken
> (to reply via email
> remove "zz" from address)

2610. Re: Sources for replacement retractable whips???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 15:50:57 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <v3t3uo8dig8s4c@corp.supernews.com>
Source record: 125499

"Robert Williams" <will7370@yahoo.com> wrote in message
news:e88e9b5a.0302021931.1c81c198@posting.google.com...
> Other than Radio Shack (which doesn't have what I need) can someone
> point me to other online resources which sell replacement retractable
> (sectional) whip antennas? I need a couple about 6' long for a
> multiband portable receiver. My receiver brand (Aircastle) is long
> out of business, so going back to the manufacturer is not an option.
>
> Appreciate the help,
>
> Rob

Rob
Check out Smiley Antennas at http://www.htantennas.com/
They make some pretty good antennas including ones for
test equipment. I have one for a 2 meter ht that is around
3 feet long when extended. I checked into a net on a
repeater around 35 miles away (hilly terrain) that I cannot
hit with the same ht with ANY other antenna.
--
'73' From KB9TMP
"The secret of life is honesty and fair dealing,
if you can fake that, you've got it made."
-Groucho Marx

2611. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 15:52:45 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <x86cnWKI_Ig9PaOjXTWc3A@comcast.com>
Source record: 125504

Wait! I got suckered into thinking the rabit ear is 300 ohms, it is not;
more like 50 - 100 ohms depending on angle. You do not need a balun, also
you do not need a balun for the dipole. I realize it is after 10AM local
time, but I am not quite awake yet.

Tam/WB2TT
"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:4gCdnYBn5e-aE6OjXTWcow@comcast.com...
> Ken,
>
> The HF balun probably won't work. The TV balun will, but there is a chance
> you will burn it out. You could make some short transmissions through it,
> and see if it gets warm at all. Best to make a balun out of a 1/2
electrical
> wavelength of RG58 coax. This will be 27 inches of regular (not foam)
coax.
> Connect the center conductor of your feedline and the center conductor of
> the RG58 (one end) to one side of the 300 ohm twinlead. Connect the other
> end of the RG58 to the other side of the 300 ohm twinlead. Connect the
> shield of the feedline to the shield of both ends of the RG58. Adjust the
> rabit ear so that each ear is about 18 - 19 inches. Expect the SWR to vary
> all over the place as you move the rabit ears. You would probably be
better
> off making a horizontal dipole and hanging it up in the attic, or outside.
> Hook it up as above.
>
> Tam/WB2TT
> "Ken" <cprstn54zz@att.net> wrote in message
> news:3e3e8145.111522468@news-server.optonline.net...
> > I want to try some cast-off TV rabbit ears for 5 watt 2M SSB.
> >
> > There is the usual 2 ft of 300 ohm twinlead and a 300-75 RX balun.
> >
> > I have a separate 200 watt HF 4:1 balun rated 1.8-30 MHz.
> >
> > Is there anything I can do with these components that will not fry my
> > finals?
> >
> > Ken KC2JDY
> >
> >
> > Ken
> > (to reply via email
> > remove "zz" from address)

>
>

2612. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 15:57:05 UTC
From: richardharrison@webtv.net
Message-ID: <26155-3E3E9151-529@storefull-2316.public.lawson.webtv.net>
Source record: 125500

CAM wrote:
"I say there is enhanced intensity (constructive interference) pouring across the match point from the destructive interference (wave cancellation) on the source side."

I lose track of what we`re trying to prove.

A transmission line stores no significant quantity of energy. In the steady-state we`re interested in, the line delivery is paid out of current revenue. There is no other source.

The outpput voltage from a sender is limited in current production by the impedance it sees at its output terminals.

The impedance at its output terminals is affected by reflected energy caused by a mismatched load.

The impedance a reflection sees in the direction of the sender, to which it tries to return, is also affected, but by the mismatch between the sender and the transmission line. This is the same type of phenom as exhibited between the load and line at its far end.

Volts and amps, taken as totals at points along a transmission line, oscillate wildly when there is a large mismatch between the line and its load. This is merely a show produced by interference between waves traveling in opposite directions on the line.

The power flowing in a single direction on the line is rock solid. This permits a directional wattmeter to show nearly the same power any place along the transmission line. You can`t put 100 wattsd in a transmission line and get 299 watts out no matter what trick you play. The line is passive.

Best regards, Richard Harrison, KB5WZI

2613. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 16:18:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3E9638.8060501@ieee.org>
Source record: 125501

Richard Harrison wrote:
> CAM wrote:
> "I say there is enhanced intensity (constructive interference) pouring
> across the match point from the destructive interference (wave
> cancellation) on the source side."
>
> I lose track of what we`re trying to prove.
>
> A transmission line stores no significant quantity of energy. In the
> steady-state we`re interested in, the line delivery is paid out of
> current revenue. There is no other source.

That is exactly what I am saying. There is *NO* other source. At an
impedance discontinuity isolated by transmission lines on each side
the *ONLY* source of constructive interference is destructive
interference.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2614. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 16:30:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3E990B.1010007@ieee.org>
Source record: 125502

VE9SRB wrote:
> Does a Zo match exist at the junction and does a total re-reflection of
> power occur at the junction as Walter claims? The correct answer: We don't
> know.

We do know if the lines are lossless and zero reflected power is incident upon the source. If the source sees no reflected power, the system is matched. If the system is matched, the source sees no reflected power. It's a no-brainer, Steve.

> 1) The 150 ohm line is 1.0 WL long. Impedance at the input to the 150 ohm
> line is 50 ohms (Zo). Forward power in 50 ohm line is 100 W. Reflected
> power in the 50 ohm line is 0 W. Forward power in the 150 ohm line is
> 133.33 W. Reflected power in the 150 ohm line is 33.33 W. Delivered power
> is 100 W.

This is a matched system. No reflected power is incident upon the source. Therefore, all reflected power is re-reflected. It has no other place to go. It's a no-brainer.

> 2) The 150 ohm line is 1.2 WL long. Impedance at the input to the 150 ohm
> line is 255.112 + j199.935 ohms. Forward power in 50 ohm line is 260.8 W.
> Reflected power in the 50 ohm line is 160.8 W. Forward power in the 150 ohm
> line is 133.33 W. Reflected power in the 150 ohm line is 33.33 W.
> Delivered power is 100 W.

This is an unmatched system. Reflected power is incident upon the source. Therefore, not all reflected power is re-reflected. It's a no-brainer.

> 3) The 150 ohm line is 0.25 WL long. Impedance at the input to the 150 ohm
> line is 450 ohms. Forward power in 50 ohm line is 277.77 W. Reflected
> power in the 50 ohm line is 177.77 W. Forward power in the 150 ohm line is
> 133.33 W. Reflected power in the 150 ohm line is 33.33 W. Delivered power
> is 100 W.

This is an unmatched system. Reflected power is incident upon the source. Therefore, not all reflected power is re-reflected. It's a no-brainer. Exactly where is the problem?

In a matched system, all reflected power is re-reflected. In an un-matched not all the reflected power is re-reflected. If all reflected power is re-reflected, the system is matched. If not all the reflected power is re-reflected, the system is unmatched. Exactly where is the problem? This is simple, no-brainer stuff. All you have to know is whether reflected power is incident upon the source to know whether the system is matched or not.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2615. Re: VHF antenna for F/G RV?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 16:31:57 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <b1m5ht$2fph$1@news1.tribune.com>
Source record: 125503

I have a soft top Tracker. Needed a 2 meter antenna. My solution is shown
on
a web page.
http://user.mc.net/~jdewey/sleeve_dipole/
You can buy a commercial version as well.

JD

"Larry Gagnon" <lgagnon@sherrittoil.com> wrote in message
news:1d3b4598.0301301326.4dac4ba8@posting.google.com...
> I am considering my options for a 2 meter VHF antenna for a fiberglass
> body RV and would like to hear from hams who have had REAL experience
> mounting and using antennas on such a vehicle.
>
> My RV is a 22' Class C with a mostly fiberglass body, other than the
> Ford E350 cab. One easy option would be a 5/8 wave, hood lip mounted,
> but the cabover part of the RV would almost touch the antenna so the
> radiation pattern would probably be lousy, as would any engine noise.
>
> The other options I am considering are:
>
> 1) 5/8 wave mounted to top of side mirror frame (like truckers do)
> 2) 1/2 wave on top of RV but that means drilling holes through roof
> 3) 1/2 wave glass mount on upper side window of RV body
> 4) 1/4 wave on RV roof with homemade mesh ground plane (but again that
> means drilling roof holes).
>
> Anyone out there tried anything similar and what are your experiences?
> Also, what have you done to ensure a waterproof rubber roof after
> drilling holes for antenna mounts. Hope to hear from you.
>
> Larry VE6MK

2616. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 17:04:42 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <-eGcnQxvtcS2PKOjXTWc3g@comcast.com>
Source record: 125505

Wait! I got suckered into thinking the rabit ears are 300 ohm, they are not.
You do not need a balun. Also, for the dipole you do not need a 4:1 balun;
you need one for a folded dipole. I was not quite awake when I posted the
original response.

Tam/WB2TT
"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:4gCdnYBn5e-aE6OjXTWcow@comcast.com...
> Ken,
>
> The HF balun probably won't work. The TV balun will, but there is a chance
> you will burn it out. You could make some short transmissions through it,
> and see if it gets warm at all. Best to make a balun out of a 1/2
electrical
> wavelength of RG58 coax. This will be 27 inches of regular (not foam)
coax.
> Connect the center conductor of your feedline and the center conductor of
> the RG58 (one end) to one side of the 300 ohm twinlead. Connect the other
> end of the RG58 to the other side of the 300 ohm twinlead. Connect the
> shield of the feedline to the shield of both ends of the RG58. Adjust the
> rabit ear so that each ear is about 18 - 19 inches. Expect the SWR to vary
> all over the place as you move the rabit ears. You would probably be
better
> off making a horizontal dipole and hanging it up in the attic, or outside.
> Hook it up as above.
>
> Tam/WB2TT
> "Ken" <cprstn54zz@att.net> wrote in message
> news:3e3e8145.111522468@news-server.optonline.net...
> > I want to try some cast-off TV rabbit ears for 5 watt 2M SSB.
> >
> > There is the usual 2 ft of 300 ohm twinlead and a 300-75 RX balun.
> >
> > I have a separate 200 watt HF 4:1 balun rated 1.8-30 MHz.
> >
> > Is there anything I can do with these components that will not fry my
> > finals?
> >
> > Ken KC2JDY
> >
> >
> > Ken
> > (to reply via email
> > remove "zz" from address)

>
>

2617. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 17:26:42 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <mDx%9.19098$rq4.1416099@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125506

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E3E990B.1010007@ieee.org...
> VE9SRB wrote:
> > Does a Zo match exist at the junction and does a total re-reflection of
> > power occur at the junction as Walter claims? The correct answer: We
don't
> > know.
>
> We do know if the lines are lossless and zero reflected power is incident
> upon the source. If the source sees no reflected power, the system is
> matched. If the system is matched, the source sees no reflected power.
> It's a no-brainer, Steve.
>

The wattmeter readings in the 150 ohm line did not tell you anything about what happens in the 50 ohm line. The wattmeter readings in the 150 ohm line do not indicate the existence of a Zo match in the 50 ohm line. Your statements above are meaningless in terms of the example as posed. What do you like to call these types of statements? Oh, yes "strawmen".

> > 1) The 150 ohm line is 1.0 WL long. Impedance at the input to the 150
ohm
> > line is 50 ohms (Zo). Forward power in 50 ohm line is 100 W. Reflected
> > power in the 50 ohm line is 0 W. Forward power in the 150 ohm line is
> > 133.33 W. Reflected power in the 150 ohm line is 33.33 W. Delivered
power
> > is 100 W.
>
> This is a matched system. No reflected power is incident upon the source.
> Therefore, all reflected power is re-reflected. It has no other place to
> go. It's a no-brainer.
>

Walter looks at the wattmeter readings in the 150 ohm line and sees the following:

PD = PF - PR

100 W = 133.33 W - 33.33 W

He rewrites it as

PF = PD + PR

133.33 W = 100 W + 33.33

concluding that in establishing a Zo match a total re-reflection of power occurs at the junction.

You concurred with him on this the other day.

> > 2) The 150 ohm line is 1.2 WL long. Impedance at the input to the 150 ohm
> > line is 255.112 + j199.935 ohms. Forward power in 50 ohm line is 260.8 W.
> > Reflected power in the 50 ohm line is 160.8 W. Forward power in the 150 ohm
> > line is 133.33 W. Reflected power in the 150 ohm line is 33.33 W.
> > Delivered power is 100 W.
>
> This is an unmatched system. Reflected power is incident upon the source.
> Therefore, not all reflected power is re-reflected. It's a no-brainer.

And the wattmeter readings in the 150 ohm line are exactly the same as when a Zo match exists at the junction, demonstrating that they have no meaning in interpreting the existence of a Zo match or what happens to reflected power in the Zo match.

Walter's "PF = PD + PR" is still mathematically valid: 100 W = 133.33 W + 33.33 W. Would you now use this relationship to conclude that a total re-reflection of power was occurring at the junction?

The problem with all of this is that you can't interpret PD = PF - PR and rewriting it as PF = PD + PR one way when a Zo match exists and another way when a Zo match does not exist.

Quite simply, you guys like to interpret power readings in any manner necessary to suit whatever hypothesis you develop in terms of the reflection and re-reflection process. Walter's PF = PD + PR is mathematically valid but its a big conceptual mistake.

I will say that this has been fun, but its become a big waste of time. Take care Cecil.

Steve VE9SRB

2618. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 17:44:50 UTC
From: cprstn54zz@att.net
Message-ID: <3e3ea9e1.121917750@news-server.optonline.net>
Source record: 125507

On Mon, 3 Feb 2003 10:52:45 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:
>Wait! I got suckered into thinking the rabit ear is 300 ohms, it is not;
>more like 50 - 100 ohms depending on angle. You do not need a balun, also
>you do not need a balun for the dipole. I realize it is after 10AM local
>time, but I am not quite awake yet.

There is 2 ft of 300 ohm twinlead with the antenna end integral with
the center insulator. Can I just splice 50 ohm coax to the 2' of
twinlead? Or do I have to cut the twinlead near the center conductor
and splice it there?

Frankly, I don't understand how two feet of twinlead (vs 2") can make
the antenna look all that different to the radio.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

2619. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 18:00:15 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <P6y%9.5422$6P2.613125@newsread1.prod.itd.earthlink.net>
Source record: 125508

Steve Best wrote:

> Walter's "PF = PD + PR" is still mathematically valid: 100 W = 133.33 W +
> 33.33 W. Would you now use this relationship to conclude that a total
> re-reflection of power was occurring at the junction?
>
> The problem with all of this is that you can't interpret PD = PF - PR and
> rewriting it as PF = PD + PR one way when a Zo match exists and another
way
> when a Zo match does not exist.

Steve, let's see you provide proof that PF does not equal PD + PR when a Zo
match doesn't exist at the input of the 150-ohm line.

> Quite simply, you guys like to interpret power readings in any manner
> necessary to suit whatever hypothesis you develop in terms of the
reflection
> and re-reflection process. Walter's PF = PD + PR is mathematically valid
> but its a big conceptual mistake.
>
Steve, in the universally-known expression PF = PD / (1 - |rho|^2), where PF
= 1.33 * PD when rho = 0.5, where do you suppose the 0.33 power comes from?
Whether you like it or not, it comes from the direct addition of the 33 w of
reflected power to the source power. When the input to the 150-ohm line is
Zo the impedance seen by the reflected wave is zero, so whatever the amount
of the reflected wave it must be totally re-reflected. Proof of this is
measuring the output of the 50-ohm line at the junction with the 150-ohm
line--forward power will equal 100 w and reflected power will be zero. If
the reflected power is zero in the rearward direction no reflected power
enters the 50-ohm line, proving total re-reflection of the reflected power
that can go nowhere except to add to the source power to become 133.33 w of
PF.

When you can finally realize the truth in this concept these continuous back
and forth msgs can come to and end. If you can't finally realize the truth,
then please stop providing nonsense.

Walt

2620. Calibrating an Antenna (Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 18:28:10 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E3EB4DA.CD0F3D96@earthlink.net>
Source record: 125509

I think I need to calibrate a receiver or maybe it's an antenna to detect some radio sources. I'm
not quite sure how that is done, but I think it involves the minimum detectable flux density
equation on p782f in Kraus's Antennas book. Can someone give me the run down on this?

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

"I refuse to have a battle of wits with an unarmed person." -- Pogo

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

2621. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 18:33:27 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <XBy%9.30778$zF6.2141634@bgtnsc04-news.ops.worldnet.att.net>
Source record: 125510

"Walter Maxwell" <w2du@iag.net> wrote in message
news:P6y%9.5422$6P2.613125@newsread1.prod.itd.earthlink.net...
> Steve Best wrote:
>
>
> Steve, let's see you provide proof that PF does not equal PD + PR when a
Zo
> match doesn't exist at the input of the 150-ohm line.
>

That was exactly my point. PD = PF - PR even when a Zo match does not exist at the input to the 150 ohm line. Your mathematical manipulation of this equation in the form of "PF = PD + PR" is also valid (mathematically) when a Zo match does not exist at the junction.

Here's the ramification of this fact for you:

You said that "PF = PD + PR" proves that a total re-reflection of power occurs when a Zo match is established at the junction.

"PF = PD + PR" is still valid when a Zo match is not established at the junction. This relationship has nothing to do with a Zo match.

Are you now implying that a total re-reflection of power occurs even when there is no Zo match?

Like I said, you can't have it both ways.

> Steve, in the universally-known expression PF = PD / (1 - |rho|^2), where
PF
> = 1.33 * PD when rho = 0.5, where do you suppose the 0.33 power comes
from?
> Whether you like it or not, it comes from the direct addition of the 33 w
of
> reflected power to the source power. When the input to the 150-ohm line is
> Zo the impedance seen by the reflected wave is zero, so whatever the
amount
> of the reflected wave it must be totally re-reflected.

Okay, and PF = 1.33 * PD even when a Zo match does not exist. This relationship has nothing to do with a Zo match.

Zo match or not, PF = 133.33 W and PD = 100 W.

Are you now telling me that a total re-reflection of power occurs when a Zo match does not exist?

Like I said, you can't interpret your "math" one way with the Zo match and an entirely different way when the Zo match does not exist.

If your math is conceptually correct it requires you to believe that a total re-reflection of power occurrs at the junction with or without the Zo match. Your math is exactly the same in both cases, so how can you change the concepts?

Steve VE9SRB

2622. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 18:44:01 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3EB871.7090203@ieee.org>
Source record: 125512

VE9SRB wrote:
> The wattmeter readings in the 150 ohm line did not tell you anything about
> what happens in the 50 ohm line. The wattmeter readings in the 150 ohm line
> do not indicate the existence of a Zo match in the 50 ohm line.

I did NOT say the wattmeter readings in the 150 ohm line can indicate the
existence of a Z0 match. I said the absence of reflected energy incident
upon the source indicates the existence of a match.

> And the wattmeter readings in the 150 ohm line are exactly the same as when
> a Zo match exists at the junction, demonstrating that they have no meaning
> in interpreting the existence of a Zo match or what happens to reflected
> power in the Zo match.

I agree with that, Steve, and have always agreed with that.

> Walter's "PF = PD + PR" is still mathematically valid: 100 W = 133.33 W +
> 33.33 W. Would you now use this relationship to conclude that a total
> re-reflection of power was occurring at the junction?

Nope, never said I would. Implying that I did is just another straw man.

> The problem with all of this is that you can't interpret PD = PF - PR and
> rewriting it as PF = PD + PR one way when a Zo match exists and another way
> when a Zo match does not exist.

You don't need to interpret anything, Steve. If reflected energy is incident
upon the source, the system is mismatched. If no reflected energy is incident
upon the source, the system is matched. That sorta shoots down the assertion
in your article: "A total re-reflection of power at the match point is not
necessary for the impedance match to occur." Steve, not only is it necessary,
it is also sufficient.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2623. Indoor antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 18:45:10 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3E3EB8B6.7BC2EA2C@raytheon.com>
Source record: 125511

Hi Reg,

Nice post.

> I hope nobody raises any objections if I suggest the following short note,
> perhaps with a little editting, be included in amateur "bibles". It may
> help to eradicate popular misconceptions relating to location of loading
> coils in short antennas.
> ==========================
> "Actually, turns-per-inch and wire diameter of a single-layer multi-turn
> solenoid does not affect its self-capacitance. Self-capacitance is primarily
> a function of a coil's overall length and diameter.

[stuff deleted]

> PS: Another design application occurs in the case of a very short
> centre-loaded dipole which in my opinion is an underated 'balcony' antenna
> and is worth experimenting with. It is the counterpart of the 'magloop'.
> Although efficiency is inevitably less it is more economical in construction
> and can be fed either via coax and a central link winding round the coil or
> over a twin line.

I have had excellent results, and considerable amusement, with such shortened antennas mounted in attics, or suspended just under the ceiling in apartment units. They have always behaved more or less as predicted, and as you say, are much more economical than loops to construct. Nearly all the necessary components can be obtained at the local hardware, or home improvement store, which makes them an excellent way to get an apartment bound ham on HF in an afternoon. Like all compact HF antennas, they tend to be narrowbanded if properly constructed for high efficiency, but are quite workable for general CW, or fixed frequency phone net operations.

Considering all of the factors involved, I have found the best overall design is to use two loading coils, one on each end of the the horizontal radiator, near the junction of the two respective 'top hats'. The 'top hats' are composed of symmetrical horizontal wires attached at the center, to the loading coil. The plan view resembles the letter 'H' , or >--< . At the approximate center of the antenna is an optional trimming reactance, usually a variometer arrangement made from a pair of air wound coils comprising less than ten percent of the total loading inductance. The antenna is fed via link coupling using a ferrite core transformer, suitably insulated, and typically located off center near the radio equipment. Band switching (40/80m) is best accomplished using a split copper bolt connection or knife switch if available. I have severely overheated standard sized banana plugs with less than 100 watts of transmitter output power.

Of the several I have installed, all but one were constructed completely from #14 AWG (0.072 inch dia approx.) solid wire, inexpensively available in 500 foot spools at building supply stores. Both the radiator and loading sections were doubled up but not the coils, which were wound around three or four inch coil forms composed of plastic drainpipe components. I would have preferred to remove the insulation, especially on the coils, to reduce dielectric loss but it hasn't appeared necessary and greatly simplifies the coil winding process. Lower loss coil forms seem like a good idea as well, but add complication.

I built the first one entirely from 3/16 inch copper tubing. The radiator and loading coils were composed of a single piece of tubing. The coils were formed by winding around a mandrel and then held in position by 1/4 inch notched polystyrene rods. The system worked acceptably when completed but was more expensive, and considerably more difficult to construct than the wire version. The lack of mechanical stability, presumably the loading coils, had a rather interesting effect; phase modulation resulted from people walking around on the floor above! The modulation was very weak, but definitely detectable across the neighborhood where the signal was still very strong.

Before the desktop computer age, the design of these antennas invariably involved a considerable amount of empirical cut and try. Today, the ability to do numerical antenna modeling has made the design task much more straightforward.

bart
wb6hqk

2624. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:00:13 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <1%y%9.30795$zF6.2142496@bgtnsc04-news.ops.worldnet.att.net>
Source record: 125513

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E3EB871.7090203@ieee.org...
>

Thanks and take care.

Steve

2625. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:03:16 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <U1z%9.5505$6P2.620668@newsread1.prod.itd.earthlink.net>
Source record: 125514

Walt Maxwell wrote:

> > Steve, let's see you provide proof that PF does not equal PD + PR when a
> Zo
> > match doesn't exist at the input of the 150-ohm line.
> >
>
> That was exactly my point. PD = PF - PR even when a Zo match does not
exist
> at the input to the 150 ohm line. Your mathematical manipulation of this
> equation in the form of "PF = PD + PR" is also valid (mathematically) when
a
> Zo match does not exist at the junction.

This is true, and is exactly what I've been saying all along.

> Here's the ramification of this fact for you:
>
> You said that "PF = PD + PR" proves that a total re-reflection of power
> occurs when a Zo match is established at the junction.
>
> "PF = PD + PR" is still valid when a Zo match is not established at the
> junction. This relationship has nothing to do with a Zo match.

I don'r recall making that statement.

> Are you now implying that a total re-reflection of power occurs even when
> there is no Zo match?

Of course not. Please tell me where I made such an absurd implication.

> Like I said, you can't have it both ways.

What TWO ways are you referring to ?

> > Steve, in the universally-known expression PF = PD / (1 - |rho|^2),
where
> PF
> > = 1.33 * PD when rho = 0.5, where do you suppose the 0.33 power comes
> from?
> > Whether you like it or not, it comes from the direct addition of the 33
w
> of
> > reflected power to the source power. When the input to the 150-ohm line
is
> > Zo the impedance seen by the reflected wave is zero, so whatever the
> amount

> > of the reflected wave it must be totally re-reflected.
>
> Okay, and PF = 1.33 * PD even when a Zo match does not exist. This
> relationship has nothing to do with a Zo match.

That's correct, the forward power increase factor 1.33 is dependent on the 0.5 rho at the terminating mismatch.

> Zo match or not, PF = 133.33 W and PD = 100 W.

Not true. If the source was initially adjusted to deliver 100 w into a Zo match and then the match is disturbed, the source will no longer deliver 100 w. PF will then equal whatever the power now being delivered by the source multiplied by the power-increase factor 1.33.

> Are you now telling me that a total re-reflection of power occurs when a
Zo
> match does not exist?

Steve, you're attempting to put words into my mouth. Well, it ain't gonna work--please show me where I ever made a statement that would give that implication.

> Like I said, you can't interpret your "math" one way with the Zo match and
> an entirely different way when the Zo match does not exist.

Steve, you're the only one who is interpreting the math in more than one way.

> If your math is conceptually correct it requires you to believe that a
total
> re-reflection of power occurrs at the junction with or without the Zo
match.
> Your math is exactly the same in both cases, so how can you change the
> concepts?

As I said above, I have never said, or implied, that total re-reflection occurs with or without a Zo match. Logic and reason, which you seem to lack on this issue, reveals that if there is a Zo match there can be NO reflected wave traveling rearward of the match point. If there were there would be no Zo match. Therefore, in this condition there cannot be another conclusion other than total re-reflection. How you cannot understand this simple logic is beyond my comprehension.

Walt, W2DU

2626. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:11:43 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <IN2dnUc31uVyI6OjXTWcpw@comcast.com>
Source record: 125515

You have to get rid of the 300 ohm twinlead, or it will act as an impedance transformer. If it was 1/4 wavelength long, it would make the rabit ear look like it had an impedance of over 1000 ohms. If the 300 ohm line were exaclt 1/2 wavelength (about 34 inches), that would be OK

Tam/WB2TT
"Ken" <cprstn54zz@att.net> wrote in message
news:3e3ea9e1.121917750@news-server.optonline.net...
> On Mon, 3 Feb 2003 10:52:45 -0500, "Tarmo Tammaru"
> <t-tammaru@home.com> wrote:
> >Wait! I got suckered into thinking the rabit ear is 300 ohms, it is not;
> >more like 50 - 100 ohms depending on angle. You do not need a balun, also
> >you do not need a balun for the dipole. I realize it is after 10AM local
> >time, but I am not quite awake yet.
>
> There is 2 ft of 300 ohm twinlead with the antenna end integral with
> the center insulator. Can I just splice 50 ohm coax to the 2' of
> twinlead? Or do I have to cut the twinlead near the center conductor
> and splice it there?
>
> Frankly, I don't understand how two feet of twinlead (vs 2") can make
> the antenna look all that different to the radio.
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

2627. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:14:12 UTC
From: Per Enocson <08.7676765@telia.com>
Message-ID: <8cz%9.9057$FF4.558252@newsb.telia.net>
Source record: 125516

Thanks all of you for interesting opinions/ideas! Will go for ladder line
direct to the tuner, as soon as spring is here again. No weather for antenna
work right now!
73's de Per SM0WRA

"Terry O'Neill" <rfmscpa@earthlink.net> skrev i meddelandet
news:TEh%9.4788$ek4.436548@newsread2.prod.itd.earthlink.net...
> I have a 400+/- foot loop fed with 450 ohm ladder line. I avoid the balun
> issue with a link coupled tuner (Johnson Matchbox). Works FB on all bands.
>
>

2628. Re: Calibrating an Antenna (Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:14:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <03gt3vk2fi8fdueocs833ou38hfm8f14va@4ax.com>
Source record: 125517

On Mon, 03 Feb 2003 18:28:10 GMT, Watson <mtnviews@earthlink.net>
wrote:

>I think I need to calibrate a receiver or maybe it's an antenna to detect some radio
sources. I'm
>not quite sure how that is done, but I think it involves the minimum detectable flux
density
>equation on p782f in Kraus's Antennas book. Can someone give me the run down on this?

Hi Wayne,

It seems to me that Mac did that in spades in your last thread.

73's
Richard Clark, KB7QHC

2629. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:18:28 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3EC084.1070800@ieee.org>
Source record: 125518

VE9SRB wrote:
> Thanks and take care.

Steve, aren't you even going to address the issue? You say
an impedance match can exist without a total re-reflection
of power in which case there will exist reflected power
incident upon the source. Seems to me reflected power
incident upon the source is *proof* that the system is NOT
matched.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2630. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:27:01 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3EC285.6040208@ieee.org>
Source record: 125369

Walter Maxwell wrote:
> As I said above, I have never said, or implied, that total re-reflection
> occurs with or without a Zo match. Logic and reason, which you seem to lack
> on this issue, reveals that if there is a Zo match there can be NO reflected
> wave traveling rearward of the match point. If there were there would be no
> Zo match. Therefore, in this condition there cannot be another conclusion
> other than total re-reflection. How you cannot understand this simple logic
> is beyond my comprehension.

Steve makes back-to-back contradictory statements in his QEX article. He says:
"A steady-state impedance match in any transmission-line system occurs via the
direct cancellation of all rearward-traveling voltages and currents at the
match point."

Then he says: "A total re-reflection of power at the match point is not necessary
for the impedance match to occur."

He seems to be ignorant of the fact that "direct cancellation of all rearward-traveling
voltages and currents at the match point" *IS* re-reflection of reflected energy through
the destructive interference process described on the Melles-Griot web page.

http://www.mellesgriot.com/products/optics/oc_2_1.htm
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2631. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:29:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3EC31D.2070503@ieee.org>
Source record: 125370

Per Enocson wrote:
> Thanks all of you for interesting opinions/ideas! Will go for ladder line
> direct to the tuner, as soon as spring is here again. No weather for antenna
> work right now!

Dang, I'm putting up my Purple Martin birdhouse in 75 degree weather
and sweating up a storm here in East Texas.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2632. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:35:42 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <iwz%9.30828$zF6.2145464@bgtnsc04-news.ops.worldnet.att.net>
Source record: 125371

"Walter Maxwell" <w2du@iag.net> wrote in message
news:U1z%9.5505$6P2.620668@newsread1.prod.itd.earthlink.net...
> Walt Maxwell wrote:
>
> > Are you now implying that a total re-reflection of power occurs even
when
> > there is no Zo match?
>
> Of course not. Please tell me where I made such an absurd implication.
>
> > Like I said, you can't have it both ways.
>
> What TWO ways are you referring to ?
>

Let's use your relationship: "PF = PD + PR" and my previous examples:

1) The 150 ohm line is 1.0 WL long. Impedance at the input to the 150 ohm line is 50 ohms (Zo). Forward power in 50 ohm line is 100 W. Reflected power in the 50 ohm line is 0 W. Forward power in the 150 ohm line is 133.33 W. Reflected power in the 150 ohm line is 33.33 W. Delivered power is 100 W.

Zo match at the junction. In the 150 ohm line:

PD = PF - PR

100 W = 133.33 W - 33.33 W

PF = PD + PR

133.33 W = 100 W + 33.33 W

You conclude that a total re-reflection of the 33.33 W occurs and adds to the 100 W of delivered power to become 133.33 W.

2) The 150 ohm line is 1.2 WL long. Impedance at the input to the 150 ohm line is 255.112 + j199.935 ohms. Forward power in 50 ohm line is 260.8 W. Reflected power in the 50 ohm line is 160.8 W. Forward power in the 150 ohm line is 133.33 W. Reflected power in the 150 ohm line is 33.33 W. Delivered power is 100 W.

Zo match does not exist at the junction. In the 150 ohm line:

PD = PF - PR

100 W = 133.33 W - 33.33 W

PF = PD + PR

133.33 W = 100 W + 33.33 W

You don't see the problem here with your interpretation of PF = PD + PR when a Zo match does not exist?

Steve VE9SRB

2633. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 19:45:22 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E3EC60C.F30CC17D@attbi.com>
Source record: 125372

The temperature is so high here in NH that I'm in the process of opening
the pool. Why it's up to 35.7 degrees F! Highest it's been in 9 weeks.

Deacon Dave, W1MCE

Three feet of snow in back yard, 1/2 inch of ice in driveway.

+++

OC_CAM's Razor wrote:
>
> Per Enocson wrote:
> > Thanks all of you for interesting opinions/ideas! Will go for ladder line
> > direct to the tuner, as soon as spring is here again. No weather for antenna
> > work right now!
>
> Dang, I'm putting up my Purple Martin birdhouse in 75 degree weather
> and sweating up a storm here in East Texas.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2634. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 20:05:26 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <aYz%9.5554$6P2.628677@newsread1.prod.itd.earthlink.net>
Source record: 125373

Steve Best wrote:
> Let's use your relationship: "PF = PD + PR" and my previous examples:
>
> 1) The 150 ohm line is 1.0 WL long. Impedance at the input to the 150 ohm
> line is 50 ohms (Zo). Forward power in 50 ohm line is 100 W. Reflected
> power in the 50 ohm line is 0 W. Forward power in the 150 ohm line is
> 133.33 W. Reflected power in the 150 ohm line is 33.33 W. Delivered
power
> is 100 W.
>
> Zo match at the junction. In the 150 ohm line:
>
> PD = PF - PR
>
> 100 W = 133.33 W - 33.33 W
>
> PF = PD + PR
>
> 133.33 W = 100 W + 33.33 W
>
> You conclude that a total re-reflection of the 33.33 W occurs and adds to
> the 100 W of delivered power to become 133.33 W.
>
>
> 2) The 150 ohm line is 1.2 WL long. Impedance at the input to the 150 ohm
> line is 255.112 + j199.935 ohms. Forward power in 50 ohm line is 260.8 W.
> Reflected power in the 50 ohm line is 160.8 W. Forward power in the 150
ohm
> line is 133.33 W. Reflected power in the 150 ohm line is 33.33 W.
> Delivered power is 100 W.
>
> Zo match does not exist at the junction. In the 150 ohm line:
>
> PD = PF - PR
>
> 100 W = 133.33 W - 33.33 W
>
> PF = PD + PR
>
> 133.33 W = 100 W + 33.33 W
>
> You don't see the problem here with your interpretation of PF = PD + PR
when
> a Zo match does not exist?

No Steve, it is you who doesn't see the problem with your math above. You show 100 w delivered when the line is mismatched. If the source is able to deliver 100 watts into the mismatch then the expression PF = PD + PR is ok. However, if the source was initially adjusted to deliver 100 watts into Zo and then presented with the mismatch, PD will no longer be 100 w.

The expression PF = PD + PR is correct whether or not there is a match. The only difference is that when there is a mismatch the input will no longer be Zo because there is no longer total re-reflection--some of the reflected power is traveling rearward past the non-perfect match and becomes incident on the source.

Walt, W2DU

2635. HF-9V 17 mtr SWR

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 20:35:45 UTC
From: jkeller <jkeller@cox.net>
Message-ID: <BoA%9.1161$tq5.26931@news1.west.cox.net>
Source record: 125374

I've heard quite a few stories as to how difficult it is to get a decent SWR on 17 mtrs with an HF-9V but are there any success stories out there? If so, I would be interested in hearing about anything that was done to get a reasonable SWR on this band. By reasonable, anything less than 3:1 works for me. I'm currently seeing about 5:1 at resonance. I've got about 20 radials, ground level. Radials are primarily cut to 1/4 wave for each of the bands except on 6. SWR on the other bands is fine. For 20 its about 1.8:1 at its lowest point but over the band I'm still at less than about 2.1:1.

Has anyone experimented with moving the 17 mtr coil assembly up or down on the antenna itself?

Thanks

Jim Keller
WB6YXY

Oceanside, Ca.

2636. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 20:53:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <volt3v0947tnrha535jp07s8pb76tq5km2@4ax.com>
Source record: 125375

On Mon, 03 Feb 2003 20:05:26 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

> If the source is able to
>deliver 100 watts into the mismatch then the expression PF = PD + PR is ok.
>However, if the source was initially adjusted to deliver 100 watts into Zo
>and then presented with the mismatch, PD will no longer be 100 w.

Now, how is it that this seems in some strange way, disconnected from
my observation:

>>My guess is everyone would be content to live with any of the three
>>forms offered, which leads to the logical conclusion that all three
>>are dependencies of a fourth agent. You guys don't have all your oars
>>in the water.

73's
Richard Clark, KB7QHC

2637. Re: Solar Spectral Power Estimates, Design Question--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 22:08:27 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E3EE86F.6FD0BC4B@earthlink.net>
Source record: 125376

Thanks. I had a very narrow concern when I originally posted the message. It was probably best
answered by the author of the book I was reading. I finally got through to him, and he answered my
question; however, the topic got broadened on this NG. That was OK even though I was going into
uncharted territory for me. I nevertheless appreciated the responses and interest.

It looks like you have had a good deal experience with RA. I'm just getting off the ground with a
10' sat dish. This stuff is not for the faint of heart. :-) It must have been fun having Kraus as a
mentor. I'm familiar with the book. It's not easy reading for me, but I'm making progress. I
thought I would take a look at the OSU site to see if the astronomy dept. teaches RA. I couldn't
find a single class. Odd. I'm pretty sure J. Kraus is still alive, but he's probably not teaching. I
wonder if anyone there is?

"J. McLaughlin" wrote:

> Dear Mr. Watson:
> I built the receiver used for one of the earliest, if not the first,
> absolute measurements in RA. It was called the HILLRAMS receiver and
> was connected to the end of a very long horn antenna. The horn antenna
> was inclined in a gully pointing north with an inclination such that
> Cassiopeia would drift through its beam once per sidereal day.
> The construction of the horn antenna was a major achievement at the
> time. It involved welding large sheets of AL together so that the
> result was a (flat) plane. Outside bracing had to be used. A horn
> antenna is one of a very small set of antennas having properties (gain)
> that can be calculated from dimensions.
> The receiver switched back and forth from a load resistor (submerged
> in a container of ice water) to the antenna, and measured the difference
> in temperature between the two "loads." One measurement was taken a
> day.
> Once one knows the apparent temperature of Cassiopeia at a
> frequency, that number may be used to calibrate radio telescopes
> elsewhere in the Northern hemesphere. A number of people had measured
> the frequency dependence, and an average of those measured dependencies
> could be used to estimate effective temperature at a frequency other
> than the one we used. (I think that we used 1400 MHz, but I am not
> sure. This took place in the late 50s at Green Bank.)
> So, first you need an antenna with a known gain and a narrow

> beamwidth if you wish to have a chance of making absolute measurements.
> The need for a known gain is obvious. A narrow beamwidth is needed so
> you "look" at only what you intend to look at.
> A few books have been written on RA that include information on the
> instrumentation. My mentor, Kraus, has one.
> As most everyone on this list will agree, making absolute
> measurements is difficult. Relative measurements are more easy.
> 73, Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>
> "Wayne Watson" <mtnviews@earthlink.net> wrote in message
> news:3E3D2220.5FCC57B7@earthlink.net...
> > I posed a question on some solar values in a book I read on radio
> astronomy. Let me reprhase the
> > question.
> >
> > The subject of the book's section is really how to determine the
> bandwidth of a receiver to observe the
> > sun. I guess where I am going with the my questions is that suppose I
> had some thought of observing M1
> > (planetary nebula in Taurus). I could design the receiver and antenna
> around the author's rough back of
> > the envelope calculations if I knew what the density (W/hz) and
> intensity (W/hz/m^2) values for M1
> > were. Basically, that's the question. That is, how does one *know*
> these for common radio sources?
> > --
> > Wayne T. Watson

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

"I refuse to have a battle of wits with an unarmed person." -- Pogo

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

2638. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 22:09:03 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <3MB%9.5694$6P2.644582@newsread1.prod.itd.earthlink.net>
Source record: 125377

Richard Clark <kb7qhc@attbi.com> wrote in message
news:volt3v0947tnrha535jp07s8pb76tq5km2@4ax.com...
> On Mon, 03 Feb 2003 20:05:26 GMT, "Walter Maxwell" <w2du@iag.net>
> wrote:
>
> > If the source is able to
> >deliver 100 watts into the mismatch then the expression PF = PD + PR is
ok.
> >However, if the source was initially adjusted to deliver 100 watts into
Zo
> >and then presented with the mismatch, PD will no longer be 100 w.
>
> Now, how is it that this seems in some strange way, disconnected from
> my observation:
>
> >>My guess is everyone would be content to live with any of the three
> >>forms offered, which leads to the logical conclusion that all three
> >>are dependencies of a fourth agent. You guys don't have all your oars
> >>in the water.
>
> 73's
> Richard Clark, KB7QHC

Why is it, Richard, that I cannot recall, even one time since our correspondence began several years ago, where you have ever agreed with my position on any issue under discussion?

Do take great delight in puting me down? Have I said something that offended you that I'm not aware of? I may not always been that civil to Steve, but I've certainly never tried to be uncivil to you. Please tell me what gives.

Walt, W2DU

2639. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 22:27:37 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v3tr6k86lekf7f@corp.supernews.com>
Source record: 125378

I would tell you I am setting on the patio typing this at 75 F,but I don't
want to make you feel bad. ;>)

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E3EC60C.F30CC17D@attbi.com...
> The temperature is so high here in NH that I'm in the process of opening
> the pool. Why it's up to 35.7 degrees F! Highest it's been in 9 weeks.
>
> Deacon Dave, W1MCE
>
> Three feet of snow in back yard, 1/2 inch of ice in driveway.
>
> +++
>
> OC_CAM's Razor wrote:
> >
> > Per Enocson wrote:
> > > Thanks all of you for interesting opinions/ideas! Will go for ladder
line
> > > direct to the tuner, as soon as spring is here again. No weather for
antenna
> > > work right now!
> >
> > Dang, I'm putting up my Purple Martin birdhouse in 75 degree weather
> > and sweating up a storm here in East Texas.
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2640. Tuning an antenna with low power

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 22:49:42 UTC
From: Peter Truman <ptruman@bigpond.com>
Message-ID: <zcC%9.39801$jM5.101077@newsfeeds.bigpond.com>
Source record: 125379

Hi

I'm wanting to use a 5/8 antenna with a flea powered radio (150Mw) but I don't know how to go about adjusting the SWR. I can't see how my meter can respond to such low power.

Is there an easy way to do this or will I just have to find somone with a more powerfull Tx on the same Fx?

Thanks
Peter

2641. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 23:04:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6art3vo6d1vl6rool0kiv7d7dbljalcc5d@4ax.com>
Source record: 125380

On Mon, 03 Feb 2003 22:09:03 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>
>Richard Clark <kb7qhc@attbi.com> wrote in message
>news:volt3v0947tnrha535jp07s8pb76tq5km2@4ax.com...
>> On Mon, 03 Feb 2003 20:05:26 GMT, "Walter Maxwell" <w2du@iag.net>
>> wrote:
>>
>> > If the source is able to
>> >deliver 100 watts into the mismatch then the expression PF = PD + PR is
>ok.
>> >However, if the source was initially adjusted to deliver 100 watts into
>Zo
>> >and then presented with the mismatch, PD will no longer be 100 w.
>>
>> Now, how is it that this seems in some strange way, disconnected from
>> my observation:
>>
>> >>My guess is everyone would be content to live with any of the three
>> >>forms offered, which leads to the logical conclusion that all three
>> >>are dependencies of a fourth agent. You guys don't have all your oars
>> >>in the water.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Why is it, Richard, that I cannot recall, even one time since our
>correspondence began several years ago, where you have ever agreed with my
>position on any issue under discussion?
>
>Do take great delight in puting me down? Have I said something that offended
>you that I'm not aware of? I may not always been that civil to Steve, but
>I've certainly never tried to be uncivil to you. Please tell me what gives.
>
>Walt, W2DU
>

Hi Walt,

I observed:
>>
>>Can you in fact shuffle these terms? They all resolve to identical
>>outcomes, true, but not for the same reasons if you start imparting
>>rationales for why your formula is better than some one else's (or the

>>authority's for that matter).
>>
Your statement:
>Exactly, PF = PD + PR is precisely equal mathematically to 6.17
>This means that forward power equals source power plus reflected power
did not respond to my question in a way to qualify as a definition.
Your statement is simply an identity which carries only a value, not a
concept. You have diverged from the text of your source and
introduced new constraints to that original work.

This was revealed by your statement:
>>if the source was initially adjusted to deliver 100 watts
which does not appear either explicitly or conceptually in Johnson, or
you will provide a quote post-haste to prove me wrong, n'est pas?

73's
Richard Clark, KB7QHC

2642. Re: Tuning an antenna with low power

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 23:12:24 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <SzC%9.11581$yU6.6010@fe01>
Source record: 125381

Peter Truman wrote:
> Hi
>
> I'm wanting to use a 5/8 antenna with a flea powered radio (150Mw)
> but I don't know how to go about adjusting the SWR. I can't see how
> my meter can respond to such low power.
>
> Is there an easy way to do this or will I just have to find somone
> with a more powerfull Tx on the same Fx?
>
> Thanks
> Peter

Use an antenna analyzer like the MFJ or Autek units.

73 de W6DKN

2643. Re: Tuning an antenna with low power

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 23:36:09 UTC
From: jgboyles@aol.com
Message-ID: <20030203183609.19888.00000585@mb-cj.aol.com>
Source record: 125382

>I'm wanting to use a 5/8 antenna with a flea powered radio (150Mw) but I
>don't know how to go about adjusting the SWR.

A field strength meter, or a receiver with an "S" meter would be the best way to get the most out of this combination. Tune for most signal. Don't worry about swr. With this flea powered rig the most signal strength will likely coincide with best swr, but usually we want most signal, so who cares about swr.
73 Gary N4AST

2644. Re: Tuning an antenna with low power

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-03 23:59:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1mvov$6lf$1@venus.btinternet.com>
Source record: 125383

"so who cares about swr" ?

73 Gary N4AST

==========

The most sensible remark for many years !

For SWR meter read TLI - "Transmitter Loading Indicator".

All anybody needs to know is whether or not the transmitter sees its
'designed-for' resistive load - usually 50 ohms.

2645. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 00:35:15 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <7VD%9.19823$rq4.1449730@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125384

"Walter Maxwell" <w2du@iag.net> wrote in message
news:aYz%9.5554$6P2.628677@newsread1.prod.itd.earthlink.net...
>
>
> No Steve, it is you who doesn't see the problem with your math above. You
> show 100 w delivered when the line is mismatched. If the source is able to
> deliver 100 watts into the mismatch then the expression PF = PD + PR is
ok.
> However, if the source was initially adjusted to deliver 100 watts into Zo
> and then presented with the mismatch, PD will no longer be 100 w.
>

Maybe I increased the output power on the source to deliver 100 W in both
cases. Either way it makes no difference to the relationships in the
equation..

> The expression PF = PD + PR is correct whether or not there is a match.

That's right Walter. The mathematical relationship PF = PD + PR is valid
with or without a match.

So then, how does this relationship validate that a total re-reflection of
power occurs with a Zo match, when the exact same relationship is valid when
a Zo match does not occur? The concepts associated with this relationship
have to work the same way in either case.

>The
> only difference is that when there is a mismatch the input will no longer
be
> Zo because there is no longer total re-reflection--some of the reflected
> power is traveling rearward past the non-perfect match and becomes
incident
> on the source.
>

Lets change the example so that 100 W of power is delivered to the 150 ohm
line:

2) The 150 ohm line is 1.2 WL long. Impedance at the input to the 150 ohm
line is 255.112 + j199.935 ohms. Forward power in 50 ohm line is 100 W.
Reflected power in the 50 ohm line is 61.657 W. Forward power in the 150
ohm
line is 51.123 W. Reflected power in the 150 ohm line is 12.781 W.
Delivered power is 38.342 W.

Again, in the 150 ohm line:

PD = PF - PR

38.342 W = 51.123 W - 12.781 W

Rewrite this as you do:

PF = PD + PR (valid with a mismatch as you stated above)

51.123 W = 38.342 W + 12.781 W

Using the exact same logic you apply with the Zo match, you would have to conclude that a total re-reflection of power occurs. i.e the 12.781 W of reflected power is re-reflected at the junction and "adds" to the delivered power of 38.342 W to become the forward power of 51.123 W. You can't use this equation and the total re-reflection of power argument in one case and not the other.

My point here is that your Zo match logic requires you to conclude that a total re-reflection of power occurs even when a Zo match does not exist. You can't use the same relationship in both cases and conclude different things.

Take care Walter.

Steve VE9SRB

2646. Too Da-n Hot. Was: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 01:16:23 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E3F138F.D1619EC8@attbi.com>
Source record: 125385

Fred, I feel so very very sorry for you. My God! It's so hot where you
are that the air conditioning bill must be outrageous!

My wife and I start to air condition our cars when the temperature hits
65. We keep our home at 70 to 72 all summer and even that's too warm.
When it gets to 75 we go into the house and contract all outdoor work
because it's just too da-n hot to do anything.

I'm glad I married a Polar Bear like myself.

Seriously, I hate hot weather!! And Hot begins at 75 F.

Deacon Dave, W1MCE
+++

Fred Hambrecht Sr wrote:
>
> I would tell you I am setting on the patio typing this at 75 F,but I don't
> want to make you feel bad. ;>)
>
> "Dave Shrader" <david.shrader@attbi.com> wrote in message
> news:3E3EC60C.F30CC17D@attbi.com...
> > The temperature is so high here in NH that I'm in the process of opening
> > the pool. Why it's up to 35.7 degrees F! Highest it's been in 9 weeks.
> >
> > Deacon Dave, W1MCE
> >
> > Three feet of snow in back yard, 1/2 inch of ice in driveway.
> >
> > +++
> >
> > OC_CAM's Razor wrote:
> > >
> > > Per Enocson wrote:
> > > > Thanks all of you for interesting opinions/ideas! Will go for ladder
> line
> > > > direct to the tuner, as soon as spring is here again. No weather for
> antenna
> > > > work right now!
> > >
> > > Dang, I'm putting up my Purple Martin birdhouse in 75 degree weather
> > > and sweating up a storm here in East Texas.
> > > --
> > > cheers, CAM http://www.qsl.net/w5dxp
> > >
> > > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----

> > > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > > ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2647. Re: Solar Spectral Power Estimates, Design Question--(Radio Astronomy)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 02:10:58 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v3u86gn0qr9r35@corp.supernews.com>
Source record: 125386

...answered off line... Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

2648. Re: VHF antenna for F/G RV?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 02:31:56 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3e3f25f2.10706244@news.sprint.ca>
Source record: 125387

On Fri, 31 Jan 2003 13:31:32 -0600, 'Doc <w5lz@cwis.net> wrote:

>
>
>Larry,
> Installing a groundplane for a 2 meter antenna doesn't
>mean that you will have to drill any holes, especially if
>you're dealing with a fibreglass roof. Simply lay down
>the mesh or radials and cover them with a layer of new
>fibreglass. A sheet of 'clothe' then the resin should do
>it. It may take some imagination to make the actual mount
>that the antenna will bolt to, but it shouldn't be ~that~
>difficult. It's another alternative, anyway...
> 'Doc
well Doc ...actually I will have to drill a hole to get the feedline
through!

Larry VE6MK
****
to send direct email remove "fake" from address

2649. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 03:10:08 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <ckbu3vs2c8qnfvvkubanp9bpgoe29qbo3d@4ax.com>
Source record: 125388

On Mon, 03 Feb 2003 14:52:10 GMT, cprstn54zz@att.net (Ken) wrote:

>I want to try some cast-off TV rabbit ears for 5 watt 2M SSB.
>
>There is the usual 2 ft of 300 ohm twinlead and a 300-75 RX balun.
>
>I have a separate 200 watt HF 4:1 balun rated 1.8-30 MHz.
>
>Is there anything I can do with these components that will not fry my
>finals?

There was an article in QST a while back that told how to convert a $20 Radio shack TV antenna into a 5 element yagi for 2 meters. It involved removing one element, moving the others around and trimming a bit off of each element. A gamma match was made with pieces of the antenna that were removed and some coax. I did this project and the antenna worked great! I now have a Cushcraft dualband (2m/70cm) 5 element on the roof.

It's available on the ARRL website, but only if you're a member, which I am not. That might be something you'd want to consider.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2650. Re: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 03:26:47 UTC
From: Craig Buck <k4ia@cox.net>
Message-ID: <XpG%9.152769$ui1.4103321@news1.east.cox.net>
Source record: 125389

The best antennas are put up in lousy weather.

--
Radio K4ia
Craig "Buck"
Fredericksburg, VA USA
FISTS 6702 cc 788 Diamond 64

"Per Enocson" <08.7676765@telia.com> wrote in message
news:8cz%9.9057$FF4.558252@newsb.telia.net...
> Thanks all of you for interesting opinions/ideas! Will go for ladder line
> direct to the tuner, as soon as spring is here again. No weather for
antenna
> work right now!
> 73 s de Per SM0WRA
>
> "Terry O'Neill" <rfmscpa@earthlink.net> skrev i meddelandet
> news:TEh%9.4788$ek4.436548@newsread2.prod.itd.earthlink.net...
> > I have a 400+/- foot loop fed with 450 ohm ladder line. I avoid the
balun
> > issue with a link coupled tuner (Johnson Matchbox). Works FB on all
bands.
> >
> >
>
>

2651. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 03:34:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3F34DA.90902@ieee.org>
Source record: 125390

VE9SRB wrote:
> 2) The 150 ohm line is 1.2 WL long. Impedance at the input to the 150 ohm
> line is 255.112 + j199.935 ohms. Forward power in 50 ohm line is 100 W.
> Reflected power in the 50 ohm line is 61.657 W. Forward power in the 150
> ohm line is 51.123 W. Reflected power in the 150 ohm line is 12.781 W.
> Delivered power is 38.342 W.

Steve, you have often challenged me to do an energy analysis on a random example so please allow me to rise to your challenge. Rho=0.5

P1 = Pfwd(50)*(1-Rho^2) = 75W, P2 = Pref(150)*Rho^2 = 3.2W
P3 = Pfwd(50)*Rho^2 = 25W, P4 = Pref(150)*(1-Rho^2) = 9.59W

Since Pfwd(150) < P1+P2 the interference on the load side is destructive.
Since Pref(50) > P3+P4 the interference on the source side is constructive.

P1+P2-Pfwd(150) = 75W + 3.2W - 51.123W = 27.07W destructive interference on the load side. The phase angle between V1 and V2 is greater than 90 deg.

Pref(50)-P3-P4 = 61.657W - 25W - 9.59W = 27.07W constructive interference on the source side. The phase angle between V3 and V4 is equal to 180 deg minus the phase angle between V1 and V2. It's perfectly symmetrical.

Destructive interference on the load side exactly equals constructive interference on the source side. Funny how that works out.

And FYI, 2 Sqrt(P1) Sqrt(P2) = 2 Sqrt(P3) Sqrt(P4)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2652. Dan's Small Parts and Kits

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 06:11:03 UTC
From: Jerry Parker <qrpradio@charter.net>
Message-ID: <v3umbkl739lh4e@corp.supernews.com>
Source record: 125391

Check out Dan's Small Parts and Kits has a whole new page.

He has some really GREAT deals up with pictures.

http://www.danssmallpartsandkits.net/

2653. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 06:29:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i2lu3v4ll98jvoaubg9rlnneqf2rv6gb00@4ax.com>
Source record: 125392

On Sat, 01 Feb 2003 19:19:10 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>Without explaining the abbreviations (we can guess them anyway) and
>remaining content neutral, ask yourself:
> PF = PD + PR
>Is PF dependant upon PD and PR, allowing that PD and PR are
>independent of PF? Do either PD or PR follow PF, or do they lead it?
>If they (together, or independently) follow, they (together, or
>independently) are dependant, and on the wrong side of the equation.
>

Hi All,

Let's look at this in terms other than power (let's choose money):

Spending Income = Earned Income - Income Taxes

Is Spending Income dependant upon Earned Income? Ya sure, you betcha.
Earned Income goes up, Spending Income goes up.

Is Spending Income dependant upon Taxes paid? Yep, Taxes go up and
Spending Income goes down.

Is Earned Income independent of Spending Income? Yes, Earned Income
does not change if you have more or less Spending Income.

Are Income Taxes paid independent of Spending Income? Yes, Income
Taxes do not change if you have more or less Spending Income.

==========

Now to consider an identity of the statement above and test it for
being coherent to the matter of defining a money issue:

Earned Income = Spending Income + Income Taxes

Is your earned income dependant upon what you spend? No, spending
more does not mean you will earn more.

Is your earned income dependant upon the taxes you pay? No, paying
more tax does not mean you will earn more.

Is spending income independant of earned income? No, if you have less
earned income, you will most certainly have less spending income.

Are your Income taxes independant of earned income? No, if your
income rises, so will your income taxes.

==========

Now the final identity of the statement above and test it for being coherent to the matter of defining a money issue:

Income Taxes = Earned Income - Spending Income

Are your income taxes dependant upon your earned income? Yes, if earned income rises, income taxes follow.

Are your income taxes dependant upon your spending income?

Is earned income independant of your taxes paid? Yes, by and large. You got it first.

Is spending income independant of your taxes paid? Hitting on the cards again, aren't you?

==========

And yet with the same numbers, we get the same balances using any of the three identities above. However, only one "might" provide the basis for defining the relationship of all three variables.

73's
Richard Clark, KB7QHC

2654. propagation theory

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 07:00:23 UTC
From: N7RX <n7rx@arrl.net>
Message-ID: <byJ%9.157891$rM2.120645@rwcrnsc53>
Source record: 125393

Is there a book that discusses the physics of RF propagation from source to receptacle?

2655. Re: propagation theory

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 13:03:14 UTC
From: richardharrison@webtv.net
Message-ID: <26155-3E3FBA12-676@storefull-2316.public.lawson.webtv.net>
Source record: 125394

N7RX wrote:
"Is there a book that discusses the physics of RF propagation from source to receptacle?"

Terman, "Electronic and Radio Engineering", McGraw-Hill books, 1955, does a good job.

If you are interested in Faraday`s law and Maxwell`s equations, B.W. Griffith, Jr.`s, "Radio-Electronic Transmission Fundamentals", McGraw-Hill books,1962, Library of Congress:
61-13756 is good.

Best regards, Richard Harrison, KB5WZI

2656. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 13:34:01 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <djP%9.20701$rq4.1513681@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125395

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E3F34DA.90902@ieee.org...
>
> Destructive interference on the load side exactly equals constructive
> interference on the source side. Funny how that works out.
>

Cecil,

I and I'm certain many others, have really tired of this discussion on the newsgroup. Given this latest destructive and constructive "power math" analysis of an example I posed, I figure I owe you the courtesy of one final response.

I agree with you that the destructive and constructive interference processes "balance" at the transmission line junction. This has all been said on the newsgroup before. This aspect of the discussion is not new.

We disagree on our interpretation of what this "balancing" process means from a physical perspective.

What I disagree with is your assumption (in this specific example) that some portion of the forward traveling power "lost" in the destructive interference process in the 150 ohm line, somehow manages to reverse direction and become a rearward traveling power in the 50 ohm line, "adding" to the existing rearward traveling power in the 50 ohm line.

In terms of the specifics of this example, you would require us to accept that all of the reflected power is delivered to the 50 ohm line and some portion of the initial 75 W of forward power somehow manages to reverse direction. Now you want me to be believe that there is really no re-reflected power at the junction (unless you want to tell me that there is really some re-reflected power at the junction and a greater portion of the 75 W of initial forward power reverses direction).

Exactly how do you decide what portion of "each individual wave" decides to reverse direction? [You do realize that this wave decomposition is just an artificial construct. There is really only one wave at any point in time. Decompose the wave into more individual power components and see what happens to your "power math".]

Other than the transient voltage and current analysis, you can't possibly describe a physical process that could make this all happen in terms of how the individual power components reverse direction. Claiming that "destructive interference" makes this all happen just doesn't work.

Here's another "mathematical interpretation" that looks like it works too and the following "power math" "proves" it.

In the steady state, 61.65 W of the 100 W of forward power arriving at the junction is reflected. 38.35 W of power travels forward into the 150 ohm line.

38.35 W = 100 W - 61.65 W

The 12.78 W of reflected power in the 150 ohm line is totally re-reflected at the junction adding to the 38.35 W of power in the 150 ohm line to become the total forward power of 51.13 W.

51.13 W = 38.35 W + 12.78 W.

This "power math" works great (I'm even using the "PF = PD + PR" formula)

Now, your "power math" requires us to believe that no re-reflection of power really occurs at the junction and my new "power math" requires us to believe that a total re-reflection of power occurs at the junction. Mathematically both "work", both are self-consistent and both adequately describe where all the power goes.

Aside from Pdelivered = Pforward - Preflected, ALL of this "power math" is foolishness. The only detailed analysis that works correctly from a conceptual perspective is the transient voltage and current analysis.

Take care,

Steve VE9SRB

2657. Re: Law: Antenna on roof help.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 14:27:21 UTC
From: Rickie <rickiev@hotmail.com>
Message-ID: <b1oib1$145ip9$1@ID-89515.news.dfncis.de>
Source record: 125396

Thats a good one,
What I did was place a J-pole on a swing plate, so I could swing it back
next to my windows when not in use. When I use it, I just swing it it.
It's about 3 feet away from the building and I get a good signal.

"KG4CYB" <ebooth1@ec.rr.com> wrote in message
news:sp8q3v8j0gjr7m2v7cts1dtgl7fbghvv2m@4ax.com...
> I am stuck living in an apartment with dick-wads for a management
> company. I am not allowed to put anything on my roof for what is quote
> " Cosmetic reasons" so I fixed them good. I made a temp mount on my
> Honda to hold a 4BTV (my car is my property) when I am finished, I
> take it down and bring it in the house. I have tuned up my gutters.
> For the low bands, I bought some 24 guage wire and strung up a long
> wire. My only hope is that a bird won't sit on it and give it away.
> Most of the time I go mobile. I'm very close to the beach and salt
> water is the best ground plane alround. I don't think I gave you an
> answer but I hope I gave you some ideas on getting alround it.
> KG4CYB
> On Fri, 24 Jan 2003 08:19:17 -0500, "Rickie / KC2KQQ"
> <rickiev@hotmail.com> wrote:
>
> >The management in my building doesn't allow anyone to place an antenna on
> >the roof, but doesn't not explain why. I was told that there is a way to
> >get a building management to allow an antenna but I dont know how..
> >
> >any help will be great!
> >
> > Rickie / KC2KQQ
> >
> >
>

2658. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 14:44:45 UTC
From: richardharrison@webtv.net
Message-ID: <29008-3E3FD1DD-800@storefull-2313.public.lawson.webtv.net>
Source record: 125398

Richard Clark wrote:
"Your statement is simply an identity which carries only a value, not a concept."

PD = power delivered by the transmitter and delivered through a lossless line to the load.

PR = power rejected by the load because there is a surplus of voltage or current in the coax power arriving at the load which must be reflected back to the transmitter because it has no place else to go. Only voltage or current which matches the load impedance for the current or voltage being delivered is accepted by the load.

PF = the power traveling from the transmitter to the load. This is the sole power source to the load.

Bird gives: PD = PF - PR

PF is indicated wehen the wattmeter arrow points to the load.

PR is indicated when the wattmeter arrow points to the transmitter.

Logic says PD, the delivered power, is the total power (PF) arriving at the load minus the rejected power (PR) as given by Bird above.

What is the forward power?

PF - PD + PR

The forward power must contain both the power delivered to the load and the power rejected by the load.

So, what is the power rejected by the load?

PR = PF - PD

The rejected power must be the difference between the total power delivered at the load and the lesser power accepted by the load when the load is mismatched to the transmission line.

There is zero problem with any case listed above.

There is a fourth case:

PF - PD - PR = 0

Take away the delivered and the rejected (reflected) powers from the forward power, and there`s nothing left.

In every case there is a valid idea for the competent individual.

Best regards, Richard Harrison, KB5WZI

2659. Johnson Matchbox#250 Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 15:01:58 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <GBQ%9.20760$rq4.1520239@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125397

I would like to use my johnson mathbox with
a solid state 100 watt transceiver. I will be using
it with 450 ohm commercial ladder line. Will
there be any harm in bypassing or eliminating the
115 volt relay that's inside of it? I don't care about
the resale value!

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/03

2660. Re: propagation theory

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 15:19:14 UTC
From: richardharrison@webtv.net
Message-ID: <26155-3E3FD9F2-694@storefull-2316.public.lawson.webtv.net>
Source record: 125400

N7RX wrote:
"Is there a book that discusses the physics of RF propagation from source to receptacle?"

If you are interested in a large collection of facts including some rarely found elsewhere, I`d be remiss not to include "Radio Propagation Handbook" by Peter N. Saveskie, TAB Books No. 1146. I worked with Pete for years overseas almost 50 years ago.

Best regards, Richard Harrison, KB5WZI

2661. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 15:42:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E3FDF66.8040804@ieee.org>
Source record: 125399

VE9SRB wrote:
> I agree with you that the destructive and constructive interference
> processes "balance" at the transmission line junction.

So were you wrong when you made this earlier assertion?

Steve said:
> The total forward power increases as a direct result of the vector
> superposition of forward voltage and current. This DOES NOT require a
> corresponding destructive interference process (reduction of power
> elsewhere) to balance the law of conservation of power ...

You really should read the Melles-Griot web page at:

http://www.mellesgriot.com/products/optics/oc_2_1.htm

> What I disagree with is your assumption (in this specific example) that some
> portion of the forward traveling power "lost" in the destructive
> interference process in the 150 ohm line, somehow manages to reverse
> direction and become a rearward traveling power in the 50 ohm line, "adding"
> to the existing rearward traveling power in the 50 ohm line.

Then you disagree with the Melles-Griot web page. They say the power "lost"
in the destructive interference process indeed does reverse direction and
become "enhanced intensity" in the opposite direction. It's not a "somehow",
Steve. That web page says it is a fact that destructive interference can
and does cause energy direction reversal, i.e. reflections.

> In terms of the specifics of this example, you would require us to accept
> that all of the reflected power is delivered to the 50 ohm line and some
> portion of the initial 75 W of forward power somehow manages to reverse
> direction.

Contrary to what you are attempting to assert, Pref(150)*Rho^2 = 3.2W is
indeed re-reflected back toward the load just as I said in the posting to
which you are responding. How could you miss that? So you are mistaken when
you say I would require you to accept that all of the reflected power is
delivered to the 50 ohm line. I said that 3.2W is re-reflected and I mean
exactly that.

> Now you want me to be believe that there is really no
> re-reflected power at the junction (unless you want to tell me that there is
> really some re-reflected power at the junction and a greater portion of the
> 75 W of initial forward power reverses direction).

In the earlier posting, I explained that 3.2W of reflected power is re-reflected
back toward the load. Maybe you should read it again before you make any more

mistakes about what I have said.

> Exactly how do you decide what portion of "each individual wave" decides to
> reverse direction?

I don't decide which water molecules come through my shower head and which
ones go through my neighbor's shower head, do you?

I simply abide by the wave reflection model, the superposition theorem, and
the conservation of energy principle. Mother Nature takes care of the rest.

> Other than the transient voltage and current analysis, you can't possibly
> describe a physical process that could make this all happen in terms of how
> the individual power components reverse direction. Claiming that
> "destructive interference" makes this all happen just doesn't work.

You really should read the Melles-Griot web page before you continue to
embarrass yourself like this. The web page says that fact has been confirmed
experimentally. The fact is that destructive interference causes the energy
to change direction and join the opposite-traveling wave as "enhanced intensity"
(the optics version of constructive interference). It's all there in black and
white on that web page, Steve. Are you going on record as disagreeing with
the Melles-Griot web page?

> Here's another "mathematical interpretation" that looks like it works too
> and the following "power math" "proves" it.
>
> In the steady state, 61.65 W of the 100 W of forward power arriving at the
> junction is reflected. 38.35 W of power travels forward into the 150 ohm
> line.

Since the physical reflection coefficient is 0.5, that mathematical interpretation
violates the superposition principle. Is that really what you want to do?

> Now, your "power math" requires us to believe that no re-reflection of power
> really occurs at the junction ...

This is a falsehood. My "power math" abides by the superposition principle.
There is 3.2W of re-reflected power at the junction as explained in this
and my earlier posting. (Your straw men are not working.)

> Aside from Pdelivered = Pforward - Preflected, ALL of this "power math" is
> foolishness.

If you believe that then you certainly should not have made any assertions
about power in your QEX article. In particular, just before "Acknowledgment":

"A total re-reflection of power at the match point is not necessary for the
impedance match to occur."

If you believe power math is foolishness, exactly what math did you use to
come up with that false conclusion about power?

"Power math is foolishness" = "Those grapes would have been too sour to
eat anyway."

--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2662. Re: Johnson Matchbox#250 Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 15:52:48 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <klR%9.94377$to3.272430@rwcrnsc51.ops.asp.att.net>
Source record: 125401

Marvin, you should explain why you want to bypass/eliminate the relay.
That way you may get a more informed/relevant answer!

Malcolm

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:GBQ%9.20760$rq4.1520239@bgtnsc05-news.ops.worldnet.att.net...
> I would like to use my johnson mathbox with
> a solid state 100 watt transceiver. I will be using
> it with 450 ohm commercial ladder line. Will
> there be any harm in bypassing or eliminating the
> 115 volt relay that's inside of it? I don't care about
> the resale value!
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/03
>
>

2663. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 15:57:49 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <j6kunWV9L+P+EAOf@ifwtech.co.uk>
Source record: 125402

Richard Harrison wrote:
>
>Bird gives: PD = PF - PR
>
>PF is indicated wehen the wattmeter arrow points to the load.
>
>PR is indicated when the wattmeter arrow points to the transmitter.
>
>Logic says PD, the delivered power, is the total power (PF) arriving at
>the load minus the rejected power (PR) as given by Bird above.
>

For the (n+m)th time... the Bird "wattmeter" does not measure watts!

When you understand how it samples the voltage and current from the line, and the conditions under which the meter scale was calibrated to read watts, then you can understand what the meter readings mean.

But it doesn't work the other way around - you cannot use the Bird wattmeter (or its user manual IMO) to help you understand the basic mechanics of wave reflection.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2664. Re: Johnson Matchbox#250 Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 16:43:56 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <p1rv3vse4mh2242r4kqrdi4k9q2rgc75h1@4ax.com>
Source record: 125403

Back when they made those units hams were receivers and transmitters
and that relay served as an antenna "change over" relay.

To answer your question, it will not cause harm to bypass it. On my
Matchbox the relay was removed by the previous owner and is not needed
or required when using transceiver.

I would recommend that you just bypass it -leaving the original relay
there should a future owner need it.

73,
Danny, K6MHE

On Tue, 04 Feb 2003 15:01:58 GMT, "marvin rosen"
<raghead@worldnet.att.net> wrote:

>I would like to use my johnson mathbox with
>a solid state 100 watt transceiver. I will be using
>it with 450 ohm commercial ladder line. Will
>there be any harm in bypassing or eliminating the
>115 volt relay that's inside of it? I don't care about
>the resale value!
>
>
>---
>Outgoing mail is certified Virus Free.
>Checked by AVG anti-virus system (http://www.grisoft.com).
>Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/03
>

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

2665. Re: Johnson Matchbox#250 Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 17:35:08 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <b1otkb$246f$1@news1.tribune.com>
Source record: 125404

I have one with it removed, and one with it present but used as a terminal
strip for the direct connection.

The important thing is to remove the recieve tap from the primary inductor.

KA9CAR

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:GBQ%9.20760$rq4.1520239@bgtnsc05-news.ops.worldnet.att.net...
> I would like to use my johnson mathbox with
> a solid state 100 watt transceiver. I will be using
> it with 450 ohm commercial ladder line. Will
> there be any harm in bypassing or eliminating the
> 115 volt relay that's inside of it? I don't care about
> the resale value!
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/03
>
>

2666. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 18:10:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <81uv3vk1vp7tmi5dv5nrjg6mid3cg1g34t@4ax.com>
Source record: 125405

On Tue, 4 Feb 2003 08:44:45 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>What is the forward power?
>
>PF - PD + PR
>
>The forward power must contain both the power delivered to the load and
>the power rejected by the load.
>
>So, what is the power rejected by the load?
>
>PR = PF - PD
>

Hi All,

A simple test of each equation reveals if it is simply an identity
(another way of saying the SAME thing) or is a definition (the only
way to say an UNIQUE thing).

We start with what appears to be a Bird error:
>PF - PD + PR
but we will assume the minus sign is in fact an equals sign such that:
>PF = PD + PR
Which tells us that as PR goes up, PF goes up; where PD goes up, PF
goes up. So according to Bird, if you increase Reflected Power, you
also increase Forward Power. Presumably while watching a Bird meter
and observing that it is measuring a rise in PR, that we must then be
experiencing a rise in PF at the same time - nothing to worry about,
so we peak the PR.

OR we then examine:
>PR = PF - PD
Which tells us that as PD goes up PR goes down; if PF goes up, PR goes
up. So, according to Bird, if you reduce the Dissipated Power, you
will increase the Reflect Power. And I thought Reflected Power was a
function (dependency) of Mismatch - foolish me.

Well, those two (a simple ongoing proof of their identity) would have
made Enron rich in the power business if only they got there before
Bird. These equations as proof expressed in standard math would have
vindicated Anderson Consulting if they only had the presence of mind
to have hired away the mathematicians at Bird.

And of course there is the sad story of Johnson, who, not knowing his own mind needs help here to explain what he meant and to shuffle not only his offered equations, but to add new constraints (the guy was so messy in his work).

No one here needs a lesson in economics to realize that their earned income is reduce by taxes to a spending income. However, many would be very upset to learn that the IRS has used an identity to force them to pay more taxes because:
taxes paid = Earned Income - Spending Income
where, it doesn't pay to save money, because that will reduce Spending Income and force taxes up. This is so close to the "Laffer Curve" (remember our last round of trillion dollar deficits for the 80's?) that I will resist the urge to correlate.

Huh? Where does it say anything about "saving" income? Spending Income is an independent variable (independent of taxes paid, according to the formula if it is a definition); but VARIABLE nonetheless through agencies other than taxation and earnings - savings easily qualifies.

I am sure to hear screams and hollers of "Foul" or "Director" (for those who play bridge); because "it is painfully obvious you clod" (meaning me) that the three terms are balanced and unchangeable otherwise - which of course simply underlines my observation that these three are identities, not definitions, and reinforces what I have always offered:
>>>My guess is everyone would be content to live with any of the three
>>>forms offered, which leads to the logical conclusion that all three
>>>are dependencies of a fourth agent. You guys don't have all your oars
>>>in the water.
which Walt already confirmed, but has yet to offer a reference because that scruffy Johnson's work is incomplete and poorly documented. We need more information on what that shabby work of Johnson's really means. (Should I ask why he was chosen as a reference in the first place? Wouldn't it be simpler to choose a competent reference that contains these answers rather than trying to sift them out of Johnson's trash?)

For the lurking members of the audience, you will no doubt nod silently when I offer that instead of getting the reference I want, I will now be responded to for this diatribe, slander, and impugning of Saint Johnson (as they rummage through his work and select uncorrelated passages as ritualistic spells to show my extreme ignorance). With a thread in excess of 500 postings, how could it be otherwise? ;-)

73's
Richard Clark, KB7QHC

2667. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 18:27:59 UTC
From: richardharrison@webtv.net
Message-ID: <1234-3E40062F-244@storefull-2311.public.lawson.webtv.net>
Source record: 125406

CAM wrote:
"He seems ignorant of the fact that "direct cancellation of all
rearward-traveling voltages, and voltages at the match point, IS
re-reflection---."

Melles=Griot agrees with Cecil.

One statement is very familiar:
"The sum of the reflected and transmitted beam intensities is always
equal to the incident intensity. This has been confirmed by experiment."

Another:
"Incident energy = reflected energy + transmitted energy."

It exactly conforms to the Bird wattmeter formula.

Best regards, Richard Harrison, KB5WZI

2668. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 18:45:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mq004v46jorgma6jn095ooipkp0cs5hn2k@4ax.com>
Source record: 125407

On Tue, 04 Feb 2003 06:29:09 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Sat, 01 Feb 2003 19:19:10 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>
>>Without explaining the abbreviations (we can guess them anyway) and
>>remaining content neutral, ask yourself:
>> PF = PD + PR
>>Is PF dependant upon PD and PR, allowing that PD and PR are
>>independent of PF? Do either PD or PR follow PF, or do they lead it?
>>If they (together, or independently) follow, they (together, or
>>independently) are dependant, and on the wrong side of the equation.
>>
>
>Hi All,
>
>Let's look at this in terms other than power (let's choose money):
>
>Spending Income = Earned Income - Income Taxes
>

Hi All,

Given the stunned silence that followed this posting, I must consider
if it either was compelling, dead-on, or too emotional to cope with
(money being the source of many fights).

I will respond to the third so as to defuse a possibly inflammatory
situation and tone it down for those so ruffled into inchoate
apoplexy.

Let's look at this in terms of shipping rather than power:
Goods Accepted = Goods Delivered - Goods Returned

We, of course, will visit the following variations and test all to
determine which are identities and which satisfy being a definition of
shipping goods.
Goods Delivered = Goods Accepted + Goods Returned
Goods Returned = Goods Delivered - Goods Accepted

-------- RRAA mandatory Warning for the Ironically Impaired ---------
--------------- do not proceed without inoculations -----------------

We will do this as a dialog between the foreman and the stevedore:
F - Hi Steve, now that you've studied the science of shipping, can
you tell me how much Goods will be Returned later this evening?

S - Yo' Fore. Indeed I can from my handy formula I just devised from this here pamphlet that didn't seem quite complete in the matter. I found that if we increase the number of those accepted this morning before they arrive, then we won't have to ship many back when they are delivered.

F - Accept them before they arrive? Do you already know how much that will be?

S - Certainly, I also know how much will be Delivered because I have already told you how many will be returned - weren't you listening? If I accept more now, then there will be more in this evening's shipment. Also, if I return more this morning, there will be more in the shipment this evening. Either way = more! Doncha get it? I am going to have to work harder to move all that stuff tonight if I do this this morning.

F - Uh huh.

S - Yeah, yeah. An' so, seeing as we are going to have more Goods Delivered because I accepted them already we can return more now and get even more Delivered later too. You know, this is going to be a lot of hauling, I want a raise.

F - You're fired!

Thanx and tip of the Halto Hat
Richard Clark, KB7QHC

2669. Re: propagation theory

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 18:54:06 UTC
From: k3bu@aol.com
Message-ID: <20030204135406.20514.00000686@mb-fo.aol.com>
Source record: 125408

>
>Is there a book that discusses the physics of RF propagation from source to
>receptacle?
>
>

One way of explaining some of the anomalies is summarized in my article in 1980
CQ Magazine:

http://members.aol.com/ve3bmv/bmvpropagation.htm

Yuri, K3BU

2670. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 19:04:56 UTC
From: k3bu@aol.com
Message-ID: <20030204140456.20514.00000687@mb-fo.aol.com>
Source record: 125409

>
>So, what is the power rejected by the load?
>

By now I would have matched all the antennas and there would be zilch of reflected or deflected power and no need for discussion about it :-)

Why would anyone want to reject/reflect the power? Match the darn thing and keep antennas, feedlines, transmitters, receivers and "scientists" happy. I hate the "matching devices" (losses) I design antennas to be 50 ohms, feedline 50 ohms to make 50 ohm transmitter and this "dummy" happy. One happy shack!

Yuri, K3BU

2671. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 19:14:45 UTC
From: dplatt@radagast.org
Message-ID: <v40495q2ettv98@corp.supernews.com>
Source record: 125410

In article <9qvv3vci6ar2rgeknq8hrach5flbvr2ac4@4ax.com>,
Mark <marks@nospam.org> wrote:

>I'm looking to mount a simple multiband scanner antenna on the truck, but
>can't do it on the roof because it's garaged and it's real tight now.
>
>I'd prefer to keep away from mag mounts and bumper mounts. I'd also like to
>mount this without doing any drilling to the vehicle. Demanding, aren't I ?
>:)
>
>What I'm thinking is a way to build a bracket that will attach to some factory
>screws/bolts somewhere on the sides in where the rear hatch is. Something
>that will be able to protrude out at a "twisted L" type angle and I can mount
>the antenna on that plate.

The Larsen TLP is an NMO mount designed for trunk-lip mounting - it
might be usable if you have a trunk/hatch/door in a suitable place.

They also make some 90-degree L-brackets (TMB34 and TMB34B) which can
be screwed down, and which will take a standard through-hole NMO base.

Neither of their brackets has a twist in it, though you could get some
amount of angling in one axis depending on which screw holes you use
and where your existing screws/bolts are. If you need something with
a customized twist, you might be able to combine one of these brackets
with a bent/twisted/drilled piece of sheet metal of your own making.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2672. Re: Johnson Matchbox#250 Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 19:16:54 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <LdV%9.546$J%2.147607563@news.inreach.com>
Source record: 125411

Marvin:

The easiest way, and the way that doesn't affect resale value, is to simply wedge the contacts closed with some convenient insulator. Previous posts on this subject have suggested paper and plastic materials.

This method forces the relay into the transmit position and makes transceiver operation very simple. It also allows the unit to be resotored to its original condition with little effort.

Roger K6XQ

2673. Re: Johnson Matchbox#250 Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 19:22:20 UTC
From: Wayne and Louise <wirwin2@cfl.rr.com>
Message-ID: <MpU%9.7419$QQ4.41418@twister.tampabay.rr.com>
Source record: 125412

No harm done at all Marvin. The Matchbox design predates the "transcieve era." Todays modern equipment has the TR function built it. In the Matchbox era, hams were using separate receivers and transmitters and there was a need to switch between the receiver and the transmitter when going from the listening mode to the talking mode.

I have 2 of the 275 watt units and in both cases I just mechanically moved the relay to the "on" position. I plan on setting up a vintage station in the not too distant future and will use one of these Matchboxes in that station. It will be a 10 minute job to restore the Matchbox to its original configuration for use with separate transmitter and receiver.

73,

Wayne, W1KI

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:GBQ%9.20760$rq4.1520239@bgtnsc05-news.ops.worldnet.att.net...
> I would like to use my johnson mathbox with
> a solid state 100 watt transceiver. I will be using
> it with 450 ohm commercial ladder line. Will
> there be any harm in bypassing or eliminating the
> 115 volt relay that's inside of it? I don't care about
> the resale value!
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/03
>
>
>

2674. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 19:30:52 UTC
From: richardharrison@webtv.net
Message-ID: <23330-3E4014EC-91@storefull-2318.public.lawson.webtv.net>
Source record: 125414

Richard Clark wrote:
"Well those two (a simple ongoing proof of their identity) would have made Enron rich in their power business if only they got there before Bird."

Mathematics is the least equivocal of sciences. Quantities are either equal or they are not. Quantities are either properly separated by an equality sign, or they are not.

Properly stated equations may be manipulated by mathematical rules in any correct fashion and they are every bit as accurate and true.

Richard clark`s assertions are absurd.

There was likely little wrong with the math used by Enron and Anderson. It was how thet they they used the math.

No doubt math mistakes are made, but all configurations of PD = PF - PR are valid as I posted, except for perhaps hitting a minus key instead of an equals key. My fingers are fat and my eyesight is poor. John Glenn reminded me the other day I had been here for more than 1/3 of the country`s history.

Richard clark`s remarks are ill posted and ill considered.

Best regards, Richard Harrison, KB5WZI

2675. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 19:35:58 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4011B4.A8E3CDCE@attbi.com>
Source record: 125413

But Yuri;

Any connectors introduce reflections!

A connector at the perfect 50.0000 ohm antenna destroys the perfection
because it may introduce a VSWR of up to 1.05:1. The connector at the
other end of the transmission also may introduce another 1.05:1 VSWR.

Bends in the transmission line, manufacturing variances all introduce
VSWR into the system.

Seriously, the true 50 ohms system from antenna to transmitter is a
students study only. Real systems vary from the ideal.

Deacon Dave, W1MCE

Yuri Blanarovich wrote:
[snip] ...

> Why would anyone want to reject/reflect the power? Match the darn thing and
> keep antennas, feedlines, transmitters, receivers and "scientists" happy. I
> hate the "matching devices" (losses) I design antennas to be 50 ohms, feedline
> 50 ohms to make 50 ohm transmitter and this "dummy" happy. One happy shack!
>
> Yuri, K3BU

2676. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 19:42:49 UTC
From: richardharrison@webtv.net
Message-ID: <23327-3E4017B9-752@storefull-2318.public.lawson.webtv.net>
Source record: 125416

Richard Clark wrote:
"Thanx and a tip of the Hatlo Hat "

Maybe a "Little Iodine" will cure what ails him, but I wouldn`t count on it.

Best regards, Richard Harrison, KB5WZI

2677. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 19:45:49 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E4018C7.82E1A36A@att.net>
Source record: 125415

Richard,

Clever.

Does your analysis still hold if you avoid changing the definition for "Spending Income" in the middle?

The relationship between "Spending Income" and "spending more" is undefined.

Actually, this is a perfect example of the typical RRAA debate. Various important components can go missing and then return when convenient for the argument.

73,
Gene
W4SZ

Richard Clark wrote:

[big snip]

> Now to consider an identity of the statement above and test it for
> being coherent to the matter of defining a money issue:
>
> Earned Income = Spending Income + Income Taxes
>
> Is your earned income dependant upon what you spend? No, spending
> more does not mean you will earn more.
>
> Is your earned income dependant upon the taxes you pay? No, paying
> more tax does not mean you will earn more.
>
> Is spending income independant of earned income? No, if you have less
> earned income, you will most certainly have less spending income.
>
> Are your Income taxes independant of earned income? No, if your
> income rises, so will your income taxes.

2678. Re: propagation theory

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 20:54:16 UTC
From: richardharrison@webtv.net
Message-ID: <23568-3E402878-311@storefull-2312.public.lawson.webtv.net>
Source record: 125418

Yuri, K3BU wrote:
"One way of explaining some of the anomalies is summarized in my article in 1980 CQ Magazine."

Very interesting. Yuri did well. A telling point is the demonstration of the not-to-scale illustrations we most often see used with propagation stories.

But, actual reflection attempts are usually based not on the out-of-whack illustrations but on actual take-off angles found to work on certain length paths. These give us our predicted ionspheric reflector heights.

A mirage wouldn`t work on the floor of the Grand Canyon to bring in shortwaves. Actually shortwave reception is pretty good there. I`ve tried it. I`ve also used a backscatter ionospheric sounder. Its results agreed with accepted geometry and ionospheric theory.

Best regards, Richard Harrison, KB5WZI

2679. Re: propagation theory

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 21:00:29 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <alGdnQF4cKJ3tN2jXTWcoQ@crocker.com>
Source record: 125417

"N7RX" <n7rx@arrl.net> wrote in message
news:byJ%9.157891$rM2.120645@rwcrnsc53...
> Is there a book that discusses the physics of RF propagation from source
to
> receptacle?
>
>

what kind of information are you looking for? the details of electric and magnetic fields, maxwell's equations, and wave equations? antennas, waveguides, cables? or atmospheric and ionospheric phenomena? and what level of detail, graphs and pictures or deep calculus?

2680. W8NX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 21:18:29 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <b1pau3$do0$1@reader08.wxs.nl>
Source record: 125419

i want to build a W8NX antenna,
But i found some different versions of it.
At w4rnl his site are different lenghts as the one in the ARRL antenna handbook.

could anyone give me the dimensions (links Photo's) of a W8NX antenna ?
there could also be a qoustion left about the best way of feeding the traps (high Z , low Z).
What is best for working all bands fed with just 75 Ohm coax ?
Or could it be better being feed with 50Ohms and matched with a 1:2 Balun?

The Z of most of the bands are higher than 103 Ohm.

anyway if someone could help this Dutch radio amateur a bit further...he is almost with one leg at the stairs to th e roof :-)

Marco PE1LPK
Near Amsterdam

2681. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 21:27:33 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E403044.1EE6887A@cwis.net>
Source record: 125420

Mark,
Run down to the 'Shack' and get a roll of the 'tape'
used for burglar alarm window sensors, and a couple of
connectors for the tape. Lay out the tape along the top
of your windshield and down one edge. Put a connector
on the bottom end of the tape, connect to scanner with
some unobtrusive wire or cable. That's it, one 'no hole'
scanner antenna.
'Doc

2682. MA5B Review request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 21:28:05 UTC
From: Richard Cassano <rcassano@optonline.net>
Message-ID: <FfW%9.81258$HG.15814295@news4.srv.hcvlny.cv.net>
Source record: 125421

Can anyone with a Cushcraft MA5B tell me what they think of it's
performance? I'm trying to narrow down options for a chimney mounted,
Multiband HF antenna that will not attract the attention of a particular
neighbor.
Thank you,
Richard , KC2ISG

2683. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 21:43:48 UTC
From: richardharrison@webtv.net
Message-ID: <1233-3E403414-703@storefull-2311.public.lawson.webtv.net>
Source record: 125424

Ian, G3SEK wrote:
"When you understand how it (the Bird wattmeter) samples the voltage and current from the line, and the conditions under which the meter scale was calibrated to read watts, then you can understand what the meter readings mean."

It appears Ian hasn`t understood yet. A speedometer does not need to measure miles or kilometers or hours to give an adequate indication of miles per hour. An electrodynometer doesn`t measure watts to indicate watts. It senses current in its field coils and current through a shunt circuit across the voltage source to indicate watts.

A watthour meter counts revolutions of a motor which runs with a speed proportional to the load`s power consumption rate. Nearly all practical measurements are indirect and calibrated to read as they should.

If the Bird wattmeter did not correctly conform to electrical principles, it could not give the correct results as it adequately does. Therefore its principles can be used to demonstrate transmission line principles. Just like the math equations, despite asinine observations made in this thread, just as the transmission line principles can be used to demonstrate the operation of the wattmeter, they can go either way.

Best regards, Richard Harrison, KB5WZI

2684. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 21:44:32 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b1pc6dugl1@slb6.atl.mindspring.net>
Source record: 125422

So Andy when are you going to join the league?

Dan/W4NTI

"Andy KC2SSB" <nospam@nospam.com> wrote in message
news:ckbu3vs2c8qnfvvkubanp9bpgoe29qbo3d@4ax.com...
>
> It's available on the ARRL website, but only if you're a member, which
> I am not. That might be something you'd want to consider.
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

2685. Re: MA5B Review request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 22:01:06 UTC
From: Per Enocson <per.enocson@telia.com>
Message-ID: <CKW%9.9542$LY2.574228@newsc.telia.net>
Source record: 125423

Richard,

Check out http://www.eham.net/reviews/detail/340 where you will find no less
than 44 reviews of the MA5B.

73ï¿½s Per SM0WRA

"Richard Cassano" <rcassano@optonline.net> skrev i meddelandet
news:FfW%9.81258$HG.15814295@news4.srv.hcvlny.cv.net...
> Can anyone with a Cushcraft MA5B tell me what they think of it's
> performance? I'm trying to narrow down options for a chimney mounted,
> Multiband HF antenna that will not attract the attention of a particular
> neighbor.
> Thank you,
> Richard , KC2ISG
>
>

2686. Re: Retractable antennas on portables - Help!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 22:32:31 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <b1qr7i$gi8$1@reader10.wxs.nl>
Source record: 125453

i guess you won't find it.
except if you could find info of the manufacturor.
But what you could do is take a chance with a regular antenna what fitts.
or and build yourself a antenna tuner you will find many links at google
take a random lenght wire as an antenna.
just a simple one it is just for receiving, take two old vari capicitors
from old transistorradio's and make a L with some junctions at some
windings.
and just experiment with it.

after doing some test with the tuner the adjustments of it and the
(full?)lenght of the antenna used you could
find out the ideal lenght.

the antenna tuner could just be the size of a matchbox at the end of the
antenna fixed at the radio.

more simplier you could match the antenna with a parralel fixed L and
variable C (from old transistor radio).

Marco

2687. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 23:00:48 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <4dcYu0hgYEQ+EA2O@ifwtech.co.uk>
Source record: 125425

Richard Harrison wrote:
>Ian, G3SEK wrote:
>"When you understand how it (the Bird wattmeter) samples the voltage and
>current from the line, and the conditions under which the meter scale
>was calibrated to read watts, then you can understand what the meter
>readings mean."
>
>It appears Ian hasn`t understood yet. A speedometer does not need to
>measure miles or kilometers or hours to give an adequate indication of
>miles per hour. An electrodynometer doesn`t measure watts to indicate
>watts. It senses current in its field coils and current through a shunt
>circuit across the voltage source to indicate watts.
>
>A watthour meter counts revolutions of a motor which runs with a speed
>proportional to the load`s power consumption rate. Nearly all practical
>measurements are indirect and calibrated to read as they should.
>
Thank you, I'm well aware of all that.

>If the Bird wattmeter did not correctly conform to electrical
>principles, it could not give the correct results as it adequately does.

The Bird undoubtedly gives correct readings under the conditions for
which it was calibrated - namely, with a 50 ohm load. But predicting how
it behaves under any other conditions requires some knowledge of
transmission line theory.

To say that it "correctly conforms to electrical principles" is trite -
it can't help but do so. But the question under debate is exactly what
those principles are.

>Therefore its principles can be used to demonstrate transmission line
>principles.

Only if you already know what those principles are.

>Just like the math equations, despite asinine observations
>made in this thread, just as the transmission line principles can be
>used to demonstrate the operation of the wattmeter, they can go either
>way.

You're missing the point about the particular and the general. General
transmission line principles can be used to deduce how this particular
instrument will respond to any given situation, and what the meter
readings actually mean. But you can't go in the other direction - it is
not logically possible to deduce a general transmission line theory by

taking the readings of some particular instrument at face value.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2688. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 23:29:39 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <75j04vsmo89jrodhur7j6o2ramb1ot977q@4ax.com>
Source record: 125426

On Tue, 04 Feb 2003 19:35:58 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

|But Yuri;
|
|Any connectors introduce reflections!
|
|A connector at the perfect 50.0000 ohm antenna destroys the perfection
|because it may introduce a VSWR of up to 1.05:1. The connector at the
|other end of the transmission also may introduce another 1.05:1 VSWR.

Yes, that's why I always prune the length of line so that the two
reflections cancel.

2689. Home brew 6 2 70cm mobile ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 23:30:10 UTC
From: The Simpsons <grant@simtronics.co.nz>
Message-ID: <G2Y%9.69950$F63.1426938@news.xtra.co.nz>
Source record: 125427

Anybody have (or know where I can get it) any information on building a mobile antenna to cover 50MHz, 146MHz and 440MHz? 28MHz as well would be nice but not essential.
I have just bought a Yaesu FT8900 and would like to build a mobile antenna for it. I could buy a commercial one but am more interested in doing it myself.

Grant, ZL2BK

2690. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 23:33:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5nh04vkocblldjurok7jchbqnmtu52mm36@4ax.com>
Source record: 125428

On Tue, 04 Feb 2003 19:45:49 GMT, Gene Fuller <W4SZzzzzz@att.net>
wrote:

>Richard,
>
>Clever.
>
>Does your analysis still hold if you avoid changing the definition for
>"Spending Income" in the middle?
>
>The relationship between "Spending Income" and "spending more" is
>undefined.
>
Hi Gene,

That is the whole point of an independent variable. If you vary it
(the nature of a true variable), does the result follow logically?
Spending is the type of income, "more" is its degree of variation not
a different type of income.

Actually, as used throughout these side-threads, the terms PD, PF, and
PR are NOT variables at all! They are constants of proportionality,
and are available as a simultaneous solution. THAT is their
relationship, and it is all their dependency upon the reflection
coefficient and an independent variable called source where X (a true
variable) merely changes the amplitude of the response, not the nature
of the relationship.

All of this simply returns to my oft-repeated observation:
>>>> My guess is everyone would be content to live with any of the three
>>>> forms offered, which leads to the logical conclusion that all three
>>>> are dependencies of a fourth agent. You guys don't have all your oars
>>>> in the water.

We can dismiss all of this folderol quite simply to look at the
results being hammered into us as proofs of some arcana:
100 = 133 - 33
133 = 100 + 33
33 = 133 - 100

Do any of the following singly "prove" anything?
100 = 133 - 33 ?
133 = 100 + 33 ?
33 = 133 - 100 ?

Can I be allowed to say that
33 = 133 - 100
proves that 133 came first? Or 133 is privileged? Or 133 is demanded
over 33 or 100 as compelling in some way instead of as:
133 = 100 + 33
or
100 = 133 - 33

I don't think I will see that one pulled off here - but I am sure
someone will argue it - uh, argue over it. That or the stale wheezing
of "ad hominem, you cur!" To that I would respond as the Fool in
Shakespeares' 12th Night:
"...why laugh you at such a barren rascal?
An you smile not he's gagged."
:-)

73's
Richard Clark, KB7QHC

2691. [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-04 23:36:43 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E404E8B.841586FA@osite.com.br>
Source record: 125429

Surfing the Antenna Book....

I found many interesting designs for the 80m band.
I am considering building a different one, since I am not
happy with the 1/2 wave dipole.
The choices are:

full (or half-) wave Horizontal loop (supports may be a
problem. Manageable though)
Inverted L (I foresee a problem with space for ground
radials)
G5RV (will try it anyway, since it will be used on the other
bands anyway)

What I am trying to do is reduce the wire mess over the
place... Iï¿½m running dipoles for every band. If I could
reduce the current 4 dipoles to just one one or 2 will be
fine.
Iï¿½m on budget constraints, so the less coax needed, the
better.

Thanks.
--
Paulo E.P. Marcondes
pepm@osite.com.br

2692. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 00:13:30 UTC
From: jgboyles@aol.com
Message-ID: <20030204191330.11667.00000192@mb-fl.aol.com>
Source record: 125431

>I found many interesting designs for the 80m band.
>I am considering building a different one, since I am not
>happy with the 1/2 wave dipole.
>The choices are:

If you are not happy with a 1/2 wave 75M dipole fed with low loss transmission line, you will not be happy with with the other choices, thats about as good as it gets.
Low to the ground 75M antennas exibit mostly omni-directional patterns. I haven't tried them all, but I have modeled lots, and that is what happens.
A 1/2 wave dipole fed with low loss transmission line is about as efficient as one can get, even low to the ground.
Get 100' of wire, cut it half, feed it with 450 ohm ladder transmission line, with a tuner at the transmitter end. Then work all bands with high efficiency
73 Gary N4AST

2693. Re: Dipole mounting options

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 00:18:07 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E40583F.F2A901C6@osite.com.br>
Source record: 125432

> I have an old tripod for mounting antennas on a roof. I could put about 10
> feet of mast into this mount and attach the balun to the end of the mast.
> One end will go towards the corner of the house, and the other end to a
> tree. Instead of the antenna running at 180 degrees, it would be more like a
> 150. The antenna would be an inverted Vee with about a 20 foot drop from
> balun to end at the house, and a 40 degree drop from balun to tree. Would

What you are describing is pretty much like the setup Iï¿½ve
been operating since some time.
Dipoles are not that killer antennas, but it works FB
anyway.

73
--
Paulo E.P. Marcondes
pepm@osite.com.br

2694. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 00:41:52 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <zZY%9.1482$Fi3.622@fe01>
Source record: 125433

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:lN2dnUc31uVyI6OjXTWcpw@comcast.com...
> You have to get rid of the 300 ohm twinlead, or it will act as an
impedance
> transformer. If it was 1/4 wavelength long, it would make the rabit ear
look
> like it had an impedance of over 1000 ohms. >
Or Any odd multiple of 1/4 wave (figureing in velocity factor), also, note
that it is a BALANCED antenna, while the radio is unbalanced, in addition
to the replaceing of the 300 ohm with 50 ohm coax, would suggest about 10
ferrite beads over the coax, or about 5-6 turns of the coax on itself, to
form a balun, as close to the rabbit ears. also, set the length of them to
around 19 inches on each one, and can adjust the length and/or angle for a
1:1 match-- jim nn7k

2695. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 00:43:46 UTC
From: "Dee D. Flint" <deehays@qix.net>
Message-ID: <67Z%9.2311$4y4.1068189@newssvr28.news.prodigy.com>
Source record: 125430

"Paulo Marcondes" <pepm@osite.com.br> wrote in message
news:3E404E8B.841586FA@osite.com.br...
> Surfing the Antenna Book....
>
> I found many interesting designs for the 80m band.
> I am considering building a different one, since I am not
> happy with the 1/2 wave dipole.
> The choices are:
>
> full (or half-) wave Horizontal loop (supports may be a
> problem. Manageable though)
> Inverted L (I foresee a problem with space for ground
> radials)
> G5RV (will try it anyway, since it will be used on the other
> bands anyway)
>
> What I am trying to do is reduce the wire mess over the
> place... I m running dipoles for every band. If I could
> reduce the current 4 dipoles to just one one or 2 will be
> fine.
> I m on budget constraints, so the less coax needed, the
> better.
>
> Thanks.

The G5RV is a good choice. A long random wire also works well (it should be at least a 1/2 wave long on the lowest frequency that you plan to work). Naturally most solutions that have a single antenna (including these two) will require that you have a tuner. The higher you can get them in the air, the better.

Dee Flint, N8UZE

2696. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 00:44:58 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <2ln04vkuo86kng5iajv8dcibfqdpg7r36n@4ax.com>
Source record: 125434

On Tue, 04 Feb 2003 13:09:16 -0500, Mark <marks@nospam.org> wrote:

>I'm looking to mount a simple multiband scanner antenna on the truck, but
>can't do it on the roof because it's garaged and it's real tight now.
>
>I'd prefer to keep away from mag mounts and bumper mounts. I'd also like to
>mount this without doing any drilling to the vehicle. Demanding, aren't I ?
>:)
>
>What I'm thinking is a way to build a bracket that will attach to some factory
>screws/bolts somewhere on the sides in where the rear hatch is. Something
>that will be able to protrude out at a "twisted L" type angle and I can mount
>the antenna on that plate.
>
>Has anyone done anything similar or have any input on this? Thanks.

how 'bout a glass mount? a dual-band ham antenna (2m/440) works fine
on most bands.

73,
rich, n9dko

2697. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 00:47:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E405F38.3080804@ieee.org>
Source record: 125435

Paulo Marcondes wrote:
> What I am trying to do is reduce the wire mess over the
> place... Ii¿½m running dipoles for every band. If I could
> reduce the current 4 dipoles to just one one or 2 will be
> fine.

I use a single 130 ft. dipole on all bands without an antenna
tuner and without coax. Check it out on my web page.
--
73, Cecil, W5DXP http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2698. Re: NMO Mount Need More Sealing?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 01:00:22 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <UeZ%9.1490$Fi3.597@fe01>
Source record: 125436

Sorry about the missing "E" ! but it is heat sink compound-- Just DON'T
try WAKEFIELD ! that is also a heat sink compound (the WHITE stuff).
Silicone Grease is the stuff you want! jim

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v3re69tjib8b69@corp.supernews.com...
> Anyone who does want to use silicone (not silicon) grease on the O-rings
> can find it at any store that sells plumbing supplies.
>
> In the Air Force long ago, we routinely used silicone grease on the
> O-rings used to seal waveguide flanges and similar things. This
> admittedly wasn't a very demanding application, since they only had to
> hold a very small amount of air pressure.
>
> Roy Lewallen, W7EL
>

2699. Re: propagation theory

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 01:16:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1pom5$6sq$1@helle.btinternet.com>
Source record: 125437

> Is there a book that discusses the physics of RF propagation from source
to
> receptacle?

==========

No, there is no such book !

If you think there's a simple mechanism which sprays radiation around, some of which can be caught a a bucket, then you are wasting your time looking. Better to do a Google on how to water your lawn.

Or if you imagine the whole business can be described in terms of 3 or 4 simple 'equations' involving Ohm's Law then think again.

On the other hand, the subject is not all that difficult.

Ideally, all you need is a sound mathematical background, the ability to concentrate your grey matter, and sufficient spare time to devote 6 months as a student under the wing of a long-experienced communications engineer who speaks your language.

Perhaps I exaggerate.

Discard ALL your preconceived notions, probably accumulated from Old Wives who frequent this newsgroup (It is almost impossible to distinguish wheat from chaff.)

It is best to go back to square one at your local technical library and search for professional books on the subject written in terms and at a level which you already understand. There are many of them. When you find one which you understand just keep reading.

Your enquiry is very vague. Search for index subjects which may interest you most. For example, radio propagation via ground waves and via the ionosphere. The librarian or computerised search system will very likely put you on the right track.

I assume N7RX is a call sign. First look for subjects of which you already have practical experience. Be prepared to do some work with numbers using pencil and paper. After a time things will become coherent, satisfying and predictable.

What's the best beam elevation angle over a one-hop radio path of 1000 miles when the F-layer is at a height of 250 miles?

What is the Maximum Usable Frequency (MUF) of such a path when the critical frequency (Fcrit) for the F-layer is 8 MHz?

At what hour of your local sun does the 160m band become active at distances more than 100 miles at the peak of the sun-spot cycle?

Don't bother with this newsgroup or Google - just visit your local technical library.

But if all you want to know is the S-meter reading from a 3.7MHz, QRP transmitter, over a 10 mile ground-path for a rag-chew to the other side of the city, vertical antennas at both ends, then download program GRNDWAV3 from website below.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

2700. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 01:20:11 UTC
From: richardharrison@webtv.net
Message-ID: <26156-3E4066CB-277@storefull-2316.public.lawson.webtv.net>
Source record: 125438

Ian, G3SEK wrote:
"The Bird undoubtedly gives correct readings under the conditions for which it was calibrated - namely with a 50 ohm load."

The Bird was designed and built to indicate mismatched loads. You don`t need a directional wattmeter to indicate matched loads.

Ian also wrote:
"It is not logically possible to deduce a general transmission line theory by taking the readings of some particular instrument at face value."

Of course not. Some thought is necessary. We also expect instrument calibration so we`re not taking readings at face value.

If Ian hasn`t investigated lines by dragging a current meter along the line, or by running a probe down a trough line, I recommend he try it. I was doing it before there was a Bird wattmeter. A bridge and an r-f ammeter can be very effective.

Best regards, Richard Harrison, KB5WZI

2701. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 01:50:55 UTC
From: k3bu@aol.com
Message-ID: <20030204205055.10179.00000194@mb-fc.aol.com>
Source record: 125439

>
>Seriously, the true 50 ohms system from antenna to transmitter is a
>students study only. Real systems vary from the ideal.
>
>Deacon Dave, W1MCE
>

Huh?
Then we (this NG?) must be flying in the theoretical "scientwific" clouds?
I hate matching "devices" they waste power, break down and complicate things (reliability).
I have always strived to design my antennas to be 50 ohm feedpoint impedance, starting with Inverted Vee, Verticals with sloping radials, Delta loops, through 3 el. quad all the way to 7 or 10 el Quagi Razor and had no problem of achieving that.
I can "find" 50 ohms on my mobile whips by using base loading coil (and adjusting their electrical length :-).
You can even feed low impedance Yagis by feeding the driven element off center a la K7GCO. No need for standing or flying waves to wonder around in the coax, or spend life time arguing about it.
I marvel at those who put directors into the antenna to gain that dB and lose more dBs on the way into the antenna, starting with poor cable, SWR, matching gizmos and traps.
Instead of ferrite baluns I use 1/4 wave coax bazooka baluns, they widen the frequency response, work as out of band filter and nothing to saturate.
If anyone wants to study reality in my classes, I will be happy to accommodate :-)

Razor Yuri, K3BU

2702. Re: propagation theory

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 02:00:16 UTC
From: k3bu@aol.com
Message-ID: <20030204210016.10179.00000195@mb-fc.aol.com>
Source record: 125440

>
>A mirage wouldn`t work on the floor of the Grand Canyon to bring in
>shortwaves. Actually shortwave reception is pretty good there. I`ve
>tried it. I`ve also used a backscatter ionospheric sounder. Its results
>agreed with accepted geometry and ionospheric theory.
>
>Best regards, Richard Harrison, KB5WZI
>
>

As long as you can see the sky, there should be no problem with reception.

Yea, but have you tried ionospheric sounder to "see" the skewed path, long path or high angle propagation at sunrise on low bands, like 160?
I was not trying to imply that all propagation is happening by ducting/refraction (conduction), but that there are many cases and they EXPLAIN some of the weird stuff that "reflective" theory has problem with.

When one tries to calculate the attentuation and dispersion of signals, then there is problem with math illustrating .5 w signal going long path, just like scientists "figured out" that no way we can work the world on short waves, but we proved them wrong.

73 Yuri, K3BU

2703. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 02:05:36 UTC
From: richardharrison@webtv.net
Message-ID: <23327-3E407170-781@storefull-2318.public.lawson.webtv.net>
Source record: 125441

Richard Clark wrote:
"Actually, as used throughout these side-threads, the terms PD, PF, and PR are NOT variables at all!"

Thet sure aren`t constants.

The variable of prime interest may very well be expressed as Rho, one of those Greek letters. Rho is the reflection coefficient. It is equal to the square root of a quotient, (the reflected power divided by the forward power).

For a particular PD,, PF and PR are determined by Rho.

I don`t even have to do any arithmetic. I have a little slide rule, not a log-log duplex vector rule or a log-log duplex decitrig rule, but a Bird VSWR Slide Rule. I can insert forward and reflected powers, and away we go. It knows and tells all.

Best regards, Richard Harrison, KB5WZI

2704. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 02:21:31 UTC
From: k3bu@aol.com
Message-ID: <20030204212131.10179.00000197@mb-fc.aol.com>
Source record: 125442

>Ian White, G3SEK
>
>The Bird undoubtedly gives correct readings under the conditions for
>which it was calibrated - namely, with a 50 ohm load. But predicting how
>it behaves under any other conditions requires some knowledge of
>transmission line theory.

That's how I use it - with 50 ohm load/cables. Not as an instrument to measure impedances or power to five decimal places, but monitor that my SWR is at 1:1, where it supposed to be and to measure power going into nice 50 ohm feeders and antenna system. I use it to monitor that reflected power is not there or to indicate when it shows up, meaning there is a trouble. Why would anyone alow SWR in the coax feedline and worry about transmission line theory? Is fractal elecromagnetics affecting some?

(:-) Yuri, K3BU

2705. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 02:32:56 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1pt4n$c8s$1@helle.btinternet.com>
Source record: 125443

Ian, I agree.

The Bird, with other similar instruments, is useless as a power 'indicator' when used in other than 50 ohm systems.

It is entirely dependent on the ASSUMPTION of 50 ohms by the user in his own system. But it never is exactly 50 ohms. In practice the instruments are used to detect the extent of departures from 50 ohms.

The internal resistance of the source, the transmitter, is never 50 ohms. The hoary assumption of a conjugate match is ever present.

The high accuracy claimed by the manufacturer is misleading because all depends on the accuracy to which the system being measured conforms to ITS 50 ohms specification.

Richard was correct in one respect - he hedged his bets by referring to "indicate" rather than "measure".

In any standards laboratory, even National standards, RF power is the most uncertain of all parameters for which the laboratory may may make an accuracy claim.

On the other hand an error as great as 1 dB is only an undetectable 1/6th of an S-unit. ;o)

The only instrument ordinarily needed by an amateur is a TLI. (Transmitter Loading Indicator).

Reg, G4FGQ

2706. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 02:32:56 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1pt4o$c8s$2@helle.btinternet.com>
Source record: 125444

Richard Harrison wrote -

> Richard clark`s assertions are absurd.
> (snip)
> Richard clark`s remarks are ill posted and ill considered.

==========

Richard, be careful or you may find yourself re-named as an Italian clown.
;o)

2707. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 02:34:47 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <61u04vkckj7tcrthdtpiau8t8as3e7ck1j@4ax.com>
Source record: 125445

On Tue, 4 Feb 2003 15:44:32 -0600, "Dan/W4NTI"
<w4nti@NOSPAMmindspring.com> wrote:

>So Andy when are you going to join the league?
>
>Dan/W4NTI

After I upgrade (if I ever do). The only reason I'd want to join is to
use the QSL buro. Otherwise, I have no real interest in joining.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2708. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 02:39:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1pthacmp1@helle.btinternet.com>
Source record: 125446

> A connector at the perfect 50.0000 ohm antenna destroys the perfection
> because it may introduce a VSWR of up to 1.05:1. The connector at the
> other end of the transmission also may introduce another 1.05:1 VSWR.

Even an aligator clip will introduce less than that on the 160m band.

2709. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 02:46:02 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E407AEA.D50F5AD1@qth.com>
Source record: 125447
Body handling: Binary attachment payload not displayed: radioranch.vcf

Hi Paulo, look at the Super Loop 80 from www.radioworks.com...AWESOME
ALL BANDER

Paulo Marcondes wrote:

> Surfing the Antenna Book....
>
> I found many interesting designs for the 80m band.
> I am considering building a different one, since I am not
> happy with the 1/2 wave dipole.
> The choices are:
>
> full (or half-) wave Horizontal loop (supports may be a
> problem. Manageable though)
> Inverted L (I foresee a problem with space for ground
> radials)
> G5RV (will try it anyway, since it will be used on the other
> bands anyway)
>
> What I am trying to do is reduce the wire mess over the
> place... Ii¿½m running dipoles for every band. If I could
> reduce the current 4 dipoles to just one one or 2 will be
> fine.
> Ii¿½m on budget constraints, so the less coax needed, the
> better.
>
> Thanks.
> --
> Paulo E.P. Marcondes
> pepm@osite.com.br

[One or more binary attachments are retained only in the source text.]

2710. Re: propagation theory

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 02:50:56 UTC
From: richardharrison@webtv.net
Message-ID: <23567-3E407C10-829@storefull-2312.public.lawson.webtv.net>
Source record: 125448

Yuri, K3BU wrote:
"Yea, but have you tried ionospheric sounder to "see" the skewed path, long path, or high angle propagation at sunrise on low bands like 160?"

Sadly, no. We didn`t broadcast on medium waves. We also had a radar like display which was devoid of much detail. In fact it was made by Raytheon. The "Sky Checker" had to be nearly the dumbest investment made for us. But things like that sometimes happened at the end of a fiscal year. If you don`t exhaust the budget, next year they are sure to cut your
budget when you really need it.

Problem with a sky checker for a broadcaster is that a schedule of programs, languages, and frequencies must be published a month in advance to draw an audience. Predictions had to be used to pick the frequencies for scheduled times and destinations. The sky checker could only be used in the interest of science, but we had reception reports for that. But since the sounder was sent to us, we were obliged to use it. Keeping the boss happy is always "Job One".

Best regards, Richard Harrison, KB5WZI

2711. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 03:11:30 UTC
From: richardharrison@webtv.net
Message-ID: <23567-3E4080E2-836@storefull-2312.public.lawson.webtv.net>
Source record: 125449

Reg wrote:
"---be careful or you may find yourself re-named as an Italian clown.
:o) "

Right on! Sorry I let my pique get the best of me.

Best regards, Richard Harrison, KB5WZI

2712. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 04:08:06 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <G600a.178$1q2.26863@newsread2.prod.itd.earthlink.net>
Source record: 125450

Richard, I owe you an apology for the unkind words I said to you in a previous post. I was upset and I should have hit delete instead of send. I regret having said them, and ask your forgiveness.

I'm sorry,

Walt, W2DU

2713. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 05:00:08 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <9e614v45pnp8fvf0kuc5ummf5464p4fp5j@4ax.com>
Source record: 125451

On 05 Feb 2003 01:50:55 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

[snip]

|Instead of ferrite baluns I use 1/4 wave coax bazooka baluns, they widen the
|frequency response, work as out of band filter and nothing to saturate.

You put a tuned element in play instead of a broadband one and it
widens frequency response? 'Splain yourself.

2714. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 08:38:29 UTC
From: markt@mindmodel.com
Message-ID: <3e40ccd6.261274342@news.prodigy.net>
Source record: 125452

On Sun, 19 Jan 2003 23:35:20 GMT, "AC6V" <contact99@ac6v.com> wrote:

>Other than beams -- the vertical antennas fit indoors nicely. I run a
>diamond antenna dual band - indoors and get into most local repeaters with
>5 watts with no problems. My antenna is not next to any window. VHF seems to
>go thru walls (with or without chicken wire) just fine. My favorite repeater
>is 25 miles away and 5 watts gives full quieting. Have worked 90 miles
>simplex (the other guy was on a mountain top).
>
>Maybe try a home brew 1/4 wave first (coathanger special).
>For homebrew antennas -- see URL:
>http://ac6v.com/antprojects.htm
>
>--
>I Doubt, Therefore I Might Be
>73 From AC6V, who is QBF most of the time !!
>Rod In Oceanside, CA
>Home Page http://ac6v.com
>DX Book http://ac6v.com/DXSAMPLE.htm
>
>"Ben Sheehan" <bigddybn@adelphia.net> wrote in message
>news:SUFW9.9261$Fj2.5460993@news2.news.adelphia.net...
>> We live in a condo which pretty eliminates any possible outside antenna
>> ideas. I'm looking for some type of antenna that can be used indoors. I do
>> have a window right next to my chosen area for a "station" that could be
>> utilized in some fashion. I realize that the gain on an indoor setup isn't
>> going to be the greatest but is there something I can buy/build that would
>> work at 144/440?
>>
>> I know these noob questions get old, but thanks in advance for any advice

Years ago I built a simple 2 element quad for 2M, and it worked very
well. At some point I got a large yagi and threw the quad away. Wish I
hadn't done that. I'm about to build another one. They are neat
antennas and give you just a bit of gain F/B ratio. They can be built
with simple wooden sticks and ROMEX house wiring wire (14awg copper).
Try it, you'll like it.

73,

Mark W1EOF
w1eof@hamnutz.com

2715. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 12:31:09 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4103EC.890C2F1F@attbi.com>
Source record: 125454

Reg, Check into the specifications in detail.

I used SMA professionally for years and even the MIL grade still
exhibited a maximum VSWR of 1.05:1.

The issue is tolerances, diameters, dielectric constants and the
variability of production lines.

DD

Reg Edwards wrote:
>
> > A connector at the perfect 50.0000 ohm antenna destroys the perfection
> > because it may introduce a VSWR of up to 1.05:1. The connector at the
> > other end of the transmission also may introduce another 1.05:1 VSWR.
>
> ---
>
> Even an aligator clip will introduce less than that on the 160m band.

2716. Re: Melles-Groit Web Page

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 13:09:30 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <e280a.21876$rq4.1635262@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125455

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E3FDF66.8040804@ieee.org...
>
> You really should read the Melles-Griot web page at:
>
> http://www.mellesgriot.com/products/optics/oc_2_1.htm
>

Cecil,

I thought that I had better address this issue so that you did not think I was running away from it.

I recognize that you will immediately dismiss my discussion below, simply because it came from me. I suggest the following: contact someone at Melles-Groit and ask them if my interpretation of their energy discussion is correct. I'd remove all the stuff about transmission line when you do.

The Melles-Groit web page discusses the relationship between incident, reflected and transmitted energy at the boundary between air and a thin film. It does not discuss, in detail, the wave reflection process occurring within the thin film. They only care about the steady state result.

Their discussion is analogous to the following example I've been discussing over the past few days:

source *** 50 ohm line ***$$*** 150 ohm line *** 50 ohm load

where the 50 ohm line and 50 ohm load are replaced with air and the 150 ohm line represents the thin film. The $$ is the boundary interface between the air and the thin film.

Note, very significantly, that the Melles-Groit web page does not discuss the reflection process within the thin film (i.e. 150 ohm line) in any detail. There are no relationships established between forward, reflected and re-reflected energy within the thin film (150 ohm line). The *only* energies they discuss or are concerned about are the *steady state* incident energy arriving at the air-thin film boundary, the *steady state* reflected energy at the air-thin film boundary and the *steady state* energy transmitted through the thin film to the air on the other side.

Here is their introductory statement:

"Whenever light is incident on the boundary between two media, some light is reflected and some is transmitted (undergoing refraction) into the second medium."

From our perspective, the incident light energy (EI) is equivalent to the steady state forward traveling power in the 50 ohm line arriving at the input to the 150 ohm line, the reflected light energy (ER) is equivalent to the steady state rearward traveling reflected power in the 50 ohm line, and the transmitted light energy (ET) is equivalent to the net or total steady state power delivered to the 150 ohm line and the 50 ohm load.

What is the relationship between these energies? Energy Transmitted = Incident Energy - Reflected Energy: ET = EI - ER. Looks exactly like PD = PF - PR.

What does the law of conservation of energy require? Very simply, Energy Transmitted + Energy Reflected = Incident Energy. The incident energy has only two places to go: it is either transmitted through the thin film (delivered) or it is reflected at the thin film boundary.

[Aside: This is equivalent to Walter's PF = PD + PR formula, which is valid independent of a Zo match, Zo mismatch etc. Walter and I disagree on the interpretation of this equation. It does not mean that the forward power is established by a total re-reflection of PR adding to PD. What it really means is that the forward or incident power can only go two places: it is either delivered to the load or it is reflected by the load. That's why this expression is valid in any transmission line regardless of whether or not a match or mismatch exists at the transmission line input]

Here are the statements that Cecil is interested in:

1) "In the absence of absorption or scatter, the principle of conservation of energy indicates all "lost" reflected intensity will appear as enhanced intensity in the transmitted beam."

What does this say? It says that ET = EI - ER or EI = PD + PR

It says, very simply, that any reduction in reflected energy at the air-thin film boundary indicates that a greater portion of the incident energy is transmitted (delivered) through the film. As the reflected energy diminishes, a greater portion of the incident (forward) energy is transmitted (delivered).

The only "forward" energy going into the transmitted beam (delivered) is a greater portion of the incident energy.

The Melles-Groit statements are discussing the net or total energy delivered beyond the junction and its relationship to the incident (forward) and reflected energy at the junction. Melles-Groit *is not* discussing the value of *forward* energy within the thin film, i.e, the forward power in the 150 ohm line. They are discussing net delivered energy, i.e. the total power delivered to the 50 ohm load. Understanding these distinctions is very important.

Nowhere on the web page, or in this statement, does it say anything about a reversal of the reflected energy or a total re-reflection of energy. They don't even discuss the wave reflection process within the thin film. They only discuss the steady state end result at the air-thin film boundary.

2) "The sum of the reflected and transmitted beam intensities is always equal to the incident intensity."

What does that say? EI = ER + ET, ie. The incident energy at the air-thin film boundary is either transmitted or reflected. The sum of the transmitted energy plus the reflected energy must equal the incident energy. It does not say that the incident energy is established by a re-reflection of ER adding to ET.

The important point that Cecil misses is that Melles-Groit is discussing the steady state relationships between incident, reflected and delivered energy on the front side of the air-thin film boundary. They are not discussing the forward, reflected and re-reflected energy within the thin-film.

There is nothing on this web page that even mentions the concept of reflected energy reversal.

With this, I will end my participation in this thread.

Steve VE9SRB

2717. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 13:20:05 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <hq324v4da29sjh2sui9nvvfmj2spbra7pc@4ax.com>
Source record: 125456

On Wed, 05 Feb 2003 06:56:02 -0500, Mark <marks@nospam.org> wrote:

>I saw the glass mounts at Rat Shack, but I thought there was lots of loss on
>them? If they actually work decent, that may be an option.
>

i can tell you from personal experience...i just installed a RS
dual-band glass mount on my jeep. swr on both vhf/uhf was flat. i'm
getting the full 50w on 2m and roughly 22w on uhf. i keep the power
down on a day-day basis but its nice to know its there if i need it.
i always thought that glass mounts were inefficient and lossy but so
far, so good.

73,
rich, n9dko

2718. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 15:28:41 UTC
From: k3bu@aol.com
Message-ID: <20030205102841.00122.00000066@mb-fi.aol.com>
Source record: 125457

Wes, N7WS asked:

>[snip]
>
>|Instead of ferrite baluns I use 1/4 wave coax bazooka baluns, they widen the
>|frequency response, work as out of band filter and nothing to saturate.
>
>You put a tuned element in play instead of a broadband one and it
>widens frequency response? 'Splain yourself.
>
>

Change in reactance in the bazooka 1/4 wave balun is opposite of change in reactance with frequency of antenna. The Bird Wattmeter sees flatter SWR curve.

This is applicable to monoband antennas, of course.

Yuri, K3BU

2719. Re: Melles-Groit Web Page

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 15:52:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E41332D.60601@ieee.org>
Source record: 125458

VE9SRB wrote:
> I recognize that you will immediately dismiss my discussion below, simply
> because it came from me.

Steve, I'm not the one dismissing things. I have actually been overly verbose and many people have begged me to just dismiss your postings.

> Note, very significantly, that the Melles-Groit web page does not discuss
> the reflection process within the thin film (i.e. 150 ohm line) in any
> detail.

Of course, they assume their readers already know something about the process. Quoting from the web page:

"Clearly, if the wavelength of the incident light and the thickness of the film are such that a phase difference exists between reflections of p, then reflected wavefronts interfere destructively, and overall reflected intensity is a minimum. If the two reflections are of equal amplitude, then this amplitude (and hence intensity) minimum will be zero."

It is clear that they are talking about your "rearward-traveling waves 1 and 2" from your QEX article. They call those waves, "two reflections", and are obviously talking about Pfwd(50)*Rho^2 and Pref(150)*(1-Rho^2) from your transmission line example. They say the two waves interfere destructively, something I have been saying and you have been denying for over a year. Only recently have you admitted you were wrong about that. They say if the *TWO REFLECTIONS* are of equal amplitude (and opposite phase) then the "overall reflected intensity will be zero".

> There are no relationships established between forward, reflected
> and re-reflected energy within the thin film (150 ohm line). The *only*
> energies they discuss or are concerned about are the *steady state* incident
> energy arriving at the air-thin film boundary, the *steady state* reflected
> energy at the air-thin film boundary and the *steady state* energy
> transmitted through the thin film to the air on the other side.

That's all there is, Steve, as I have been trying to point out to you. You are correct that P1 = Pfwd(50)*(1-Rho^2) and P2 = Pref(150)*Rho^2 combine into the forward wave Pfwd(150). But the Melles-Griot web page says that the "two reflections" also combine into that same forward wave when the system is matched. So Pfwd(50)*Rho^2 is involved in 100% destructive interference with Pref(150)*(1-Rho^2) and that energy joins the forward wave Pfwd(150). That's why Pfwd(150)=P1+P2+P3+P4. That's what the Melles-Griot web page means when it says:

"In the absence of absorption or scatter, the principle of conservation of energy indicates all "lost" reflected intensity will appear as enhanced intensity in the transmitted beam. The sum of the reflected and transmitted

beam intensities is always equal to the incident intensity. This important
fact has been confirmed experimentally."

They use words almost identical to what I have been saying for a year and
a half. They use "intensity" instead of "power". They use "beam" instead
of "wave". They use "enhanced intensity" instead of "constructive
interference". But the meaning is clear. Translating into ham radio terms:

... reflected wavefronts interfere destructively, and overall reflected
intensity [power] is a minimum. If the two reflections are of equal amplitude
[and opposite phase], then this amplitude (and hence intensity) minimum will
be zero [all reflected power is canceled and the system is matched].

... the principle of conservation of energy indicates all "lost" reflected
intensity [power] will appear as enhanced intensity [constructive interference]
in the transmitted beam [forward wave]. The sum of the reflected and transmitted
beam intensities [powers] is always equal to the incident intensity [power].
"THIS IMPORTANT FACT HAS BEEN CONFIRMED EXPERIMENTALLY."

> What does the law of conservation of energy require?

The Melles-Griot web page answers that question perfectly, Steve. In case
you missed it: ... the principle of conservation of energy indicates all
"lost" reflected [power] will appear as [constructive interference] in the
[forward wave]. That's exactly what I have been telling you for a year and
a half.

> The only "forward" energy going into the transmitted beam (delivered) is a
> greater portion of the incident energy.

Nope, remember the Melles-Groit web page says that energy is from two
reflected waves that undergo destructive interference. Please read it again.

> Nowhere on the web page, or in this statement, does it say anything about a
> reversal of the reflected energy ...

You've got to be kidding. You need to read again what they have to say. They
say that two reflected waves interfere destructively and the energy in those
two waves changes direction and joins the forward wave. Please read it again,
Steve. It's there in black and white for all to see.

> There is nothing on this web page that even mentions the concept of
> reflected energy reversal.

What is it about "reflected wavefronts interfering destructively" such
that their combined "intensities" reverse direction and join the
"transmitted beam" as "enhanced intensity" that you don't understand?

> With this, I will end my participation in this thread.

You originate the thread, have the first word, and then withdraw?????
Sounds like you know you are wrong and cannot defend yourself.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2720. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 16:32:35 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302050832.3611df73@posting.google.com>
Source record: 125459

jgboyles@aol.com (JGBOYLES) wrote in message
news:<20030204191330.11667.00000192@mb-fl.aol.com>...
> >I found many interesting designs for the 80m band.
> >I am considering building a different one, since I am not
> >happy with the 1/2 wave dipole.
> >The choices are:
>
> If you are not happy with a 1/2 wave 75M dipole fed with low loss transmission
> line, you will not be happy with with the other choices, thats about as good as
> it gets.

Very true. The only way I see anything being better is if he is
wanting to work DX. In that case, he might want to try a vertical. IE:
inv L or whatever. But then he needs all the radials... If he wanted
to just reduce the number of coax lines, I'd just feed all the dipoles
with a single coax. If he wants a single antenna for all bands, a few
options there.. Cecils antenna is one, or a tuner / ladder line fed
dipole, or a loop fed in the same way, or even a trap dipole. MK

2721. Re: Melles-Groit Web Page

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 16:51:47 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <Dib0a.22099$rq4.1651924@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125460

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E41332D.60601@ieee.org...

> > Nowhere on the web page, or in this statement, does it say anything
about a
> > reversal of the reflected energy ...
>
> You've got to be kidding. You need to read again what they have to say.
They
> say that two reflected waves interfere destructively"

Yes, they do say that.

> and the energy in those
> two waves changes direction and joins the forward wave. Please read it
again,
> Steve. It's there in black and white for all to see.
>

I did read it again. They never say in, "black and white", the following:

"the energy in those two waves changes direction and joins the forward
wave."

Find that exact statement on their web page. You obviously read English much
differently than I do.

> > There is nothing on this web page that even mentions the concept of
> > reflected energy reversal.
>
> What is it about "reflected wavefronts interfering destructively" such
> that their combined "intensities" reverse direction and join the
> "transmitted beam" as "enhanced intensity" that you don't understand?
>

Boy, did you add a lot of words to their "black and white" statement.

Here's what they said exactly:

"The principle of conservation of energy indicates all "lost" reflected
intensity will appear as enhanced intensity in the transmitted beam"

I interpret that to mean that as the reflected energy at the front of the
thin-film interface diminishes, a greater portion of the forward incident
energy is delivered to the thin-film. Ie. ET = EI - ER

You interpret that to mean that the reflected energy reverses direction.

I think the "extra" delivered energy or "enhanced intensity" comes from more of the the incident forward energy being delivered to the thin-film. You think it comes from the reflected energy reversing direction.

In either case, nowhere on that page does Melles-Groit use the word "reverse" nor do they state that the "reflected energy reverses direction".

This is all a matter of interpretation.

So, go ask Melles-Groit which interpretation is correct. When you do, please state my interpretation correctly as outlined in these two most recent e-mails.

Let me know what they say.

Steve VE9SRB

2722. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 17:15:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cig24vgrr87o7qk3kj1555uatuqq4jkaj3@4ax.com>
Source record: 125461

On Wed, 05 Feb 2003 12:31:09 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>Reg, Check into the specifications in detail.
>
>I used SMA professionally for years and even the MIL grade still
>exhibited a maximum VSWR of 1.05:1.
>
>The issue is tolerances, diameters, dielectric constants and the
>variability of production lines.
>
>DD
>

Hi OM,

I've sat at the Metrology bench for years measuring devices with and through couplers and very FEW exhibited such characteristics. And that includes BNC out to 4 GHZ. On the flip side, I've measured some at that level, and worse - typically found on Bird Power Meters. The margins of this specification are visited only by heavy use and the consequent thread erosion that migrates into the coupler. Of course, you can construct a coupler incorrectly to accelerate this chance.

I've been saying this for years, so I must allow that most hams would rather bow to their "fate" than open up the connection and swab it out. This once in a life-time (or at least once every couple of years depending on use) requirement is a great technical challenge for many equipment operators. The simple reason for that, is that it doesn't really matter. Few here could measure 1:1.05 in the first place.

Combining errors through addition (1.05 worst case expectations summed up like pearls on a strand) for each and every connection is anal in the extreme. In such situations, the more likely combination is RSS (root sum square). Even then, this has proven out at the bench to be overstated too; which qualifies RSS easily as the worst case value.

For years the coupler closest to perfection, and still available over the counter, was the General Radio sexless connectors (the one you see on their RF bridges). And this was for service easily up to 12 GHz.

73's
Richard Clark, KB7QHC

2723. Re: W8NX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 17:18:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <d2i24v42hpbcfmtgqi8p5k1f8oo58tdfpa@4ax.com>
Source record: 125462

On Tue, 4 Feb 2003 22:18:29 +0100, "Marco PE1LPK" <m.vliet9@planet.nl>
wrote:

>i want to build a W8NX antenna,
>But i found some different versions of it.
>At w4rnl his site are different lenghts as the one in the ARRL antenna
>handbook.
>
>could anyone give me the dimensions (links Photo's) of a W8NX antenna ?
>there could also be a qoustion left about the best way of feeding the traps
>(high Z , low Z).
>What is best for working all bands fed with just 75 Ohm coax ?
>Or could it be better being feed with 50Ohms and matched with a 1:2 Balun?
>
>The Z of most of the bands are higher than 103 Ohm.
>
>anyway if someone could help this Dutch radio amateur a bit further...he is
>almost with one leg at the stairs to th e roof :-)
>
>Marco PE1LPK
>Near Amsterdam
>

Hi Marco,

Try:
http://www.cebik.com/trapqq.html

73's
Richard Clark, KB7QHC

2724. Re: Melles-Groit Web Page

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 17:33:56 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <f8i24vo6jcg7c0fif6rugihtplscvso8um@4ax.com>
Source record: 125463

On Wed, 05 Feb 2003 09:52:13 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>
> > With this, I will end my participation in this thread.
>
>You originate the thread, have the first word, and then withdraw?????
>Sounds like you know you are wrong and cannot defend yourself.

Hi Cecil,

*ï¿½ (low technical content, poor entertainment value)

It sounds more like he has learned that you will make only statements
like the one above through the life of the thread - your personal
assessment of him. This is perhaps why you got so many (two?)
>many people have begged me to just dismiss your postings.
which is obviously advice lost to a deaf ear; offered to us to yet
again make a personal assessment of Steve.

If I were to do the same (and I will); I would offer that Steve is
wasting bandwidth just starting the thread. Unfortunately the loss in
this scenario exceeds RSS, and it exceeds the total of individual
losses. An excellent example of destructive interference only is
found in these dialogs (sic).

73's
Richard Clark, KB7QHC

2725. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 17:41:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <76g24v024jan3ue7tlpgvdsliuep1uto93@4ax.com>
Source record: 125464

On Wed, 05 Feb 2003 04:08:06 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>
>Richard, I owe you an apology for the unkind words I said to you in a
>previous post. I was upset and I should have hit delete instead of send. I
>regret having said them, and ask your forgiveness.
>
>I'm sorry,
>
>Walt, W2DU
>
>

Hi Walt,

No hard feelings here. In fact, your being upset by me is perfectly
understandable. Walt, you've always proven to be the more gracious of
us and your reputation stands firm for that. Myself, I get into this
because I am willing to discard mine to pursue a question.

So, in that regard I return to the regularly scheduled show's topic:
Do you have a response to my technical questions?

Do you dispute (as do some others, no doubt) that the equations that
both you and Steve so shuffle about are not definitions but simple
identities that exhibit constants of proportionality as I've described
elsewhere? I will skip the issue of Johnson, because the source has
absolutely nothing to do with the actual dependency in this entire
line of discussion: the reflection co-efficient.

73's
Richard Clark, KB7QHC

2726. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 17:49:37 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E414DF3.204A1072@attbi.com>
Source record: 125466

Richard. Absolutely agree that algebraic addition of extreme tolerances
is incorrect procedure. Depending on my customer's preferences we either
RSS'd or used Gaussian parameters.

We still exhibited variations from 1:1 on connectors. The Limit of
acceptability of 1.05:1 typical values were less but different from
1.00:1.00 i.e. 1:1.

An absolute 1:1 does not exist. Coax is not 50.0000 ohms etc.

DD, W1MCE

Richard Clark wrote:
>
> On Wed, 05 Feb 2003 12:31:09 GMT, Dave Shrader
> <david.shrader@attbi.com> wrote:
>
> >Reg, Check into the specifications in detail.
> >
> >I used SMA professionally for years and even the MIL grade still
> >exhibited a maximum VSWR of 1.05:1.
> >
> >The issue is tolerances, diameters, dielectric constants and the
> >variability of production lines.
> >
> >DD
> >
>
> Hi OM,
>
> I've sat at the Metrology bench for years measuring devices with and
> through couplers and very FEW exhibited such characteristics. And
> that includes BNC out to 4 GHZ. On the flip side, I've measured some
> at that level, and worse - typically found on Bird Power Meters. The
> margins of this specification are visited only by heavy use and the
> consequent thread erosion that migrates into the coupler. Of course,
> you can construct a coupler incorrectly to accelerate this chance.
>
> I've been saying this for years, so I must allow that most hams would
> rather bow to their "fate" than open up the connection and swab it
> out. This once in a life-time (or at least once every couple of years
> depending on use) requirement is a great technical challenge for many
> equipment operators. The simple reason for that, is that it doesn't
> really matter. Few here could measure 1:1.05 in the first place.
>

> Combining errors through addition (1.05 worst case expectations summed
> up like pearls on a strand) for each and every connection is anal in
> the extreme. In such situations, the more likely combination is RSS
> (root sum square). Even then, this has proven out at the bench to be
> overstated too; which qualifies RSS easily as the worst case value.
>
> For years the coupler closest to perfection, and still available over
> the counter, was the General Radio sexless connectors (the one you see
> on their RF bridges). And this was for service easily up to 12 GHz.
>
> 73's
> Richard Clark, KB7QHC

2727. Re: Melles-Groit Web Page

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 17:53:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E414F9E.6020108@ieee.org>
Source record: 125467

Richard Clark wrote:
> *i¿½ (low technical content, poor entertainment value)

Uhhhhhhhhhh Richard, the technical content was in the part of the posting
that you deleted. Why don't you ever object to anything technical?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2728. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:05:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6ak24v82ro2b72kcsv3o8jhgo85h6i0on2@4ax.com>
Source record: 125465

On Wed, 05 Feb 2003 17:49:37 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>is incorrect procedure. Depending on my customer's preferences we either
>RSS'd or used Gaussian parameters.
>
>We still exhibited variations from 1:1 on connectors. The Limit of
>acceptability of 1.05:1 typical values were less but different from
>1.00:1.00 i.e. 1:1.
>
>An absolute 1:1 does not exist. Coax is not 50.0000 ohms etc.
>
>
>DD, W1MCE
>

Hi OM,

Even a Primary Standard of 50 Ohms is not 50.0000 Ohms. I've
calibrated resistors out two or three more places beyond that, and the
measurement has never ended with a zero (nor were there many zeros
after the decimal). I have flattened a line down to 1.0025, possibly
less, but at that level it gets exponentially more expensive to do a
test.

73's
Richard Clark, KB7QHC

2729. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:17:24 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b1rkdrcnv1@slb4.atl.mindspring.net>
Source record: 125468

I understand Andy. Only true hams that give a rip for the service join the league.

Dan/W4NTI

"Andy KC2SSB" <nospam@nospam.com> wrote in message news:61u04vkckj7tcrthdtpiau8t8as3e7ck1j@4ax.com...
> On Tue, 4 Feb 2003 15:44:32 -0600, "Dan/W4NTI"
> <w4nti@NOSPAMmindspring.com> wrote:
>
> >So Andy when are you going to join the league?
> >
> >Dan/W4NTI
>
> After I upgrade (if I ever do). The only reason I'd want to join is to
> use the QSL buro. Otherwise, I have no real interest in joining.
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA Grid FM29vw
> http://vhfradiobuff.tripod.com

2730. Re: Melles-Groit Web Page

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:23:01 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <97l24vcq0e93dq9mu4afjl8eo6n7qn2bba@4ax.com>
Source record: 125319

On Wed, 05 Feb 2003 11:53:35 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> *ï¿½ (low technical content, poor entertainment value)
>
>Uhhhhhhhhhh Richard, the technical content was in the part of the posting
>that you deleted. Why don't you ever object to anything technical?

Hi Cecil,

ï¿½ (less technical content, same poor entertainment value)

What was deleted and what is technical are worlds apart - there's your
objection :-)

73's
Richard Clark, KB7QHC

2731. Re: Melles-Groit Web Page

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:30:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E41582B.7000804@ieee.org>
Source record: 125320

VE9SRB wrote:
> I did read it again. They never say in, "black and white", the following:
>
> "the energy in those two waves changes direction and joins the forward
> wave."
>
> Find that exact statement on their web page. You obviously read English much
> differently than I do.

The *meaning* is there in black and white, Steve, not the exact statement.

> Here's what they said exactly:
>
> "The principle of conservation of energy indicates all "lost" reflected
> intensity will appear as enhanced intensity in the transmitted beam"

Yep, that's what they said all right and it gives me the opportunity to ask
you the very same question that you have refused to answer for a year and
a half. The M-G web page says: "reflected wavefronts interfere destructively".
The reflected wavefronts are traveling toward the source. Agreed? They
interfere destructively. Agreed? This is a quote: "If the two reflections
are of equal amplitude, then this amplitude (and hence intensity) minimum
will be zero." Agreed? Reflected wavefronts traveling toward the source
interfere destructively and their combined intensity in the direction of
the source will be zero. Agreed? That "lost" reflected intensity joins the
transmitted beam as enhanced intensity toward the load. Now here is the
question again:

If the energy in the reflected wavefronts becomes zero in the direction
of the source, and if that energy joins the transmitted beam as enhanced
intensity traveling toward the load, pray tell exactly how does it do
that without reversing direction? It was previously traveling toward the
source and now it's traveling toward the load. How is that not a reversal
of direction? How is that not a re-reflection?

> I interpret that to mean that as the reflected energy at the front of the
> thin-film interface diminishes, a greater portion of the forward incident
> energy is delivered to the thin-film. Ie. ET = EI - ER

Exactly correct. In ham radio language, that energy is re-reflected. It
was reflected energy toward the source which diminishes to zero and winds
up traveling toward the load. Reflected energy that winds up traveling
toward the load is re-reflected, by definition.

> You interpret that to mean that the reflected energy reverses direction.

See above, Steve. That's what it says. If you want to argue that it doesn't say what it says, be my guest. It was traveling toward the source and now it is traveling toward the load. Exactly how is that not a reversal of direction?

> I think the "extra" delivered energy or "enhanced intensity" comes from more
> of the the incident forward energy being delivered to the thin-film. You
> think it comes from the reflected energy reversing direction.

They are the same thing, Steve. Pfwd(5)*Rho^2 is forward energy incident upon the match point. You can look at it and tell it is reflected energy. Do you realize that your above statement supports Mr. Maxwell's argument?

> In either case, nowhere on that page does Melles-Groit use the word
> "reverse" nor do they state that the "reflected energy reverses direction".

No, the M-G web page assumes that the readers have a modicum of intelligence, education, and deductive reasoning skills. If the reflected wavefronts are traveling toward the source and are interfered with, their energy winds up joining the forward beam as enhanced intensity. Exactly how does it do that without changing directions? Please be specific.

> So, go ask Melles-Groit which interpretation is correct.

I would say it is up to you to do that, Steve. You are the one who has published 24 pages of assertions in QEX and you are the one who has to defend them. I have published nothing except on r.r.a.a and my web page which are only personal opinions. Therefore, you have to defend your official "tutorial" article against *ANY AND ALL* arguments. I merely have to find one place where you are wrong. The onus of proof is upon the one who asserts the positive premises, Steve. That's you. Sorry, but that's the way science works. You have to prove and defend your statement: "A total re-reflection of power at the match point is not necessary for the impedance match to occur". That's a positive assertion, Steve. Please defend your statement by contacting Melles-Groit.

FYI, another ham-engineer and I engaged in a heated email discussion. He sided with you. I suggested an optics experiment that would prove you wrong. It is described on my web page. The guy said I was crazy and he didn't have to run the experiment to know the outcome. He went off and researched the problem and it was he who came up with the Melles-Griot web page. He read it and instantly changed his position from agreeing with you to agreeing with me. What did he read and understand on that web page that you haven't read and understood yet?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2732. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:33:40 UTC
From: Bob Dixon <Bob_Dixon@osu.edu>
Message-ID: <Bob_Dixon-B5F853.13334005022003@nntp.service.ohio-state.edu>
Source record: 125321

In article <v3lqg750kh4fa@corp.supernews.com>, "J. McLaughlin"
<JCM@Power-Net.Net> wrote:

> Dear Dr. Dixon:
> Thanks for giving us much of the rest of the story. What an
> unexpected way to connect the elements. So odd that I am still not sure
> what is going on even after looking at the picture on their site.
> Conventionally, LPDAs have symmetry about a plane that bisects, and
> is normal to, the feeding TL. This is true whether the TL is also used
> as a twin boom or the TL is separate from the boom. From your
> description, it appears that your antenna does not have such symmetry,
> which would make it confusing, or worst, to determine element lengths.
> ... it would be easy not to be feeding in the middle of each element!
> Ouch.

The elements not quite symmetrical about the center, since each
alternate half element has to be offset along the boom a little so it
does not run in to the other half of that element as they cross over one
another.

No elements are actually fed exactly in the center; they are fed from
the twin booms, which are horizontally spaced.

> Please do inform us of more details when you have them including
> which of their antennas you have.

I have the LP-12.

Thanks again.
> 73, Mac N8TT
> P.S. I left OSU some 40 years ago. It sure has changed. The
> observatory about 5 miles from your house is apparently all gone.

Yes I know too well. I was the Assistant Director of that Observatory.

Bob

> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>
> "Bob Dixon" <Bob_Dixon@osu.edu> wrote in message
> <snip>
> >
> > The problem is related to the unusual twin side-by-side boom design.
> It
> > > is not at all obvious where to start measuring the element lengths at

> > the center. The booms are about 3 inches apart. Half of the elements
> > start on one of the booms and extend outward. The other half of the
> > elements start out on one boom, and pass over the top of the other
> boom
> > and then stick out the other side. Thus the ambiguity of whether you
> > measure from halfway between the booms, or from the boom where the
> > element is fastened, or from the other boom where it crosses over.
> >
> > Bob W8ERD
>

2733. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:35:40 UTC
From: Bob Dixon <Bob_Dixon@osu.edu>
Message-ID: <Bob_Dixon-DBE247.13354005022003@nntp.service.ohio-state.edu>
Source record: 125322

In article <hulj3v4q3dpehaal2f4bmus4n1fsetlb4r@4ax.com>, Wes Stewart
<n7ws@#arrl.net> wrote:

>
> Forgive me but I thought that one reason for using LPDs was the
> continous frequency coverage within the design range. How come the
> element lengths are so picky?
>

They probably aren't, so long as they at least progress in length from
one end to the other. The problem here is defining "length".

> And I'm really curious about how their boom design increases gain.

It doesn't. It is just mechanically convenient for them.

Bob
>

2734. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:39:42 UTC
From: Bob Dixon <Bob_Dixon@osu.edu>
Message-ID: <Bob_Dixon-413CF8.13394205022003@nntp.service.ohio-state.edu>
Source record: 125323

In article <gf0m3vghss53ttq2bn9qh6l3i2gm3qg2jb@4ax.com>, Wes Stewart
<n7ws@#arrl.net> wrote:

> On Fri, 31 Jan 2003 16:40:45 -0500, "J. McLaughlin"
> <JCM@Power-Net.Net> wrote:
>
> |Dear Mr. Stewart:
> | Ordinarily, increasing (or decreasing) all element lengths by a
> |constant multiple would do little more than shift down (or up) the large
> |band of frequencies over which the antenna is effective. In other
> |words, your concern is well taken.
> | It appears, however, that in this case the elements (or some of
> |the elements) may not be center fed. I expect that such off center
> |feeding will cause much larger changes in input impedance with changes
> |in frequency than will be the case with center fed LPDAs.
> | I do not have a clue as to how their boom design increases gain.
> | 73, Mac N8TT
>
> Mac,
>
> Look at the photo at:
>
> http://www.titanex.de/frames/about.html
>
> The way I view it, the closest element to the viewer is connected to
> the right side boom. There appears to be a sleeve insulator on the
> portion that rests on the element clamp on the left side boom. The
> other element is the converse.

The sleeve serves only to insulate the elements where they cross over
the opposite boom, and then only if the clamp slips and lets it sag
downward.

>
> If you were to rotate the booms 90 degrees counterclockwise about a
> line midway between and parallel to the booms, one boom (the right
> one) would be above the other (the left one) as is often the way other
> manufacturers (KMA, Tennadyne, et. al.) build them. If fact, it
> appears that some of Titanex's short beams have the booms one above
> the other.
>
> So there is nothing magic about the Titanex. The elements are end-fed
> and I resubmit that a length "error" of an inch or two should be in
> the noise.

it is more like 3 inches, alternating plus and minus from element to element.

Bob
>

2735. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:48:22 UTC
From: Bob Dixon <Bob_Dixon@osu.edu>
Message-ID: <Bob_Dixon-4615D6.13482205022003@nntp.service.ohio-state.edu>
Source record: 125324

In article <7n7j3vks0fiv2m32fm3f01iggu6d910ru4@4ax.com>, Richard Clark
<kb7qhc@attbi.com> wrote:

> On Thu, 30 Jan 2003 14:44:41 -0500, Bob Dixon <Bob_Dixon@osu.edu>
> wrote:
>
> >Here is the current status of my Titanex beam. I got good advice from
> >several hams, and had extensive correspondence with W3FRG. He and I both
> >now agree that the element lengths are set wrong. But I can't get up
> >there to change them until the weather gets better in Spring.
> >
> >To review the problem, the instructions are ambiguous, and give two
> >possible sets of element lengths. I corresponded with Titanex several
> >times, and they told me which was the correct set of lengths, and that
> >is what I used. It now appears that their advice was wrong, perhaps due
> >to a language problem.
> >
> >The problem is related to the unusual twin side-by-side boom design. It
> >is not at all obvious where to start measuring the element lengths at
> >the center. The booms are about 3 inches apart. Half of the elements
> >start on one of the booms and extend outward. The other half of the
> >elements start out on one boom, and pass over the top of the other boom
> >and then stick out the other side. Thus the ambiguity of whether you
> >measure from halfway between the booms, or from the boom where the
> >element is fastened, or from the other boom where it crosses over.
> >
> > Bob W8ERD
>
> Hi Bob,
>
> This certainly demands a picture. I found one at:
> http://www.antennex.com/preview/New/pict02.gif
> that seems to respond to your issues.
>

That is a good picture of the overall structure.
As one can see there, the definiton of "element length" is open to some
interpretation.

Bob

> I would have to agree, there is a certain amount of unneeded
> complexity with the basket weave in their line and elements.
>
> 73's

> Richard Clark, KB7QHC

2736. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:51:32 UTC
From: lazy_man7@yahoo.com
Message-ID: <4131249b.0302051051.46a8ab02@posting.google.com>
Source record: 125325

Bob Miller <bxmillerSpamNot@texas.net> wrote in message
news:<DlIrPsojOD5IvSH9ORdCxYomqoVg@4ax.com>...

> The current Feb. 2003 QST has plans for a dual-band 144/440 J-pole made of 300
> ohm twinlead you can hang in your window or hide in pvc pipe.

Where might I find a copy of this magazine?

2737. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:52:38 UTC
From: Bob Dixon <Bob_Dixon@osu.edu>
Message-ID: <Bob_Dixon-83A3AF.13523805022003@nntp.service.ohio-state.edu>
Source record: 125326

In article <ibycnTfSgcwdP6SjXTWcow@comcast.com>, "w3frg"
<w3frg@comcast.net> wrote:

> The photo you really want to look at is at :
> http://www.titanex.de/frames/about.html
> It gives the whole story in one picture.
>

This picture shows clearly the design of half the elements. The
insulating sleeve does not extend into the mounting bracket.

The other half of the elements stick out from the booms, and do not
cross over as the one in the picture.

Bob

2738. Re: Titanex Log Periodic Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 18:56:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <dfn24v87dso535em00jiadru2aci1ougeq@4ax.com>
Source record: 125327

On Wed, 05 Feb 2003 13:39:42 -0500, Bob Dixon <Bob_Dixon@osu.edu>
wrote:

>> So there is nothing magic about the Titanex. The elements are end-fed
>> and I resubmit that a length "error" of an inch or two should be in
>> the noise.
>
>it is more like 3 inches, alternating plus and minus from element to
>element.
>
> Bob

Hi Bob,

From any other manufacturer, I would agree with Wes about a few inches here, a few inches there. By the nature of being log periodic, and being that successfully, the variations should be washed out. But then we have that "insulation" sleeve and proximity to the opposite side of the feed line cum boom. It appears that the mechanical engineering is driving the electrical design (close to the edge).

73's
Richard Clark, KB7QHC

2739. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 19:02:46 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <qdd0a.925$tO2.125290@newsread1.prod.itd.earthlink.net>
Source record: 125328

Thank you, Richard, for the warm response to my misconduct.

> So, in that regard I return to the regularly scheduled show's topic:
> Do you have a response to my technical questions?
>
> Do you dispute (as do some others, no doubt) that the equations that
> both you and Steve so shuffle about are not definitions but simple
> identities that exhibit constants of proportionality as I've described
> elsewhere? I will skip the issue of Johnson, because the source has
> absolutely nothing to do with the actual dependency in this entire
> line of discussion: the reflection co-efficient.

No, Richard, concerning the equations concerning PD, PR, and PF, I do not consider them definitions, but only mathematical identities.

Concerning the expression PF = PD + PR, which is the one Steve has previously rejected in communications with me, until now he has always maintained that just because PF = PD + PR is a mathematical equivalent to PF = PF - PR, it doesn't mean that PR added to PD equals PF in transmission-line practice. In fact, he denies that the two powers add, but instead, he says the source and reflected voltages add to form the foward power. Taint so.

IMO, the expression PF = PD + PR is correct whether there is a perfect match at the matching point or a mismatch. PD is the independent variable, and PF and PR are dependent on the value of PD and the terminating mismatch.

However, if there is a perfect match at the matching point, the reflected power is totally re-reflected. For proof of total re-reflection, a measurement looking into the match point will yield Z = Zo, proving that no reflected power has traveled rearward past the match point. On the other hand, as I interpret Steve's rhetoric, he denies that total reflection is necessary for a perfect match to occur at the match point, which makes him totally wrong on this issue.

This is my best shot at the moment.

Walt, W2DU

2740. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 19:27:19 UTC
From: richardharrison@webtv.net
Message-ID: <2791-3E416597-29@storefull-2315.public.lawson.webtv.net>
Source record: 125329

Richard Clark wrote:
"I`ve measured some at that level (1.05 : 1 VSWR), and worse - typically found on Bird Power Meters."

Why would he say that? I`ve had experience with many Bird Model 43 wattmeters ever since they appeared in 1959. They are supplied with your choice of connectors, American or European, including the General Radio Type 874. Normally, and if you don`t specify, they are supplied with two female Type N`s.

My company had many in service for many years. Every technician had a Model 43 and an array of elements in his car. These got constant use with mobile units and base stations. Some technicians had pigtails made up to make the Bird body part of a 1/2-wave if they were mostly working with one VHF frequency in their area. This cut the wear and tear on the Bird connectors. But we had plenty of Birds used with few or no jumper cables that just got inserted by some adapter and cable of the moment into coax lines. We always got our Birds with N connectors.

Despite a huge number of items and despite decades of use, these N connectors never were a problem. We didn`t normally test the connectors for SWR. But, we shuffled radios and wattmeters, and these were mostly indifferent to location and user. As long as things are interchangeable, repeatable, and you are considering a large population sample, the results seem valid to me.

Best regards, Richard Harrison, KB5WZI

2741. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 19:49:58 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7no24vk4nm58i4s0567t38fm74ud0j9c8v@4ax.com>
Source record: 125330

On Wed, 05 Feb 2003 19:02:46 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>Thank you, Richard, for the warm response to my misconduct.
>
>> So, in that regard I return to the regularly scheduled show's topic:
>> Do you have a response to my technical questions?
>>
>> Do you dispute (as do some others, no doubt) that the equations that
>> both you and Steve so shuffle about are not definitions but simple
>> identities that exhibit constants of proportionality as I've described
>> elsewhere? I will skip the issue of Johnson, because the source has
>> absolutely nothing to do with the actual dependency in this entire
>> line of discussion: the reflection co-efficient.
>
>No, Richard, concerning the equations concerning PD, PR, and PF, I do not
>consider them definitions, but only mathematical identities.
>
>Concerning the expression PF = PD + PR, which is the one Steve has
>previously rejected in communications with me, until now he has always
>maintained that just because PF = PD + PR is a mathematical equivalent to PF
>= PF - PR, it doesn't mean that PR added to PD equals PF in
>transmission-line practice. In fact, he denies that the two powers add, but
>instead, he says the source and reflected voltages add to form the foward
>power. Taint so.

Well, it is obviously true when we divorce all discussion of lines
from power. It is obviously true when we do include lines (the world
doesn't change when we enter a line).

So, the explanation must be you two are talking about different
things. This is not uncommon.

>
>IMO, the expression PF = PD + PR is correct whether there is a perfect match
>at the matching point or a mismatch.

Coming from a simultaneous solution that encompasses all the terms
offered, it cannot help but be so.

>PD is the independent variable, and PF
>and PR are dependent on the value of PD and the terminating mismatch.

You neglect to say that PR is also independent of PF - IFF this were
an equation of definition. We already agree that is NOT the case; so
issues of dependency are not germane. PF, PD, and PR are constants of

proportionality and they offer no proofs beyond the simple statement
of their magnitudes.

>
>However, if there is a perfect match at the matching point, the reflected
>power is totally re-reflected. For proof of total re-reflection, a
>measurement looking into the match point will yield Z = Zo, proving that no
>reflected power has traveled rearward past the match point. On the other
>hand, as I interpret Steve's rhetoric, he denies that total reflection is
>necessary for a perfect match to occur at the match point, which makes him
>totally wrong on this issue.
>
>This is my best shot at the moment.
>
>Walt, W2DU

Hi Walt,

>However, if there is a perfect match at the matching point, the reflected
>power is totally re-reflected.

This is confusing. Are you talking about a forced match, or a match
that occurs because there is no discontinuity?

The second speculation is a tautology and I don't think you would go
there for the simple exercise of exercising your typing skills. Thus
I will consider the first: this is a forced match and there is a
discontinuity that has been tuned out (by whatever means). (Even here
I may be wrong, such is the confusion engendered.)

If such is the case, your statement here, above, still makes no sense.
> the reflected power is totally re-reflected.
In what way is "totally" different from "partially" such that we need
to examine both cases? The power that is (re)reflected is the power
that is (re)reflected - total and partial have no meaning. (This
specific point of yours does appear to be a tautology.) Here again, I
must rummage up what I presume you to mean, and in observing past
correspondence, it seems to hinge on the source as being the key. If
this is so, then this is a very slippery slope because there are many
sources available to us all, and none of them impact the final answer
when it comes to what power is delivered, reflected, or forwarded;
unless, of course, we have designed a paradigm to fail in advance.

Continuing on with this speculation, it should then be a simple matter
to separate out differences by performing identical tests with
representative equipments that each offer their unique variations to
the key characteristic.

Feel free to abandon my speculations (not that you need permission of
course). Further discussion may turn us back to visit them again, but
I can wait if that has any chance of happening. If it doesn't, no
loss there either.

73's
Richard Clark, KB7QHC

2742. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 20:25:34 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <lfs24voakracj4lm52h9iudac9sl0teope@4ax.com>
Source record: 125331

On Wed, 05 Feb 2003 17:49:37 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

|Richard. Absolutely agree that algebraic addition of extreme tolerances
|is incorrect procedure. Depending on my customer's preferences we either
|RSS'd or used Gaussian parameters.
|
|We still exhibited variations from 1:1 on connectors. The Limit of
|acceptability of 1.05:1 typical values were less but different from
|1.00:1.00 i.e. 1:1.
|
|An absolute 1:1 does not exist. Coax is not 50.0000 ohms etc.

A Maury Microwave beadless air line with 7mm connectors is close
enough:)

2743. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 20:46:48 UTC
From: richardharrison@webtv.net
Message-ID: <15827-3E417838-81@storefull-2316.public.lawson.webtv.net>
Source record: 125334

Richard Clark wrote:
"PF, PD, and PR are constants of proportionality."

A constant is a quantity which can be considered unchanged throughout a discussion. The three powers named above are related variables. All are subject to change if any one of them changes.

I repeat:
"They can`t be constants."

Best regards, Richard Harrison, KB5WZI

2744. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 20:56:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gjr24vsk7oq9j7v2qvjja74f7fucvb62nm@4ax.com>
Source record: 125332

On Wed, 5 Feb 2003 13:27:19 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"I`ve measured some at that level (1.05 : 1 VSWR), and worse - typically
>found on Bird Power Meters."
>
>Why would he say that?

The experience of making thousands of measurements that were traceable
to the National Bureau of Standards on very many units in more than
one lab, from many more than one industry.

>I`ve had experience with many Bird Model 43
>wattmeters ever since they appeared in 1959. They are supplied with your
>choice of connectors, American or European, including the General Radio
>Type 874. Normally, and if you don`t specify, they are supplied with two
>female Type N`s.

And it is extremely easy to confirm the erosion by simple visual
inspection. Nearly every connector I've observed contains a red
rubber (or synthetic) seal that will invariably offer some "color" (a
term used to denote gold in the past - just as applicable here in the
sense of metallic flakes, typically sliver/gray) showing some erosion.
This is much more difficult to observe in the white disk that
separates the internal pin from the shield element in the connection
(for the male connector as described; the female connector has the
same thing, but no red seal).

The material observed on the red seal is indicative of the degree of
pollution that exists everywhere within the connection. This
pollution by erosion has ALWAYS been confirmed by the Bird first
failing its specification as it arrived, and then conforming to
tighter tolerances once the connector has been cleared of these
metallic flakes that sit upon the white disk (sometimes even that was
painfully obvious).

Bad before, good after; the correlation is unmistakeable.

>
>...These got constant use

My point entirely.

>...This cut the wear and tear on the
>Bird connectors.

And offers a statement that supports my experience and observations.

>Despite a huge number of items and despite decades of use, these N
>connectors never were a problem. We didn`t normally test the connectors
>for SWR.

I did for flight line applications (a major application here in Jet City) because the FAA mandates it as an issue of safety and engineering reliability. Other industries could care less, and they no doubt conform to your experience in this matter. Obviously they don't submit meters for calibration. For Birds, this was a 6 month interval and they ALWAYS required adjustment to meet Bird specifications.

I am intimately aware of Bird's specifications through direct scrutiny. I am intimately aware of Bird's problems through correcting same. I am intimately aware of Bird's capabilities through actual formal tests. I am intimately aware of Bird's reliability through the years of monitoring many units that returned on a fixed interval for calibration. None of this is caprice, arbitrary nor fancied impressions; all is based on a rigorous examination of the manufacturer's claims (specifications) applied to a real unit sitting on the bench in front of me where I employ tools vastly more accurate than what was being tested. If you wish to challenge me in any of these regards, let's compare credentials to the matter of making measurements to a high order of skill, precision, and accuracy.

>But, we shuffled radios and wattmeters, and these were mostly
>indifferent to location and user. As long as things are interchangeable,
>repeatable, and you are considering a large population sample, the
>results seem valid to me.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

You simply describe a population of instruments that have no care for accuracy, but rather simple repeatability. A light bulb will offer just as much assurance to equal quality. I have worked extensively in the communications field too, I used to teach it in the Navy. Nearly all such common bench activity has tests that include ranges of acceptable power to easily wash out any concern for accuracy - it isn't demanded in the first place.

To offer some insight, the Bird may have always failed calibration in the condition it was in arriving at my bench, but it rarely degraded beyond that. Let's just say that Bird specifications are truly observed ONLY for calibrated units in a typical calibration schedule. This is true of the entire field of instrumentation. Once it departs from that cycle, it is out of calibration, and likely to stay that way for the duration of its service life (which is to say that a unit specified at 5% is actually finding no one is using it for better than 10-20% expectations which it will offer for a very long time). It is

not very remarkable for an industry to accept a population of gear with that much error. To say that 80% of your readings are the same (all off by the same margins of accumulated error) does not impart accuracy to those same meters. Such industries that are tolerant of absolute inaccuracy find solace in repeatability.

The second most failure prone part of the Bird was the slug. Basically, anything that moves introduces error. In the case of Bird's small physical form factor for its slug, erosion here too created slop in the geometry of physical alignment. I've often seen bent bayonet pins that have upset the placement such as to fail the meter outright. I have also observed how those same pins had eroded their stop points through repeated use over the years. These are all simple observations that anyone can perform by visual inspection. However, few here have the skill to determine how much error that brings and it is either ignored, or passed over to a skilled Metrologist.

73's
Richard Clark, KB7QHC

2745. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 21:12:06 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <0gv24vs6ikurm3n86hvg0d8pl1k0ou9kia@4ax.com>
Source record: 125333

Large magazine stores. Ham radio stores. Your local library.

Dick - W6CCD

On 5 Feb 2003 10:51:32 -0800, lazy_man7@yahoo.com (lazy man) wrote:

>Bob Miller <bxmillerSpamNot@texas.net> wrote in message
news:<DlIrPsojOD5IvSH9ORdCxYomqoVg@4ax.com>...
>
>> The current Feb. 2003 QST has plans for a dual-band 144/440 J-pole made of 300
>> ohm twinlead you can hang in your window or hide in pvc pipe.
>
>Where might I find a copy of this magazine?

2746. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 21:40:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7j034vkn2vgairr3k0l0p27son9c45qsik@4ax.com>
Source record: 125335

On Wed, 5 Feb 2003 14:46:48 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"PF, PD, and PR are constants of proportionality."
>
>A constant is a quantity which can be considered unchanged throughout a
>discussion. The three powers named above are related variables. All are
>subject to change if any one of them changes.
>
>I repeat:
>"They can`t be constants."
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Perhaps if you were to explain how, with one reflection co-efficient,
do the three terms wander around, variable?

One way is turn off the source; but then the discussion is no longer
about wattmeter readings, it becomes about common sense. (The three
terms are still inextricably tied together through a constant = 0.)
Contrariwise (and no more or less common sense than before) allows us
to play with the power level to our heart's content - but it does
nothing to their proportionality UNLESS you change the independent
variable of reflection co-efficient.

As I have offered many times to no apparent nor successful challenge:
>>>>>My guess is everyone would be content to live with any of the three
>>>>>forms offered, which leads to the logical conclusion that all three
>>>>>are dependencies of a fourth agent. You guys don't have all your oars
>>>>>in the water.
Need I state what that fourth agent is? Sheesh....

They are constants of proportionality or mathematical identities,
plain and simple. Steve has used them immutably, Walt has agreed to
use them immutably, and I use them immutably. Repetition in denial
teaches nothing. Show your work.

73's
Richard Clark, KB7QHC

2747. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 21:50:47 UTC
From: Larry Moss <larrymoss@citcom.net>
Message-ID: <b1s0sk$3ltj$1@news3.infoave.net>
Source record: 125336

Hi Paulo,
Use either a Vertiacal or Horizontal full wave loop. The vertical
arrangement will give you better dx on the 80 Mtr band. I have used both
with lot of luck. I prefef the Vertical loop for easy of getting up and
keeping up, and besides it is a very good dx antenna. Larry/W4LM
"Paulo Marcondes" <pepm@osite.com.br> wrote in message
news:3E404E8B.841586FA@osite.com.br...
> Surfing the Antenna Book....
>
> I found many interesting designs for the 80m band.
> I am considering building a different one, since I am not
> happy with the 1/2 wave dipole.
> The choices are:
>
> full (or half-) wave Horizontal loop (supports may be a
> problem. Manageable though)
> Inverted L (I foresee a problem with space for ground
> radials)
> G5RV (will try it anyway, since it will be used on the other
> bands anyway)
>
> What I am trying to do is reduce the wire mess over the
> place... I�m running dipoles for every band. If I could
> reduce the current 4 dipoles to just one one or 2 will be
> fine.
> I�m on budget constraints, so the less coax needed, the
> better.
>
> Thanks.
> --
> Paulo E.P. Marcondes
> pepm@osite.com.br

2748. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 21:56:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E418889.1000002@ieee.org>
Source record: 125337

Richard Clark wrote:
> Perhaps if you were to explain how, with one reflection co-efficient,
> do the three terms wander around, variable?

That's easy, Richard. Vary one and they all vary.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2749. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 22:21:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5i334v0dqn3tbraoef6s9f06993dh9v699@4ax.com>
Source record: 125338

On Wed, 05 Feb 2003 15:56:25 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Perhaps if you were to explain how, with one reflection co-efficient,
>> do the three terms wander around, variable?
>
>That's easy, Richard. Vary one and they all vary.

Hi Cecil,

Which says nothing, really, because I can vary none, and they can ALL
still vary. Still and all, this does nothing to their nature as
constants of proportionality as evidenced by ALL their dependency on
the reflection co-efficient.

:-)

73's
Richard Clark, KB7QHC

2750. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 23:11:54 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E419A3A.226E6929@osite.com.br>
Source record: 125339

Mark Keith wrote:
>
> jgboyles@aol.com (JGBOYLES) wrote in message
> >
> > If you are not happy with a 1/2 wave 75M dipole fed with low loss transmission
> > line, you will not be happy with with the other choices, thats about as good as
> > it gets.
>
> Very true. The only way I see anything being better is if he is
> wanting to work DX. In that case, he might want to try a vertical. IE:
> inv L or whatever. But then he needs all the radials... If he wanted
> to just reduce the number of coax lines, I'd just feed all the dipoles
> with a single coax. If he wants a single antenna for all bands, a few
> options there.. Cecils antenna is one, or a tuner / ladder line fed
> dipole, or a loop fed in the same way, or even a trap dipole. MK

FIRST: Thanks ALL for the answers.

Yes, I was thinking about DX.
Something I haven't said about the dipoles, and I see is
worth mentioning...
Iï¿½m feeding it with RG-58 <grin>. Probably going to RG-213
will make things better.

I have read many times about open wire TL, but I don't even
emagine how can I be sure that my line has the right
impedance. And, being a clueless newbie... I don't know if
my tuner will accept open wire line. If it doesn't, I'll
have to feed the antenna via coax from the shack to a balun,
then open-wire to the antenna.
Don't ask about the tuner... It is brazilian made, and you
won't probably have heard about it.

I acknowledge that open wire is pretty much sensitive to
whatever conductors are nearby, wich is precisely the case
with the current installation (no way to change it <grin>!).
So, I guess the open wire line will be rendered near useless
with all that metal around.

73
--
Paulo E.P. Marcondes
(ex)PU2PIX
pepm@osite.com.br

2751. Re: Tuning Multi-Band Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 23:21:10 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E419C66.E1C2D09A@osite.com.br>
Source record: 125340

Roy Lewallen wrote:
>
> Connect the signal generator to the antenna feedline through a resistor
> of, say, 100 ohms or so. (Keep the leads short, and connect the signal
>
> This method should be more than accurate enough for your purposes.

Roy, is this method valid for other kinds of antennae?
--
Paulo E.P. Marcondes
(ex)Pu2PIX
pepm@osite.com.br

2752. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 23:31:25 UTC
From: richardharrison@webtv.net
Message-ID: <9607-3E419ECD-99@storefull-2314.public.lawson.webtv.net>
Source record: 125341

Richard Clark has, I believe, a copy of a remarkable little book. The writer was Sylvanus F. Thompson, F.R.S. and he was very clever indeed. The book is "Calculus Made Easy". My copy was published by Macmillan around the middle of the 20th century. But it originally came from England and Thompson wrote it around 1914.

Quoting from page 9:
"We classify all quantities into two classes: constants and variables.

Those which we regard as of fixed value, and call constants, we generally denote algebraically by letters from the beginning of the alphabet, such as a, b, or c; while those which we consider as capable of growing, or (as mathematicians say) "varying", we denote by letters from the end of the alphabet, such as x, y, z, u, v, w, or sometimes t.

Since Richard Clark has access to this marvelous little book, I should leave him to read on for examples of the difference between constants and variables..

I recommend the book to anyone interested in math for pure entertainment value and its dirt simple presentation which shows how clever it really is.

Best regards, Richard Harrison, KB5WZI

2753. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-05 23:40:25 UTC
From: richardharrison@webtv.net
Message-ID: <9607-3E41A0E9-101@storefull-2314.public.lawson.webtv.net>
Source record: 125342

I am sorry I misread the author of "Calculus Made Easy". His name is
Silvanus P. Thompson, F.R.S.. It is a very amusing book.

Best regards, Richard Harrison, KB5WZI

2754. Plans on an "Umbrella Antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 00:23:27 UTC
From: radiosam@wongfaye.com
Message-ID: <823e3267.0302051623.3e3a45b8@posting.google.com>
Source record: 125343

I'm looking for web site with some type of plans for an Umbrella wire antenna. Apparently it has a low angle of radiation and can do 80-10 meters. I had heard of a reference to an old copy of "Ham Radio" from the seventies.

2755. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 00:45:52 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <4fi0a.5767$P46.395391@twister.southeast.rr.com>
Source record: 125344

Comet has a mount that will clip on the back door of an SUV (I've used it with an Explorer and a Jeep over the years. It has an PL-259 connector for the antenna.

Good luck,

Bill, W4WNT

"Mark" <marks@nospam.org> wrote in message news:9qvv3vci6ar2rgeknq8hrach5flbvr2ac4@4ax.com...
> I'm looking to mount a simple multiband scanner antenna on the truck, but
> can't do it on the roof because it's garaged and it's real tight now.
>
> I'd prefer to keep away from mag mounts and bumper mounts. I'd also like to
> mount this without doing any drilling to the vehicle. Demanding, aren't I ?
> :)
>
> What I'm thinking is a way to build a bracket that will attach to some factory
> screws/bolts somewhere on the sides in where the rear hatch is. Something
> that will be able to protrude out at a "twisted L" type angle and I can mount
> the antenna on that plate.
>
> Has anyone done anything similar or have any input on this? Thanks.

2756. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 00:57:58 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b1sbsr$5am$1@slb9.atl.mindspring.net>
Source record: 125345

DX is a relative thing. I assume you mean another continent? Not all that hard from anywhere with enough power on 75 meters.

500 watts is a good place to consider minimum on that band in my opinion.

Generally speaking it is best to use Vertical polarization on 75 meters. This does NOT MEAN a SHORT COMMERCIAL multi-band vertical. For most folks a 75 meter vertical is impossible for their location.

A decent half wave center fed dipole works well if its up in the air a reasonable amount. That would be in the vicinity of at least 20 meters on 75.

Using RG213 is a good idea or RG8. 58 is subject to too much breakage. Loss on this band is not much of a factor. You may want to look at MINI 8. Good stuff for Low and Medium power.

Dan/W4NTI

"Paulo Marcondes" <pepm@osite.com.br> wrote in message
news:3E419A3A.226E6929@osite.com.br...
> Mark Keith wrote:
> >
> > jgboyles@aol.com (JGBOYLES) wrote in message
> > >
> > > If you are not happy with a 1/2 wave 75M dipole fed with low loss
transmission
> > > line, you will not be happy with with the other choices, thats about
as good as
> > > it gets.
> >
> > Very true. The only way I see anything being better is if he is
> > wanting to work DX. In that case, he might want to try a vertical. IE:
> > inv L or whatever. But then he needs all the radials... If he wanted
> > to just reduce the number of coax lines, I'd just feed all the dipoles
> > with a single coax. If he wants a single antenna for all bands, a few
> > options there.. Cecils antenna is one, or a tuner / ladder line fed
> > dipole, or a loop fed in the same way, or even a trap dipole. MK
>
> FIRST: Thanks ALL for the answers.
>
> Yes, I was thinking about DX.
> Something I haven't said about the dipoles, and I see is
> worth mentioning...
> I'm feeding it with RG-58 <grin>. Probably going to RG-213

> will make things better.
>
> I have read many times about open wire TL, but I don't even
> emagine how can I be sure that my line has the right
> impedance. And, being a clueless newbie... I don't know if
> my tuner will accept open wire line. If it doesn't, I'll
> have to feed the antenna via coax from the shack to a balun,
> then open-wire to the antenna.
> Don't ask about the tuner... It is brazilian made, and you
> won't probably have heard about it.
>
> I acknowledge that open wire is pretty much sensitive to
> whatever conductors are nearby, wich is precisely the case
> with the current installation (no way to change it <grin>!).
> So, I guess the open wire line will be rendered near useless
> with all that metal around.
>
> 73
> --
> Paulo E.P. Marcondes
> (ex)PU2PIX
> pepm@osite.com.br

2757. Re: Tuning Multi-Band Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 00:59:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v43crkm5eefq63@corp.supernews.com>
Source record: 125346

Paulo Marcondes wrote:
> Roy Lewallen wrote:
>
>>Connect the signal generator to the antenna feedline through a resistor
>>of, say, 100 ohms or so. (Keep the leads short, and connect the signal
>>
>>This method should be more than accurate enough for your purposes.
>
>
> Roy, is this method valid for other kinds of antennae?

Yes, but remember that what you're finding are the resonances at the point where you're measuring, not necessarily the resonant frequencies of the antenna itself. The two will coincide only if the impedance at resonance (that is, the resistance at resonance) equals the transmission line characteristic impedance or if the transmission line is a particular length. The frequencies you find will correspond closely to the points of minimum indicated SWR (that is, SWR measured for a 50 ohm reference, and not necessarily the actual SWR on the transmission line), measured at the same point, although the correspondence won't be exact if the impedance at resonance isn't the same as the reference impedance used for calculating SWR.

The original question was about a multi band vertical, so I made the assumption that the resistance at resonance wasn't too awfully different from the transmission line impedance. That means that the measured resonances will be close to the antenna resonances and that the dips will be close to the resonances and points of minimum SWR.

Near resonance, the reactance typically changes much more rapidly than the resistance. The dip is where the total impedance is minimum, so because the reactance is changing much faster, it's very nearly the point where the reactance is minimum. At resonance, the reactance is zero, so this is where the bottom of the dip is.

There are cases, particularly when the feedline impedance is very different from the antenna impedance, where the resistance at the line input is changing fairly rapidly near resonance. In those cases, the dip, and point of minimum SWR, won't be the same as the resonant point. In practice, though, the difference is usually slight, and you won't often see this happen.

Roy Lewallen, W7EL

2758. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 01:18:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <dp934v82h0l33fcu28oggjh63a38roe0qr@4ax.com>
Source record: 125347

On Wed, 5 Feb 2003 17:31:25 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark has, I believe, a copy of a remarkable little book. The
>writer was Sylvanus F. Thompson, F.R.S. and he was very clever indeed.
>The book is "Calculus Made Easy". My copy was published by Macmillan
>around the middle of the 20th century. But it originally came from
>England and Thompson wrote it around 1914.
>
>Quoting from page 9:
>"We classify all quantities into two classes: constants and variables.
>
>Those which we regard as of fixed value, and call constants, we
>generally denote algebraically by letters from the beginning of the
>alphabet, such as a, b, or c; while those which we consider as capable
>of growing, or (as mathematicians say) "varying", we denote by letters
>from the end of the alphabet, such as x, y, z, u, v, w, or sometimes t.
>
>Since Richard Clark has access to this marvelous little book, I should
>leave him to read on for examples of the difference between constants
>and variables..
>
>I recommend the book to anyone interested in math for pure entertainment
>value and its dirt simple presentation which shows how clever it really
>is.
>
>Best regards, Richard Harrison, KB5WZI
>

Hi Richard,

Yes, that slender tome is never very far from my reach and is far more
insightful than any library full of theories.

Thompson offers us a discussion on dependency:
"We usually think of "x" as a quantity that can we can vary;
and regarding the variation of "x" as a sort of "cause," we
consider the resulting variation of "y" as an effect. In other
words, we regard the value of "y" as depending on that of "x."
Both "x" and "y" are variables, but "x" is the one we operate
upon, and "y" is the "dependant variable". In all the preceding
chapters we have been to find out rules for the proportion
which the dependant variation in "y" bears to the dependant
variation independently made in "x."

If we look at PF, PD, and PR; then Thompson offers a compelling test:
Does a change in any term CAUSE the change in the other(s)? No. The
causation is found in the reflection co-efficient. All terms are
reduced to values simultaneously through the agency of reflection (the
only independent variable), not each other.

So, my longstanding comment stands without contradiction:
>>>>>> My guess is everyone would be content to live with any of the three
>>>>>> forms offered, which leads to the logical conclusion that all three
>>>>>> are dependencies of a fourth agent. You guys don't have all your oars
>>>>>> in the water.

73's
Richard Clark, KB7QHC

2759. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 01:24:38 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v43eaoosnkj5e9@corp.supernews.com>
Source record: 125348

I have worked over 200 countries on 75, most with just a 100 watt Kenwood. Granted I have had a few 5-0 reports but totally q-5 communications. I crank up the homebrew kilowatt if I want to ragchew with a ZS6 or a VK1.

There used to be a guy in Atlanta with a 3 element beam at 160 feet. The only difference was he worked them about 5 to 10 minutes before I could hear them on a dipole 35 feet in the air. 75 becomes a game of graylines and low sunspot cycles and winter if your not blessed with ideal antenna systems.

Most of the folks you can talk to are limited to 250 watts or less in many parts of the world. I suspect with 500 watts I could work DXCC on 75 mobile... Whoops now we are back to a vertical.

"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
news:b1sbsr$5am$1@slb9.atl.mindspring.net...
> DX is a relative thing. I assume you mean another continent? Not all
that
> hard from anywhere with enough power on 75 meters.
>
> 500 watts is a good place to consider minimum on that band in my opinion.
>
> Generally speaking it is best to use Vertical polarization on 75 meters.
> This does NOT MEAN a SHORT COMMERCIAL multi-band vertical. For most
folks
> a 75 meter vertical is impossible for their location.
>
> A decent half wave center fed dipole works well if its up in the air a
> reasonable amount. That would be in the vicinity of at least 20 meters on
> 75.
>
> Using RG213 is a good idea or RG8. 58 is subject to too much breakage.
> Loss on this band is not much of a factor. You may want to look at MINI
8.
> Good stuff for Low and Medium power.
>
> Dan/W4NTI
>
> "Paulo Marcondes" <pepm@osite.com.br> wrote in message
> news:3E419A3A.226E6929@osite.com.br...
> > Mark Keith wrote:
> > >
> > > jgboyles@aol.com (JGBOYLES) wrote in message
> > > >
> > > > If you are not happy with a 1/2 wave 75M dipole fed with low loss

> transmission
> > > > line, you will not be happy with with the other choices, thats about
> as good as
> > > > it gets.
> > >
> > > Very true. The only way I see anything being better is if he is
> > > wanting to work DX. In that case, he might want to try a vertical. IE:
> > > inv L or whatever. But then he needs all the radials... If he wanted
> > > to just reduce the number of coax lines, I'd just feed all the dipoles
> > > with a single coax. If he wants a single antenna for all bands, a few
> > > options there.. Cecils antenna is one, or a tuner / ladder line fed
> > > dipole, or a loop fed in the same way, or even a trap dipole. MK
> >
> > FIRST: Thanks ALL for the answers.
> >
> > Yes, I was thinking about DX.
> > Something I haven't said about the dipoles, and I see is
> > worth mentioning...
> > I m feeding it with RG-58 <grin>. Probably going to RG-213
> > will make things better.
> >
> > I have read many times about open wire TL, but I don't even
> > emagine how can I be sure that my line has the right
> > impedance. And, being a clueless newbie... I don't know if
> > my tuner will accept open wire line. If it doesn't, I'll
> > have to feed the antenna via coax from the shack to a balun,
> > then open-wire to the antenna.
> > Don't ask about the tuner... It is brazilian made, and you
> > won't probably have heard about it.
> >
> > I acknowledge that open wire is pretty much sensitive to
> > whatever conductors are nearby, wich is precisely the case
> > with the current installation (no way to change it <grin>!).
> > So, I guess the open wire line will be rendered near useless
> > with all that metal around.
> >
> > 73
> > --
> > Paulo E.P. Marcondes
> > (ex)PU2PIX
> > pepm@osite.com.br
>
>

2760. US Tower Manual Needed for MA40

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 02:21:32 UTC
From: GLEN JENKINS <wb4ktf@pipeline.com>
Message-ID: <b1sgrc$7ji$1@slb6.atl.mindspring.net>
Source record: 125349

I bought a used US Tower MA40 Crank up and tilt over mast. Does anyone have a manual or instructions for the mast? This is an older unit with round tubular pipes (4.5" OD at that base). Please email me at wb4ktf@pipeline.com Many thanks and 73s. Glen

2761. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 04:42:34 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <YBadnfwLBqonetyjXTWcpg@comcast.com>
Source record: 125350

"Scott" <scott@scotti.sh!t> wrote in message
news:9h2cndsxH8exV6ijXTWcpw@comcast.com...
>
>
> Tarmo Tammaru wrote:
> >
> > Check out ebay, but you want win98SE, not 95.
>
>
>
> You're going to load 98 or ME on a P60 with 8MB of RAM and a
> 420MB hard drive?

If you take a drive to your town dump, you can find a lot newer machine than that for nothing. However, I did load 98 on a 486DX4 with either 16 or 32 M of memory. Works fine. You can do a minimum 98 install that will take less space than a "typical" Win 95 install, and it won't crash as often. He does not need sound, internet, or a bunch of other stuff. In the original message he said he wanted to run DOS programs (and I presume PRINT). Don't believe there was any mention of 8 Megs RAM.

Tam/WB2TT

2762. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 04:54:13 UTC
From: richardharrison@webtv.net
Message-ID: <17983-3E41EA75-90@storefull-2317.public.lawson.webtv.net>
Source record: 125351

Walter, W2DU wrote:
"For proof of total re-reflection, a measurement looking into the match point will yield Z = Zo."

Suppose we have a radio connected by some length of 50-ohm coax to the "match point".

When the signal sets out for the distant load, current from the transmitter is forced to flow in the coax at a voltage to current ratio of (E/I) = Zo by the coax inherent inductance and capacitance.

Regardless of the impedance of the load, if there is a lossless matching network at the "match point" which is adjusted to eliminate reflections from the load, our "some length" of 50-ohm cable at the match point will not experience a reflection from the far end load.

To the transmitter, the "match point" might just as well be an infinite continuation of the 50-ohm coax connected to the radio.

We know that the mis-matched load on the far side of the "match point" produces a reflection. This reflection is totally re-reflected at the "match point". Otherwise, some un-re-reflected energy getting through the "match point" back to the transmitter would change the load that transmitter "sees", from the initial 50 ohms "seen" before the un-re-reflected energy returned to the transmitter.

The output of most transmitters changes when you change the impedance loading the transmitter.

I see no argument with Walter`s statement above.

Best regards, Richard Harrison, KB5WZI

2763. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 05:51:18 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <3ut34vs39jfptqhk2si8cp2vgmfv813dro@4ax.com>
Source record: 125352

On Wed, 5 Feb 2003 12:17:24 -0600, "Dan/W4NTI"
<w4nti@NOSPAMmindspring.com> wrote:

>I understand Andy. Only true hams that give a rip for the service join the
>league.
>
>Dan/W4NTI

Just couldn't hold back anymore, eh Dan? Is your girlfriend going to
join in now too?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2764. Re: Plans on an "Umbrella Antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 06:35:13 UTC
From: larryc@northwest.com
Message-ID: <3E420221.365712A2@northwest.com>
Source record: 125353

could be the same thing as an HF discone antenna. does this help ring a bell?

Radiosam wrote:

> I'm looking for web site with some type of plans for an Umbrella wire
> antenna. Apparently it has a low angle of radiation and can do 80-10
> meters. I had heard of a reference to an old copy of "Ham Radio" from
> the seventies.

2765. Re: Too Da-n Hot. Was: Feeding a multiband horizontal loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 09:48:58 UTC
From: Chris <noone@nowhere.com>
Message-ID: <3e422f85@news.comindico.com.au>
Source record: 125354

45 deg C here the other day (E Australia), about 113 in f.

Chris
VK2XCD

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E3F138F.D1619EC8@attbi.com...
> Fred, I feel so very very sorry for you. My God! It's so hot where you
> are that the air conditioning bill must be outrageous!
>
> My wife and I start to air condition our cars when the temperature hits
> 65. We keep our home at 70 to 72 all summer and even that's too warm.
> When it gets to 75 we go into the house and contract all outdoor work
> because it's just too da-n hot to do anything.
>
> I'm glad I married a Polar Bear like myself.
>
> Seriously, I hate hot weather!! And Hot begins at 75 F.
>
> Deacon Dave, W1MCE
> +++
>
> Fred Hambrecht Sr wrote:
> >
> > I would tell you I am setting on the patio typing this at 75 F,but I
don't
> > want to make you feel bad. ;>)
> >
> > "Dave Shrader" <david.shrader@attbi.com> wrote in message
> > news:3E3EC60C.F30CC17D@attbi.com...
> > > The temperature is so high here in NH that I'm in the process of
opening
> > > the pool. Why it's up to 35.7 degrees F! Highest it's been in 9 weeks.
> > >
> > > Deacon Dave, W1MCE
> > >
> > > Three feet of snow in back yard, 1/2 inch of ice in driveway.
> > >
> > > +++
> > >
> > > OC_CAM's Razor wrote:
> > > >
> > > > Per Enocson wrote:
> > > > > Thanks all of you for interesting opinions/ideas! Will go for
ladder

> > line
> > > > > direct to the tuner, as soon as spring is here again. No weather
for
> > antenna
> > > > > work right now!
> > > >
> > > > Dang, I'm putting up my Purple Martin birdhouse in 75 degree weather
> > > > and sweating up a storm here in East Texas.
> > > > --
> > > > cheers, CAM http://www.qsl.net/w5dxp
> > > >
> > > > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > > > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > > > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2766. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 10:40:41 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E423BA9.C1970993@cwis.net>
Source record: 125355

Dan,
I guess everyone is entitled to their opinion. About
the ARRL, and what a 'true' ham is. I have a license so
I figure that makes me as 'true' a ham as anyone. I think
how long I've had that license just really doesn't make a
lot of difference.
I'm no longer a member of the ARRL, although I was for
quite a few years. When I first joined, I would have agreed
with you about the benefits both to the individual and for
all hams in general. Unfortunately the aims and direction
of the League have changed over the years. I can remember
when the League really did care for the individual ham and
tried to do the best they could for the whole hobby. I can
also say from experience that the League isn't like that
any more. It isn't very difficult to see for your self, if
you're interested. Start with the editorials from the 70'
and read your way up to the present. You will see the
attitude change, and it should certainly make you wonder just
who's 'side' they're on now, (if 'side' is the right word).
I wish it were possible to get the magazine without the
membership. I don't mind paying for the magazine, but I won't
support what the ARRL is doing to this hobby.
'Doc

2767. Re: US Tower Manual Needed for MA40

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 10:42:06 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E423BFE.F3A33A95@cwis.net>
Source record: 125356

Glen,
Why not email 'US Towers'? Bet they'd have
a manual, if anyone did.
'Doc

2768. Re: Plans on an "Umbrella Antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 15:37:59 UTC
From: Eskay <ve3juaNO@SPAMrac.ca>
Message-ID: <3E428157.4010601@SPAMrac.ca>
Source record: 125357

Ham radio magazine indeed carried an article on what they called a
folded umbrella antenna.
It was built with a 40 ft push-up mast and a 15 ft top loading whip for
a total hight of 55 ft..
The design is suitable for 1.6 through 30 Mhz.
The wire part is supported by the guy wires, and spaced 30 ft from the
mast..
This is not what I would call a small antenna..
There are 6 pages to the article and I could scan them and send them via
E-mail if you are still interested.And to anyone else who may want it.
Contact me via E-mail,,,ve3jua@rac.ca
73 de Sieb VE3JUA

Radiosam wrote:
> I'm looking for web site with some type of plans for an Umbrella wire
> antenna. Apparently it has a low angle of radiation and can do 80-10
> meters. I had heard of a reference to an old copy of "Ham Radio" from
> the seventies.

2769. Re: Plans on an "Umbrella Antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 16:02:18 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v451odl52led5d@corp.supernews.com>
Source record: 125358

I for one, would like a copy. my e-mail is

w4jle@charter.net

TIA

"Eskay" <ve3juaNO@SPAMrac.ca> wrote in message
news:3E428157.4010601@SPAMrac.ca...
> Ham radio magazine indeed carried an article on what they called a
> folded umbrella antenna.
> It was built with a 40 ft push-up mast and a 15 ft top loading whip for
> a total hight of 55 ft..
> The design is suitable for 1.6 through 30 Mhz.
> The wire part is supported by the guy wires, and spaced 30 ft from the
> mast..
> This is not what I would call a small antenna..
> There are 6 pages to the article and I could scan them and send them via
> E-mail if you are still interested.And to anyone else who may want it.
> Contact me via E-mail,,,ve3jua@rac.ca
> 73 de Sieb VE3JUA
>
> Radiosam wrote:
> > I'm looking for web site with some type of plans for an Umbrella wire
> > antenna. Apparently it has a low angle of radiation and can do 80-10
> > meters. I had heard of a reference to an old copy of "Ham Radio" from
> > the seventies.
>

2770. Multi-band verticals and the radials that love them

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 16:06:55 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA67C895000A38FFF0305600@news.west.cox.net>
Source record: 125359

I have slightly less than 30 feet of aluminum sitting
atop a 10 feet high mast. I am feeding the antenna with
ladder line.

I am unsure of the length/number of radials needed to
provide efficient all band (80-10) operation.

The latest arrl antenna book indicates a need to provide
radials for each band of operation. At the same time it
doesn't mention the feed method or means of making it
multi-band.

I currently have 3 short radials (about 7') and 3 longish
(about 20', 40' and 60'). I didn't measure, I simply ran
wire to the available support structures.

My question is, I guess, while I am "tuning my ladder line",
am I also "tuning my radials" in a manner that provides efficient
operation.

I haven't seen this discussed/documented anywhere, at least in a
manner I was able to identify.

What needs to be provided?

Thanks,
bill KA6DVN

2771. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 16:08:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E428869.1050909@ieee.org>
Source record: 125360

Gene Fuller wrote:
> Steve's model is based on vector addition of voltages. You may or may
> not like his approach.

On the contrary, I fully agree with Dr. Best's approach up to the point where he mentally violates the conservation of energy principle. My model is virtually *IDENTICAL* to his model up to that point.

> However, if one gives him the benefit of the
> doubt and accepts vector addition, then everything else works out
> correctly, including energy balance.

Nope, it doesn't, Gene, and that's what this year and a half argument has been all about. Please review the history of this argument on Google.

> There are no conflicts in the math.

I feel sorry for you if you think 75W + 8.33W = 133.33W is not a conflict in the math. That's what started this whole argument a year and a half ago. Dr. Best missed 50W of constructive interference that the equation requires in order to balance.

> Again, you may not agree with the setup of the problem, but the model is
> *internally* self-consistent.

Nope, it's not, Gene. That's what the argument is all about. Where is Dr. Best's missing energy? Energy cannot disappear so where is it? All I did was find it and identify it. Since, in a matched system, it is re-reflected energy, we can deduce why Dr. Best needed to ignore it.

> The CAM model never explicitly balances the energy, so the math cannot
> be checked.

THERE IS NO CAM MODEL. I have repeated that over and over. I learned all this stuff at Texas A&M in the 50's. I use virtually the identical model that Dr. Best uses. Then I apply the conservation of energy principle to see if he has balanced the energy. He hasn't and therefore his model is inconsistent and incomplete. I have taken Dr. Best's model and furnished it with consistency and completeness. That's *ALL* I have done. I find absolutely nothing wrong with Dr. Best's superposition of voltage and have said so repeatedly. But when one superposes two voltages and the phase angle is less than 90 degrees, constructive interference results and that constructive interference energy must come from somewhere.

My wave reflection model is virtually identical to Dr. Best's.
My superposition model is virtually identical to Dr. Best's.

My conservation of energy model tracks all the energy. Dr. Best's
conservation of energy model tracks *only* total net energy and
allows the energy components to disappear and reappear at his whim.
Do you really think that is consistent with reality?

> You note: "That 50W of energy is re-reflected back toward the load."
> Fine. Where is it?

I have explained all that, Gene. That 50W of destructive interference
energy reverses direction and joins the forward wave as constructive
interference energy. This is all explained on the Melles-Griot web page.

The M-G web page says:

"reflected wavefronts interfere destructively".
In our transmission line example those two reflected wavefronts are
associated with 25W each for a total of 50W. Mathematically they
are Pfwd(50)*Rho^2=25W and Pref(150)*(1-Rho^2)=25W, you know the
two reflected energy components of a total of four energy components
predicted by the superposition theorem that Dr. Best says are canceled.

"... the principle of conservation of energy indicates all "lost" reflected
intensity will appear as enhanced intensity in the transmitted beam."
In ham radio terms, that says the above 50W joins the forward wave as
constructive interference energy. It's exactly what Dr. Best needs to
balance his energy equation.

Dr. Best earlier denied that there was any destructive or constructive
interference. Now he has admitted that the destructive and constructive
interference energy components existing around an impedance discontinuity
must balance. Given that admission, Dr. Best has taken the first step
toward making his model complete and consistent. Only one tiny step
remains. To balance the energy around an impedance discontinuity, the
destructive interference caused by wave cancellation must reverse
direction and join the opposite-traveling wave as "enhanced intensity",
i.e. constructive interference. When Dr. Best finally accepts that fact,
his model will become consistent and complete and he will have to retract
about a dozen of his assertions in his QEX article.

> The CAM model is incomplete and therefore inconsistent.

Again, THERE IS NO CAM MODEL! The incomplete and therefore inconsistent
model is all Dr. Best's. I have simply added energy balance to Dr. Best's
existing model. It is an addendum, not a new and different means of analysis.
One cannot completely analyze a transmission line problem using only energy
analysis. One can only perform an energy analysis after a conventional
analysis has been performed. That is all I have done.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2772. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 16:14:31 UTC
From: richardharrison@webtv.net
Message-ID: <16230-3E4289E7-246@storefull-2311.public.lawson.webtv.net>
Source record: 125362

Richard clark wrote:
"The causation is found in the reflection co-efficient."

Beg to differ. A coefficient is defined as merely a multiplier. In the term, 3x, the number, 3, is the coefficient of ,x. Certainly 3 is a constant, as it has a non-varying value. "x" can be assigned any value, so it is the variable in the term 3x.

A friction coefficient is determined by surface roughness. If this is high, a tall box may flip over instead of slide when brakes are suddenly applied to a truck.

The coefficient was a constant. The forces acting on the box were the variables.

Same is true for a reflection coefficient in a trqansmission line. It is a constant. The reflection coefficient tells us the ratio of reflected voltage to incident voltage at a mismatch. It`s a fraction , and its voltages are vectors.

But a reflection coefficient is a constant, that is, its value isn`t expected to change during the period you are using an equation.

Best regards, Richard Harrison, KB5WZI

2773. Re: Plans on an "Umbrella Antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 16:32:39 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302060832.179103e0@posting.google.com>
Source record: 125361

\

Larry you may well be right, Belrose had an article in QST in tne mid seventies and Ham Radio was in print at that time. Ham radio was a very good one for antenna articles and also printed the first series of articles on computor designed yagis.(Lawson?).The only other form that could fit the bill was a similar form that included a mirror image of the discone but without the top hat and thus was not ground mounted per se. With these type of antennas you are talking about the need for an awful lot of ground. Scott airforce base (IL)had one of the latter forms and was about 300 feet high and easily that much diameter when guys were included.
I am sure some enterprising fellow will come up with something that will do the same job in much less space in my life time, so that all can operate on the high bands when the sun spot cycle is low.
Art

rryc@northwest.com wrote in message news:<3E420221.365712A2@northwest.com>...
> could be the same thing as an HF discone antenna. does this help ring a
> bell?
>
> -----------
>
> Radiosam wrote:
>
> > I'm looking for web site with some type of plans for an Umbrella wire
> > antenna. Apparently it has a low angle of radiation and can do 80-10
> > meters. I had heard of a reference to an old copy of "Ham Radio" from
> > the seventies.

2774. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 16:51:51 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <How0a.2400$tO2.278986@newsread1.prod.itd.earthlink.net>
Source record: 125363

Richard Clark wrote:
> If we look at PF, PD, and PR; then Thompson offers a compelling test:
> Does a change in any term CAUSE the change in the other(s)? No. The
> causation is found in the reflection co-efficient. All terms are
> reduced to values simultaneously through the agency of reflection (the
> only independent variable), not each other.

> 73's
> Richard Clark, KB7QHC

Richard, in my previous post I said that PD is the independent variable. This is because in many of my measurements on lines, I keep the source voltage constant while measuring different loads. I believe it depends on the goal of the measurements that determines which variable is independent. It may well be PR, but it may also be PD, depending on the experiment.

But you are correct, a change in reflection coefficient will cause a change in all the other terms. However, when the reflection coefficient remains constant, the values of all the other terms will change proportionally when source PD changes.

Or have I missed your point?

Walt, W2DU

PS--Thank you, Richard H. for your support.

2775. Re: [clueless newbie] Antenna choice for 3.5MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 17:16:38 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302060916.f420667@posting.google.com>
Source record: 125364

Paulo Marcondes <pepm@osite.com.br> wrote in message
> Yes, I was thinking about DX.
> Something I haven't said about the dipoles, and I see is
> worth mentioning...
> Iï¿½m feeding it with RG-58 <grin>. Probably going to RG-213
> will make things better.

Not that much on 80m. It will on the higher bands though. Also, if you ever use a tuner and feed on a different band with a high SWR, it will make a large difference. I like rg-58 for lightweight portable use, where heavy coax can be a hassle holding it up in the air, but generally I prefer the thick stuff. I use only 213 here at the house.
>
> I have read many times about open wire TL, but I don't even
> emagine how can I be sure that my line has the right
> impedance. And, being a clueless newbie... I don't know if
> my tuner will accept open wire line.

If it has only coax connectors, it doesn't have an internal balun for balanced lines. If it also has a pair of posts for connecting ladder line, then it does.
IE: my mfj 989c has both. Also can be configured to feed a single random wire.

If it doesn't, I'll
> have to feed the antenna via coax from the shack to a balun,
> then open-wire to the antenna.

You can do that, but I'm not a fan of that type of setup. I don't like mixing feedline types. I use either one or the other. Not a mix. Not that doing that won't work, I just don't like it...:(

> Don't ask about the tuner... It is brazilian made, and you
> won't probably have heard about it.
>
> I acknowledge that open wire is pretty much sensitive to
> whatever conductors are nearby, wich is precisely the case
> with the current installation (no way to change it <grin>!).
> So, I guess the open wire line will be rendered near useless
> with all that metal around.

Maybe not as bad as you think. But myself, I would probably still stick with the coax feed. Your problem is not the dipole in itself, it's working. You just want an antenna with a lower overall radiation angle. Like one mentioned. In general, storebought lossy verticals are not the answer unless you have a very good radial system. I'd go with

an inv L, or better yet, a T vertical, or even better yet, a vertical with a full large top hat. You want to use as much capacitive loading as possible, and the least amount of inductive loading. "coil". If you use the hat, your current distribution is better, and you have a better chance for decent results if skimping on radials . You can work DX just fine with a dipole of decent height. Say 35-40 ft min. I've never had any trouble..I once did a test with a guy in VK. I used paralleled coax fed dipoles on both bands. We started on 40m. Then went to 80m. I might have lost 1-2 s units or so , meter wise. We still had no trouble talking. Both the 40 and 80 dipole were at about 40 ft at right angles. I remember working Hawaii on 80m cw last year at field day with a dipole at about 20 ft at the most. And it's noisy that time of year. I was running about 100w. A good vertical will be better though on the long paths. MK

2776. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 17:40:45 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E429E7A.E23C3D33@att.net>
Source record: 125365

Cecil,

I am sorry to learn that English is not your working language.
Unfortunately I am not sufficiently fluent in whatever language you
understand to carry on the discussion.

Vector addition of voltages means that power addition is determined by:

[SQRT(75) + SQRT(8.33)]^2, which is 133.33

If you accept vector addition of voltages then the math works. If you
don't, then there is little point of going forward with the discussion.

The remainder of your message is redundant and irrelevant. Feel free to
bask in your "victory".

73,
Gene
W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Steve's model is based on vector addition of voltages. You may or may
> > not like his approach.
>
> On the contrary, I fully agree with Dr. Best's approach up to the point
> where he mentally violates the conservation of energy principle. My
> model is virtually *IDENTICAL* to his model up to that point.
>
> > However, if one gives him the benefit of the
> > doubt and accepts vector addition, then everything else works out
> > correctly, including energy balance.
>
> Nope, it doesn't, Gene, and that's what this year and a half argument
> has been all about. Please review the history of this argument on
> Google.
>
> > There are no conflicts in the math.
>
> I feel sorry for you if you think 75W + 8.33W = 133.33W is not a conflict
> in the math. That's what started this whole argument a year and a half
> ago. Dr. Best missed 50W of constructive interference that the equation
> requires in order to balance.
>
> > Again, you may not agree with the setup of the problem, but the model is

> > *internally* self-consistent.
>
> Nope, it's not, Gene. That's what the argument is all about. Where is
> Dr. Best's missing energy? Energy cannot disappear so where is it? All
> I did was find it and identify it. Since, in a matched system, it is
> re-reflected energy, we can deduce why Dr. Best needed to ignore it.
>
> > The CAM model never explicitly balances the energy, so the math cannot
> > be checked.
>
> THERE IS NO CAM MODEL. I have repeated that over and over. I learned all
> this stuff at Texas A&M in the 50's. I use virtually the identical model
> that Dr. Best uses. Then I apply the conservation of energy
> principle to see if he has balanced the energy. He hasn't and therefore
> his model is inconsistent and incomplete. I have taken Dr. Best's model
> and furnished it with consistency and completeness. That's *ALL* I have
> done. I find absolutely nothing wrong with Dr. Best's superposition of
> voltage and have said so repeatedly. But when one superposes two voltages
> and the phase angle is less than 90 degrees, constructive interference
> results and that constructive interference energy must come from somewhere.
>
> My wave reflection model is virtually identical to Dr. Best's.
> My superposition model is virtually identical to Dr. Best's.
> My conservation of energy model tracks all the energy. Dr. Best's
> conservation of energy model tracks *only* total net energy and
> allows the energy components to disappear and reappear at his whim.
> Do you really think that is consistent with reality?
>
> > You note: "That 50W of energy is re-reflected back toward the load."
> > Fine. Where is it?
>
> I have explained all that, Gene. That 50W of destructive interference
> energy reverses direction and joins the forward wave as constructive
> interference energy. This is all explained on the Melles-Griot web page.
>
> The M-G web page says:
>
> "reflected wavefronts interfere destructively".
> In our transmission line example those two reflected wavefronts are
> associated with 25W each for a total of 50W. Mathematically they
> are Pfwd(50)*Rho^2=25W and Pref(150)*(1-Rho^2)=25W, you know the
> two reflected energy components of a total of four energy components
> predicted by the superposition theorem that Dr. Best says are canceled.
>
> "... the principle of conservation of energy indicates all "lost" reflected
> intensity will appear as enhanced intensity in the transmitted beam."
> In ham radio terms, that says the above 50W joins the forward wave as
> constructive interference energy. It's exactly what Dr. Best needs to
> balance his energy equation.
>

> Dr. Best earlier denied that there was any destructive or constructive
> interference. Now he has admitted that the destructive and constructive
> interference energy components existing around an impedance discontinuity
> must balance. Given that admission, Dr. Best has taken the first step
> toward making his model complete and consistent. Only one tiny step
> remains. To balance the energy around an impedance discontinuity, the
> destructive interference caused by wave cancellation must reverse
> direction and join the opposite-traveling wave as "enhanced intensity",
> i.e. constructive interference. When Dr. Best finally accepts that fact,
> his model will become consistent and complete and he will have to retract
> about a dozen of his assertions in his QEX article.
>
> > The CAM model is incomplete and therefore inconsistent.
>
> Again, THERE IS NO CAM MODEL! The incomplete and therefore inconsistent
> model is all Dr. Best's. I have simply added energy balance to Dr. Best's
> existing model. It is an addendum, not a new and different means of analysis.
> One cannot completely analyze a transmission line problem using only energy
> analysis. One can only perform an energy analysis after a conventional
> analysis has been performed. That is all I have done.
> --
> cheers, CAM http://www.qsl.net/w5dxp

2777. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 18:05:05 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <ltx0a.23614$rq4.1780640@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125366

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E428869.1050909@ieee.org...

>Dr. Best missed 50W of constructive interference that the equation
> requires in order to balance.
>

Cecil,

We know that at t = 0 there is an initial 25 W of power reflected at the
junction bewteen the 50 ohm line and the 150 ohm line.

How do you know that there is actually "25 W" of power in the rearward wave
transmitted into the 50 ohm line from the reflections and re-reflections
occurring in the 150 ohm line?

Steve VE9SRB

2778. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 18:05:49 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <1ux0a.2543$tO2.286031@newsread1.prod.itd.earthlink.net>
Source record: 125367

Gene Fuller wrote:
> Vector addition of voltages means that power addition is determined by:
>
> [SQRT(75) + SQRT(8.33)]^2, which is 133.33
>
> W4SZ

Gene, you haven't answered my question concerning the above equation. If you add a source capable of delivering only 75 w to another source capable of delivering only 8.33 w, do you still maintain the total power will be 133.33?

If so, where is the missing 50 w of power coming from?

Walt, W2DU

2779. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 18:17:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42A69F.1070006@ieee.org>
Source record: 125368

Gene Fuller wrote:
> I am sorry to learn that English is not your working language.

When you cannot defend yourself technically, mount an ad hominem
attack, eh?

> Vector addition of voltages means that power addition is determined by:
>
> [SQRT(75) + SQRT(8.33)]^2, which is 133.33

That model gives the correct answer, Gene, but doesn't appear to relate
directly to reality. What is the physical meaning of the square root
of a power? Are watts really square? What does the square root of a
joule mean in reality? Does it mean that a joule has four equal sides?
What does the square root of a second mean? Does it mean that a second
is really square? I doubt it. You have obviously been seduced by the
steady-state model, something I suggested months ago. I agree with
Richard Clark's concept. An equation doesn't dictate reality. It
is supposed to be the other way around.

> If you accept vector addition of voltages then the math works.

You appear to be completely ignorant of constructive interference.
Maybe you should review what constructive interference implies from
a physical standpoint. It implies that extra power is available from
somewhere. Where does the extra power come from at an impedance
discontinuity isolated from any source by transmission lines? That
is the fundamental physics question under discussion.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2780. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 18:28:04 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42A934.50306@ieee.org>
Source record: 125269

VE9SRB wrote:
> We know that at t = 0 there is an initial 25 W of power reflected at the
> junction bewteen the 50 ohm line and the 150 ohm line.

> How do you know that there is actually "25 W" of power in the rearward wave
> transmitted into the 50 ohm line from the reflections and re-reflections
> occurring in the 150 ohm line?

All that is predicted by the superposition theorem.

Your P1 = Pfwd(50)*(1-Rho^2) = 75W, Your P2 = Pref(150)*Rho^2 = 8.33W

There are two other predicted components that you choose to ignore and
imply that they become your canceled (rearward-traveling waves 1 and 2".
Even you cannot cancel energy, Steve. Energy that is canceled in one
direction in a transmission line must reverse directions without any
energy loss. That's what the conservation of energy principle means
and I have been telling that to you for a year and a half.

P3 = Pfwd(50)*Rho^2 = 25W, P4 = Pref(150)*(1-Rho^2) = 25W

How many times am I going to have to repeat myself? P3 and P4 are the
two wavefronts mentioned on the M-G web page when they say: "reflected
wavefronts interfere destructively". You know, the energy components
that reverse direction and join the "transmitted beam" as "enhanced
intensity"? It appears that you have not understood the M-G web page
yet.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2781. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 18:29:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42A9A4.1080705@ieee.org>
Source record: 125270

Walter Maxwell wrote:
> Gene Fuller wrote:
>>Vector addition of voltages means that power addition is determined by:
>> [SQRT(75) + SQRT(8.33)]^2, which is 133.33
>
> Gene, you haven't answered my question concerning the above equation. If you
> add a source capable of delivering only 75 w to another source capable of
> delivering only 8.33 w, do you still maintain the total power will be
> 133.33?

If he can do that Walt, he can get 400W out of two phase-locked IC-706's.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2782. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 18:36:38 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <WWx0a.23653$rq4.1782154@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125271

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E42A934.50306@ieee.org...
> VE9SRB wrote:
> > We know that at t = 0 there is an initial 25 W of power reflected at the
> > junction bewteen the 50 ohm line and the 150 ohm line.
>
> > How do you know that there is actually "25 W" of power in the rearward
wave
> > transmitted into the 50 ohm line from the reflections and re-reflections
> > occurring in the 150 ohm line?
>
> All that is predicted by the superposition theorem.
>

You did not specifcally answer the question.

EXACTLY how do you know that "25 W" of power is transmitted rearward into
the 50 ohm line?

Steve

2783. Re: Multi-band verticals and the radials that love them

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 18:37:35 UTC
From: Eskay <ve3juaNO@SPAMrac.ca>
Message-ID: <3E42AB6F.4060906@SPAMrac.ca>
Source record: 125272

You could start by making the radials the same length as the
radiator...That would even things out without getting too complicated..
Four radials should do the trick...
73 de VE3JUA..

Bill Mahaffey wrote:
> I have slightly less than 30 feet of aluminum sitting
> atop a 10 feet high mast. I am feeding the antenna with
> ladder line.
>
> I am unsure of the length/number of radials needed to
> provide efficient all band (80-10) operation.
>
> The latest arrl antenna book indicates a need to provide
> radials for each band of operation. At the same time it
> doesn't mention the feed method or means of making it
> multi-band.
>
> I currently have 3 short radials (about 7') and 3 longish
> (about 20', 40' and 60'). I didn't measure, I simply ran
> wire to the available support structures.
>
> My question is, I guess, while I am "tuning my ladder line",
> am I also "tuning my radials" in a manner that provides efficient
> operation.
>
> I haven't seen this discussed/documented anywhere, at least in a
> manner I was able to identify.
>
> What needs to be provided?
>
> Thanks,
> bill KA6DVN
>

2784. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 18:52:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0e954v80q16alknqk5cl4h9ve3v03pks6i@4ax.com>
Source record: 125273

On Thu, 06 Feb 2003 16:51:51 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

> Richard Clark wrote:
>> If we look at PF, PD, and PR; then Thompson offers a compelling test:
>> Does a change in any term CAUSE the change in the other(s)? No. The
>> causation is found in the reflection co-efficient. All terms are
>> reduced to values simultaneously through the agency of reflection (the
>> only independent variable), not each other.
>
>> 73's
>> Richard Clark, KB7QHC
>
>Richard, in my previous post I said that PD is the independent variable.
>This is because in many of my measurements on lines, I keep the source
>voltage constant while measuring different loads. I believe it depends on
>the goal of the measurements that determines which variable is independent.
>It may well be PR, but it may also be PD, depending on the experiment.
>
>But you are correct, a change in reflection coefficient will cause a change
>in all the other terms. However, when the reflection coefficient remains
>constant, the values of all the other terms will change proportionally when
>source PD changes.
>
>Or have I missed your point?
>
>Walt, W2DU
>
>PS--Thank you, Richard H. for your support.
>

Hi Walt,

Only if you violate Thompson's point about causation and attach it to
PD distinct from PF and PR.

>Thompson offers us a discussion on dependency:
> "We usually think of "x" as a quantity that can we can vary;
> and regarding the variation of "x" as a sort of "cause," we
> consider the resulting variation of "y" as an effect. In other
> words, we regard the value of "y" as depending on that of "x."
> Both "x" and "y" are variables, but "x" is the one we operate
> upon, and "y" is the "dependant variable". In all the preceding
> chapters we have been to find out rules for the proportion
> which the dependant variation in "y" bears to the dependant

> variation independently made in "x."
>

Shuffling terms of identities does not yield a definition because all terms arise simultaneously through the agency of the reflection co-efficient.

A second test, also found in Thompson's material above, demands:
> find out rules for the proportion
> which the dependant variation in "y" bears to the dependant
> variation independently made in "x."

By your question attending PD, I see that you may still harbor some association that comes OF the expression
PF = PD + PR
being treated not as an identity, but as a conceptual definition.

As Richard and you both agree that the reflection co-efficient is constant throughout the simultaneous determination of all three terms and as both of you appear to "want" one of these terms to change independently of the others (presumably to elevate the expression beyond identity to prove some concept) then you simply have to describe what Thompson asks for: the proportion.

So, with a fixed reflection co-efficient what do we get from this speculation of an equation of definition of PF when I raise PR? PF follows PR? Does that make sense? No. How does it happen that PR changed in the first place? If it is an independent variable, that means the change cannot arrive through the agency of PF. However, this is not to deny PR its variable status, as long as it remains intendant of PF. I won't delve into speculating what agency performs this trick and still maintain the SAME reflection co-efficient.

Let's do the same with PD. If I raise PD independently of PF with a fixed reflection co-efficient, does PF follow? Does that make sense? No. Again the question arises, how did PD change independently of both PF and the reflection co-efficient? Again I will not speculate further along that line. And again, this is not to deny PD its variable status as long as it is independent on PF.

I have allowed independent variable status for both PD and PR for the expression offered to test for this expression's capacity to break free of simple identity and elevation to the definition of a concept. However, barring the descriptions of the agents of change for both PD and PR (that is independent of PF and the fixed reflection co-efficient) such is a fantasy as this speculation is couched in contradiction. One need only demonstrate:
> the proportion
> which the dependant variation in "PF" bears to the dependant
> variation independently made in "PD."
AND
> the proportion

> which the dependant variation in "PF" bears to the dependant
> variation independently made in "PR."
to show the error of my assertion:
>>>>>>>My guess is everyone would be content to live with any of the three
>>>>>>>forms offered, which leads to the logical conclusion that all three
>>>>>>>are dependencies of a fourth agent. You guys don't have all your oars
>>>>>>>in the water.

Considering the thread is beyond 550 postings without a single
syllable of that necessary discussion, I don't anticipate the
presentation of that proportion will appear in the next 550 postings.

73's
Richard Clark, KB7QHC

2785. Re: Multi-band verticals and the radials that love them

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 19:08:14 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <bic54vkraslnptpqfv9d7sjlqkdd2gh96d@4ax.com>
Source record: 125274

On Thu, 06 Feb 2003 16:06:55 GMT, Bill Mahaffey <ka6dvn@cox.net>
wrote:

>I have slightly less than 30 feet of aluminum sitting
>atop a 10 feet high mast. I am feeding the antenna with
>ladder line.
>
>I am unsure of the length/number of radials needed to
>provide efficient all band (80-10) operation.
>
>The latest arrl antenna book indicates a need to provide
>radials for each band of operation. At the same time it
>doesn't mention the feed method or means of making it
>multi-band.
>
>I currently have 3 short radials (about 7') and 3 longish
>(about 20', 40' and 60'). I didn't measure, I simply ran
>wire to the available support structures.
>
>My question is, I guess, while I am "tuning my ladder line",
>am I also "tuning my radials" in a manner that provides efficient
>operation.
>
>I haven't seen this discussed/documented anywhere, at least in a
>manner I was able to identify.
>
>What needs to be provided?
>
>Thanks,
>bill KA6DVN

I would make the radials the same length as the vertical section if
feed it with Ladder line. And at 10' above ground 8 or more would be
good.. but even one will work.
73 Dave kc1di

2786. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 19:12:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0uc54v87pfsnqpsdding1nqdu6e91saogg@4ax.com>
Source record: 125275

On Thu, 06 Feb 2003 12:17:03 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Gene Fuller wrote:
>> I am sorry to learn that English is not your working language.
>
>When you cannot defend yourself technically, mount an ad hominem
>attack, eh?
>You appear to be completely ignorant

Hi Cecil,

*** (for outstanding irony in a statement)

73's
Richard Clark, KB7QHC

2787. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 19:20:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42B592.2020208@ieee.org>
Source record: 125276

VE9SRB wrote:
> EXACTLY how do you know that "25 W" of power is transmitted rearward into
> the 50 ohm line?

I gathered that from your QEX article, Steve. I'm at work at the moment
and don't have access to your article, but I will quote it for you later.
Exactly how to you know that 75W and 8.33W of power is joining the
forward wave? You cannot measure either one of those quantities. That
25W is the part of 100W left over from your 75W. You add the 75W wave
to the 8.33W wave and completely ignore the two other energy components
predicted by the superposition theorem. Why do you ignore half the
energy components predicted by the superposition theorem?

I'm getting tired of repeating this over and over. Are you trying
to keep me repeating things until I die from old age?

Your P1 = Pfwd(50)*(1-Rho^2) = 100W * 0.75 = 75W

Your P2 = Pref(150)*Rho^2 = 33.33W * 0.25 = 8.33W

Your "rearward-traveling waves 1 and 2" are:

P3 = Pfwd(50)*Rho^2 = 100W*0.25 = 25W, the rest of Pfwd(50)

P4 = Pref(150)*(1-Rho^2) = 33.33W*0.75 = 25W. the rest of Pref(150)

You appear to be selectively endorsing the superposition principle
when you need it to support your argument and rejecting the
superposition principle when it supports my argument. What gives
with that?
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2788. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 19:32:04 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42B834.5020401@ieee.org>
Source record: 125278

Richard Clark wrote:
> <Cecil.A.Moore@ieee.org> wrote:
>
>>Gene Fuller wrote:
>>>I am sorry to learn that English is not your working language.
>>
>>When you cannot defend yourself technically, mount an ad hominem
>>attack, eh? You appear to be completely ignorant
>
> *** (for outstanding irony in a statement)

Tsk, Tsk, Richard. You have reduced yourself to editing postings
in order to change their meanings. I do believe that act became
illegal last year, at least in a number of states.

The entire statement was, "You appear to be completely ignorant
of constructive interference."

Note the use of the word "appear" indicating that is a personal
opinion of mine and not an assertion about objective reality.
And it is no crime to be ignorant of a narrow concept. I am
completely ignorant of the reason why Purple Martin scouts
migrate into the teeth of a cold front which condemns them to
starvation as they feed on nothing but flying insects.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2789. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 19:35:53 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <tOy0a.23714$rq4.1788264@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125277

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E42B592.2020208@ieee.org...

>
> You appear to be selectively endorsing the superposition principle
> when you need it to support your argument and rejecting the
> superposition principle when it supports my argument. What gives
> with that?
> --

I'm just trying to understand whether or not you might be right.

I understand exactly what your interpretation is relative to power.

I'm honestly trying to have an open mind here, so you can stop repeating
position and equations over and over.

Steve VE9SRB

2790. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 19:38:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42B9BC.8080407@ieee.org>
Source record: 125279

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
>>You appear to be selectively endorsing the superposition principle
>>when you need it to support your argument and rejecting the
>>superposition principle when it supports my argument. What gives
>>with that?

> I'm just trying to understand whether or not you might be right.
>
> I understand exactly what your interpretation is relative to power.
>
> I'm honestly trying to have an open mind here, so you can stop repeating
> position and equations over and over.

But Steve, you are asking exactly the same questions that you asked
a year and a half ago, questions that I have answered tens, if not
hundreds, of times before. Why is it taking years for you to have
an open mind? If you don't want the same answers, please stop
repeating exactly the same questions ad infinitum.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2791. FS - HF6V Butternut vertical w/160m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 19:51:31 UTC
From: K R Larkin <kl0719@earthlink.net>
Message-ID: <71z0a.2687$tO2.298458@newsread1.prod.itd.earthlink.net>
Source record: 125280

HF6V Butternut Vertical w/160m kit. Old unit, but never been assembled. Equivalent unit today would cost you $400.00+ I'm not asking nearly that much. Email your offer, include estimate for shipping from South Carolina
WX3Y

2792. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 20:06:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2qf54vk7qjfvgjqdk8294fa0p90nkraf7n@4ax.com>
Source record: 125281

On Thu, 06 Feb 2003 11:32:04 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>>Gene Fuller wrote:
>>>>I am sorry to learn that English is not your working language.
>>>
>>>When you cannot defend yourself technically, mount an ad hominem
>>>attack, eh? You appear to be completely ignorant
>>
>> *** (for outstanding irony in a statement)
>
>Tsk, Tsk, Richard. You have reduced yourself to editing postings
>in order to change their meanings. I do believe that act became
>illegal last year, at least in a number of states.

Tell it to the judge.

>
>The entire statement was, "You appear to be completely ignorant
>of constructive interference."
>
>Note the use of the word "appear" indicating that is a personal
>opinion of mine and not an assertion about objective reality.

Hmm,

ï¿½ (for less than compelling technical entry to support an irony)

And if I were to offer that you "appear to be a ____" (use your own
pejorative) that you would accept this is as an innocent observation,
however subjective and free of ad hominem. Unfortunately, lesser
characterizations have provoked far greater outrage from you in the
past. As such, I am suspicious about the quality of your tolerance -
if it mattered to me in the first place. It doesn't.

Strange that you can allow yourself such latitude for "appears" while
brushing aside the equally subjective, innocent observation that "I am
sorry to learn ____." But it does have a charming correlation to your
other work.

73's
Richard Clark, KB7QHC

2793. Re: Plans on an "Umbrella Antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 20:13:49 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E42C1FD.9DE1CED7@osite.com.br>
Source record: 125282

> There are 6 pages to the article and I could scan them and send them via
> E-mail if you are still interested.And to anyone else who may want it.
> Contact me via E-mail,,,ve3jua@rac.ca
> 73 de Sieb VE3JUA

Well, I want a copy too.

But I think it would be better if posted on a website.
Talk to Ron (?), AC6V (http://www.ac6v.com), maybe he is
interested in hosting the files.

73
--
Paulo E.P. Marcondes
pepm@osite.com.br

2794. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 20:27:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8lc54vcmg0e13hnm345qbtrc459jtfk513@4ax.com>
Source record: 125283

On Thu, 06 Feb 2003 18:05:49 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>Gene Fuller wrote:
>> Vector addition of voltages means that power addition is determined by:
>>
>> [SQRT(75) + SQRT(8.33)]^2, which is 133.33
>>
>> W4SZ
>
>Gene, you haven't answered my question concerning the above equation. If you
>add a source capable of delivering only 75 w to another source capable of
>delivering only 8.33 w, do you still maintain the total power will be
>133.33?
>
>If so, where is the missing 50 w of power coming from?
>
>Walt, W2DU
>

Hi Walt,

The demonstration of this is simple in the extreme if you allow me to perform it outside of a line and you do not constrain me to what sources are available.

Last night, using EZNEC, I placed three antennas in free space to measure this question. These antennas, halfwave dipoles, were put 10 wavelengths apart to help them clear the near-field. That is, they were distributed evenly along an axis 20 wavelengths long.

The inside antenna had only a load of 50 Ohms to support the measurement of the fields produced by the remote sources.

The outside antennas each had an equal source, such that each source could independently impress upon the load a power of 1 Watt into that same 50 Ohms when the source offered a known and fixed power. I then turned on both sources and measured 4 Watts at the same load through the doubling of power.

I hesitate to force this scenario into the classic x + y = z that has been bandied about. I trust that one model will satisfy the argument, and I trust that same x + y = z is not a discontinuity in the fabric of the space/time continuum that requires its own proof.

73's
Richard Clark, KB7QHC

2795. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 20:38:18 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b1uh3ppkq1@helle.btinternet.com>
Source record: 125284

> You appear to be completely ignorant of constructive interference.

==========

To whoever this silly meaningless piece of advice was addressed to should
immediately erase it from his/her memory. It's utterly useless.

2796. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 20:40:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42C83A.9090205@ieee.org>
Source record: 125285

Richard Clark wrote:
> Unfortunately, lesser
> characterizations have provoked far greater outrage from you in the
> past. As such, I am suspicious about the quality of your tolerance -
> if it mattered to me in the first place.

I'll admit my tolerance level was low while my Dad was dying.
I'm presently striving to improve that record.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2797. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 20:44:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42C923.4050300@ieee.org>
Source record: 125286

Richard Clark wrote:
> The outside antennas each had an equal source, such that each source
> could independently impress upon the load a power of 1 Watt into that
> same 50 Ohms when the source offered a known and fixed power. I then
> turned on both sources and measured 4 Watts at the same load through
> the doubling of power.

That's quite a feat without increasing the power into the source
antennas. But we all know that two sources can confuse a wattmeter.
If you reduce the sources to one, as in an ordinary transmission
line, can you then double the power?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2798. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 20:46:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42C9A9.2050209@ieee.org>
Source record: 125287

Reg Edwards wrote:
>>You appear to be completely ignorant of constructive interference.
>
> To whoever this silly meaningless piece of advice was addressed to should
> immediately erase it from his/her memory. It's utterly useless.

What? Don't they teach constructive interference
(enhanced intensity) in England?
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2799. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 20:49:03 UTC
From: richardharrison@webtv.net
Message-ID: <1262-3E42CA3F-272@storefull-2312.public.lawson.webtv.net>
Source record: 125289

Richard Clark wrote:
"---both of you appear to "want" one of these terms (in PF = PD + PR) to change independently of the others----."

Can`t speak for Walter, but I don`t think so. The only valid way to change any term requires a balancing action on both sides of the equation. For example, were you to double the PF, or forward power, it would double both PD, the delivered power and PR, the reflected power, and this is exactly what we would expect. All the powers in the systems increase in proportion. We have multiplied both sides of the equation by two in our example.

We can`t just add a couple of watts to both sides of the equation willy-nilly because Richard Clark imposed in his posting a fixed reflection coefficient. To be true to that condition fixes the ratio of reflected power to the forward power. We might do a simultaneous solution if we already had some values, or without actual values.

Richard wrote:
"So, with a fixed reflection co-efficient what do we get from the speculation of an equation of definition of PF when I raise PR?"

We haven`t named any values yet, so the general equations are true.

(PF = PD + PR)
This defines PF no more than (I = E/R) defines I. in this Ohms law example. Ohm`s law has only been solved for I in the example. It could just as easily been solved for E or R. Some people do exactly that with a little circle or triangle diagram and an agile finger.

We can solve the power equation for PD by subtracting PR from both sides:
PD = PF - PR

Written as above we`ve solved the equation for the power delivered to the load (and for the power delivered to the low-loss line, too).

The equation PD = PF - PR may be interpreted as above, but I am repeating myself as I already posted the four possible permutations of the equation and explained them in a previous posting.

I agree with Cecil that use dictates the equation rather than the equation dictating the use, but they will work either way with no penalty other than clarity of exposition.

Best regards, Richard Harrison, KB5WZI

2800. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 21:12:12 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <McA0a.35483$zF6.2518662@bgtnsc04-news.ops.worldnet.att.net>
Source record: 125288

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E42B9BC.8080407@ieee.org...
> VE9SRB wrote:
> > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> >>You appear to be selectively endorsing the superposition principle
> >>when you need it to support your argument and rejecting the
> >>superposition principle when it supports my argument. What gives
> >>with that?
> >
> > I'm just trying to understand whether or not you might be right.
> >
> > I understand exactly what your interpretation is relative to power.
> >
> > I'm honestly trying to have an open mind here, so you can stop repeating
> > position and equations over and over.
> >
> But Steve, you are asking exactly the same questions that you asked
> a year and a half ago, questions that I have answered tens, if not
> hundreds, of times before. Why is it taking years for you to have
> an open mind? If you don't want the same answers, please stop
> repeating exactly the same questions ad infinitum.
> --
> 73, Cecil, W5DXP
>

Cecil,

From my perspective, I would say that you haven't exactly exhibited much of an open mind in any of this.

At this point, you can have a "discussion" with me where we truly exchange thoughts about the very fine details of our interpretations or you can exchange rhetoric with me. I am equally guilty for sure but I am seriously trying to understand some very subtle points.

I understand each of our interpretations.

I understand that if we both start at t = 0 and perform a transient voltage and current reflection analysis (with superposition) we will both arrive at the same steady state conditions for forward, rearward and delivered power everywhere within the system.

Our interpretations start to differ when we try to decompose the steady state waves into two or more of the individual transient power values. I am not certain that this is even a valid concept. Both of us may be wrong in even trying to have any discussion beyond the transient determination of the

steady state values of power.

For example, decompose the "25 W" rearward wave transmitted into the 50 ohm line into its infinite number (about 8 will do) of individual transient components. The individual voltages and currents add up to the correct total values - from which the "correct" total power can be determined. The individual powers add up to 15 W. I'm perfectly comfortable with this as I know that the individual powers should not necessarily add up to the correct total power in the superposition process. Do you require the power "missing" in the superposition process - 10 W (25 W - 15 W) - to come from somewhere else in the system?

I'm not even sure if that's a valid question or concept. I still lean towards the concept that the only power that has any meaning is the total resultant power determined after ALL the waves combine. That's why I interpret the Melles-Groit web page the way I do.

In any event, I'm going to think about this a bit more and may not be responding on the NG until I feel I've sorted the decomposition issue out a bit more.

Steve VE9SRB

2801. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 21:18:56 UTC
From: richardharrison@webtv.net
Message-ID: <1267-3E42D140-27@storefull-2312.public.lawson.webtv.net>
Source record: 125291

Richard Clark wrote:
"Last night, using EZNEC, I placed three antennas in free space to measure this question.----I then turned on both sources and measured 4 watts---."

I have often applied 0.1 watts to an antenna and measured 100 watts ERP on path. You are gathering power from all directions and concentrating in a narrow beam if you do that. On a transmission line you can`t do that because you have only two directions to take from, forward and backwards.

Best regards, Richard Harrison, KB5WZI

2802. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 21:21:57 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <49k54vou1i3ovdhtpo9spihmuu6fjfh52f@4ax.com>
Source record: 125290

On Thu, 06 Feb 2003 12:44:19 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> The outside antennas each had an equal source, such that each source
>> could independently impress upon the load a power of 1 Watt into that
>> same 50 Ohms when the source offered a known and fixed power. I then
>> turned on both sources and measured 4 Watts at the same load through
>> the doubling of power.
>
>That's quite a feat without increasing the power into the source
>antennas. But we all know that two sources can confuse a wattmeter.
>If you reduce the sources to one, as in an ordinary transmission
>line, can you then double the power?

Hi Cecil,

The point of the posting was to suggest you might try it yourself. It is quite simple to confirm that two equal fields of power dissipate 4 times the power in a load compared to one field of power (all powers being constant and equal). I may be wrong, it was late at night and you are certainly not shy about levering cracks in an argument - are you?

And while you are performing that exercise, try moving the load's position, linearly along the axis to observe the conservation of power across a wavelength of space. Consult the Melles-Griot page to observe their dictum about vectors and such, as this observation with EZNEC fully complies (why would it not?).

By the way, I have observed no confused power meters in EZNEC. Is this an ad hominem aimed at Roy through my posting?

73's
Richard Clark, KB7QHC

2803. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 21:54:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <a0l54vg4d2n4a9uq6s3u995vfaf4rd488h@4ax.com>
Source record: 125292

On Thu, 6 Feb 2003 14:49:03 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>(PF = PD + PR)
>This defines PF no more than (I = E/R) defines I. in this Ohms law
>example. Ohm`s law has only been solved for I in the example. It could
>just as easily been solved for E or R. Some people do exactly that with
>a little circle or triangle diagram and an agile finger.

Hi Richard,

You illuminate the issue with a familiar error observed in the casual
treatment of Ohm. Challenge me on this at your risk, and we will
compare credentials as to who has actual experience to the matter.

With "Ohm's Law" we find the same triumvirate of terms as we have with
these Power issues, and the same mistakes of attribution. Thompson
demands you show your work through describing causation and
proportion. This is something lacking in your responses in spite of
your having introduced Thompson as an authority.

Take a simple example from "Ohm's Law"
R = E / I
which, if it is a "Law" then it is distinct and separate from being a
simple identity and fulfills Thompson's demand for causality and
proportion. The simple question that follows from these demands asks
does it make sense that a change of Resistance is caused by a change
in Voltage or Current? I have a resistor mounted to a bread board,
and I pick up a battery of unknown potential. Does the resistance
change to suit the eventual solution found for that potential? I
think not. For any E, is I independent of R? I think not.

But now I am going to offer the double whammy of a lifetime.
R = E/I
IS Ohm's Law, by mandate of the World's Metrology Bureaus through the
construction of the Primary Standard for Resistance. We start with a
known volume of mercury in a toleranced trough, channel, tube, or what
have you of fixed and precise cross area and length, and when a known
potential is observed across it with a known current passed through it
in such proportions (sound familiar through Thompson?) that is causes
us to recognize the physical structure as evidencing one Ohm.

This AGAIN goes to the accuracy of my long standing observation:
>>>>>>>>My guess is everyone would be content to live with any of the three
>>>>>>>>forms offered, which leads to the logical conclusion that all three

>>>>>>>>are dependencies of a fourth agent. You guys don't have all your oars
>>>>>>>>in the water.

Thus I have shown HOW a seemingly trivial identity can be constructed into a definition that transcends its apparent indistinctive roots in math. I have revealed ALL the dependencies to accomplish this. You have yet to do the same. I have employed ONLY those facts that have been offered by you and others. I have referenced ONLY authorities that have been named by you and others. I have done this across a multitude of examples and metaphors and have seen nothing comparable offered in rebuttal, nor have these same examples nor metaphors has been challenged successfully, or not at all.

Show your work.

73's
Richard Clark, KB7QHC

2804. Titanex or Optibeam ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 21:58:01 UTC
From: adibene@yahoo.com
Message-ID: <e9aa0d73.0302061358.4d6060c4@posting.google.com>
Source record: 125293

Hi all,

I am evaluating the installation of a new HF beam, and the two models
I have taken into consideration are the Titanex TY-5 and the
Optibeam OB9-5.

I would be much interested to hear from users of these two antennas their
opinions, pros and cons, suggestions, caveats, etc.

When dealing with HF beams, when you have installed it, usually it is
too late to change your mind, so a bit of preliminary investigation
is in order.

Thanks for any answers,

73 Alberto I2PHD

2805. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 22:10:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42DD50.7000307@ieee.org>
Source record: 125295

Richard Clark wrote:
> The point of the posting was to suggest you might try it yourself.

Two-source examples don't tell us much about single-source
systems. So I repeat the question: Can you demonstrate the
same phenomenon using only a single source? [not rhetorical]
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2806. Re: Titanex or Optibeam ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 22:12:25 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v45ngrobv1um85@corp.supernews.com>
Source record: 125294

If you have not considered this I offer the URL: http://www.steppir.com/ .
H.
NQ5H

"Alberto" <adibene@yahoo.com> wrote in message
news:e9aa0d73.0302061358.4d6060c4@posting.google.com...
> Hi all,
>
> I am evaluating the installation of a new HF beam, and the two models
> I have taken into consideration are the Titanex TY-5 and the
> Optibeam OB9-5.
>
> I would be much interested to hear from users of these two antennas their
> opinions, pros and cons, suggestions, caveats, etc.
>
> When dealing with HF beams, when you have installed it, usually it is
> too late to change your mind, so a bit of preliminary investigation
> is in order.
>
> Thanks for any answers,
>
> 73 Alberto I2PHD

2807. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 22:17:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0jn54vsfl7ipt78807uv7nll9s5rdnoskk@4ax.com>
Source record: 125296

On Thu, 6 Feb 2003 15:18:56 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"Last night, using EZNEC, I placed three antennas in free space to
>measure this question.----I then turned on both sources and measured 4
>watts---."
>
>I have often applied 0.1 watts to an antenna and measured 100 watts ERP
>on path. You are gathering power from all directions and concentrating
>in a narrow beam if you do that. On a transmission line you can`t do
>that because you have only two directions to take from, forward and
>backwards.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Why is it that I find myself repeating at every turn that you show
your work? You can contrive to prove a fallacy, we all can. That is
NOT the point. I have offered a simple model, challenge it and prove
its failure.

You make a presumption of my having rigged the experiment, just as
Cecil made a presumption my having leveraged EZNEC from its being
"confused." There is no quality in these protestations and slurs.

The example is as simple as described, it is fully described, it is
testable, and yet no one steps up to the plate.

73's
Richard Clark, KB7QHC

2808. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 22:30:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <eko54v8p2c1qnb6jjkpfqk5pv3fnk8f3ul@4ax.com>
Source record: 125298

On Thu, 06 Feb 2003 14:10:24 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> The point of the posting was to suggest you might try it yourself.
>
>Two-source examples don't tell us much about single-source
>systems. So I repeat the question: Can you demonstrate the
>same phenomenon using only a single source? [not rhetorical]

Hi Cecil,

Yes.

73's
Richard Clark, KB7QHC

2809. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 23:06:04 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42EA5C.3060403@ieee.org>
Source record: 125299

VE9SRB wrote:
> Our interpretations start to differ when we try to decompose the steady
> state waves into two or more of the individual transient power values. I am
> not certain that this is even a valid concept.

Steve, you are the one who decomposes the steady state waves into
individual power values. That's where your 75W and 8.33W come from.
That's where the two voltages come from that you superpose to obtain
the total forward voltage. IMO, you have made very minor mistakes
and now have some sort of mental block about them. Parts 1 and 2 of
your QEX article were excellent. IMO, you just seemed to get side-
tracked in Part 3 and lost track of the energy components.

I think I see your problem. You seem to think the "reflected wavefronts"
are transient values. They are *steady-state values* as can be inferred
from the Melles-Griot web page. M-G is not talking about transient values.
They are talking about *steady-state values* and so am I. The two
"rearward-traveling waves 1 and 2" are the steady-state waves (reflected
wavefronts) that are continuously canceling. They are NOT transients.
Wave cancellation is an on-going steady-state process.

> Both of us may be wrong in
> even trying to have any discussion beyond the transient determination of the
> steady state values of power.

If you are wrong, then I must be wrong also? :-) Couldn't you be 2%
wrong and I be 1% wrong or some such? :-)

> For example, decompose the "25 W" rearward wave transmitted into the 50 ohm
> line into its infinite number (about 8 will do) of individual transient
> components. The individual voltages and currents add up to the correct
> total values - from which the "correct" total power can be determined. The
> individual powers add up to 15 W.

The 8 equal individual transient components are each 12.5V.
8 times (12.5^2)/50 = 25W What you are doing is the equivalent of
taking a 25W signal into the primary of a transformer with eight 3.125W
secondaries where each secondary 12.5V/0.25A equals 50 ohms.

> I'm not even sure if that's a valid question or concept.

It's valid if you adhere to the conservation of energy principle.
If you think you can decompose a 25W signal into eight (and only
eight) signals that add up to a total of 15W, you have managed to
destroy energy. I'm willing to bet that you have simply caused
10W of reflections in the opposite direction and don't realize it.

Remember the example I posed where two voltages 120 degrees out of
phase are superposed in a transmission line? The result is two
waves of the same magnitude voltage as each of the two original
waves but traveling in opposite directions. Energy must be
conserved. If 100V + 100V = 100V in an isolated transmission line,
there has to be a 100V wave heading in the opposite direction.

> That's why I interpret the Melles-Groit web page the way I do.

The Melles-Griot web page is perfectly clear, Steve. No interpretation
required. "... all "lost" reflected intensity will appear as enhanced
intensity in the transmitter beam." In order to do that, it has to
change direction, i.e. be re-reflected since it was "reflected intensity"
to start with.

> In any event, I'm going to think about this a bit more and may not be
> responding on the NG until I feel I've sorted the decomposition issue out a
> bit more.

While you are at it, decompose your 133.33W forward wave back into the
75W wave and the 8.33W wave. You will have 50W of extra energy left
over. I suspect that decomposition will cause a 50W wave in the opposite
direction. That's the only possibility I can think of.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2810. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 23:10:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42EB6E.7050804@ieee.org>
Source record: 125300

Richard Clark wrote:
> The example is as simple as described, it is fully described, it is
> testable, and yet no one steps up to the plate.

Exactly what do you think it proves, Richard?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2811. Re: Titanex or Optibeam ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 23:23:05 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <t7C0a.2756$4y4.1288740@newssvr28.news.prodigy.com>
Source record: 125297

I second that.

--
73,
Larry N8LP
www.telepostinc.com/n8lp.html

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v45ngrobv1um85@corp.supernews.com...
> If you have not considered this I offer the URL: http://www.steppir.com/ .
> H.
> NQ5H
>
>
> "Alberto" <adibene@yahoo.com> wrote in message
> news:e9aa0d73.0302061358.4d6060c4@posting.google.com...
> > Hi all,
> >
> > I am evaluating the installation of a new HF beam, and the two models
> > I have taken into consideration are the Titanex TY-5 and the
> > Optibeam OB9-5.
> >
> > I would be much interested to hear from users of these two antennas
their
> > opinions, pros and cons, suggestions, caveats, etc.
> >
> > When dealing with HF beams, when you have installed it, usually it is
> > too late to change your mind, so a bit of preliminary investigation
> > is in order.
> >
> > Thanks for any answers,
> >
> > 73 Alberto I2PHD
>
>

2812. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 23:40:32 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <QnC0a.24112$rq4.1807987@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125301

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E42EA5C.3060403@ieee.org...
> VE9SRB wrote:
> > Our interpretations start to differ when we try to decompose the steady
> > state waves into two or more of the individual transient power values. I
am
> > not certain that this is even a valid concept.
>
> Steve, you are the one who decomposes the steady state waves into
> individual power values. That's where your 75W and 8.33W come from.
> That's where the two voltages come from that you superpose to obtain
> the total forward voltage. IMO, you have made very minor mistakes
> and now have some sort of mental block about them. Parts 1 and 2 of
> your QEX article were excellent. IMO, you just seemed to get side-
> tracked in Part 3 and lost track of the energy components.
>
> I think I see your problem. You seem to think the "reflected wavefronts"
> are transient values. They are *steady-state values* as can be inferred
> from the Melles-Griot web page. M-G is not talking about transient values.
> They are talking about *steady-state values* and so am I. The two
> "rearward-traveling waves 1 and 2" are the steady-state waves (reflected
> wavefronts) that are continuously canceling. They are NOT transients.
> Wave cancellation is an on-going steady-state process.
>
> > Both of us may be wrong in
> > even trying to have any discussion beyond the transient determination of
the
> > steady state values of power.
>
> If you are wrong, then I must be wrong also? :-) Couldn't you be 2%
> wrong and I be 1% wrong or some such? :-)
>
> > For example, decompose the "25 W" rearward wave transmitted into the 50
ohm
> > line into its infinite number (about 8 will do) of individual transient
> > components. The individual voltages and currents add up to the correct
> > total values - from which the "correct" total power can be determined.
The
> > individual powers add up to 15 W.
>
> The 8 equal individual transient components are each 12.5V.
> 8 times (12.5^2)/50 = 25W What you are doing is the equivalent of
> taking a 25W signal into the primary of a transformer with eight 3.125W
> secondaries where each secondary 12.5V/0.25A equals 50 ohms.

>
> > I'm not even sure if that's a valid question or concept.
>
> It's valid if you adhere to the conservation of energy principle.
> If you think you can decompose a 25W signal into eight (and only
> eight) signals that add up to a total of 15W, you have managed to
> destroy energy. I'm willing to bet that you have simply caused
> 10W of reflections in the opposite direction and don't realize it.
>
> Remember the example I posed where two voltages 120 degrees out of
> phase are superposed in a transmission line? The result is two
> waves of the same magnitude voltage as each of the two original
> waves but traveling in opposite directions. Energy must be
> conserved. If 100V + 100V = 100V in an isolated transmission line,
> there has to be a 100V wave heading in the opposite direction.
>
> > That's why I interpret the Melles-Groit web page the way I do.
>
> The Melles-Griot web page is perfectly clear, Steve. No interpretation
> required. "... all "lost" reflected intensity will appear as enhanced
> intensity in the transmitter beam." In order to do that, it has to
> change direction, i.e. be re-reflected since it was "reflected intensity"
> to start with.
>
> > In any event, I'm going to think about this a bit more and may not be
> > responding on the NG until I feel I've sorted the decomposition issue
out a
> > bit more.
>
> While you are at it, decompose your 133.33W forward wave back into the
> 75W wave and the 8.33W wave. You will have 50W of extra energy left
> over. I suspect that decomposition will cause a 50W wave in the opposite
> direction. That's the only possibility I can think of.
> --
> 73, Cecil, W5DXP
>
>
>
> ------------== Posted via Newsfeed.Com - Uncensored Usenet News
==----------
> http://www.newsfeed.com The #1 Newsgroup Service in the World!
> -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers
=-----

2813. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 23:47:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42F426.2050506@ieee.org>
Source record: 125303

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Two-source examples don't tell us much about single-source
>>systems. So I repeat the question: Can you demonstrate the
>>same phenomenon using only a single source? [not rhetorical]
>
> Hi Cecil, Yes.

Let me get this straight. You can get more power into a
receive antenna that is being radiated by the transmit
antenna? How much efficiency above 100%?
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2814. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 23:53:26 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <WzC0a.3210$1q2.318879@newsread2.prod.itd.earthlink.net>
Source record: 125302

Richard Harrison wrote:
> Can`t speak for Walter, but I don`t think so. The only valid way to
> change any term requires a balancing action on both sides of the
> equation. For example, were you to double the PF, or forward power, it
> would double both PD, the delivered power and PR, the reflected power,
> and this is exactly what we would expect. All the powers in the systems
> increase in proportion. We have multiplied both sides of the equation by
> two in our example.

Well, Richard, you can't just double PF. The amount of PF is dependent on PR and/or PD. If the reflection coefficient of the load remains constant the only way to increase PF is to increase PD from the source.

Walt, W2DU

2815. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-06 23:58:37 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <NEC0a.3215$1q2.316127@newsread2.prod.itd.earthlink.net>
Source record: 125304

Richard, here's a little trivia I forgot to tell you earlier. My oldest son, Bill, W2WM was a metrologist while in the Air Force during Vietnam. He worked in the PMEL standards lab at Wheelus Air Base in Tripoli, periodically taking secondary standards from Wheelus to Torrehone (sp) in Spain for correlation.

Walt, W2DU

2816. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 00:02:19 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <fIC0a.24138$rq4.1810774@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125305

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E42EA5C.3060403@ieee.org...

> VE9SRB wrote:
> > For example, decompose the "25 W" rearward wave transmitted into the 50
ohm
> > line into its infinite number (about 8 will do) of individual transient
> > components. The individual voltages and currents add up to the correct
> > total values - from which the "correct" total power can be determined.
The
> > individual powers add up to 15 W.
>
> The 8 equal individual transient components are each 12.5V.
> 8 times (12.5^2)/50 = 25W

That's not possible.

If the 8 individual voltage components were each 12.5 V, the total voltage
would be 100 V and the total power would be 200 W.

I'd check your transient analysis again.

The 8 individual transient rearward voltage components in the 50 ohm line go
as follows:

-26.516 V: 14.062 W
-6.629 V: 0.879 W
-1.657 V: 0.055 W
-0.414V: 0.003 W
-0.104 V: 0.00021W
-0.026 V: .000013 W
-0.006 V: -
-.002 V: -

Total: -35.355 V

If you determine total power from the total voltage you get 25 W. Add the
individual power components you get 15 W.

The point here is exactly the entire argument you make against me when I use
superposition. Adding the voltages works but adding the powers doesn't.
You conclude that when I add 106.065 V (75 W) + 35.355 V (8.33 W) = 141.42 V
to get 133.33 W, that I'm doing something wrong because the superposition
process doesn't account for all the energy.

The same thing happens when we use superposition to get the "25 W" of
rearward power. I presumed that you would conclude that you needed to

account for the extra 10 W of power "missing" in the superposition process.

The point here is that there's nothing wrong with superposition. Its decomposing the steady state wave into power components that the problem. They don't mean anything and you can't conclude anything from them.

Seeing that the rest of your response was just more argument over interpretation, any hopes of a real discussion may be pointless.

Steve VE9SRB

2817. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 00:31:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <eru54v0q0pdk3dovqo86tkcu0gnplh65rf@4ax.com>
Source record: 125306

On Thu, 06 Feb 2003 23:58:37 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>Richard, here's a little trivia I forgot to tell you earlier. My oldest son,
>Bill, W2WM was a metrologist while in the Air Force during Vietnam. He
>worked in the PMEL standards lab at Wheelus Air Base in Tripoli,
>periodically taking secondary standards from Wheelus to Torrehone (sp) in
>Spain for correlation.
>
>Walt, W2DU
>

Hi Walt,

Same era as myself (no surprise there I s'pose). I went to Metrology
school (there was only one in the US) in mid '72; perhaps he and I
bumped into each other in the Halls?

Maybe not, the Zoomies were not particularly inclined to seek our
favor as we had their women and beer. A beard back then did wonders
for attracting those gals in Denver, and when we were in dress canvas,
we were all the more exotic. Our school being there was responsible
for more marriages than any other school in the Navy Educational
system. ;-)

As for rushing Standards around, I remember racing along the deck,
across the quarter deck, down the aft gangway across the ship yards to
the Cal Lab 100 feet down a tunnel under a small hill (built as an
air-raid shelter during WWII). Me and my buddy were hustling a Cesium
Beam Atomic Clock, and hoping against hope that the 15 minute window
of battery power would keep the tocks going in synchrony with the
Naval Observatory. We lost. As a consolation prize, the lab there
offered to transfer a calibrated straight-edge that they wanted to
surplus out of their shop (yeah, like we needed more ballast).

I am unfamiliar with Torrehone (sp) in Spain, unless it is located
fairly close to where my ship tied up in Rota (very near Gibraltar).
Our presence in the land of Franco (last news is that he is "still"
dead - Chevy Chase) was not very high profile; so I would have not
been surprised to stumble across an air base for the same reason (or I
would have been surprised, but not for long).

73's
Richard Clark, KB7QHC

2818. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 00:32:28 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E42FE9C.9020907@ieee.org>
Source record: 125307

VE9SRB wrote:
> The 8 individual transient rearward voltage components in the 50 ohm line go
> as follows:

I'm sorry, I didn't realize what you were doing. I missed the word "transient"
in your posting. I thought you just wanted to take one voltage and break it up
into 8 voltages. So ignore my response.

> The point here is that there's nothing wrong with superposition.

I have never said there was anything wrong with superposition of
voltages and currents. All I have said is that the total energy used
in the superposition process must come from somewhere and balance.
Anything else is a violation of the conservation of energy principle.

Any time the phase angle between two vector voltages is less than
90 degrees, constructive interference occurs. That extra constructive
interference energy has to come from somewhere. When constructive
interference happens at an impedance discontinuity isolated from
any source by a transmission line, there must be an equal magnitude
of destructive interference to balance the constructive interference.
The destructive interference on one side of an impedance discontinuity
feeds the constructive interference on the other side. That necessarily
involves reflected energy and re-reflected energy depending upon the
configuration.

And I have been dealing with *nothing* except steady-state values.
Where did you get the idea I was dealing with transient values?
I have never discussed transient values with you. P1, P2, P3, and
P4 are all steady-state values. For steady-state configurations,
I fail to see the value in discussing transients. It just unnecessarily
complicates things.

> Seeing that the rest of your response was just more argument over
> interpretation, any hopes of a real discussion may be pointless.

I'm sorry that I am not omniscient, Steve. I misunderstood what you
said. Give me a break. I'm only human. I apologize and will buy you
a beer if you come to College Station, TX.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2819. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 00:35:14 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E42FF42.79F63626@uci.edu>
Source record: 125308

RC -

What we have here is a failure to communicate. Not sure what point you're trying to make about identities and all that. The variables under discussion are certainly not constants of proportionality. However you certainly could say that about Rho. You're right about Ohms Law (as was obvious without noting). But that doesn't change the fact that RH is right about PD being equal to PF - PR. He is also correct in that for a given circuit the ratio of PF to PR is fixed, which simply means that if PR goes up (for example), then _both_ PF and PD must also change. Not just one or the other - or neither (as you seemed to suggest w/re your math book). When you know any two of the terms, the third can always be determined using that simple relation. Under those circumstances (as with Ohms Law), PF = PD + PR and its variants are, without caveat, completely valid. If you don't know two of the three terms, then that equation by itself is insufficient to solve the problem. A fourth term (Rho) and a second equation relating Rho to two of the other terms would be necessary. Two equations and two unknowns.

(Until now, I thought they only needed to teach Ohms "Three" laws in the Army.) ;-)

73 de AC6XG

Richard Clark wrote:
>
> On Thu, 6 Feb 2003 14:49:03 -0600 (CST), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >
> >(PF = PD + PR)
> >This defines PF no more than (I = E/R) defines I. in this Ohms law
> >example. Ohm`s law has only been solved for I in the example. It could
> >just as easily been solved for E or R. Some people do exactly that with
> >a little circle or triangle diagram and an agile finger.
>
> Hi Richard,
>
> You illuminate the issue with a familiar error observed in the casual
> treatment of Ohm. Challenge me on this at your risk, and we will
> compare credentials as to who has actual experience to the matter.
>
> With "Ohm's Law" we find the same triumvirate of terms as we have with
> these Power issues, and the same mistakes of attribution. Thompson
> demands you show your work through describing causation and

> proportion. This is something lacking in your responses in spite of
> your having introduced Thompson as an authority.
>
> Take a simple example from "Ohm's Law"
> R = E / I
> which, if it is a "Law" then it is distinct and separate from being a
> simple identity and fulfills Thompson's demand for causality and
> proportion. The simple question that follows from these demands asks
> does it make sense that a change of Resistance is caused by a change
> in Voltage or Current? I have a resistor mounted to a bread board,
> and I pick up a battery of unknown potential. Does the resistance
> change to suit the eventual solution found for that potential? I
> think not. For any E, is I independent of R? I think not.
>
> But now I am going to offer the double whammy of a lifetime.
> R = E/I
> IS Ohm's Law, by mandate of the World's Metrology Bureaus through the
> construction of the Primary Standard for Resistance. We start with a
> known volume of mercury in a toleranced trough, channel, tube, or what
> have you of fixed and precise cross area and length, and when a known
> potential is observed across it with a known current passed through it
> in such proportions (sound familiar through Thompson?) that is causes
> us to recognize the physical structure as evidencing one Ohm.
>
> This AGAIN goes to the accuracy of my long standing observation:
> >>>>>>>>My guess is everyone would be content to live with any of the three
> >>>>>>>>forms offered, which leads to the logical conclusion that all three
> >>>>>>>>are dependencies of a fourth agent. You guys don't have all your oars
> >>>>>>>>in the water.
>
> Thus I have shown HOW a seemingly trivial identity can be constructed
> into a definition that transcends its apparent indistinctive roots in
> math. I have revealed ALL the dependencies to accomplish this. You
> have yet to do the same. I have employed ONLY those facts that have
> been offered by you and others. I have referenced ONLY authorities
> that have been named by you and others. I have done this across a
> multitude of examples and metaphors and have seen nothing comparable
> offered in rebuttal, nor have these same examples nor metaphors has
> been challenged successfully, or not at all.
>
> Show your work.
>
> 73's
> Richard Clark, KB7QHC

2820. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 00:45:25 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3E4301A5.7BBE@wt.net>
Source record: 125309

nm5k@wt.net (Mark Keith) wrote in message
> But I've never seen a case of a lower
> band antenna that had maximum efficiency with the coil at the base, or
> that would even really compete with one that had the coil higher up
> the mast.
> The only way I could see this happening would be if you top loaded the
> antenna with a capacity hat to produce linear current distribution. In
> that case, then yes, I can see how having the coil at the base would
> be the way to go, being it takes less turns to tune, and less coil
> loss.

After doing some modeling, I think I'm going to change my tune on this.
I modeled quite a few different verticals, base load, center load, T
top, Hat, etc. I found if the hat is not large enough to resonate the
antenna as a 1/4 wave, elevating the coil is better than the base
mounted coil even in this case.
The small hat is not large enough to provide a fully linear current
distribution, even though it's better than with no hat. In comparing the
small hat antenna with the coil at the base and then at the 70% up
point, the elevated coil version gave a better current distribution, and
a higher feedpoint impedance.
There will be more coil losses but I don't think enough to offset the
advantage of the elevated coil.
I also noticed that say if you used a 40 ft vertical and then added a
top wire to form a T vertical which was resonant, it was nearly equal to
the same vertical with 4 shorter spokes also tuning the antenna to the
same freq.
The current distribution was the same, and also the feedpoint impedance.
So I see no real loss in just using a T vertical compared to a 4 spoke
hat. "Both resonant with full length top loading".
This may be no surprise, but I thought I would mention it in case people
might think about converting a T vertical to a full 4 spoke or more hat.
I don't think it's both the bother according to modeling. If both have
equal total capacitance, they seem to give equal results.
Sure, the "T" pattern may not be quite as perfect a circle, but any skew
is not enough to notice in the real world. It's close enough to
perfect...:/ MK

--
http://web.wt.net/~nm5k

2821. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 00:45:58 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E4301C6.5E1731D3@uci.edu>
Source record: 125311

Richard Clark wrote:
> It
> is quite simple to confirm that two equal fields of power dissipate 4
> times the power in a load compared to one field of power (all powers
> being constant and equal).

Wish I could confirm an S unit increase in signal for every 3 dB increase in power at my home station. That's twice what I can do with 3 dB of antenna gain. But I guess if doubled the number of properly phased radiators at the same time as I doubled the power, maybe I could just do it.

73 de AC6XG

2822. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 00:48:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7m064vgtosi2djkrujvdms8g5a88pvnuni@4ax.com>
Source record: 125310

On Thu, 06 Feb 2003 16:35:14 -0800, Jim Kelley <jwkelley@uci.edu>
wrote:

>Under those
>circumstances (as with Ohms Law), PF = PD + PR and its variants are,
>without caveat, completely valid.

Hi Jim,

>>>>>>>>>This AGAIN goes to the accuracy of my long standing observation:
>>>>>>>>>My guess is everyone would be content to live with any of the three
>>>>>>>>>forms offered, which leads to the logical conclusion that all three
>>>>>>>>>are dependencies of a fourth agent. You guys don't have all your oars
>>>>>>>>>in the water.

73's
Richard Clark, KB7QHC

2823. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 01:06:35 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b1v0ou$60e$1@slb9.atl.mindspring.net>
Source record: 125312

Doc,

My comments were directed to that goof Andy. Your comments about the ARRL
are valid. I do indeed agree that the league needs to get more 'in touch'
with present day reality.

I do indeed remember how it used to be with the ARRL. And there are MANY
things I dont agree with. However, and this is a biggy, IF you dont
belong you have NO INPUT. And it is ALL WE HAVE to represent us.

Dan/W4NTI

"'Doc" <w5lz@cwis.net> wrote in message news:3E423BA9.C1970993@cwis.net...
>
>
> Dan,
> I guess everyone is entitled to their opinion. About
> the ARRL, and what a 'true' ham is. I have a license so
> I figure that makes me as 'true' a ham as anyone. I think
> how long I've had that license just really doesn't make a
> lot of difference.
> I'm no longer a member of the ARRL, although I was for
> quite a few years. When I first joined, I would have agreed
> with you about the benefits both to the individual and for
> all hams in general. Unfortunately the aims and direction
> of the League have changed over the years. I can remember
> when the League really did care for the individual ham and
> tried to do the best they could for the whole hobby. I can
> also say from experience that the League isn't like that
> any more. It isn't very difficult to see for your self, if
> you're interested. Start with the editorials from the 70'
> and read your way up to the present. You will see the
> attitude change, and it should certainly make you wonder just
> who's 'side' they're on now, (if 'side' is the right word).
> I wish it were possible to get the magazine without the
> membership. I don't mind paying for the magazine, but I won't
> support what the ARRL is doing to this hobby.
> 'Doc

2824. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 01:55:34 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E431219.9846C56D@silverstar.com>
Source record: 125313

Mark, why not buy a B&W matchbox to connect scanner to car radio
antenna?

2825. Re: Multi-band verticals and the radials that love them

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 01:58:43 UTC
From: Bill Mahaffey <ka6dvn@cox.net>
Message-ID: <0001HW.BA68534A002ABB8BF0284600@news.west.cox.net>
Source record: 125314

On Thu, 6 Feb 2003 11:08:14 -0800, KC1DI wrote
(in message <bic54vkraslnptpqfv9d7sjlqkdd2gh96d@4ax.com>):

> On Thu, 06 Feb 2003 16:06:55 GMT, Bill Mahaffey <ka6dvn@cox.net>
> wrote:
>
>> I have slightly less than 30 feet of aluminum sitting
>> atop a 10 feet high mast. I am feeding the antenna with
>> ladder line.
>>
>> I am unsure of the length/number of radials needed to
>> provide efficient all band (80-10) operation.
>>
>> The latest arrl antenna book indicates a need to provide
>> radials for each band of operation. At the same time it
>> doesn't mention the feed method or means of making it
>> multi-band.
>>
>> I currently have 3 short radials (about 7') and 3 longish
>> (about 20', 40' and 60'). I didn't measure, I simply ran
>> wire to the available support structures.
>>
>> My question is, I guess, while I am "tuning my ladder line",
>> am I also "tuning my radials" in a manner that provides efficient
>> operation.
>>
>> I haven't seen this discussed/documented anywhere, at least in a
>> manner I was able to identify.
>>
>> What needs to be provided?
>>
>> Thanks,
>> bill KA6DVN
>
> I would make the radials the same length as the vertical section if
> feed it with Ladder line. And at 10' above ground 8 or more would be
> good.. but even one will work.
> 73 Dave kc1di
>
>

Thanks for the feedback guys. I'll shorten'em up a bit and see
how that goes. Putting in 8 will be difficult as I don't have anything
readily available to attach the radials to, but 5 i can do.

73,
bill
ka6dvn

2826. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 02:05:48 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E431471.AFC1130@attbi.com>
Source record: 125315

ARRL is the ONLY LOBBYIST I can hire for $40 a year.

Remember we are a LICENSED SERVICE subject to government rules and
regulations. We do NOT have a RIGHT to operate radios. It is a legal
privilege that has to be defended and advanced.

I'll be a member of ARRL until I die. QST is simply a bonus.

Deacon Dave Shrader, W1MCE
+++

Dan/W4NTI wrote:
>
> Doc,
>
> My comments were directed to that goof Andy. Your comments about the ARRL
> are valid. I do indeed agree that the league needs to get more 'in touch'
> with present day reality.
>
> I do indeed remember how it used to be with the ARRL. And there are MANY
> things I dont agree with. However, and this is a biggy, IF you dont
> belong you have NO INPUT. And it is ALL WE HAVE to represent us.
>
> Dan/W4NTI
>
> "'Doc" <w5lz@cwis.net> wrote in message news:3E423BA9.C1970993@cwis.net...
> >
> >
> > Dan,
> > I guess everyone is entitled to their opinion. About
> > the ARRL, and what a 'true' ham is. I have a license so
> > I figure that makes me as 'true' a ham as anyone. I think
> > how long I've had that license just really doesn't make a
> > lot of difference.
> > I'm no longer a member of the ARRL, although I was for
> > quite a few years. When I first joined, I would have agreed
> > with you about the benefits both to the individual and for
> > all hams in general. Unfortunately the aims and direction
> > of the League have changed over the years. I can remember
> > when the League really did care for the individual ham and
> > tried to do the best they could for the whole hobby. I can
> > also say from experience that the League isn't like that
> > any more. It isn't very difficult to see for your self, if
> > you're interested. Start with the editorials from the 70'
> > and read your way up to the present. You will see the

> > attitude change, and it should certainly make you wonder just
> > who's 'side' they're on now, (if 'side' is the right word).
> > I wish it were possible to get the magazine without the
> > membership. I don't mind paying for the magazine, but I won't
> > support what the ARRL is doing to this hobby.
> > 'Doc

2827. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 02:53:01 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3E431F8D.EA28B1F@raytheon.com>
Source record: 125316

Hi Mark,

Mark Keith wrote:

> After doing some modeling, I think I'm going to change my tune on this.
> I modeled quite a few different verticals, base load, center load, T
> top, Hat, etc. I found if the hat is not large enough to resonate the
> antenna as a 1/4 wave, elevating the coil is better than the base
> mounted coil even in this case.

That's right! The optimum placement of the the loading coil depends on a number of factors and can be difficult to determine precisely. Fortunately, the optimization is broad and you won't lose more than a decibel or two from the optimum location as long as the coil is at least a third of the way up the mast.

For example, in the common low HF mobile installation where the vertical is a small fraction of a quarter wavelength tall, and ground losses a dozen ohms or less, the optimum placement of the loading coil will be such that the capacitance to ground of the section above the coil will be approximately 25% to 50% of the capacitance of the entire structure, measured at the base, without the loading coil installed. The higher the coil Q, the higher up the loading should be placed for best efficiency. So called 'center loading' results in both increased efficiency and bandwidth over the mechanically simpler base loaded configuration. The adverse effects of conductive surfaces, such as automotive quarter panels, near the base are also minimized by center loading.

> The small hat is not large enough to provide a fully linear current
> distribution, even though it's better than with no hat.

To clarify, the current distribution of any short vertical can always be reasonably approximated as a straight line, and is therefore linear. The current is zero at the tip, and increases approximately linearly towards the feedpoint where the current is maximum. When top loaded with a capacity hat, the current starts at some non zero value at the top of the vertical section, and continues to increase in an approximately linear manner towards the base. If the capacity hat is very large, than the current along the vertical section is approximately _constant_.

> In comparing the
> small hat antenna with the coil at the base and then at the 70% up
> point, the elevated coil version gave a better current distribution, and
> a higher feedpoint impedance.
> There will be more coil losses but I don't think enough to offset the
> advantage of the elevated coil.

Depends on the coil Q and the size of the capacity hat. Higher Q coils
should be located further up the mast than low Q coils, but far enough from
the hat itself so that capacitance from the hat doesn't significantly effect
the coil self resonance characteristics.

> I also noticed that say if you used a 40 ft vertical and then added a
> top wire to form a T vertical which was resonant, it was nearly equal to
> the same vertical with 4 shorter spokes also tuning the antenna to the
> same freq.
> The current distribution was the same, and also the feedpoint impedance.
> So I see no real loss in just using a T vertical compared to a 4 spoke
> hat. "Both resonant with full length top loading".

If the objective is minimize high angle horizontally polarized radiation,
then four or more spokes, all carefully balanced, will be slightly superior
to two spokes. The effect is insignificant for most amateur uses but may be
significant in certain specialized applications. Minimization of
horizontally polarized radiation is the reason more than two radials are
usually used in groundplane verticals.

> This may be no surprise, but I thought I would mention it in case people
> might think about converting a T vertical to a full 4 spoke or more hat.
> I don't think it's both the bother according to modeling.

Probably not for overwhelming majority of practical applications.

bart
wb6hqk

2828. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 03:03:14 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E4321F2.B3915E1B@uci.edu>
Source record: 125317

OC_CAM's Razor wrote:
> I think I see your problem. You seem to think the "reflected wavefronts"
> are transient values. They are *steady-state values* as can be inferred
> from the Melles-Griot web page. M-G is not talking about transient values.
> They are talking about *steady-state values* and so am I. The two
> "rearward-traveling waves 1 and 2" are the steady-state waves (reflected
> wavefronts) that are continuously canceling. They are NOT transients.
> Wave cancellation is an on-going steady-state process.

I agree with Cecil on this point. We know that two waves of equal amplitude and opposite phase, traveling in the same direction will cancel in that direction. Melles-Griot tells us that under this circumstance, as shown by experiment, the cancelled waves are caused to propagate in the opposite direction. The energy is cancelled only in the original direction. Energy is conserved owing to the reversal in direction (and vice-versa). They in fact must continue in the direction of the original incident wave or waves. In effect, they never actually reflected back from the load in the first place.

From looking at the optics texts, it appears that the proof would be found in a special case solution to Poynting vector equations. I can't really do that math with any authority, but I know from past discussions that there are folks here in the group who do it - given the opportunity and motivation.

I found the idea to be counterintuitive at first glance, but it does explain how energy is conserved even when it is apparently being cancelled.

I hope Cecil and Steve can agree to discuss the steady-state for the moment. The transient stuff gets real nutty. We don't really want to get into the weird thing Maxwells equations say should happen in order to conserve momentum at the instant a flashlight is turned on. ;-)

73, ac6xg

2829. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 03:36:05 UTC
From: richardharrison@webtv.net
Message-ID: <16233-3E4329A5-162@storefull-2311.public.lawson.webtv.net>
Source record: 125318

Walt, W2DU wrote:
"Well, Richard, you can`t just double PF. The amount of PF is dependent on PR and/or PD. If the reflection coefficient of the load remains constant the only way to increase PF is to increase PD from the source."

That was exactly what I had in mind when I said you must double everything. I assumed I had control of the transmitter output and cranked the PD up, which doubles the forward power and doubles the reflected power because the reflection coefficient is unchanged.

Best regards, Richard Harrison, KB5WZI

2830. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 04:36:53 UTC
From: Bart Rowlett <bart@wb6hqk.ampr.org>
Message-ID: <3E4337E5.5A15B51D@wb6hqk.ampr.org>
Source record: 125219

OC_CAM's Razor wrote:
>
> Richard Clark wrote:
> > The example is as simple as described, it is fully described, it is
> > testable, and yet no one steps up to the plate.
>
> Exactly what do you think it proves, Richard?

I would call it a nice demonstration of the superposition principal.

bart
wb6hqk

2831. Re: Plans on an "Umbrella Antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 05:02:07 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0302062102.6efb14f8@posting.google.com>
Source record: 125220

Look at this : http://www.hexbeam.com/

and a homebrew version :http://ireland.iol.ie/~bravo/ahexbeam.htm

Rich K2CPE

radiosam@wongfaye.com (Radiosam) wrote in message
news:<823e3267.0302051623.3e3a45b8@posting.google.com>...
> I'm looking for web site with some type of plans for an Umbrella wire
> antenna. Apparently it has a low angle of radiation and can do 80-10
> meters. I had heard of a reference to an old copy of "Ham Radio" from
> the seventies.

2832. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 06:47:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E435669.8040409@ieee.org>
Source record: 125221

Jim Kelley wrote:
> I hope Cecil and Steve can agree to discuss the steady-state for the
> moment. The transient stuff gets real nutty.

Yep, and makes for an excellent diversion from the real topic.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2833. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 06:52:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E43579D.9040802@ieee.org>
Source record: 125222

Bart Rowlett wrote:
> OC_CAM's Razor wrote:
>
>>Richard Clark wrote:
>>
>>>The example is as simple as described, it is fully described, it is
>>>testable, and yet no one steps up to the plate.
>>
>>Exactly what do you think it proves, Richard?
>
> I would call it a nice demonstration of the superposition principal.

Beyond that, does it prove that you can get blood out of a turnip?
Can you get constructive interference of radio waves at a point in
space without getting destructive interference somewhere else? I
once used EZNEC to design an omnidirectional vertical with 20dBi
gain and a 3dB beamwidth of 60 degrees. Do you think I can turn that
antenna into reality?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2834. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 07:07:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E435B4C.E7E81811@cwis.net>
Source record: 125223

Dan,
I've tried it from the 'inside' as you suggest. If
you pay attention to the letter to the editor for a
couple of those years, you'll see my former call sign
quite a few times. It did/does no good at all. When
you complain to the people who have the only control
over what is printed, you are only wasting your time.
One 'voice in the wilderness' has absolutely no chance.
Talking to your area director (inperson and by letter)
also has very little chance of going any further than
his 'round file'. From what I've seen 'money talks,
and the rest walk', to paraphrase that just a little.
I hope others can make a difference where I couldn't,
I'll certainly cheer them on...
'Doc

PS - As for the lobbying thing. Don't make me laugh.

2835. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 07:09:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E435BBF.9020905@ieee.org>
Source record: 125224

Jim Kelley wrote:
> OC_CAM's Razor wrote:
>
>>I think I see your problem. You seem to think the "reflected wavefronts"
>>are transient values. They are *steady-state values* as can be inferred
>>from the Melles-Griot web page. M-G is not talking about transient values.
>>They are talking about *steady-state values* and so am I. The two
>>"rearward-traveling waves 1 and 2" are the steady-state waves (reflected
>>wavefronts) that are continuously canceling. They are NOT transients.
>>Wave cancellation is an on-going steady-state process.
>
> I agree with Cecil on this point. We know that two waves of equal
> amplitude and opposite phase, traveling in the same direction will
> cancel in that direction. Melles-Griot tells us that under this
> circumstance, as shown by experiment, the cancelled waves are caused to
> propagate in the opposite direction. The energy is cancelled only in
> the original direction.

One of the problems here is illustrated by a quote from the QEX article.

>> "For a total re-reflection of power to occur ..., transmission-line theory
>> requires that the physical or measurable impedance ... be a short circuit,
>> open circuit, or purely reactive".

This may be a true statement for a load driven by a single source, but
the statement is not true for an impedance discontinuity in the middle of
a transmission line, isolated from the source, with waves incident upon it
from two different directions in the form of forward and reflected waves.

The Melles-Griot web page indicates that there is an additional method of
causing a total re-reflection and that is when "reflected wavefronts interfere
destructively and ... the two reflections are of equal amplitude ..." That's
exactly what happens at a match point in a transmission line with reflections.

> I found the idea to be counterintuitive at first glance, but it does
> explain how energy is conserved even when it is apparently being
> cancelled.

All "cancellation" of energy is only apparent.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2836. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 07:40:31 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jno64vo9jf200p035qs9dor12ttcdk43bb@4ax.com>
Source record: 125225

On Fri, 07 Feb 2003 00:52:13 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Bart Rowlett wrote:
>> OC_CAM's Razor wrote:
>>
>>>Richard Clark wrote:
>>>
>>>>The example is as simple as described, it is fully described, it is
>>>>testable, and yet no one steps up to the plate.
>>>
>>>Exactly what do you think it proves, Richard?
>>
>> I would call it a nice demonstration of the superposition principal.
>
>Can you get constructive interference of radio waves at a point in
>space without getting destructive interference somewhere else?

Hi Cecil,

The simple answer to that can be obtained from the free form of EZNEC
if you should care to download it and try. You will find that EZNEC
easily conforms to and shows all solutions offered by Melles-Griot.

73's
Richard Clark, KB7QHC

2837. Re: Looking at Spectrum Analyzers

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 10:17:50 UTC
From: Barry Lennox <pbarryplennoxp@operamail.com>
Message-ID: <gf174v0ajm7hj8m6vc0cb5ieckj52ntql3@4ax.com>
Source record: 125226

On Wed, 22 Jan 2003 08:43:32 -0600, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

>Larry:
>
>There are numerous variables, and, of course, is the application critical,
>or just looking around at RF. The optimum choice these days for a ham is
>the 8558B for general work. I have reason to believe there was a batch of
>bad rotors, and by now they have all shown themselves, so if the unit has
>been in use, and all the controls work properly, then you are OK. So,
>either buy in person and check the unit out, or get a return guarantee. My
>friend was fortunate in finding the rotor fingers still inside his 8558B,
>and was able to repair it using 00-96 screws. It took 3 weeks, between
>opening the unit, pulling all the front panel apart, repairing the rotor,
>and reassembling. He (we) also discovered the big HP manual is incomplete
>in reassembly instructions, and having an intact unit to compare was
>necessary to finish the job.

George,

Ohoh--, I have a 181T/8559B with what sounds like that problem, the
display vanishes, leaving a plain trace, at a couple of the Freq Span
switch settings. Is that it? If so, is it a lost cause?

I also have an intermittent problem with the 182T, the horizontal
deflection shrinks to about an inch from time to time. Is that a known
common problem? My guess is that one of the power supply rails dies.

Barry Lennox

2838. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 12:09:20 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <QIN0a.24821$rq4.1880841@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125227

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E42FE9C.9020907@ieee.org...

> I will buy you
> a beer if you come to College Station, TX.
> --
> 73, Cecil, W5DXP

Now that's something we can agree on.

If I'm ever going to be in that area, I'll let you know.

I've got a few "fractal" things to take care of and need to focus some
thought energy there, so I'll really be exiting this thread [infamous last
words].

Take care,

Steve

2839. Re: Titanex or Optibeam ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 13:16:31 UTC
From: adibene@yahoo.com
Message-ID: <e9aa0d73.0302070516.5cd556e7@posting.google.com>
Source record: 125228

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:<v45ngrobv1um85@corp.supernews.com>...
> If you have not considered this I offer the URL: http://www.steppir.com/ .
> H.
> NQ5H
>
Thanks for the pointer. Wasn't that antenna formerly called
FluidMotion ? It seems they don't use this name any longer.
I had examined it, but I am a bit worried about wearing in time
of the sliding contacts.... weren't for this, it would look
as the ideal one. Any comments or experiences with this antenna ?
TNX.

73 Alberto I2PHD

2840. Mobile Antenna for 2m/70cms

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 13:33:19 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b20civ$8r8$1@helle.btinternet.com>
Source record: 125229

Hi,

The idea of a small vertical (without radials) appeals to me because I'm in an appartment.

I have a balcony at decent height. I was thinking of getting a vertical mobile with gain for 2m and 70cms. Is the groundplane critical in terms of being perpendicular to the antenna? Or can I just attach various bits of metal welded together to the corner of the wall where it will be mounted, and paint that black?

It's hard to describe, but a solution like that would be extremely discrete for me.

Thanks,

D
M3DPE

2841. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 14:12:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E43BED4.3080909@ieee.org>
Source record: 125230

Richard Clark wrote:
> The simple answer to that can be obtained from the free form of EZNEC
> if you should care to download it and try. You will find that EZNEC
> easily conforms to and shows all solutions offered by Melles-Griot.

Richard, I purchased ELNEC back in the 80's and have been a
registered owner of EZNEC ever since it was first introduced.
It is a very good piece of software. If you would like, I can
show you an antenna design that EZNEC says gives 20 dBi omni-
directional gain with a 60 degree vertical beamwidth. If you
integrate all that gain over 360x60 degrees, you will see
that NEC-2 will indeed radiate more power than is being
supplied to the antenna. That's why I'm asking what exactly
have you proven?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2842. Re: Titanex or Optibeam ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 14:17:02 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v47g1hovqauif4@corp.supernews.com>
Source record: 125231

The Steppir is made by FluidMotion.
They use industrial stepper motors. The system should last for a long time.
Their test stand is over a million band changes without a failure.
I have the three element yagi and my vertical should arrive soon.
Weight and wind loading are much better than a log periodic with better
performance.
The front to back is amazing.
You have push button reversal and a bi directional mode.
Good product; an idealized three element yagi on every frequency.
H.
NQ5H

"Alberto" <adibene@yahoo.com> wrote in message
news:e9aa0d73.0302070516.5cd556e7@posting.google.com...
> "H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:<v45ngrobv1um85@corp.supernews.com>...
> > If you have not considered this I offer the URL: http://www.steppir.com/
.
> > H.
> > NQ5H
> >
> Thanks for the pointer. Wasn't that antenna formerly called
> FluidMotion ? It seems they don't use this name any longer.
> I had examined it, but I am a bit worried about wearing in time
> of the sliding contacts.... weren't for this, it would look
> as the ideal one. Any comments or experiences with this antenna ?
> TNX.
>
> 73 Alberto I2PHD

2843. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 14:26:29 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E43C215.3040102@ieee.org>
Source record: 125232

VE9SRB wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
>>I will buy you a beer if you come to College Station, TX.
>
> Now that's something we can agree on.
>
> If I'm ever going to be in that area, I'll let you know.
>
> I've got a few "fractal" things to take care of and need to focus some
> thought energy there, so I'll really be exiting this thread [infamous last
> words].

Before you go, Steve, let's list the things we agree on. Your model
with my "enhancements" is elegantly simple and perfectly symmetrical.
It would be a shame to let our minor disagreements about energy
overshadow the utility of the model. Consider an impedance discontinuity:

Source---------Z01-------x--------Z02---------Load
Pfwd1, Pref1 Rho Pfwd2, Pref2

The superposition principle predicts four steady-state components:

Pfwd1(1-Rho^2) = P1 = V1*I1

Pref2(Rho^2) = P2 = V2*I2

Pfwd1(Rho^2) = P3 = V3*I3

Pref2(1-Rho^2) = P4 = V4*I4

Using _V_ to indicate a phasor and performing phasor addition:

_V1_ + _V2_ = _Vfwd2_ (your equation)

_I1_ + _I2_ = _Ifwd2_

_V3_ + _V4_ = _Vref1_

_I3_ + _I4_ = _Iref1_

You and I agree on the above, right? There is an elegant
natural symmetry surrounding that impedance discontinuity.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2844. Re: Mobile Antenna for 2m/70cms

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 14:41:28 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <3E43C598.1010006@psu.edu>
Source record: 125233

Dean,

It sounds like what you may want is a sleeve dipole, fed from the bottom end (or the top, hanging down over the balcony.) The one thing I don't know for sure is how to make it work on two bands that way, but a dual band vertical fed with coax through a copper tube one quarter wave long on 2 meters may work well for 70 cm as well. An alternative would be a dual band pole antenna. Both of these antennas coul be put in a corner and would not be obtrusive.

73,
Bob AD3K

Dean Elwood wrote:
> Hi,
>
> The idea of a small vertical (without radials) appeals to me because I'm in
> an appartment.
>
> I have a balcony at decent height. I was thinking of getting a vertical
> mobile with gain for 2m and 70cms. Is the groundplane critical in terms of
> being perpendicular to the antenna? Or can I just attach various bits of
> metal welded together to the corner of the wall where it will be mounted,
> and paint that black?
>
> It's hard to describe, but a solution like that would be extremely discrete
> for me.
>
> Thanks,
>
> D
> M3DPE
>
>

--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

2845. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 15:40:24 UTC
From: richardharrison@webtv.net
Message-ID: <891-3E43D368-5@storefull-2313.public.lawson.webtv.net>
Source record: 125237

Jim Kelley wrote:
"We know that two waves of equal amplitude and opposite phase traveling in the same direction will cancel in that direction."

That`s what happens in space. But, energy isn`t destroyed. It goes elsewhere or it is converted to another form.

SWR shows what happens on a transmission line when the incident and reflected waves pass through each other traveling in opposite directions. They largely ignore each other.

SWR voltage maxima occur every 1/2-wavelength (180-degrees) in the line. Current maxima are displaced 90-degrees from the voltage maxima.

The reflected wave originates from an impedance bump in the line. An open or a short on the line causes a complete reflection.

A pure reactance also results in a complete reflection. A reflection reverses phase between volts and amps in a reflected wave. A capacitive receiver (load) causes the first VSWR minimum to occur closer to the receiver than a quarter-wavelength. The distance from the receiver at which the reflected wave lags 180-degrees behind the incident wave is less than a quarter-wavelength. See page 94 of the 1955 Terman for diagrams and a better explanation. The effect of a reactive load is to displace the SWR pattern.

The reversal in phase between volts and amps in the reflected wave is the distinguishing characteristic enabling a Bird wattmeter to cancel samples from one transmission line direction while sensing those from the opposite direction.

You may rely on Melles-Griot to illustrate phase and direction reversal which coincide, or you could choose some other example.

When more than one source of energy exists, interference is possible. When this occurs in the absence of waveguides, including coax, energy can take many directions. In coax, it generally has to go one way or the other.

The interpretations of Melles-Griot puzzle me. We seem to be considering two coincident (or two coreflected) waves of opposite phase, and on the same path. How can this happen on cable? In free space we have the balloon analogy, but on a pair of wires, coincident, out-of-phase, energy has only two possible results: reflection, or conversion to heat if ordinary resistance is present.

Best regards, Richard Harrison, KB5WZI

2846. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 15:51:16 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E43D5F4.6030506@ieee.org>
Source record: 125234

Bart Rowlett wrote:
> OC_CAM's Razor wrote:
>
>>Richard Clark wrote:
>>>The example is as simple as described, it is fully described, it is
>>>testable, and yet no one steps up to the plate.
>>
>>Exactly what do you think it proves, Richard?
>
> I would call it a nice demonstration of the superposition principal.

Does it illustrate constructive interference without destructive
interference? If not, it doesn't add anything to the discussion.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2847. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 16:06:34 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302070806.478d3cfc@posting.google.com>
Source record: 125235

Bart Rowlett <BHRowlett@raytheon.com> wrote in message
news:<3E431F8D.EA28B1F@raytheon.com>...

>
> > The small hat is not large enough to provide a fully linear current
> > distribution, even though it's better than with no hat.
>
If the capacity hat is very large, than the current along the
> vertical section is approximately _constant_.

Thats a better description. The only time I saw an even constant
current distribution was if the hat was large enough to tune to
resonance. If not, there would still be a slight "slope" with the max
still obviously at the base.
But using an elevated coil and the small hat gave a better
distribution than the coil with no hat. Most of the improvement being
above the coil where normally current would start to diminish quite a
bit.

MK

2848. Re: Mobile Antenna for 2m/70cms

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 16:09:09 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e43db1b_1@news1.prserv.net>
Source record: 125236

Buy, beg, borrow or steal the current issue of QST. (Can't find mine, may be either Jan or Feb 2003) It shows how to construct (cheaply, I might add) exactly what you want, a dual band "J" made from twinlead with no radials necessary.

--
Crazy George
Remove NO and SPAM from return address
"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message news:b20civ$8r8$1@helle.btinternet.com...
> Hi,
>
> The idea of a small vertical (without radials) appeals to me because I'm in
> an appartment.
>
> I have a balcony at decent height. I was thinking of getting a vertical
> mobile with gain for 2m and 70cms. Is the groundplane critical in terms of
> being perpendicular to the antenna? Or can I just attach various bits of
> metal welded together to the corner of the wall where it will be mounted,
> and paint that black?
>
> It's hard to describe, but a solution like that would be extremely discrete
> for me.
>
> Thanks,
>
> D
> M3DPE
>
>

2849. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 16:26:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E43DE1D.7000204@ieee.org>
Source record: 125241

Richard Harrison wrote:
> The interpretations of Melles-Griot puzzle me. We seem to be considering
> two coincident (or two coreflected) waves of opposite phase, and on the
> same path. How can this happen on cable?

Easy, at a match point, that perfectly describes Pfwd1(Rho^2) and
Pref2(1-Rho^2), two coherent waves of equal magnitude and opposite
phase.

> In free space we have the
> balloon analogy, but on a pair of wires, coincident, out-of-phase,
> energy has only two possible results: reflection, or conversion to heat
> if ordinary resistance is present.

Thus my question which, by now, has grown a long gray beard waiting
for an answer. When the E & H fields in two waves cancel, if the
result is not reflection or dissipation, where does the energy go?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2850. Re: Mobile Antenna for 2m/70cms

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 16:26:07 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b20mmv$jb2$1@venus.btinternet.com>
Source record: 125238

Thanks George - but I already have one of these (actually, mines a slim-jim but they're all variations on the same thing).

What I want is a discrete vertical *with gain*. The J-Pole is a dipole variation (unity gain).

What I actually want to do is use a mobile vertical and create a groundplane to suit my location using metal sheet (or something else) to replace the car body.

What I need to know is whether or not the mass of the ground-plane (size of sheet) is critical. I understand that I may end up making something that's slightly directional if the groundplane is not symetrical, but I'll live with that (to an extent).

D

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message news:3e43db1b_1@news1.prserv.net...
> Buy, beg, borrow or steal the current issue of QST. (Can't find mine, may
> be either Jan or Feb 2003) It shows how to construct (cheaply, I might add)
> exactly what you want, a dual band "J" made from twinlead with no radials
> necessary.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> news:b20civ$8r8$1@helle.btinternet.com...
> > Hi,
> >
> > The idea of a small vertical (without radials) appeals to me because I'm
> in
> > an appartment.
> >
> > I have a balcony at decent height. I was thinking of getting a vertical
> > mobile with gain for 2m and 70cms. Is the groundplane critical in terms of
> > being perpendicular to the antenna? Or can I just attach various bits of
> > metal welded together to the corner of the wall where it will be mounted,
> > and paint that black?
> >
> > It's hard to describe, but a solution like that would be extremely
> discrete

> > for me.
> >
> > Thanks,
> >
> > D
> > M3DPE
> >
> >
>
>

2851. Re: Cushcraft MA5V

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 16:32:43 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <LcR0a.19799$2H6.729@sccrnsc04>
Source record: 125240

I and 2 others LOVE our MA5Vs. There are no radials to install on your roof. Just 4 "stingers" sloping down near the base, around 4 ft long each. Footprint is about 3 ft. x3 ft. and less than 15 ft tall. We all mounted ours from a chimney strap. Did fine in winds over 65mph several times! Good SWR (<1.5) on all bands. We're all VERY happy with it. Good solution at $209.

"Per Brix" <oz5abo@XXXtdcadsl.dk> wrote in message news:3e3612b7$0$201$edfadb0f@dread14.news.tele.dk...
> Hi
>
> I am thinking of buying this antenna since I have limited space in my small
> garden for putting up an antenna. Antennas mounted on buildings are not
> allowed.
>
> So could anyone tell me how long the radials for this antenna are and the
> diameter of the "foot print" ?
>
> 73, OZ5ABO, Per
>
>

2852. Pocket size continuous coverage VHF/UHF omni antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 16:40:38 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <akR0a.19820$2H6.199@sccrnsc04>
Source record: 125242

If you like working VHF/UHF while hiking or camping but wanted the same performance as a mobile-mount antenna, then check out my website at: http://home.attbi.com/~wiedemann/private/portable_antenna.htm

You can easily build this antenna for under $35 and about 1 hour of work.

Let me know if you build it, how you like it and what you did with it.

73s.....Rudi - WA6RW

2853. Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 17:03:23 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302070903.126bb8c6@posting.google.com>
Source record: 125243

When thinking about dissention on this newsgroup my mind
goes to Fractals, contrawound and E/H antennas.
Each of these forays into antenna design have one thing in common
in that they move away from the common starting point of the thinking
in ham radio which is 'wave lengths' or parts there of but go to the
starting point of 'aperture' and 'Q' . In looking at the experimental
path that I follow I suddenly realise that I also do exactly the same.
Yet, when one understands that these two factors outweigh any
prepoderance on 'wave length' with respect to antennas a whole new
frontier opens that can bring new life to antenna design.
Instead of total derision with the advent of new design thoughts could
we not discuss the new and good things that come from these
experiments that would encourage new ideas in the hobby.
I for one think that the hobby is in error in focussing its thoughts
on wavelength with respect to antennas. Am I the only one that thinks
this way? Is my thinking too far out to be called 'out of the box'.
Some noted thinkers state that radiation can emanate from a single point,
if this is so does in not add reason to move away from the 'Wave length'
term and restart with Q and aperture ?
Maybe the above is too deep to base a discussable post upon.
Regards
Art

2854. harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 17:04:24 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <rGR0a.44$tY3.106838@news.randori.com>
Source record: 125244

Hi all,

I've been reading up on electrical harmonics and such with arials... What I dont kinda get is the frequency of the waves used.... Most arials seem to work on a 1/4th wave with basically the bottom end grounded to make up the other half of the wave... Though so I aead 1/2wave (no gound) is better for maximum radiation ? This then brings me onto the 3rd harmonic since this itself seems to give more power somehow than anything else ? Does anyone know of any good site which explains this kinda thing ? I've read a fair bit from google though none of them actually say what happens in terms of power output from 1/4 wave 1/2wave and 3rd harmonic...

thanks,
chris

2855. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 17:06:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E43E796.7050708@ieee.org>
Source record: 125245

exxos wrote:
> Hi all,
>
> I've been reading up on electrical harmonics and such with arials... What I
> dont kinda get is the frequency of the waves used.... Most arials seem to
> work on a 1/4th wave with basically the bottom end grounded to make up the
> other half of the wave... Though so I aead 1/2wave (no gound) is better
> for maximum radiation ? This then brings me onto the 3rd harmonic since this
> itself seems to give more power somehow than anything else ? Does anyone
> know of any good site which explains this kinda thing ? I've read a fair bit
> from google though none of them actually say what happens in terms of power
> output from 1/4 wave 1/2wave and 3rd harmonic...

You can download the free demo version of EZNEC from eznec.com and
verify this for yourself. A 1/4WL vertical used on the third harmonic
is not a good DX antenna as it has a lot of high angle radiation. The
longest vertical one should use to ensure good low angle radiation is
5/8WL. 3/4WL is 6/8WL and is a wee bit too long for optimum DX.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

2856. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 17:22:31 UTC
From: larryc@northwest.com
Message-ID: <3E43EB57.6264EF89@northwest.com>
Source record: 125246

A close friend tried many many times to get ARRL support on the drift bouy issues - interference from the driftnet transponders - some years back. The ARRL gave the soft-shoe response...and did nothing. "We appreciate your thoughts, and we share your concerns on <-insert trendy cause here->." I also tried, on some issues. Same response. The ARRL seemed to spiral down hill after they went "full size" with QST.

Sorry, folks, but that's how this person also sees it.

==========

'Doc wrote:

> Dan,
> I've tried it from the 'inside' as you suggest. If
> you pay attention to the letter to the editor for a
> couple of those years, you'll see my former call sign
> quite a few times. It did/does no good at all. When
> you complain to the people who have the only control
> over what is printed, you are only wasting your time.
> One 'voice in the wilderness' has absolutely no chance.
> Talking to your area director (inperson and by letter)
> also has very little chance of going any further than
> his 'round file'. From what I've seen 'money talks,
> and the rest walk', to paraphrase that just a little.
> I hope others can make a difference where I couldn't,
> I'll certainly cheer them on...
> 'Doc
>
> PS - As for the lobbying thing. Don't make me laugh.

2857. Re: Titanex or Optibeam ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 17:24:52 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <EZR0a.2896$4y4.1367036@newssvr28.news.prodigy.com>
Source record: 125239

Join the SteppIR group at http://groups.yahoo.com/group/SteppIR/

200+ members, all thrilled with their beams as far as I can tell. Check out
the archives...ask around.

73,
Larry N8LP

"Alberto" <adibene@yahoo.com> wrote in message
news:e9aa0d73.0302070516.5cd556e7@posting.google.com...
> "H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:<v45ngrobv1um85@corp.supernews.com>...
> > If you have not considered this I offer the URL: http://www.steppir.com/
.
> > H.
> > NQ5H
> >
> Thanks for the pointer. Wasn't that antenna formerly called
> FluidMotion ? It seems they don't use this name any longer.
> I had examined it, but I am a bit worried about wearing in time
> of the sliding contacts.... weren't for this, it would look
> as the ideal one. Any comments or experiences with this antenna ?
> TNX.
>
> 73 Alberto I2PHD

2858. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 17:25:36 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <i_R0a.46$tY3.114724@news.randori.com>
Source record: 125247

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E43E796.7050708@ieee.org...
> exxos wrote:
> > Hi all,
> >
> > I've been reading up on electrical harmonics and such with arials...
What I
> > dont kinda get is the frequency of the waves used.... Most arials seem
to
> > work on a 1/4th wave with basically the bottom end grounded to make up
the
> > other half of the wave... Though so I aead 1/2wave (no gound) is
better
> > for maximum radiation ? This then brings me onto the 3rd harmonic since
this
> > itself seems to give more power somehow than anything else ? Does anyone
> > know of any good site which explains this kinda thing ? I've read a fair
bit
> > from google though none of them actually say what happens in terms of
power
> > output from 1/4 wave 1/2wave and 3rd harmonic...
>
> You can download the free demo version of EZNEC from eznec.com and
> verify this for yourself. A 1/4WL vertical used on the third harmonic
> is not a good DX antenna as it has a lot of high angle radiation. The
> longest vertical one should use to ensure good low angle radiation is
> 5/8WL. 3/4WL is 6/8WL and is a wee bit too long for optimum DX.
> --
> 73, Cecil, W5DXP
>

thanks, I will take a look at that!

Chris

>
>
> ------------== Posted via Newsfeed.Com - Uncensored Usenet News
==----------
> http://www.newsfeed.com The #1 Newsgroup Service in the World!
> -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers
=-----

2859. Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 17:45:07 UTC
From: paranoia28@yahoo.com
Message-ID: <1b02f652.0302070945.44f171ed@posting.google.com>
Source record: 125248

We're on the 6th floor of a concrete building. We're getting an extension office on the ground floor. The relative location of both offices inside the building is exactly the same, just on different floors, meaning if I looked down from the window of our 6th floor office, I can directly see the window of our ground floor office. Is this a valid line-of-sight for a wireless lan to work properly?

We currently have a wired LAN on the 6th floor office. We hope to be able to connect PCs from the extension office to this LAN for file sharing purposes. I talked to a local PC vendor about this and his response was that "line-of-sight" standard only applied to horizontal distances, not vertical ones. Is this true?
What about omni-directional antennas? Would these help and is it strong enough to traverse the distance of 5 floors vertically?

Any info/advice would be greatly appreciated!

Yours truly,
Spycegirl

2860. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 18:00:27 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v47t1slmlan538@corp.supernews.com>
Source record: 125249

Line of sight is normally stated as a horizontal distance, that being said
your requirements should be easy to meet.

Feel free to e-mail me for specific recommendations.

Fred
w4jle@charter.net

"spyce girl" <paranoia28@yahoo.com> wrote in message
news:1b02f652.0302070945.44f171ed@posting.google.com...
> We're on the 6th floor of a concrete building. We're getting an
> extension office on the ground floor. The relative location of both
> offices inside the building is exactly the same, just on different
> floors, meaning if I looked down from the window of our 6th floor
> office, I can directly see the window of our ground floor office. Is
> this a valid line-of-sight for a wireless lan to work properly?
>
> We currently have a wired LAN on the 6th floor office. We hope to be
> able to connect PCs from the extension office to this LAN for file
> sharing purposes. I talked to a local PC vendor about this and his
> response was that "line-of-sight" standard only applied to horizontal
> distances, not vertical ones. Is this true?
> What about omni-directional antennas? Would these help and is it
> strong enough to traverse the distance of 5 floors vertically?
>
> Any info/advice would be greatly appreciated!
>
> Yours truly,
> Spycegirl

2861. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 18:01:44 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E43F4E4.DAE45548@att.net>
Source record: 125250

Art,

You make some interesting points. I will reply to a couple items.

It is very common and very useful in many areas of science and engineering to simplify problems through the use of derived properties such as aperture and Q. It is not necessary to return to the raw form of Maxwell's equations in order to solve every problem.

However, it is important to realize that these derived properties do not introduce one bit of new physics. If they do, then they have most likely been set up incorrectly.

It may be very useful for visualization and for the solution of practical problems to use these derived entities, but it should not be expected that any new phenomena will arise.

The professionals understand this. See, for example, the discussions on aperture in "Antennas" by Kraus.

The proponents of some magic antennas perform all sorts of manipulations on the derived quantities without ever going back to check if the fundamental electromagnetic and circuit properties are violated.

If a problem is set up correctly, and there are no math errors, it will make no difference at all whether one uses the "wavelength" model or the "Q and aperture" model. One formulation may be much easier to deal with, but the answers must be the same.

Remember, nature does not follow our models. Instead, our models attempt to describe how nature works.

73,
Gene
W4SZ

Art Unwin KB9MZ wrote:
>
> When thinking about dissention on this newsgroup my mind
> goes to Fractals, contrawound and E/H antennas.
> Each of these forays into antenna design have one thing in common
> in that they move away from the common starting point of the thinking
> in ham radio which is 'wave lengths' or parts there of but go to the
> starting point of 'aperture' and 'Q' . In looking at the experimental
> path that I follow I suddenly realise that I also do exactly the same.
> Yet, when one understands that these two factors outweigh any
> prepoderance on 'wave length' with respect to antennas a whole new

> frontier opens that can bring new life to antenna design.
> Instead of total derision with the advent of new design thoughts could
> we not discuss the new and good things that come from these
> experiments that would encourage new ideas in the hobby.
> I for one think that the hobby is in error in focussing its thoughts
> on wavelength with respect to antennas. Am I the only one that thinks
> this way? Is my thinking too far out to be called 'out of the box'.
> Some noted thinkers state that radiation can emanate from a single point,
> if this is so does in not add reason to move away from the 'Wave length'
> term and restart with Q and aperture ?
> Maybe the above is too deep to base a discussable post upon.
> Regards
> Art

2862. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 18:27:02 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <bF-dnZ8_g_jlZ96jXTWcpA@comcast.com>
Source record: 125251

Probably won't work if the froors are made of concrete. I made some tests on a low power voice system (2 GHz), and you could barely make contact one floor above or below the base station. There would be ways to make it work, but for a commercial installation, anything other than pulling cable would result in a cluge.

Tam/WB2TT
"spyce girl" <paranoia28@yahoo.com> wrote in message news:1b02f652.0302070945.44f171ed@posting.google.com...
> We're on the 6th floor of a concrete building. We're getting an
> extension office on the ground floor. The relative location of both
> offices inside the building is exactly the same, just on different
> floors, meaning if I looked down from the window of our 6th floor
> office, I can directly see the window of our ground floor office. Is
> this a valid line-of-sight for a wireless lan to work properly?
>
> We currently have a wired LAN on the 6th floor office. We hope to be
> able to connect PCs from the extension office to this LAN for file
> sharing purposes. I talked to a local PC vendor about this and his
> response was that "line-of-sight" standard only applied to horizontal
> distances, not vertical ones. Is this true?
> What about omni-directional antennas? Would these help and is it
> strong enough to traverse the distance of 5 floors vertically?
>
> Any info/advice would be greatly appreciated!
>
> Yours truly,
> Spycegirl

2863. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 18:32:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7pq74vcvtjp1jc6avlnskdfqotuco8o6n9@4ax.com>
Source record: 125252

On 7 Feb 2003 09:03:23 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>When thinking about dissention on this newsgroup my mind
>goes to Fractals, contrawound and E/H antennas.
>Each of these forays into antenna design have one thing in common
>in that they move away from the common starting point of the thinking
>in ham radio which is 'wave lengths' or parts there of but go to the
>starting point of 'aperture' and 'Q' .

Quite the opposite in fact. They represent a desire to shrink
aperture, and suffer from problems with Q for that effort.

"Small" fractals, as compared to the E-H or CFA are not small at all.
They are simply smaller than conventional dipoles.

>In looking at the experimental
>path that I follow I suddenly realise that I also do exactly the same.
> Yet, when one understands that these two factors outweigh any
>prepoderance on 'wave length' with respect to antennas a whole new
>frontier opens that can bring new life to antenna design.
>Instead of total derision with the advent of new design thoughts could
>we not discuss the new and good things that come from these
>experiments that would encourage new ideas in the hobby.

Can you tell us about your experience in encouraging building any of
these new ideas like a CFA or EH or fractal? Have you corresponded
here to support them with material facts? Have you any analysis of a
CFA to offer to the group? Can you respond to their shortfalls? Can
you defend their claims? Just how far are you willing to go to
support new ideas then?

Reminds me of the film "How Green Was My Valley," where a fight is
about to start, and one of the buddies (who goaded it on) offers:
"t'is a coward, I am, but I will hold your coat for you."

>I for one think that the hobby is in error in focussing its thoughts
>on wavelength with respect to antennas. Am I the only one that thinks
>this way? Is my thinking too far out to be called 'out of the box'.
>Some noted thinkers state that radiation can emanate from a single point,
>if this is so does in not add reason to move away from the 'Wave length'
>term and restart with Q and aperture ?
>Maybe the above is too deep to base a discussable post upon.
>Regards
>Art

Hi Art,

>Too deep to base a discussable post upon? :-)
This is the internet!

OK, so we got that out of the way.

>Some noted thinkers state that radiation can emanate from a single point,
Happens all the time with light bulbs and resistors, but those are hardly recommendations are they? You can use a short antenna, and yes it approximates a single point, and it also approximates a large resistor - take one, and you get both. If you don't care much for efficiency, you can optimize the smallness and the resistance simultaneously.

>move away from the 'Wave length'
>term and restart with Q and aperture ?
Your discussion contains a presumption that is in error. Aperture is related to wavelength. You cannot move away and toward something at the same time.

Do you know the difference between a Sierpinski, a Koch Triadic or a Koch Quadratic? You should, they have been the staple of fractal design for many, many years. Can you tell us which is the better design? I can, and have. Can you tell us how to produce a fractal broad band antenna (several ham bands not just one)? I can and have. Can you tell us which fractal would be a broad band antenna? Can you tell us which fractals are dead ends and which are performers? I can and have. Clearly, these fundamental issues are of no importance to you because you have never uttered one word in that regard.

Do you support experiments and encourage new ideas in fractals? No, you don't. But you do seem quite interested in the fate of snake oil salesmen and pine about their treatment when the town-folk run them out tarred and feathered to a pole for having poisoned their children.

Art, skip the sentimentality and stick to what you actually DO and where you intend to GO.

73's
Richard Clark, KB7QHC

2864. Re: Pocket size continuous coverage VHF/UHF omni antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 18:32:55 UTC
From: arrow146@aol.com
Message-ID: <20030207133255.14441.00000423@mb-mw.aol.com>
Source record: 125253

<< Subject: Pocket size continuous coverage VHF/UHF omni antenna
From: "Rudi" wiedemann@attbi.com
Date: Fri, Feb 7, 2003 8:40 AM
Message-id: <akR0a.19820$2H6.199@sccrnsc04>

If you like working VHF/UHF while hiking or camping but wanted the same
performance as a mobile-mount antenna, then check out my website at:
http://home.attbi.com/~wiedemann/private/portable_antenna.htm

You can easily build this antenna for under $35 and about 1 hour of work.

Let me know if you build it, how you like it and what you did with it.

73s.....Rudi - WA6RW >>

Nice portable 1/4 wave ground plane, BUT 5 dB Gain ?
Compared to What ? A Wet String.
This is why gain figures are useless these days.

73 Al Lowe N0IMW

2865. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 18:43:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vav74vs00mphrp2v3d3pk1j7v4c4p0g4st@4ax.com>
Source record: 125254

On 7 Feb 2003 09:45:07 -0800, paranoia28@yahoo.com (spyce girl) wrote:

>We're on the 6th floor of a concrete building. We're getting an
>extension office on the ground floor. The relative location of both
>offices inside the building is exactly the same, just on different
>floors, meaning if I looked down from the window of our 6th floor
>office, I can directly see the window of our ground floor office. Is
>this a valid line-of-sight for a wireless lan to work properly?
>
>We currently have a wired LAN on the 6th floor office. We hope to be
>able to connect PCs from the extension office to this LAN for file
>sharing purposes. I talked to a local PC vendor about this and his
>response was that "line-of-sight" standard only applied to horizontal
>distances, not vertical ones. Is this true?
>What about omni-directional antennas? Would these help and is it
>strong enough to traverse the distance of 5 floors vertically?
>
>Any info/advice would be greatly appreciated!
>
>Yours truly,
>Spycegirl

Hi Spycegirl,

"Line of sight" which includes one antenna being able to "see" the
other is the only requirement you need to consider. It may fail for
other reasons, but simply moving one antenna (by up to half the size
of the antenna) around can improve that from 0 to hero (then nail them
both down). Trying is the only guarantee.

Stick with industry designed antennas for this application. Also, the
local PC vendor sounds wholly unfamiliar with this application (even
if he has read a lot of computer magazines). Find someone with
experience (and not one who dresses like it).

Visit a local Starbucks and ask them how they do it.

73's
Richard Clark, KB7QHC

2866. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 19:49:52 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <ic384v8nlprqjbvbv2fdiv63la371q7fs9@4ax.com>
Source record: 125255

On 7 Feb 2003 09:03:23 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>When thinking about dissention on this newsgroup my mind
>goes to Fractals, contrawound and E/H antennas.
>Each of these forays into antenna design have one thing in common

The fractal was different in that this newsgroup was used as a soap
box for years by its adherent to draw attention to his commercial
products which had no applications in amateur radio. His attempts to
pretend the relevance of fractal antennas (which he claimed to have
"invented") to this newsgroup were transparent and ludicrous.

This message was posted after 30 January, 2003.

2867. Re: Pocket size continuous coverage VHF/UHF omni antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 20:16:53 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E441435.5CB0CC83@cwis.net>
Source record: 125256

Al,
I didn't see any gain figures at all. Where
did you come up with '5db'?
'Doc

2868. Re: Titanex or Optibeam ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 20:21:35 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302071221.6317ef33@posting.google.com>
Source record: 125257

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:<v47g1hovqauif4@corp.supernews.com>...
snip
> Good product; an idealized three element yagi on every frequency.

What does "idealised " mean ? It certainly is not an ideal yagi
if the element spacings are the same regardless of what frequency
is being used. To be completely 'ideal'on all frequencies surely
element spacings comes into the equation.
A good product no doubt, but it is a long way from being an
optimised antenna. Is it known what contribution
the fibre glass tubing gives to f/b , gain, swr e.t.c.?
Is the turning radius equal to a 10 metre antenna of the same
boom length? If so, how do they retract excess projections or
do these excess projections add to it's radiating efficiency ?
Does 'instant' direction reversal provide less costly wear or
maintenance compared to the use of a rotator? Does the initial
cost factor in well with alternative choices ?
Do the above questions have any connection as to what is an
idealised antenna or are they all irrelavent?
Regards
Art

> H.
> NQ5H
>
> "Alberto" <adibene@yahoo.com> wrote in message
> news:e9aa0d73.0302070516.5cd556e7@posting.google.com...
> > "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> news:<v45ngrobv1um85@corp.supernews.com>...
> > > If you have not considered this I offer the URL: http://www.steppir.com/
> .
> > > H.
> > > NQ5H
> > >
> > Thanks for the pointer. Wasn't that antenna formerly called
> > FluidMotion ? It seems they don't use this name any longer.
> > I had examined it, but I am a bit worried about wearing in time
> > of the sliding contacts.... weren't for this, it would look
> > as the ideal one. Any comments or experiences with this antenna ?
> > TNX.
> >
> > 73 Alberto I2PHD

2869. Re: Mobile Antenna for 2m/70cms

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 20:26:43 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E441683.77EFA8E1@cwis.net>
Source record: 125258

Dean,
Select a mobile antenna which suits your purpose
as to gain and 'looks'. Mount it to the railing of
your balcony. If your balcony doesn't have a metal
railing, use a wire connected to the proper place on
the base (or mount) of the antenna. Does it matter
how long the wire/counterpoise is? As long as it's
longer than the antenna, not really. Will it work?
Sure, almost as well as if the antenna were mounted
on a car. The radiation pattern will be skewed, but
how much and what direction is anyone's guess...
'Doc

2870. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 21:00:12 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b216or$r17$1@knossos.btinternet.com>
Source record: 125259

Line-of-sight, horizontal or vertical, means exactly what it says.

Provided the pair of antennas are not very near to the outside wall of the building all should be OK.

If the antennas are directional and intended to 'beam' to each other make sure they are approximately correctly orientated with the path between them clear of obstructions.

With the two windows on the same outside wall, or on the facing walls of two adjacent buildings, the radio path between them can be at any angle relative to the horizontal. If they can see each other then they will work.

Gravity does not affect propagation of radio and optical waves.

Change your PC dealer.

Reg, G4FGQ

=======================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
=======================

"spyce girl" wrote
> We're on the 6th floor of a concrete building. We're getting an
> extension office on the ground floor. The relative location of both
> offices inside the building is exactly the same, just on different
> floors, meaning if I looked down from the window of our 6th floor
> office, I can directly see the window of our ground floor office. Is
> this a valid line-of-sight for a wireless lan to work properly?
>
> We currently have a wired LAN on the 6th floor office. We hope to be
> able to connect PCs from the extension office to this LAN for file
> sharing purposes. I talked to a local PC vendor about this and his
> response was that "line-of-sight" standard only applied to horizontal
> distances, not vertical ones. Is this true?
> What about omni-directional antennas? Would these help and is it
> strong enough to traverse the distance of 5 floors vertically?
>
> Any info/advice would be greatly appreciated!
>
> Yours truly,
> Spycegirl

2871. F.S. Delhi, 2" Ball Bearing Mast Bearing for DMX tower

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 21:30:30 UTC
From: DougH <dhunter001@sympatico.ca>
Message-ID: <QtV0a.34642$CF1.1125571@news20.bellglobal.com>
Source record: 125260

F.S. Delhi, 2" Ball Bearing Mast Bearing for DMX tower

I am asking $50.00CAD plus shipping

Thanks:
Doug
dhunter001@sympatico.ca

2872. Re: Titanex or Optibeam ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 21:38:44 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v489tn8gdthtcb@corp.supernews.com>
Source record: 125261

Well Art, idealized was a poor choice of words.
On 20 it's a three element monobander.
At higher frequencies it's a three element long boom.
Having a long boom is not a bad thing.
There's a fourth element for six.
It will out perform a log periodic with much less weight and wind loading.
Last I checked fibreglass was an insulator and irrelevant.
The copper elements have an order of magnitude better resistivity than
aluminum.
Of course the turning radius isn't the same as a ten meter antenna,
ten meter antennas don't work well on 20 either. It's always the size of a
three element 20 meter monobander.
Direction reversal takes three seconds and the test bed is over one million
band change with no failures.
It also has a bi-directional mode.
It costs about like a log with less rotor and tower requirements.
Of course you questions are relevant.
I chose the Steppir over a log periodic.
H.
NQ5H

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0302071221.6317ef33@posting.google.com...
> "H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:<v47g1hovqauif4@corp.supernews.com>...
> snip
> > Good product; an idealized three element yagi on every frequency.
>
> What does "idealised " mean ? It certainly is not an ideal yagi
> if the element spacings are the same regardless of what frequency
> is being used. To be completely 'ideal'on all frequencies surely
> element spacings comes into the equation.
> A good product no doubt, but it is a long way from being an
> optimised antenna. Is it known what contribution
> the fibre glass tubing gives to f/b , gain, swr e.t.c.?
> Is the turning radius equal to a 10 metre antenna of the same
> boom length? If so, how do they retract excess projections or
> do these excess projections add to it's radiating efficiency ?
> Does 'instant' direction reversal provide less costly wear or
> maintenance compared to the use of a rotator? Does the initial
> cost factor in well with alternative choices ?
> Do the above questions have any connection as to what is an
> idealised antenna or are they all irrelavent?
> Regards

> Art
>
>
> > H.
> > NQ5H
> >
> > "Alberto" <adibene@yahoo.com> wrote in message
> > news:e9aa0d73.0302070516.5cd556e7@posting.google.com...
> > > "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> > news:<v45ngrobv1um85@corp.supernews.com>...
> > > > If you have not considered this I offer the URL:
http://www.steppir.com/
> > .
> > > > H.
> > > > NQ5H
> > > >
> > > Thanks for the pointer. Wasn't that antenna formerly called
> > > FluidMotion ? It seems they don't use this name any longer.
> > > I had examined it, but I am a bit worried about wearing in time
> > > of the sliding contacts.... weren't for this, it would look
> > > as the ideal one. Any comments or experiences with this antenna ?
> > > TNX.
> > >
> > > 73 Alberto I2PHD

2873. Re: Pocket size continuous coverage VHF/UHF omni antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 22:01:26 UTC
From: arrow146@aol.com
Message-ID: <20030207170126.04229.00000145@mb-fj.aol.com>
Source record: 125262

<< Al,
I didn't see any gain figures at all. Where
did you come up with '5db'?
'Doc >>

On his web page

73 Al Lowe N0IMW

2874. Re: Pocket size continuous coverage VHF/UHF omni antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 22:02:51 UTC
From: arrow146@aol.com
Message-ID: <20030207170251.04229.00000146@mb-fj.aol.com>
Source record: 125263

<<
Al,
I didn't see any gain figures at all. Where
did you come up with '5db'?
'Doc >>

This is a collapsible and tunable omni-directional antenna with about 5dB of gain.ï¿½ It features continuous coverage from 118 MHz (bottom of the aircraft band) to 450 MHz (top of the 70cm ham band).ï¿½ It's small enough to fit in your pocket, yet gives you good performance (SWR <1.1 at resonance and <1.5 within about +/- 4MHz.).ï¿½ You can easily adjust resonance from about 118MHz to 450MHz just by adjusting the telescoping section lengths appropriately.ï¿½ It features aï¿½ true NTR (No Tools Required) setup in the field.ï¿½ You can build this baby for less than $35 in stock Radio Shack and hardware store parts.

2875. Re: Pocket size continuous coverage VHF/UHF omni antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 22:15:21 UTC
From: dplatt@radagast.org
Message-ID: <v48bvpiohbor74@corp.supernews.com>
Source record: 125264

>> Al,
>> I didn't see any gain figures at all. Where
>> did you come up with '5db'?
> > 'Doc >>
>
> "This is a collapsible and tunable omni-directional antenna with about 5dB of
> gain."

Since it's a quarter-wave-radiator-plus-ground-plane design, it'd be a bit down from a full half-wave dipole, no? Might be 1-2 dBi, or between 0 and -1 dBd?

I can well believe that it has 5 dB of gain, compared to a typical HT rubber duck. I've heard that ducks tend to measure between -5 dbD and -10 dBd, due to their shortness and their lack of an efficient ground plane or counterpoise.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2876. aluminium joints, vaseline or conductive grease?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 22:17:54 UTC
From: Henrik <henrik>
Message-ID: <3e443091$0$213$edfadb0f@dread15.news.tele.dk>
Source record: 125265

Hi,
I have just started to refurbish my 10 year old R5, and find that most joints are corroded and needs to be cleaned and treated to obtain and keep best performance.
But in respect to treatment after cleaning...what is the best standard for aluminium tubes and fixtures?
I see advice to use Vaseline, and some who advice to use electrically conductive grease, presumably a grease with zink powder in, and not readily available for the hobbyist...it seems.

So, what would you advice?
73's
H

2877. Re: aluminium joints, vaseline or conductive grease?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 22:32:07 UTC
From: dplatt@radagast.org
Message-ID: <v48cv7pf9n165@corp.supernews.com>
Source record: 125266

>I have just started to refurbish my 10 year old R5, and find that most
>joints are corroded and needs to be cleaned and treated to obtain and keep
>best performance.
>But in respect to treatment after cleaning...what is the best standard for
>aluminium tubes and fixtures?
>I see advice to use Vaseline, and some who advice to use electrically
>conductive grease, presumably a grease with zink powder in, and not readily
>available for the hobbyist...it seems.

Here in the U.S., anti-oxidant greases are easily and inexpensively available at electrical supply stores. The "NoAlOx" brand is the commonest... it's a combination of zinc dust and silicon dioxide, in a polybutene carrier.

They are used as an essential element, whenever aluminum wire is attached to a fixture. There was a trend here, some years ago, to use aluminum wiring for household "mains" connections. It turned out to be a rather bad idea, due to problems with thermal cycling and oxidation where the wires are attached to switches, outlets, circuit breakers, etc. Special techniques, such as anti-oxidant greases and the use of high-pressure-crimp "pigtails", are now required by the electrical code when aluminum wire is used.

Similar anti-oxidant greases (with or without zinc and/or copper dust) are used when connecting copper mains wire to breakers and switches.

I'd suggest checking with your local electrical-supply house... they may have this sort of product easily available. Auto-parts stores might have something of this sort, as well.

I'd think that Vaseline (petrolatum, petroleum jelly) would work, as would various silicone greases. These will retard further oxidation on the joints, but wouldn't "cut through" the existing oxidation layer as NoAlOx is said to do.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2878. Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 22:34:00 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <djc84v8bgbpfde9kcq2jqmnn2amgua0hvf@4ax.com>
Source record: 125267

I am going to mount a VHF/UHF vertical on the stand that holds my air conditioner on the roof. This is the highest point on my house, and makes a perfect mount for the antenna. The A/C runs on 220 VAC, and the stand is at service ground. I want to ground my antenna to an 8' ground rod in the ground below. This will be dedicated to the antenna, however, it would put the antenna ground at the same potential as the service ground. Something tells me I shouldn't tie service ground to an antenna ground. Seems like it would violate the NEC. Comments? Suggestions?

Dick - W6CCD

2879. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 22:52:54 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4438C6.55702250@cwis.net>
Source record: 125268

Dick,
Depending on where you live, all grounds are required
to be connected to the service ground (NEC).
'Doc

2880. Re: Pocket size continuous coverage VHF/UHF omni antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 22:56:45 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4439AD.9D6BEE61@cwis.net>
Source record: 125169

Al,
I found it! Don't know why I didn't see it
the first time, oh well.
'Doc

2881. Re: aluminium joints, vaseline or conductive grease?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 23:19:12 UTC
From: Henrik <henrik>
Message-ID: <3e443eef$0$196$edfadb0f@dread15.news.tele.dk>
Source record: 125170

"Dave Platt" <dplatt@radagast.org> wrote in message
Snip
> Here in the U.S., anti-oxidant greases are easily and inexpensively
> available at electrical supply stores. The "NoAlOx" brand is the
> commonest... it's a combination of zinc dust and silicon dioxide, in a
> polybutene carrier.

Thanks for the info Dave!

Anyone who knows of a dealer in Europe, or of a similar product used here?

73,
H

2882. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 23:22:34 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302071522.35891262@posting.google.com>
Source record: 125171

Gene Fuller <W4SZzzzzz@att.net> wrote in message news:<3E43F4E4.DAE45548@att.net>...
> Art,
>
> You make some interesting points. I will reply to a couple items.
>
> It is very common and very useful in many areas of science and
> engineering to simplify problems through the use of derived properties
> such as aperture and Q. It is not necessary to return to the raw form of
> Maxwell's equations in order to solve every problem.
Very true
>
> However, it is important to realize that these derived properties do not
> introduce one bit of new physics. If they do, then they have most likely
> been set up incorrectly.
It is not new physics that we seek for, it is a understanding of what
is known
so that we have optimum antennas which we do not have today
>
> It may be very useful for visualization and for the solution of
> practical problems to use these derived entities, but it should not be
> expected that any new phenomena will arise.
Again it is not a phenomena that we all seek but progress towards an
optimum antenna at any chosen frequency of use that rejects off
frequency
responses.
>
> The professionals understand this. See, for example, the discussions on
> aperture in "Antennas" by Kraus.
>
> The proponents of some magic antennas perform all sorts of manipulations
> on the derived quantities without ever going back to check if the
> fundamental electromagnetic and circuit properties are violated.
Don't get me wrong now, I do not advocate improper manipulations, what
I am saying that we are removing ourselves away from the optimum.

>
> If a problem is set up correctly, and there are no math errors, it will
> make no difference at all whether one uses the "wavelength" model or the
> "Q and aperture" model. One formulation may be much easier to deal with,
> but the answers must be the same.
Again you are drifting away from what I am pointing out, optimum
results can be obtained without introduction of wavelength and in
accordance with known
science. You point out yourself that one can achieve things from

different directions. All the descriptive antennas that I spoke of
deid not revolve areound wavelength in a direct form and if you draw a
typical antenna circuit the components shown are capacitance,
inductance and resiswtance , there is no reference directly to
wavelength.
>
> Remember, nature does not follow our models. Instead, our models attempt
> to describe how nature works.
Thankyou for that pointer
Regards
Art
>
> 73,
> Gene
> W4SZ
>
> Art Unwin KB9MZ wrote:
> >
> > When thinking about dissention on this newsgroup my mind
> > goes to Fractals, contrawound and E/H antennas.
> > Each of these forays into antenna design have one thing in common
> > in that they move away from the common starting point of the thinking
> > in ham radio which is 'wave lengths' or parts there of but go to the
> > starting point of 'aperture' and 'Q' . In looking at the experimental
> > path that I follow I suddenly realise that I also do exactly the same.
> > Yet, when one understands that these two factors outweigh any
> > prepoderance on 'wave length' with respect to antennas a whole new
> > frontier opens that can bring new life to antenna design.
> > Instead of total derision with the advent of new design thoughts could
> > we not discuss the new and good things that come from these
> > experiments that would encourage new ideas in the hobby.
> > I for one think that the hobby is in error in focussing its thoughts
> > on wavelength with respect to antennas. Am I the only one that thinks
> > this way? Is my thinking too far out to be called 'out of the box'.
> > Some noted thinkers state that radiation can emanate from a single point,
> > if this is so does in not add reason to move away from the 'Wave length'
> > term and restart with Q and aperture ?
> > Maybe the above is too deep to base a discussable post upon.
> > Regards
> > Art

2883. Re: aluminium joints, vaseline or conductive grease?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 23:36:53 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b21fuk$a4p$1@sparta.btinternet.com>
Source record: 125172

If you're after the electrically conductive grease (you're right, it does contain zinc powder), you can get this (in the UK certainly) at a marine shop.

They use it on the terminals of 12 volt batteries on boats. Most marina's have a chandlers which will stock it.

73's de Dean

"Henrik" <henrik> wrote in message
news:3e443eef$0$196$edfadb0f@dread15.news.tele.dk...
>
> "Dave Platt" <dplatt@radagast.org> wrote in message
> Snip
> > Here in the U.S., anti-oxidant greases are easily and inexpensively
> > available at electrical supply stores. The "NoAlOx" brand is the
> > commonest... it's a combination of zinc dust and silicon dioxide, in a
> > polybutene carrier.
>
> Thanks for the info Dave!
>
> Anyone who knows of a dealer in Europe, or of a similar product used here?
>
> 73,
> H
>
>

2884. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-07 23:57:13 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <pRidna7ez4YYy9mjXTWcow@ctc.net>
Source record: 125182

> sharing purposes. I talked to a local PC vendor about this and his
> response was that "line-of-sight" standard only applied to horizontal
> distances, not vertical ones. Is this true?
> What about omni-directional antennas? Would these help and is it
> strong enough to traverse the distance of 5 floors vertically?
>
As you are going vertical you may have to lay the antennas sideways. They
can be very directional in the vertical and horizontal planes.

2885. Shortwave Antenna Setup

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 00:05:57 UTC
From: Michael Farragher <michaelfarragher@#####eircom.net>
Message-ID: <XRX0a.8243$V6.10795@news.indigo.ie>
Source record: 125173

Hi all,

To set up an external antenna do I need to drill outside to keep it away
from windows.

I would be a little hesitant in drilling if there was not any need to.

Will the window cause interference ?

Thanks

Michael

2886. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 00:13:06 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302071613.114bee37@posting.google.com>
Source record: 125174

William Ewald <wgewald@att.net> wrote in message
news:<ic384v8nlprqjbvbv2fdiv63la371q7fs9@4ax.com>...
> On 7 Feb 2003 09:03:23 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >When thinking about dissention on this newsgroup my mind
> >goes to Fractals, contrawound and E/H antennas.
> >Each of these forays into antenna design have one thing in common
>
> The fractal was different in that this newsgroup was used as a soap
> box for years by its adherent to draw attention to his commercial
> products which had no applications in amateur radio. His attempts to
> pretend the relevance of fractal antennas (which he claimed to have
> "invented") to this newsgroup were transparent and ludicrous.
>
> This message was posted after 30 January, 2003.

Yes Richard I fully understand the 'soap box' allegation but what
about the actual antenna itself which I know you are knoweledgable
about. It did work
though I would not say it was optimum , but it was aproached on the
basis of resitance, capacitance and inductance without reference to
wavelength .
Is it foolish to contemplate foraging in a new frontier to obtain an
optimum antenna without being burdened by antenna length governed by
wave lengths?
Regards
Art

2887. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 00:19:31 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <u6j84vciofk332culftvmms51eonj808k2@4ax.com>
Source record: 125175

OK Doc. I guess my thinking is backward. My plan would actually be
more in compliance, and not less. That's good!

Dick - W6CCD

On Fri, 07 Feb 2003 16:52:54 -0600, 'Doc <w5lz@cwis.net> wrote:

>
>
>Dick,
> Depending on where you live, all grounds are required
>to be connected to the service ground (NEC).
> 'Doc

2888. Re: Shortwave Antenna Setup

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 00:23:09 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <v9j84voqefqnd88r4c8n9i72njld3ge9ka@4ax.com>
Source record: 125176

On Sat, 8 Feb 2003 00:05:57 -0000, "Michael Farragher"
<michaelfarragher@#####eircom.net> wrote:

>Hi all,
>
>To set up an external antenna do I need to drill outside to keep it away
>from windows.
>
>I would be a little hesitant in drilling if there was not any need to.
>
>Will the window cause interference ?
>
>Thanks
>
>Michael
>

Hi Michael,

The window should not be a big problem if it's is not metal. even if
it is have a peice of plexi glass cut and raise the window then put
the plexi under in and close the window on it seal it and drill holes
needed for lead in through the plexi glass. then when you need to you
can alway remove the whole afair and it will be good as new with now
need to drill holes through the wall.

73 Dave KC1DI

2889. Re: Shortwave Antenna Setup

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 00:24:31 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <3fj84vof068n267uocn1n8o23vp4cta0qd@4ax.com>
Source record: 125177

On Sat, 8 Feb 2003 00:05:57 -0000, "Michael Farragher"
<michaelfarragher@#####eircom.net> wrote:

>Hi all,
>
>To set up an external antenna do I need to drill outside to keep it away
>from windows.
>
>I would be a little hesitant in drilling if there was not any need to.
>
>Will the window cause interference ?
>
>Thanks
>
>Michael
>
not if you're using a piece of insulated wire, michael. i've done just
exactly that and the long wire works well for me. just be sure that
the wire doesn't break off in the window.

73,
rich, n9dko

2890. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 00:43:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <27k84vg2t0pc303qa9n6i7b76jooo585o7@4ax.com>
Source record: 125178

On 7 Feb 2003 16:13:06 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>William Ewald <wgewald@att.net> wrote in message
news:<ic384v8nlprqjbvbv2fdiv63la371q7fs9@4ax.com>...
>> On 7 Feb 2003 09:03:23 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>> wrote:
>>
>> >When thinking about dissention on this newsgroup my mind
>> >goes to Fractals, contrawound and E/H antennas.
>> >Each of these forays into antenna design have one thing in common
>>
>> The fractal was different in that this newsgroup was used as a soap
>> box for years by its adherent to draw attention to his commercial
>> products which had no applications in amateur radio. His attempts to
>> pretend the relevance of fractal antennas (which he claimed to have
>> "invented") to this newsgroup were transparent and ludicrous.
>>
>> This message was posted after 30 January, 2003.
>
>Yes Richard I fully understand the 'soap box' allegation but what
>about the actual antenna itself which I know you are knoweledgable
>about. It did work
>though I would not say it was optimum , but it was aproached on the
>basis of resitance, capacitance and inductance without reference to
>wavelength .
>Is it foolish to contemplate foraging in a new frontier to obtain an
>optimum antenna without being burdened by antenna length governed by
>wave lengths?
>Regards
>Art

Hmmm,

Art, I don't know if I am to respond to this, or if you name all your
critics Richard these days. I can understand why tho' if that is
indeed the case. ;-)

The Richard effect, kinda like Lou Gherig's disease hmmm?
Homer Simpson: "Who's Lou Gherig?"
Dr. Hibbard: "He's the fellow that got this terrible and rare
illness with that name."
Homer: "Wow! Can you imagine the odds on that?"

If you want to forage a new frontier, remember to take condiments.

However, to forge on has its own virtues, nothing is learned without mistakes. I make sure to pick projects with high prospects of making many mistakes. The latest one was a fixed price deliverables contract where I got the specification AFTER the end of the contract. Talk about mistakes.

Now, perhaps William might want to pick up the lateral hand-off....

73's
Richard Clark, KB7QHC

2891. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 00:47:47 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <clY0a.400$oc.183@fe01.atl2.webusenet.com>
Source record: 125179

Was at war with them for some 25 years (after their misbegotton "Incentive Licenseing" scheme, but have an uneasy truce (tis the only mouthpiece we have, at this time), but would jump ship for another compentent organization, in a instant (wayne Green, and your old organization, are you listening?). but, by law, the LEAGUE CAN'T LOBBY! all it can do is propose. this is the normal problem with 503(c) charities! jim nn7k

> 'Doc wrote:
>
> > Dan,
> > I've tried it from the 'inside' as you suggest. If
> > you pay attention to the letter to the editor for a
> > couple of those years, you'll see my former call sign
> > quite a few times. It did/does no good at all. When
> > you complain to the people who have the only control
> > over what is printed, you are only wasting your time.
> > One 'voice in the wilderness' has absolutely no chance.
> > Talking to your area director (inperson and by letter)
> > also has very little chance of going any further than
> > his 'round file'. From what I've seen 'money talks,
> > and the rest walk', to paraphrase that just a little.
> > I hope others can make a difference where I couldn't,
> > I'll certainly cheer them on...
> > 'Doc
> >
> > PS - As for the lobbying thing. Don't make me laugh.
>

2892. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 00:51:02 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302071651.1d1b5691@posting.google.com>
Source record: 125180

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<7pq74vcvtjp1jc6avlnskdfqotuco8o6n9@4ax.com>...
> On 7 Feb 2003 09:03:23 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >When thinking about dissention on this newsgroup my mind
> >goes to Fractals, contrawound and E/H antennas.
> >Each of these forays into antenna design have one thing in common
> >in that they move away from the common starting point of the thinking
> >in ham radio which is 'wave lengths' or parts there of but go to the
> >starting point of 'aperture' and 'Q' .
High Richard, got mixed up on the names on the other response

> Quite the opposite in fact. They represent a desire to shrink
> aperture, and suffer from problems with Q for that effort.

Well I saw them as moving away from the requirements based on wave
length.
Didn't these efforts provide antennas that was not representitive of
wave length designs for the broadcast bands? Reference the Q factor is
this value governed by length,breadth or height?

> "Small" fractals, as compared to the E-H or CFA are not small at all.
> They are simply smaller than conventional dipoles.
Exactly what I was alluding to.
>
> >In looking at the experimental
> >path that I follow I suddenly realise that I also do exactly the same.
> > Yet, when one understands that these two factors outweigh any
> >prepoderance on 'wave length' with respect to antennas a whole new
> >frontier opens that can bring new life to antenna design.
> >Instead of total derision with the advent of new design thoughts could
> >we not discuss the new and good things that come from these
> >experiments that would encourage new ideas in the hobby.
>
> Can you tell us about your experience in encouraging building any of
> these new ideas like a CFA or EH or fractal? Have you corresponded
> here to support them with material facts? Have you any analysis of a
> CFA to offer to the group? Can you respond to their shortfalls? Can
> you defend their claims? Just how far are you willing to go to
> support new ideas then?
Now, now Richard, I am not going down that path again with my antennas
other than they do change with frequency to obtain an optimum design
for the frequency in use which requires moving towards a lossless
match together with rejection of off frequency signals. One can argue

whether I achieved these optimum aims but that is not the point or the
basis of discussion regarding merit revolving around wave length

>
> Reminds me of the film "How Green Was My Valley," where a fight is
> about to start, and one of the buddies (who goaded it on) offers:
> "t'is a coward, I am, but I will hold your coat for you."
My favorate movie, was even discussing it last month with my sister in
the U.K.
Can't see the relavence of your statement tho.
>
> >I for one think that the hobby is in error in focussing its thoughts
> >on wavelength with respect to antennas. Am I the only one that thinks
> >this way? Is my thinking too far out to be called 'out of the box'.
> >Some noted thinkers state that radiation can emanate from a single point,
> >if this is so does in not add reason to move away from the 'Wave length'
> >term and restart with Q and aperture ?
> >Maybe the above is too deep to base a discussable post upon.
> >Regards
> >Art
>
> Hi Art,
>
> >Too deep to base a discussable post upon? :-)
> This is the internet!
Well I thought the newsgroup members should not be pushed out
because of philisophical grounds.
> OK, so we got that out of the way.
yes you did!
>
> >Some noted thinkers state that radiation can emanate from a single point,
> Happens all the time with light bulbs and resistors, but those are
> hardly recommendations are they? You can use a short antenna, and yes
> it approximates a single point, and it also approximates a large
> resistor - take one, and you get both. If you don't care much for
> efficiency, you can optimize the smallness and the resistance
> simultaneously.
I am not judging what is right or wrong Richard I am pointing out that
some antenna efforts are moving away from the domination of
wavelength. As far as efficiency goes the moment you move away from
the lowest reonant resistance point then you are moving away from
optimisation if only as a compromise.

>
> >move away from the 'Wave length'
> >term and restart with Q and aperture ?
> Your discussion contains a presumption that is in error. Aperture is
> related to wavelength. You cannot move away and toward something at
> the same time.
Maybe my communication is at fault here, if a radiator is smaller than
a wavelength or percentage there of does not the aperture change

accordingly?
>
> Do you know the difference between a Sierpinski, a Koch Triadic or a
> Koch Quadratic?
No
You should, they have been the staple of fractal
> design for many, many years. Can you tell us which is the better
> design? I can, and have. Can you tell us how to produce a fractal
> broad band antenna (several ham bands not just one)? I can and have.
> Can you tell us which fractal would be a broad band antenna? Can you
> tell us which fractals are dead ends and which are performers? I can
> and have. Clearly, these fundamental issues are of no importance to
> you because you have never uttered one word in that regard.
No the fractal antenna is of no real interest to me but I do recognise
your considerable knoweledge on the subject. I have no intention of
auguing one point against the other, I aqm not in a offensive mode
with this subject.
>
> Do you support experiments and encourage new ideas in fractals? No,
> you don't. But you do seem quite interested in the fate of snake oil
> salesmen and pine about their treatment when the town-folk run them
> out tarred and feathered to a pole for having poisoned their children.
No Rich get off that sort of aproach I am discussing that new
aproaches to antenna designs are not being governed by wavelength in
the attempt to be omptimum and that includes the IR antenna. Am I out
of order in raising the observation and my opinion?
>
> Art, skip the sentimentality and stick to what you actually DO and
> where you intend to GO.

Richard don't go off in that direction ,please, I am not trying to be
combative
Best regards
Art
>
> 73's
> Richard Clark, KB7QHC

2893. Re: aluminium joints, vaseline or conductive grease?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 00:57:25 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <fuY0a.460$oc.25@fe01.atl2.webusenet.com>
Source record: 125181

also, check out "lubriplate", and (especially at vhf-uhf, and on p.c. boards) COOL-AMP , a silver plateing compound, that can be applied with water . think no-ox is also made by same outfit (bears silver, suspended in grease , and made by the cool-amp people) , located around portland, oregon. as info, jim nn7k

"Dave Platt" <dplatt@radagast.org> wrote in message news:v48cv7pf9n165@corp.supernews.com...
> >I have just started to refurbish my 10 year old R5, and find that most
> >joints are corroded and needs to be cleaned and treated to obtain and keep
> >best performance.
> >But in respect to treatment after cleaning...what is the best standard for
> >aluminium tubes and fixtures?
> >I see advice to use Vaseline, and some who advice to use electrically
> >conductive grease, presumably a grease with zink powder in, and not readily
> >available for the hobbyist...it seems.
>
> Here in the U.S., anti-oxidant greases are easily and inexpensively
> available at electrical supply stores. The "NoAlOx" brand is the
> commonest... it's a combination of zinc dust and silicon dioxide, in a
> polybutene carrier.
>
> They are used as an essential element, whenever aluminum wire is
> attached to a fixture. There was a trend here, some years ago, to use
> aluminum wiring for household "mains" connections. It turned out to
> be a rather bad idea, due to problems with thermal cycling and
> oxidation where the wires are attached to switches, outlets, circuit
> breakers, etc. Special techniques, such as anti-oxidant greases and
> the use of high-pressure-crimp "pigtails", are now required by the
> electrical code when aluminum wire is used.
>
> Similar anti-oxidant greases (with or without zinc and/or copper dust)
> are used when connecting copper mains wire to breakers and switches.
>
> I'd suggest checking with your local electrical-supply house... they
> may have this sort of product easily available. Auto-parts stores
> might have something of this sort, as well.
>
> I'd think that Vaseline (petrolatum, petroleum jelly) would work, as
> would various silicone greases. These will retard further oxidation
> on the joints, but wouldn't "cut through" the existing oxidation layer

> as NoAlOx is said to do.
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

2894. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 01:10:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b21ldl$791$1@helle.btinternet.com>
Source record: 125183

"Dick" wrote -
> I am going to mount a VHF/UHF vertical on the stand that holds my air
> conditioner on the roof. This is the highest point on my house, and
> makes a perfect mount for the antenna. The A/C runs on 220 VAC, and
> the stand is at service ground. I want to ground my antenna to an 8'
> ground rod in the ground below. This will be dedicated to the
> antenna, however, it would put the antenna ground at the same
> potential as the service ground. Something tells me I shouldn't tie
> service ground to an antenna ground. Seems like it would violate the
> NEC. Comments? Suggestions?
>
> Dick - W6CCD

==========

A single 8 foot ground rod, in soil of average resistivity, has a resistance in the order of 50 to 100 ohms which, all by itself, is fairly useless at radio frequencies. It will have a resistance about the same as a single 8-feet radial wire which is obviously considerably shorter than the power supply ground you intend to parallel it with. As the antenna is roof-mounted the reactance of the long grounding wire will further isolate the rod from the power ground.

A single rod might as well not be there. If installed its effectiveness at RF can be tested just by disconnecting it and checking to see if the antenna tuner needs any re-adjustment.

See Doc's message about connecting all grounds together. This reduces the possibility of electric shock at power frequency should a fault occur somewhere in the building wiring or equipment. For the same reason, if the incoming water and gas mains come in through metal pipes then bond THEM to the power supply ground too.

In the UK (and probably the rest of civilised Europe) everything metallic is required by the Buildings Regulations to be bonded to everything else with a plastic insulated multi-strand cable of specified minimum diameter.

The incoming main water pipe, 3/4" diameter, at my QTH is by far the best radial in my ground system. It's connected to every other house for miles around. In addition to its low input impedance, when compared with the power supply ground is low electrical noise. Unfortunately I cannot disconnect the noisy power ground otherwise the insurance company might not pay up if the house burnt down. ;o)

Download in a few seconds from website below and run immediately program EARTHRES to obtain resistance to Mother Earth of single rods, multiple rods,

plates, single wires, multi-radial grounding systems, versus conductor dimensions and soil resistivity. There are also two simple methods of determining soil resistivity.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

2895. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 01:10:15 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b21ldn$791$2@helle.btinternet.com>
Source record: 125184

Art, how many more times do I have to say they are NOT Maxwell's
quations? - they are Oliver Heaviside's who came along about 20 years
later.

We should give credit where credit is due.

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================

2896. Re: Shortwave Antenna Setup

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 01:14:21 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <2KY0a.563$oc.509@fe01.atl2.webusenet.com>
Source record: 125185

and, that you haven't aluminiun sideing ! also, if not transmitting, can use burgular alarm tape on BOTH sides of the window , overlapping each other, and the glue on sensors -- use as a capacitor thru the glass -- they used to be sold for tv installations, but the more foil, the better (higher capacatance) response at low frequencies-- jim nn7k

"Rich" <rk911@ANTISPAM.yahoo.com> wrote in message news:3fj84vof068n267uocn1n8o23vp4cta0qd@4ax.com...
> On Sat, 8 Feb 2003 00:05:57 -0000, "Michael Farragher"
> <michaelfarragher@#####eircom.net> wrote:
>
> >Hi all,
> >
> >To set up an external antenna do I need to drill outside to keep it away
> >from windows.
> >
> >I would be a little hesitant in drilling if there was not any need to.
> >
> >Will the window cause interference ?
> >
> >Thanks
> >
> >Michael
> >
> not if you're using a piece of insulated wire, michael. i've done just
> exactly that and the long wire works well for me. just be sure that
> the wire doesn't break off in the window.
>
> 73,
> rich, n9dko
>

2897. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 01:17:42 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E445AAE.5B23E14E@attbi.com>
Source record: 125186

Art,

It's been many many years since my college days but if I recall
correctly we used to measure aperture in square wavelengths.

The last program I managed, USAF MILSTAR antennas, still used effective
aperture of XYZ square wavelengths in the gain calculations.

What unit do you suggest for the measure of effective aperture?

Deacon Dave, W1MCE
+++

Art Unwin KB9MZ wrote:
>
> When thinking about dissention on this newsgroup my mind
> goes to Fractals, contrawound and E/H antennas.
> Each of these forays into antenna design have one thing in common
> in that they move away from the common starting point of the thinking
> in ham radio which is 'wave lengths' or parts there of but go to the
> starting point of 'aperture' and 'Q' . In looking at the experimental
> path that I follow I suddenly realise that I also do exactly the same.
> Yet, when one understands that these two factors outweigh any
> prepoderance on 'wave length' with respect to antennas a whole new
> frontier opens that can bring new life to antenna design.
> Instead of total derision with the advent of new design thoughts could
> we not discuss the new and good things that come from these
> experiments that would encourage new ideas in the hobby.
> I for one think that the hobby is in error in focussing its thoughts
> on wavelength with respect to antennas. Am I the only one that thinks
> this way? Is my thinking too far out to be called 'out of the box'.
> Some noted thinkers state that radiation can emanate from a single point,
> if this is so does in not add reason to move away from the 'Wave length'
> term and restart with Q and aperture ?
> Maybe the above is too deep to base a discussable post upon.
> Regards
> Art

2898. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 01:22:59 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g1n84vo7i0n44ubh7572ch8t3cfevmcrtt@4ax.com>
Source record: 125187

On 7 Feb 2003 16:51:02 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>> the same time.
>Maybe my communication is at fault here, if a radiator is smaller than
>a wavelength or percentage there of does not the aperture change
>accordingly?

Hi Art,

Aperture doesn't really mean anything useful for standard to small
sized antennas. Even a small, small antenna has about the same
aperture as a full sized dipole - and that is not saying much.

Aperture only becomes meaningful in the context of wavelength and
large dimensions with respect to that wavelength. You might want to
investigate "Synthetic Aperture" (not a joke) though.

73's
Richard Clark, KB7QHC

2899. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 01:25:46 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <icGdnT8fjooFwdmjXTWcpw@crocker.com>
Source record: 125188

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0302070903.126bb8c6@posting.google.com...
> When thinking about dissention on this newsgroup my mind
> goes to Fractals, contrawound and E/H antennas.
> Each of these forays into antenna design have one thing in common
> in that they move away from the common starting point of the thinking
> in ham radio which is 'wave lengths' or parts there of but go to the
> starting point of 'aperture' and 'Q' . In looking at the experimental
> path that I follow I suddenly realise that I also do exactly the same.
> Yet, when one understands that these two factors outweigh any
> prepoderance on 'wave length' with respect to antennas a whole new
> frontier opens that can bring new life to antenna design.
> Instead of total derision with the advent of new design thoughts could
> we not discuss the new and good things that come from these
> experiments that would encourage new ideas in the hobby.
> I for one think that the hobby is in error in focussing its thoughts
> on wavelength with respect to antennas. Am I the only one that thinks
> this way? Is my thinking too far out to be called 'out of the box'.
> Some noted thinkers state that radiation can emanate from a single point,
> if this is so does in not add reason to move away from the 'Wave length'
> term and restart with Q and aperture ?
> Maybe the above is too deep to base a discussable post upon.
> Regards
> Art

if you want, you can look at any antenna as an array of point sources. this is essentially what eznec and most other antenna analysis programs do. numerically combining point sources and calculating the interaction between them is the basis of most simulation code. now, since that method provides a reasonable approximation of how antennas work, can you not envision that for yourself? if so, then all antennas are nothing but collections of one or more point sources arranged in some kind of shape to generate a desired radiation pattern at some distance from them. what that shape is doesn't really matter, the interaction between all these point radiators still works the same way, the laws of Gauss and Faraday and the equations of Maxwell have never been shown to be violated by any know arrangement of radiators... fractal, eh, cfa, or simple dipole, break them down far enough and they all work the same way... so arrange away, shrink, stretch, coil, fold, or crunch into a flying saucer shape on top of your tv and you have nothing new, just another collection of point sources interacting via some relatively simple equations.

now, why do 'wavelengths' and large fractions of them like 1/2 and 1/4 keep showing up in antenna designs? because 1/2 wavelength is the shortest free standing wire that is resonant at a given frequency. this makes such things

as the yagi work, an approximately 1/2 wavelength conductor responds to the excitation by developing its own current with a predictable phase relationship and magnitude to the rest of the structure in such a way that this current can be used to form the radiated field into some desired pattern. 1/4 wavelength conductors over a good ground happen to have an impedance that is easy to get current into with common equipment. 1 wavelength conductors folded into a loop also have an impedance that is relatively easy to use and have some interesting properties that make forming far fields into useful patterns. likewise a 1/2 wave conductor broken in the middle to make two 1/4 waves happens to have a nice feed point impedance and a useful radiation pattern.... there is nothing magic about them, they just happen to do things that have been found useful over the last 100 years or so.

much smaller arrangements of conductors have also been used, but they frequently exhibit characteristics in one or more critical area that make them harder to work with and often less useful than 'wavelength' size conductors. short helically wound conductors while much smaller than a wavelength usually exhibit an impedance that is harder to efficiently get current into, and respond well over a narrower range of frequencies. folded, fractalized, crunched, zigzag, and all sorts of other arrangements have been succesfully used in certain circumstances and perform in accordance with physical laws, but they aren't a cure all and certainly aren't magical or 'new physics' as some would have you believe.

in summary after this long rambling... keep experimenting, fold your wires, wind your coils, forge your plates, whatever turns you on, but you will have a hard time breaking the physical laws that describe how charges, currents, fields, and waves work.

2900. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 01:25:49 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E445C94.F607AAF7@attbi.com>
Source record: 125189

The power radiated by the antennas is the same [assuming a good ground system for the 1/4 wave vertical].

100 watts from 1/4 wavelength = 100 watts from a 1/2 wavelength = 100 watts from a 3/4 wavelength = 100 watts from a 1 wavelength etc.

Antenna lengths longer than 1/2 wavelength produce side lobes in the radiated pattern. These lobes concentrate some of the power in one direction by subtracting it from another direction. So, for example, you may transmit a stronger signal N-S at the expense of a weaker signal E-W.

Deacon Dave, W1MCE

exxos wrote:
>
> Hi all,
>
> I've been reading up on electrical harmonics and such with arials... What I
> dont kinda get is the frequency of the waves used.... Most arials seem to
> work on a 1/4th wave with basically the bottom end grounded to make up the
> other half of the wave... Though so I aead 1/2wave (no gound) is better
> for maximum radiation ? This then brings me onto the 3rd harmonic since this
> itself seems to give more power somehow than anything else ? Does anyone
> know of any good site which explains this kinda thing ? I've read a fair bit
> from google though none of them actually say what happens in terms of power
> output from 1/4 wave 1/2wave and 3rd harmonic...
>
> thanks,
> chris

2901. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 02:37:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v48rb4jjn72k90@corp.supernews.com>
Source record: 125190

About 3 minutes of time spent on the web produced the facts that:

1. The ARRL is a 501(c)(3) non-profit organization, not a "503(c) charity" (https://www.arrl.org/forms/note.html), and

2. 501(c)(3) organizations are permitted to lobby (http://www.nonprofits.org/npofaq/16/34.html).

The ARRL most certainly does lobby. Until his death last year, Steve Mansfield, N1MZA was a lobbyist for the ARRL. According to the ARRL web site, it currently retains Chwat & Company, a "government relations firm" in Washington.

Roy Lewallen, W7EL

Jimnn7k@reno.rmci.net wrote:
> Was at war with them for some 25 years (after their misbegotton "Incentive
> Licenseing" scheme, but have an uneasy truce (tis the only mouthpiece we
> have, at this time), but would jump ship for another compentent
> organization, in a instant (wayne Green, and your old organization, are you
> listening?). but, by law, the LEAGUE CAN'T LOBBY! all it can do is propose.
> this is the normal problem with 503(c) charities! jim nn7k

2902. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 02:50:40 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <qnr84vsvr0tnqkr5ptu4qg4vts7ueurn4o@4ax.com>
Source record: 125191

Thanks Reg. I am not trying to achieve an RF ground. My antenna
works just fine without any. The antenna is a Diamond X-50. My only
concern is to provide a little protection from nearby lightning as the
antenna will be the highest point above the house roof. I know it's
not going to protect from a direct hit.

Dick - W6CCD

On Sat, 8 Feb 2003 01:10:14 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>
>"Dick" wrote -
>> I am going to mount a VHF/UHF vertical on the stand that holds my air
>> conditioner on the roof. This is the highest point on my house, and
>> makes a perfect mount for the antenna. The A/C runs on 220 VAC, and
>> the stand is at service ground. I want to ground my antenna to an 8'
>> ground rod in the ground below. This will be dedicated to the
>> antenna, however, it would put the antenna ground at the same
>> potential as the service ground. Something tells me I shouldn't tie
>> service ground to an antenna ground. Seems like it would violate the
>> NEC. Comments? Suggestions?
>>
>> Dick - W6CCD
>
>============================
>
>A single 8 foot ground rod, in soil of average resistivity, has a resistance
>in the order of 50 to 100 ohms which, all by itself, is fairly useless at
>radio frequencies. It will have a resistance about the same as a single
>8-feet radial wire which is obviously considerably shorter than the power
>supply ground you intend to parallel it with. As the antenna is
>roof-mounted the reactance of the long grounding wire will further isolate
>the rod from the power ground.

2903. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 03:24:39 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <cE_0a.1368$oc.1081@fe01.atl2.webusenet.com>
Source record: 125192

If that is the case, then ANY "contributions" to the league are NOT TAX DEDUCTABLE! for any purposes ! but, then , that, they arn't as effective as the NRA (EVEN IF THEY (NRA), a 503)-- afterall, just WHOM in the amateur radio community bugs their SENATORS/CONGRESSpersons, not to mention the AGENCIES of the government??
way I see it, the ARRL will let the amateur licensing become as effective as it was in WW II, issue licenses, but WITHOUT access to spectrum. And, at the end (IF EVER) of our present conflict, those licenses will mean nothing , but WALLPAPER! ! the spectrum is a valuable resource to be auctioned off, and the license structure has been dumbed down to about what was required when licenses were ended for citizens banders - translation, will be the end of AMATEUR RADIO!

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v48rb4jjn72k90@corp.supernews.com...
> About 3 minutes of time spent on the web produced the facts that:
>
> 1. The ARRL is a 501(c)(3) non-profit organization, not a "503(c)
> charity" (https://www.arrl.org/forms/note.html), and
>
> 2. 501(c)(3) organizations are permitted to lobby
> (http://www.nonprofits.org/npofaq/16/34.html).
>
> The ARRL most certainly does lobby. Until his death last year, Steve
> Mansfield, N1MZA was a lobbyist for the ARRL. According to the ARRL web
> site, it currently retains Chwat & Company, a "government relations
> firm" in Washington.
>
> Roy Lewallen, W7EL
>
> Jimnn7k@reno.rmci.net wrote:
> > Was at war with them for some 25 years (after their misbegotton
"Incentive
> > Licenseing" scheme, but have an uneasy truce (tis the only mouthpiece we
> > have, at this time), but would jump ship for another compentent
> > organization, in a instant (wayne Green, and your old organization, are
you
> > listening?). but, by law, the LEAGUE CAN'T LOBBY! all it can do is
propose.
> > this is the normal problem with 503(c) charities! jim nn7k
>

2904. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 04:56:45 UTC
From: Bill <wbishop1nospam@minsdspring.com>
Message-ID: <b222mh$6l4$1@slb4.atl.mindspring.net>
Source record: 125193

Be aware that it's not just concrete in those floors -- there's plenty of steel providing strength as well. The distance for your wireless LAN assumes not great impediment to radio waves. The flooors may well be a great impediment.

Bill
"spyce girl" <paranoia28@yahoo.com> wrote in message news:1b02f652.0302070945.44f171ed@posting.google.com...
> We're on the 6th floor of a concrete building. We're getting an
> extension office on the ground floor. The relative location of both
> offices inside the building is exactly the same, just on different
> floors, meaning if I looked down from the window of our 6th floor
> office, I can directly see the window of our ground floor office. Is
> this a valid line-of-sight for a wireless lan to work properly?
>
> We currently have a wired LAN on the 6th floor office. We hope to be
> able to connect PCs from the extension office to this LAN for file
> sharing purposes. I talked to a local PC vendor about this and his
> response was that "line-of-sight" standard only applied to horizontal
> distances, not vertical ones. Is this true?
> What about omni-directional antennas? Would these help and is it
> strong enough to traverse the distance of 5 floors vertically?
>
> Any info/advice would be greatly appreciated!
>
> Yours truly,
> Spycegirl

2905. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 05:00:45 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E448F59.CEFA6FB0@att.net>
Source record: 125194

Hi Jim,

Not sure where you are getting your information, but this is a direct
quote from an ARRL web page on The Big Project.

"Since the ARRL is a 501(c)(3) organization, donations are tax
deductible"

Payments for member services such as a QST subscription, running the
ARRL office, and lobbying are not tax deductible. Donations for
educational projects are tax deductible.

73,
Gene
W4SZ

Jimnn7k@reno.rmci.net wrote:
>
> If that is the case, then ANY "contributions" to the league are NOT TAX
> DEDUCTABLE! for any purposes ! but, then , that, they arn't as effective
> as the NRA (EVEN IF THEY (NRA), a 503)-- afterall, just WHOM in the
> amateur radio community bugs their SENATORS/CONGRESSpersons, not to mention
> the AGENCIES of the government??
> way I see it, the ARRL will let the amateur licensing become as effective as
> it was in WW II, issue licenses, but WITHOUT access to spectrum. And, at the
> end (IF EVER) of our present conflict, those licenses will mean nothing ,
> but WALLPAPER! ! the spectrum is a valuable resource to be auctioned off,
> and the license structure has been dumbed down to about what was required
> when licenses were ended for citizens banders - translation, will be the end
> of AMATEUR RADIO!
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v48rb4jjn72k90@corp.supernews.com...
> > About 3 minutes of time spent on the web produced the facts that:
> >
> > 1. The ARRL is a 501(c)(3) non-profit organization, not a "503(c)
> > charity" (https://www.arrl.org/forms/note.html), and
> >
> > 2. 501(c)(3) organizations are permitted to lobby
> > (http://www.nonprofits.org/npofaq/16/34.html).
> >
> > The ARRL most certainly does lobby. Until his death last year, Steve
> > Mansfield, N1MZA was a lobbyist for the ARRL. According to the ARRL web
> > site, it currently retains Chwat & Company, a "government relations
> > firm" in Washington.
> >

> > Roy Lewallen, W7EL

2906. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 05:07:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v49448vc8a04e@corp.supernews.com>
Source record: 125195

You should really take some effort to get your facts straight. If you had bothered to click on the first URL in my posting (https://www.arrl.org/forms/note.html), you would have read:

"The American Radio Relay League is a tax-exempt, non-profit organization as described in Section 501(c)(3) of the Internal Revenue Code. Contributions are tax-deductible to the extent permitted by law. Under Internal Revenue Service guidelines, the estimated value of any benefits you may receive in exchange for a contribution of $250 or more must be deducted from the amount of your contribution to determine the tax-deductible amount."

Roy Lewallen, W7EL

Jimnn7k@reno.rmci.net wrote:
> If that is the case, then ANY "contributions" to the league are NOT TAX
> DEDUCTABLE! for any purposes ! . . .

2907. Re: Cushcraft MA5V

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 06:37:47 UTC
From: Per Brix <oz5abo@XXXtdcadsl.dk>
Message-ID: <3e44a5bc$0$237$edfadb0f@dread14.news.tele.dk>
Source record: 125196

Hi Rudi,

Tnx for your info.

Vy 73 de oz5abo, Per

"Rudi" <wiedemann@attbi.com> skrev i en meddelelse
news:LcR0a.19799$2H6.729@sccrnsc04...
> I and 2 others LOVE our MA5Vs. There are no radials to install on your
> roof. Just 4 "stingers" sloping down near the base, around 4 ft long
each.
> Footprint is about 3 ft. x3 ft. and less than 15 ft tall. We all mounted
> ours from a chimney strap. Did fine in winds over 65mph several times!
> Good SWR (<1.5) on all bands. We're all VERY happy with it. Good
solution
> at $209.
>
> "Per Brix" <oz5abo@XXXtdcadsl.dk> wrote in message
> news:3e3612b7$0$201$edfadb0f@dread14.news.tele.dk...
> > Hi
> >
> > I am thinking of buying this antenna since I have limited space in my
> small
> > garden for putting up an antenna. Antennas mounted on buildings are not
> > allowed.
> >
> > So could anyone tell me how long the radials for this antenna are and
the
> > diameter of the "foot print" ?
> >
> > 73, OZ5ABO, Per
> >
> >
>
>

2908. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 10:31:40 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <f051a.1$vQ1.3693@news.randori.com>
Source record: 125197

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E445C94.F607AAF7@attbi.com...
> The power radiated by the antennas is the same [assuming a good ground
> system for the 1/4 wave vertical].
>
> 100 watts from 1/4 wavelength = 100 watts from a 1/2 wavelength = 100
> watts from a 3/4 wavelength = 100 watts from a 1 wavelength etc.
>
> Antenna lengths longer than 1/2 wavelength produce side lobes in the
> radiated pattern. These lobes concentrate some of the power in one
> direction by subtracting it from another direction. So, for example, you
> may transmit a stronger signal N-S at the expense of a weaker signal
> E-W.
>

do you know of any online field images to show this kinda thing ?

Thanks,
chris

> Deacon Dave, W1MCE
>
> exxos wrote:
> >
> > Hi all,
> >
> > I've been reading up on electrical harmonics and such with arials...
What I
> > dont kinda get is the frequency of the waves used.... Most arials seem
to
> > work on a 1/4th wave with basically the bottom end grounded to make up
the
> > other half of the wave... Though so I aead 1/2wave (no gound) is
better
> > for maximum radiation ? This then brings me onto the 3rd harmonic since
this
> > itself seems to give more power somehow than anything else ? Does anyone
> > know of any good site which explains this kinda thing ? I've read a fair
bit
> > from google though none of them actually say what happens in terms of
power
> > output from 1/4 wave 1/2wave and 3rd harmonic...
> >
> > thanks,
> > chris

2909. sale: High Power Diode 400 V 80 A

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 10:48:17 UTC
From: bluenight <bluenight@cne.de>
Message-ID: <3e44e072$0$333$88693e94@news.cneweb.de>
Source record: 125198

Hallo

sale 4 High Power Diode 400 V 80 A
price 50 $ + freight
Type SKKE 81/04
Data
http://www.semikron.com/databook99/01semipa/kd46.pdf

2910. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 10:58:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b22ns6$k1u$1@helle.btinternet.com>
Source record: 125199

. . . . . and the equations of Maxwell . . . . .

==========
If names MUST be dropped in order to bask in radiated glory then it's a good idea to drop the correct ones.

Replace "Maxwell" with "Heaviside".

2911. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 12:01:21 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E44F189.9B994BD5@attbi.com>
Source record: 125200

Reg, What's your source for this claim?

For almost 50 years, and in all my text books [circa 1950-1960], Maxwell
gets the credit.

Who is rewriting history <grin>?

Deacon Dave, W1MCE
+++

Reg Edwards wrote:
>
> . . . . . and the equations of Maxwell . . . . .
>
> ==========
> If names MUST be dropped in order to bask in radiated glory then it's a good
> idea to drop the correct ones.
>
> Replace "Maxwell" with "Heaviside".

2912. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 12:04:47 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E44F257.BC96BFCB@attbi.com>
Source record: 125201

Not on line.

But, any good library should have several books on antennas. The ARRL Antenna Book, Radio Electronics [by Terman][complex but does show the images], Antennas by Kraus [also complex but does show the images].

Deacon Dave

exxos wrote:
>
> "Dave Shrader" <david.shrader@attbi.com> wrote in message
> news:3E445C94.F607AAF7@attbi.com...
> > The power radiated by the antennas is the same [assuming a good ground
> > system for the 1/4 wave vertical].
> >
> > 100 watts from 1/4 wavelength = 100 watts from a 1/2 wavelength = 100
> > watts from a 3/4 wavelength = 100 watts from a 1 wavelength etc.
> >
> > Antenna lengths longer than 1/2 wavelength produce side lobes in the
> > radiated pattern. These lobes concentrate some of the power in one
> > direction by subtracting it from another direction. So, for example, you
> > may transmit a stronger signal N-S at the expense of a weaker signal
> > E-W.
> >
>
> do you know of any online field images to show this kinda thing ?
>
> Thanks,
> chris
>
> > Deacon Dave, W1MCE
> >
> > exxos wrote:
> > >
> > > Hi all,
> > >
> > > I've been reading up on electrical harmonics and such with arials...
> What I
> > > dont kinda get is the frequency of the waves used.... Most arials seem
> to
> > > work on a 1/4th wave with basically the bottom end grounded to make up
> the
> > > other half of the wave... Though so I aead 1/2wave (no gound) is
> better
> > > for maximum radiation ? This then brings me onto the 3rd harmonic since

> this
> > > itself seems to give more power somehow than anything else ? Does anyone
> > > know of any good site which explains this kinda thing ? I've read a fair
> bit
> > > from google though none of them actually say what happens in terms of
> power
> > > output from 1/4 wave 1/2wave and 3rd harmonic...
> > >
> > > thanks,
> > > chris

2913. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 12:40:41 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <d8OdnUBAPdVbZ9mjXTWcoA@crocker.com>
Source record: 125202

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b22ns6$k1u$1@helle.btinternet.com...
> . . . . . and the equations of Maxwell . . . . .
>
> ==========
> If names MUST be dropped in order to bask in radiated glory then it's a
good
> idea to drop the correct ones.
>
> Replace "Maxwell" with "Heaviside".
>
>
in both of my reference books the only reference to heaviside has to do with
a slightly different set of units. they don't change the concept of the
equations, only simplify the unit conversions a bit.

2914. Stealth antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 13:22:51 UTC
From: gil <gilpi@mindspring.com>
Message-ID: <b22vg9$37h$1@slb4.atl.mindspring.net>
Source record: 125203

Living in a townhouse restricted situation, I want to get a random wire antenna going from the top floor deck into some trees a few feet away.

What would be least noticible thickness and color wire I could use before it reaches the trees?

I plan to sling shoot the wire over the trees but what effect would the trees have on the overall performace? I dont plan to use a lot of power.....25-30 watts.

I"m sure there are a lot of guys out there in the same position I am, but I'm also sure there is a way to get around some of the restrictions.

Thanks

Gil

2915. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 13:29:02 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v4a1gvrs80ute4@corp.supernews.com>
Source record: 125204

Get a copy of the EZNEC demo and you may see the resultant fields for
various antennas.

"exxos" <exxos@home.co.uk> wrote in message
news:f051a.1$vQ1.3693@news.randori.com...
>
> "Dave Shrader" <david.shrader@attbi.com> wrote in message

> do you know of any online field images to show this kinda thing ?
>
> Thanks,
> chris
>

2916. What is polarity on the HI-Q 4:1 Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 13:38:53 UTC
From: shane0319@hotmail.com
Message-ID: <5e60425.0302080538.493203c5@posting.google.com>
Source record: 125205

Thank you for reading my msg!

I am building a HB windom antenna according to:
http://www.packetradio.com/windom.htm

According to the diagram I need to connect the short leg to NEG ang
long leg to POS. I just recd the HI-Q 4:1 and there is no
documentation on which side is what. Ohming is not on option, due to
being DC grounded.
The instructions in the HI-Q say, "Do NOT disassemble the HI-Q Balun.
Once any of the hooks are disassembled, the balun can not be
reassembled."
Plus the PVC is glued well.

Thank you for the help!

Shane N0ZDI

2917. Mobile10M Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 14:24:15 UTC
From: RadioFan <RadioFan@Juno.com>
Message-ID: <f7WdnSWMgqSKjtijXTWc3A@giganews.com>
Source record: 125206

Any recommendations for a mobile antenna for 10M? I will be using an old RS HTX-100 (25W).

The vehicle is a Ford Ranger pickup, and I do not want to drill any holes, so mag mounts or other un-intrusive mounts are the main concern.

TIA.

RadioFan

2918. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 14:53:28 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302080653.2c304bb2@posting.google.com>
Source record: 125207

William Ewald <wgewald@att.net> wrote in message
news:<ic384v8nlprqjbvbv2fdiv63la371q7fs9@4ax.com>...
> On 7 Feb 2003 09:03:23 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >When thinking about dissention on this newsgroup my mind
> >goes to Fractals, contrawound and E/H antennas.
> >Each of these forays into antenna design have one thing in common
>
> The fractal was different in that this newsgroup was used as a soap
> box for years by its adherent to draw attention to his commercial
> products which had no applications in amateur radio. His attempts to
> pretend the relevance of fractal antennas (which he claimed to have
> "invented") to this newsgroup were transparent and ludicrous.
>
> This message was posted after 30 January, 2003.

Richard from this point on let us exclude fractals from the discussion
and let it revolve around other antennas. I think it will then allow
all to focus much better
Regards
Art

2919. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 15:26:51 UTC
From: richardharrison@webtv.net
Message-ID: <19330-3E4521BB-22@storefull-2315.public.lawson.webtv.net>
Source record: 125208

Reg wrote:
"For almost 50 years, and in all my text books (circa 1950-1960),
Maxwell gets the credit."

Oliver Heaviside was born in the same London slums as Charles Dickens.
Heaviside lived 1850-1925.

Scarlet fever left him partly deaf. He was finished with formal
schooling by 1865 at an age of about 16. Heaviside had been a top
student. He then went to work as a telegrapher, became interested in
electricity, and then read Maxwell`s "Treatise on Electricity and
Magnetism". It changed his life.

Heaviside quit his job as a telegrapher and went to work at home on his
electricial obsession. Heaviside succeeded in reducing Maxwell`s whole
field theory into two equations. Next, he invented operational calculus.

Heaviside got plenty of recognition by my professors. They idolized him.

The text review, no. 426, for "Oliver Heaviside", one of a series of
University of Houston, short TV programs, called "Engines of Our
Ingenuity", can be found by searching the web on: "Oliver Heaviside".

Best regards, Richard Harrison, KB5WZI

2920. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 15:52:33 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <5J91a.526$ji.167802@twister.southeast.rr.com>
Source record: 125209

The makers of Hamsticks have a license plate bracket that goes under the license plate with about a 3 or 4 inch bracket sticking out. Looks good for light weight verticals. I've seen a couple of them around town.

Good luck,

Bill, W4WNT
Mark" <marks@nospam.org> wrote in message
news:9qvv3vci6ar2rgeknq8hrach5flbvr2ac4@4ax.com...
> I'm looking to mount a simple multiband scanner antenna on the truck, but
> can't do it on the roof because it's garaged and it's real tight now.
>
> I'd prefer to keep away from mag mounts and bumper mounts. I'd also like
to
> mount this without doing any drilling to the vehicle. Demanding, aren't I
?
> :)
>
> What I'm thinking is a way to build a bracket that will attach to some
factory
> screws/bolts somewhere on the sides in where the rear hatch is. Something
> that will be able to protrude out at a "twisted L" type angle and I can
mount
> the antenna on that plate.
>
> Has anyone done anything similar or have any input on this? Thanks.

2921. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 16:11:53 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302080811.5c895380@posting.google.com>
Source record: 125210

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b21ldn$791$2@helle.btinternet.com>...
> Art, how many more times do I have to say they are NOT Maxwell's
> quations? - they are Oliver Heaviside's who came along about 20 years
> later.
>
> We should give credit where credit is due.
> ---
> ========================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ========================

Reg you have to realise that we only have a handfull of news sources
for the the whole of the U.S.A. and thus America is woefullty behind
on newspaper corrections. We still not have been informed of the error
regarding the first plane to cross the atlantic ocean was an american
plane.
On another note, correct me if I am wrong but doesn't the loop have
rejection abilities for off frequency signals and is it not governed
by size i.e. wavelength? If only we could regulate bandwidth and
introduce loss less
matching we would be close to the optimum antenna would we not ?
Regards
Art

2922. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 16:19:31 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302080819.68553dd2@posting.google.com>
Source record: 125211

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<27k84vg2t0pc303qa9n6i7b76jooo585o7@4ax.com>...
> On 7 Feb 2003 16:13:06 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >William Ewald <wgewald@att.net> wrote in message
news:<ic384v8nlprqjbvbv2fdiv63la371q7fs9@4ax.com>...
> >> On 7 Feb 2003 09:03:23 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> >> wrote:
> >>
> >> >When thinking about dissention on this newsgroup my mind
> >> >goes to Fractals, contrawound and E/H antennas.
> >> >Each of these forays into antenna design have one thing in common
> >>
> >> The fractal was different in that this newsgroup was used as a soap
> >> box for years by its adherent to draw attention to his commercial
> >> products which had no applications in amateur radio. His attempts to
> >> pretend the relevance of fractal antennas (which he claimed to have
> >> "invented") to this newsgroup were transparent and ludicrous.
> >>
> >> This message was posted after 30 January, 2003.
> >
> >Yes Richard I fully understand the 'soap box' allegation but what
> >about the actual antenna itself which I know you are knoweledgable
> >about. It did work
> >though I would not say it was optimum , but it was aproached on the
> >basis of resitance, capacitance and inductance without reference to
> >wavelength .
Richard didn't you read where I apologise for that error? The
corrective post was made to you.

> >Is it foolish to contemplate foraging in a new frontier to obtain an
> >optimum antenna without being burdened by antenna length governed by
> >wave lengths?
> >Regards
> >Art
>
>
> Hmmm,
>
> Art, I don't know if I am to respond to this, or if you name all your
> critics Richard these days. I can understand why tho' if that is
> indeed the case. ;-)
>

> The Richard effect, kinda like Lou Gherig's disease hmmm?
> Homer Simpson: "Who's Lou Gherig?"
> Dr. Hibbard: "He's the fellow that got this terrible and rare
> illness with that name."
> Homer: "Wow! Can you imagine the odds on that?"
>
> If you want to forage a new frontier, remember to take condiments.
>
> However, to forge on has its own virtues, nothing is learned without
> mistakes. I make sure to pick projects with high prospects of making
> many mistakes.

That is why I devote my efforts to an optimum antenna without being
burdened by wavelength and my efforts so far are more than
encouraging.

The latest one was a fixed price deliverables contract
> where I got the specification AFTER the end of the contract. Talk
> about mistakes.
>
> Now, perhaps William might want to pick up the lateral hand-off....

I assume that the above was not meant for me but for "William "
Regards
Art

>
> 73's
> Richard Clark, KB7QHC

2923. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 16:36:48 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302080836.59a8dc9e@posting.google.com>
Source record: 125212

"David Robbins" <k1ttt@arrl.net> wrote in message
news:<icGdnT8fjooFwdmjXTWcpw@crocker.com>...
> "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> news:85ed38d.0302070903.126bb8c6@posting.google.com...
> > When thinking about dissention on this newsgroup my mind
> > goes to Fractals, contrawound and E/H antennas.
> > Each of these forays into antenna design have one thing in common
> > in that they move away from the common starting point of the thinking
> > in ham radio which is 'wave lengths' or parts there of but go to the
> > starting point of 'aperture' and 'Q' . In looking at the experimental
> > path that I follow I suddenly realise that I also do exactly the same.
> > Yet, when one understands that these two factors outweigh any
> > prepoderance on 'wave length' with respect to antennas a whole new
> > frontier opens that can bring new life to antenna design.
> > Instead of total derision with the advent of new design thoughts could
> > we not discuss the new and good things that come from these
> > experiments that would encourage new ideas in the hobby.
> > I for one think that the hobby is in error in focussing its thoughts
> > on wavelength with respect to antennas. Am I the only one that thinks
> > this way? Is my thinking too far out to be called 'out of the box'.
> > Some noted thinkers state that radiation can emanate from a single point,
> > if this is so does in not add reason to move away from the 'Wave length'
> > term and restart with Q and aperture ?
> > Maybe the above is too deep to base a discussable post upon.
> > Regards
> > Art
>
> if you want, you can look at any antenna as an array of point sources. this
> is essentially what eznec and most other antenna analysis programs do.
> numerically combining point sources and calculating the interaction between
> them is the basis of most simulation code. now, since that method provides
> a reasonable approximation of how antennas work, can you not envision that
> for yourself? if so, then all antennas are nothing but collections of one
> or more point sources arranged in some kind of shape to generate a desired
> radiation pattern at some distance from them. what that shape is doesn't
> really matter, the interaction between all these point radiators still works
> the same way, the laws of Gauss and Faraday and the equations of Maxwell
> have never been shown to be violated by any know arrangement of radiators...
> fractal, eh, cfa, or simple dipole, break them down far enough and they all
> work the same way... so arrange away, shrink, stretch, coil, fold, or crunch
> into a flying saucer shape on top of your tv and you have nothing new, just
> another collection of point sources interacting via some relatively simple
> equations.
I could not agree more but it cannot think for itself, it must be lead

and guided by a human that is not encumbered by wavelength.
>
> now, why do 'wavelengths' and large fractions of them like 1/2 and 1/4 keep
> showing up in antenna designs? because 1/2 wavelength is the shortest free
> standing wire that is resonant at a given frequency.
You now make my case with that erronious statement and the very reason
I suggest tha we should all me more than open minded. Thank you for
making that comment.

this makes such things
> as the yagi work, an approximately 1/2 wavelength conductor responds to the
> excitation by developing its own current with a predictable phase
> relationship and magnitude to the rest of the structure in such a way that
> this current can be used to form the radiated field into some desired
> pattern. 1/4 wavelength conductors over a good ground happen to have an
> impedance that is easy to get current into with common equipment. 1
> wavelength conductors folded into a loop also have an impedance that is
> relatively easy to use and have some interesting properties that make
> forming far fields into useful patterns. likewise a 1/2 wave conductor
> broken in the middle to make two 1/4 waves happens to have a nice feed point
> impedance and a useful radiation pattern.... there is nothing magic about
> them, they just happen to do things that have been found useful over the
> last 100 years or so.

Yes it is true that we have exceptede compromises instead of the
pursuit of the optimum.
>
> much smaller arrangements of conductors have also been used, but they
> frequently exhibit characteristics in one or more critical area that make
> them harder to work with and often less useful than 'wavelength' size
> conductors. short helically wound conductors while much smaller than a
> wavelength usually exhibit an impedance that is harder to efficiently get
> current into, and respond well over a narrower range of frequencies.
> folded, fractalized, crunched, zigzag, and all sorts of other arrangements
> have been succesfully used in certain circumstances and perform in
> accordance with physical laws, but they aren't a cure all and certainly
> aren't magical or 'new physics' as some would have you believe.

As I stated earlier we accempt compromise

>
> in summary after this long rambling... keep experimenting, fold your wires,
> wind your coils, forge your plates, whatever turns you on, but you will have
> a hard time breaking the physical laws that describe how charges, currents,
> fields, and waves work.

That is not what I am suggesting. It would apear that you are one of
the majority that is convinced that all is known about antennas and if
anything different is proposed it must be magic oe snake oil. I hope
the Patent office doesn't close shop and thus hinder innovation. Did
you finish enquiring when you left college on the basis that you now
knew all, I doubt it otherwise your company would have hired your

professor
Regards
Art

2924. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 17:06:53 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302080906.6c077bf9@posting.google.com>
Source record: 125213

Dave Shrader <david.shrader@attbi.com> wrote in message
news:<3E445AAE.5B23E14E@attbi.com>...
> Art,
>
> It's been many many years since my college days but if I recall
> correctly we used to measure aperture in square wavelengths.
>
> The last program I managed, USAF MILSTAR antennas, still used effective
> aperture of XYZ square wavelengths in the gain calculations.
>
> What unit do you suggest for the measure of effective aperture?
>
> Deacon Dave, W1MCE

Deacon, I look for the smart guys or the gurus to be more flexible and
come up with these sort of suggestions. When one of them does this
and achieves something then all will follow. In my mind I have already
achieved
most of my goals for the optimum antenna by thinking about other
things than wavelength, but until a guru who is respected talks and
describes such things
(non wavelength dominated antennas) progress will continue to be
stymied.
With respect to the above I can measure anything with my thumbnail
should I then decide that all things should be measured by thumbnails
? I hope not otherwise followers would be chopping away at my fingers.
I now notice what you were a manager of. Would the military reject any
antenna
that was not related to 'wavelength' that rejects all close bye
signals and provided a lossles matching system ? If dismissal first
came to mind instead of curiousity then we are doomed to relive the
past because all dipoles of 'wavelength' fail to achieve this optimum
design.
Best regards
Art

> Art Unwin KB9MZ wrote:
> >
> > When thinking about dissention on this newsgroup my mind
> > goes to Fractals, contrawound and E/H antennas.
> > Each of these forays into antenna design have one thing in common
> > in that they move away from the common starting point of the thinking
> > in ham radio which is 'wave lengths' or parts there of but go to the
> > starting point of 'aperture' and 'Q' . In looking at the experimental
> > path that I follow I suddenly realise that I also do exactly the same.

> > Yet, when one understands that these two factors outweigh any
> > prepoderance on 'wave length' with respect to antennas a whole new
> > frontier opens that can bring new life to antenna design.
> > Instead of total derision with the advent of new design thoughts could
> > we not discuss the new and good things that come from these
> > experiments that would encourage new ideas in the hobby.
> > I for one think that the hobby is in error in focussing its thoughts
> > on wavelength with respect to antennas. Am I the only one that thinks
> > this way? Is my thinking too far out to be called 'out of the box'.
> > Some noted thinkers state that radiation can emanate from a single point,
> > if this is so does in not add reason to move away from the 'Wave length'
> > term and restart with Q and aperture ?
> > Maybe the above is too deep to base a discussable post upon.
> > Regards
> > Art

2925. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 17:23:01 UTC
From: W7TI <jamspam@upyours.now>
Message-ID: <Xns931C5F751148Fpookster@216.168.3.50>
Source record: 125215

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in
news:85ed38d.0302080906.6c077bf9@posting.google.com:

> I hope not otherwise followers would be chopping away at my fingers.
>

Sounds good. Please give me the finger.

BT

2926. Re: Mobile10M Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 17:24:53 UTC
From: gil <gilpi@mindspring.com>
Message-ID: <b23dla$pd5$1@slb4.atl.mindspring.net>
Source record: 125214

So many out there...I've used a Wilson 1000 mag mount with great results but a full 1/4 wave whip (102") gives the best bang for the buck.

Gil

"RadioFan" <RadioFan@Juno.com> wrote in message news:f7WdnSWMgqSKjtijXTWc3A@giganews.com...
> Any recommendations for a mobile antenna for 10M? I will be using an old RS
> HTX-100 (25W).
>
> The vehicle is a Ford Ranger pickup, and I do not want to drill any holes,
> so mag mounts or other un-intrusive mounts are the main concern.
>
> TIA.
>
> RadioFan

2927. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 17:45:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b23fnk$574$1@sparta.btinternet.com>
Source record: 125217

> I've read a fair bit
> from google though none of them actually say what happens in terms of
power
> output from 1/4 wave 1/2wave and 3rd harmonic...
>
==========

That's because there's very little to say about it. The total amount of power radiated from an efficient antenna depends entirely on what is available from the transmitter regardless of antenna shape, lengths and number of elements.

Shape, lengths and number of elements determine the 3-dimensional radiation pattern, ie., the many directions between which power may be unequally shared, the SUM of ALL directions always being equal to the constant amount of power available from the transmitter.

Placing a reflector on one side of a light bulb has no effect on the TOTAL amount of light radiated into space.

Connecting 2 loud speakers, in series or parallel, in or out of phase, to an amplifier generating 1 watt of undistorted audio has no effect on the overall sound level in the room regardless of what nit-picking Hi-fi enthusiasts might have to say.

Reg, G4FGQ

2928. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 17:45:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b23fnl$574$2@sparta.btinternet.com>
Source record: 125216

Dave,

Just do the obvious - a simultaneous Google on "Heaviside" and "Maxwell".

Google is less tedious than obtaining the original scientific papers of both H and M and comparing both with what's been printed in the last 100 years of text books.

==========

> Reg, What's your source for this claim?
>
> For almost 50 years, and in all my text books [circa 1950-1960], Maxwell
> gets the credit.
>
> Who is rewriting history <grin>?

==========

> Deacon Dave, W1MCE
> +++
>
> Reg Edwards wrote:
> >
> > . . . . . and the equations of Maxwell . . . . .
> >
> > ==========
> > If names MUST be dropped in order to bask in radiated glory then it's a
good
> > idea to drop the correct ones.
> >
> > Replace "Maxwell" with "Heaviside".

2929. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 18:00:37 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <odha4vkbm3aninic9jsno1t2f97mfjnueq@4ax.com>
Source record: 125218

On Thu, 6 Feb 2003 19:06:35 -0600, "Dan/W4NTI"
<w4nti@NOSPAMmindspring.com> wrote:

>
>My comments were directed to that goof Andy.

I thought you and your girlfriend gave up on that quest.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2930. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 18:07:27 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e4540d2.86330109@news.galilei.com>
Source record: 125019

Hi Dick

Lightning does not necessarily seek out the highest point in an area. A study of hundreds of direct lightning hits to commercial radio and TV towers shows that lightning seems to have a pattern of hitting at specific points the majority of times. I think the point was a multiple of 15 feet +- I don't remember the exact number they said. But using 15 feet, lightning would normally hit at the point that was highest multiple of that number. A 50 foot tall tower would probably take a direct hit at the 30 or 45 foot point before taking it at the top.

TTUL
Gary

2931. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 18:21:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E454AAA.8060701@ieee.org>
Source record: 125020

Gary V. Deutschmann, Sr. wrote:
> Lightning does not necessarily seek out the highest point in an area.

Lightning hit my five foot tall live oak tree, the shortest thing
on my property.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2932. Connector for GSM mobile phone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 18:30:26 UTC
From: Ralph Prestros <prestros@agtu.at>
Message-ID: <3E454CC2.3000304@agtu.at>
Source record: 125021

Hi!

I've built a 10 element antenna for my mobile 1.8-GHz-GSM phone
SIEMENS M35i. Now I need to know the name of the connector on
the mobile phone. it looks like SMB but it isn't.
do what it is?

bye ralph!

2933. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 18:58:42 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302081058.6905d115@posting.google.com>
Source record: 125022

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<19330-3E4521BB-22@storefull-2315.public.lawson.webtv.net>...
> Reg wrote:
> "For almost 50 years, and in all my text books (circa 1950-1960),
> Maxwell gets the credit."
>
> Oliver Heaviside was born in the same London slums as Charles Dickens.
> Heaviside lived 1850-1925.
>
> Scarlet fever left him partly deaf. He was finished with formal
> schooling by 1865 at an age of about 16. Heaviside had been a top
> student. He then went to work as a telegrapher, became interested in
> electricity, and then read Maxwell`s "Treatise on Electricity and
> Magnetism". It changed his life.
>
> Heaviside quit his job as a telegrapher and went to work at home on his
> electricial obsession. Heaviside succeeded in reducing Maxwell`s whole
> field theory into two equations. Next, he invented operational calculus.
>
> Heaviside got plenty of recognition by my professors. They idolized him.
>
> The text review, no. 426, for "Oliver Heaviside", one of a series of
> University of Houston, short TV programs, called "Engines of Our
> Ingenuity", can be found by searching the web on: "Oliver Heaviside".
>
> Best regards, Richard Harrison, KB5WZI

Richard I am impressed with your post, you were open minded enough to seek
out things for yourself instead of just being a follower.
Best regards
Art

2934. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 19:29:00 UTC
From: tdonaly@aol.com
Message-ID: <20030208142900.04296.00000148@mb-bh.aol.com>
Source record: 125023

Art wrote,
>
>Richard I am impressed with your post, you were open minded enough to seek
>out things for yourself instead of just being a follower.
>Best regards
>Art
>

Now, if people would only give credit to Hermann Grassmann and Josiah
Willard Gibbs, whose mathematics made Heaviside's statements of Maxwell's ideas

possible, there might be some justice in the world.
73,
Tom Donaly, KA6RUH

2935. Please help antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 19:29:34 UTC
From: SABU731@webtv.net
Message-ID: <889-3E455A9E-284@storefull-2313.public.lawson.webtv.net>
Source record: 125026

Hi,
I live in the Passaic county area in NJ. I have a VHF/UHF antenna on the roof about 17 feet total off the roof (Two family). I am trying to receive channel 48 WGTW out of Philadelphia. The twin lead wire runs to the first floor, I am on the second floor + Attic.. I have received permission to splice the wire and add my own. Is this a good way to add my wire? I have lots of twin lead wire, is there a way to make my own antenna across my attic using the wire to get UHF reception? Any help in how to receive this station or making a antenna would be appreciated. A link to the technical stuff regarding WGTW transmitter http://100kwatts.tmi.net/tv/PHL.html

Thanks, J

2936. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 19:38:53 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <60na4vge6jcca2ibcdil5v44m0bn4l85p9@4ax.com>
Source record: 125024

Am I reading that there is no point to running a ground from my
antenna mount directly to the earth? The only path then would be
though the roof into the attic and down the wall to the service ground
some 50 feet away. Of course I realize the air conditioner sitting up
there on top is a pretty nice target in itself.

Dick

On Sat, 08 Feb 2003 12:21:30 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Gary V. Deutschmann, Sr. wrote:
>> Lightning does not necessarily seek out the highest point in an area.
>
>Lightning hit my five foot tall live oak tree, the shortest thing
>on my property.

2937. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 19:43:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ahna4v8b421nn8ov636g399jtdkpnu247f@4ax.com>
Source record: 125025

On 8 Feb 2003 08:19:31 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Richard didn't you read where I apologise for that error? The
>corrective post was made to you.

Hi Art,

Yes, I did when you posted it after I posted mine.

The timestamps are so close as to warrant the investigation of
propagation differences through the Internetosphere. ;-)

73's
Richard Clark, KB7QHC

2938. Re: Plans on an "Umbrella Antenna"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 19:49:27 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E455F4B.17784E94@silverstar.com>
Source record: 125027

Near Vertical Incident Skywave produces "umbrella" propagation pattern.
Fifty watts on SSB at MUF [usually 75M or 40M] with 20 feet of radiating
element horizontally deployed from ground upward produces totally clear
audio between similarly set up stations out to 300 mile radius.

2939. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 19:49:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E455F53.3040809@ieee.org>
Source record: 125029

Dick wrote:
> Am I reading that there is no point to running a ground from my
> antenna mount directly to the earth?

I learned a long time ago that lightning is not going to do
what I expect it to do. I have followed all the recommended
grounding techniques but I still disconnect my transmission
line during a thunderstorm. I have my ladder-line connected
through a piece of plexiglas using banana plugs/sockets. If
I forget to unplug it, the wind invariably unplugs it for me.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2940. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 19:50:15 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3pna4v87dumq7a0f9amokrtbf6el23bok6@4ax.com>
Source record: 125028

On 8 Feb 2003 06:53:28 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>William Ewald <wgewald@att.net> wrote in message
news:<ic384v8nlprqjbvbv2fdiv63la371q7fs9@4ax.com>...
>> On 7 Feb 2003 09:03:23 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>> wrote:
>>
>> >When thinking about dissention on this newsgroup my mind
>> >goes to Fractals, contrawound and E/H antennas.
>> >Each of these forays into antenna design have one thing in common
>>
>> The fractal was different in that this newsgroup was used as a soap
>> box for years by its adherent to draw attention to his commercial
>> products which had no applications in amateur radio. His attempts to
>> pretend the relevance of fractal antennas (which he claimed to have
>> "invented") to this newsgroup were transparent and ludicrous.
>>
>> This message was posted after 30 January, 2003.
>
>Richard from this point on let us exclude fractals from the discussion
>and let it revolve around other antennas. I think it will then allow
>all to focus much better
>Regards
>Art

Hi Art,

I think William might be starting to think something is going on
between us. We are going to have to stop meeting like this.

You are right, it must be those kinky fractals.

73's
Richard Clark, KB7QHC

2941. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 19:52:29 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ao2f224bat1b@corp.supernews.com>
Source record: 125030

When the slaves revolted on the ship Amistad and were held for trial,
it was Willard Gibb's father who translated their language into English.
H.
NQ5H
"Tdonaly" <tdonaly@aol.com> wrote in message
news:20030208142900.04296.00000148@mb-bh.aol.com...
> Art wrote,
> >
> >Richard I am impressed with your post, you were open minded enough to
seek
> >out things for yourself instead of just being a follower.
> >Best regards
> >Art
> >
>
> Now, if people would only give credit to Hermann Grassmann and Josiah
> Willard Gibbs, whose mathematics made Heaviside's statements of Maxwell's
ideas
>
> possible, there might be some justice in the world.
> 73,
> Tom Donaly, KA6RUH
>
>

2942. Re: Mobile10M Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 19:54:58 UTC
From: MM <junquemaile@cox.net>
Message-ID: <mgd1a.5679$q91.743196@news2.west.cox.net>
Source record: 125031

> "RadioFan" wrote ...
>> Any recommendations for a mobile antenna for 10M? I will be using an old
> RS
>> HTX-100 (25W).
>>
>> The vehicle is a Ford Ranger pickup, and I do not want to drill any
>> holes, so mag mounts or other un-intrusive mounts are the main concern.
>>
>> TIA.
>>
>> RadioFan

I ran an HTX-100 in my Ranger for a while. I had good luck with a 10M Hamstick on a mount that went into the stake pocket. I got the mount from a QST ad and put it in the rear-most stake pocket on the passenger side. It's a real rugged mount and it was very easy to run the coax from there into the cab. Let me know if you need more details (I'd probably be willing to make you a deal on ant & mount if you're interested...).

73... Mark AA7TA

2943. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 20:19:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0aoa4v0vlo69vmd27dpb64bakpn05oq16a@4ax.com>
Source record: 125032

On 08 Feb 2003 19:29:00 GMT, tdonaly@aol.com (Tdonaly) wrote:

>Art wrote,
>>
>>Richard I am impressed with your post, you were open minded enough to seek
>>out things for yourself instead of just being a follower.
>>Best regards
>>Art
>>
>
>Now, if people would only give credit to Hermann Grassmann and Josiah
>Willard Gibbs, whose mathematics made Heaviside's statements of Maxwell's ideas
>
>possible, there might be some justice in the world.
>73,
>Tom Donaly, KA6RUH
>

Hi Tom,

We have to remember that all this folderol over celebrity comes from
one who jealously hides his sources in cryptic code, obscures method
like a wife rustling her recipes under her apron; and who then pines
away about the state of shiftless students who seek mindless formula,
or lean on rote memory as their being too lazy to seek learning for
themselves.

To think that his hero is Heaviside and nary a credit nor reference
for the specifics of his work in sight, except through the veil of
supposedly 'original' software. Which is worse: demanding honor for
this icon without regard for his antecedents, or prostituting him?

73's
Richard Clark, KB7QHC

2944. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 20:20:57 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302081220.2154de5b@posting.google.com>
Source record: 125033

"David Robbins" <k1ttt@arrl.net> wrote in message
news:<d8OdnUBAPdVbZ9mjXTWcoA@crocker.com>...
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> news:b22ns6$k1u$1@helle.btinternet.com...
> > . . . . . and the equations of Maxwell . . . . .
> >
> > ==========
> > If names MUST be dropped in order to bask in radiated glory then it's a
> good
> > idea to drop the correct ones.
> >
> > Replace "Maxwell" with "Heaviside".
> >
> >
> in both of my reference books the only reference to heaviside has to do with
> a slightly different set of units. they don't change the concept of the
> equations, only simplify the unit conversions a bit.

David,
It would appear that just two books are not enough, Just say
" Houston we have a problem" and the true facts will come out and
you may well be correct.
The fact that Heaviside was proficient in mathematics where Maxwell
was not
sort of bends one way in my opinion as to who generated the
equations.Also blends in with his work on calculus. This in no way
casts a cloud on Maxwell's experimentation. Fortunately there was
somebody around open minded enough to listen to a non academic deaf
man and put his work on the table in a cohesive manner such that the
naysayers could not deny the achievement.
How do you think that Maxwell would have fared today on this newsgroup
who would quote prior authorities and theorems ad infinightum?
Was it not Gallileo who was threatened with excommunication if he
repeated the assertion that the World was NOT FLAT BUT ROUND, he also
would not fared well on this newsgroup either. Worse would have
happened if by chance he had studied
Islamic law but I digress.
Regards
Art

2945. Re: Mobile10M Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 20:33:42 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4569A6.50D5E998@cwis.net>
Source record: 125034

RadioFan,
Almost anything will work on 10 meters. You
have a choice of the entire range of CB antennas
to those made for 10 meter ham use. If you don't
want to drill a hole in your truck, use a mag-mount,
'stake-hole', or 'lip-mount' for the base. The
problem isn't going to be in 'finding' an antenna,
but in picking which you want to use...
'Doc

2946. Re: What is polarity on the HI-Q 4:1 Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 20:35:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E456A2B.FF587358@cwis.net>
Source record: 125035

Shane,
It doesn't matter since RF is alternating current.
For at least half the cycle, each terminal is (-).
'Doc

2947. Re: What is polarity on the HI-Q 4:1 Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 20:42:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3jqa4vctlu1qv3l454t5c4pn5gfjm6fs85@4ax.com>
Source record: 125036

On 8 Feb 2003 05:38:53 -0800, shane0319@hotmail.com (Shane) wrote:

>Thank you for reading my msg!
>
>I am building a HB windom antenna according to:
>http://www.packetradio.com/windom.htm
>
>According to the diagram I need to connect the short leg to NEG ang
>long leg to POS. I just recd the HI-Q 4:1 and there is no
>documentation on which side is what. Ohming is not on option, due to
>being DC grounded.
>The instructions in the HI-Q say, "Do NOT disassemble the HI-Q Balun.
>Once any of the hooks are disassembled, the balun can not be
>reassembled."
>Plus the PVC is glued well.
>
>Thank you for the help!
>
>Shane N0ZDI

Hi Shane,

BalUns do not have a polarity except within themselves for the purpose of design and construction (usually called phasing dots). Once built, you either use it right or you use it wrong. The physical construction reveals that difference much as illustrated at the site you offer above (there's the gozinta, a line, and the comesoutta, the two wires - not easy to mix up).

I did not read the page fully, but I expect the + and - signs are for identification of the wire, not the BalUn; these symbols have no meaning beyond that.

They warn you not to take it apart because it would be damn difficult to reassemble (they don't want to hear from you on this). You could as easily get the same advice from Timex about their watches. Also, the reason for this difficulty (at least from one vendor) is that the two hooks serve as a lightning gap within the shell (twist one or the other and you may short out the antenna). This purpose is more a calmative than a real protection though.

73's
Richard Clark, KB7QHC

2948. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 20:42:33 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E456BB9.127A62C@cwis.net>
Source record: 125037

W7TI,
I sort of think we've all been given the finger,
beginnging with this thread...
'Doc

2949. Stacking/Separation Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 20:50:50 UTC
From: Hobbes <hobbestg@voicenet.com>
Message-ID: <3E456BF4.67F2@voicenet.com>
Source record: 125038

To the Group,

Recently I acquired a dual band mobile radio. As part of the deal the seller threw in a 2 meter vertically polarized beam and a 440 vertically polarized beam. I would like to mount both beams vertically polarized on a horizontal boom which would then be attached to the mast above my tribander. To that end I am open to suggestions about:

l. What is the best distance to mount them above my tribander?

2. What is the best distance to separate the two beams from each other?

3. Any suggestions as to feeding the two beams with the same coax?

Thanks in advance for reading this posting and any of your suggestions.

Ed K2ZE

2950. Re: Please help antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 20:55:39 UTC
From: Ralph Prestros <prestros@agtu.at>
Message-ID: <3E456ECB.5090403@agtu.at>
Source record: 125039

SABU731@webtv.net schrieb:
> I live in the Passaic county area in NJ. I have a VHF/UHF antenna on
> the roof about 17 feet total off the roof (Two family). I am trying to
> receive channel 48 WGTW out of Philadelphia. The twin lead wire runs to
> the first floor, I am on the second floor + Attic.. I have received
> permission to splice the wire and add my own. Is this a good way to add
> my wire? I have lots of twin lead wire, is there a way to make my own
> antenna across my attic using the wire to get UHF reception? Any help in
> how to receive this station or making a antenna would be appreciated. A
> link to the technical stuff regarding WGTW transmitter
> http://100kwatts.tmi.net/tv/PHL.html
>
> Thanks, J
>
hi!

don't be offended, but i think you are not a RF-expert, so i have some
essential tipps for you:

- if you are more than 100 km away and the carrier frequency is much
higher than about 50 MHz, you can get a problem with the
bend of the earth, hills and mountains, ...

- the best way to add your wire, would be to use a power divider:
http://www.dxcomm.com/products/DXAntenna/SED-772.asp

- get a antenna, with the highest gain available.
check that the antenna is designed for the right frequency!
check the orientation of the antenna! high gain antennas allow
less angular spread. it's like with a telescope, a high aggrandizement
allows only low angular wpread, or you will miss the target.
if you don't have a antenna measurement equeipment, take your tv and
climb up to the antenna. oriantation is optimum, when the picture is
best, isn't it ;-)

i've it is necessary you can built a antenna yourself, i've already
done this, just with the tools you already have in your garage!
(i built it with the book rothammel, see
http://www.dj0tr.de/english/buecher.html
but there is also a lot of good english litrature available.)

- place a amplifier as near to the antenna as possible.
look for one with low noise. you can cascade them to have
more amplification, but the first one must be the one with lowest

noise numer. (but the best amplifier is a antenna!!!)

- check that your antennea cable is as short as possible.

have a good connedtion.

bye ralph!

2951. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 20:56:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3era4vc0sniqo9fgofuln99vkkv8reucg3@4ax.com>
Source record: 125040

Hi Art,

On 8 Feb 2003 12:20:57 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>How do you think that Maxwell would have fared today on this newsgroup
> who would quote prior authorities and theorems ad infinightum?

He would have held his own. There is no need to anticipate nor
impose handicaps upon him from the start.

>Was it not Gallileo who was threatened with excommunication if he
>repeated the assertion that the World was NOT FLAT BUT ROUND,

He was tried for the sun centric idea that was anathema to the church.

>he also
>would not fared well on this newsgroup either. Worse would have
>happened if by chance he had studied
>Islamic law but I digress.
Yes you do, especially with that wild divergence into law when Islam
was the repository for Math and the Sciences. As to that matter, he
DID study those Islamic sources - there were no others (unless he dug
deeper to find Islam's source from India).

Euro-centrism and blind faith in dead white men leads to ignorance.

73's
Richard Clark, KB7QHC

2952. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 21:36:13 UTC
From: wa8ulx@aol.com
Message-ID: <20030208163613.23109.00000398@mb-bd.aol.com>
Source record: 125041

>>My comments were directed to that goof Andy.
>
>I thought you and your girlfriend gave up on that quest.
>=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
>73! de Andy KC2SSB (e

Dan I didnt know "Homo BOY Andy" was still here.

2953. Re: Stacking/Separation Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 22:10:38 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E458068.FCF52818@silverstar.com>
Source record: 125042

Try to find someone who will trade you your 2M/440 antennas for one
Arrow 2M/440 corner reflecter. Something like 10dBd gain on each band
with beam length each side of 8-feet. Much less wind loading than Yagi
of equivalent gain. Antennas West of Utah used to sell the brand [2M/440
was 165.00] but sold out to a company I believe to be in Arizona. A
websearch for Antennas West might still have the referral.

2954. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:02:01 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <J%f1a.14$z7.10093@news.randori.com>
Source record: 125043

"Fred Hambrecht Sr" <w4jle@charter.net> wrote in message
news:v4a1gvrs80ute4@corp.supernews.com...
> Get a copy of the EZNEC demo and you may see the resultant fields for
> various antennas.
>

Someone else said this also, I have the demo though I can enter a frequency and I can get the wave , though how would I go about entering other, If I say had a 1mhz antenna would I just put in 2mhz to give me 1/2wave ? What I want to see and understand is a frequency X at the normal 1/4wave then see 1/2 and 3/4 etc and just see how it works then. The antenna would all be the same actual frequency though driven at a higher rate for say the 3/4wave... if that makes sence... Someone also pointed out that 3/4wave seems directional also..?

Chris

>
> "exxos" <exxos@home.co.uk> wrote in message
> news:f051a.1$vQ1.3693@news.randori.com...
> >
> > "Dave Shrader" <david.shrader@attbi.com> wrote in message
>
> > do you know of any online field images to show this kinda thing ?
> >
> > Thanks,
> > chris
> >
>
>

2955. bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:05:17 UTC
From: "Larry D. Clark" <buddycl@swbell.net>
Message-ID: <N2g1a.278$F96.186379431@newssvr11.news.prodigy.com>
Source record: 125044

wonder if anyone could comment on the
sensitivity of a double bazooka antenna
as opposed to a traditional wirev antenna
for 80m. i have done some research on
the internet and have learned that the 2:1
bandwidth is much greater for a bazooka.
i don't think that there are many free lunches
around, what's the tradeoff here?

larry
kd5foy

2956. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:07:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E458DBB.6050408@ieee.org>
Source record: 125046

Larry D. Clark wrote:
> wonder if anyone could comment on the
> sensitivity of a double bazooka antenna
> as opposed to a traditional wirev antenna
> for 80m. i have done some research on
> the internet and have learned that the 2:1
> bandwidth is much greater for a bazooka.
> i don't think that there are many free lunches
> around, what's the tradeoff here?

You can increase the bandwidth of a conventional dipole by putting
a resistor across the feedpoint. The loss in the coax of a double
bazooka is like a resistor across the feedpoint of a conventional
dipole. You are right. There's no such thing as a free lunch.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2957. Re: Mobile10M Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:07:50 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <uZf1a.6251$oc.1816@fe01.atl2.webusenet.com>
Source record: 125045

Speaking of these, has anyone tried the "Thru the Glass" CB antennas (presumeably would also work on 10 meters) ? tho, don't know if need ground, or if these about as effective as a dummy load. have used them on 2 meters, and see antenna specialists has them for 6 meters, but curious about these "11 meter" versions (about 25 bux at K-MART). Jim NN7K

nn7k@reno.rmci.net

"'Doc" <w5lz@cwis.net> wrote in message news:3E4569A6.50D5E998@cwis.net...
>
>
> RadioFan,
> Almost anything will work on 10 meters. You
> have a choice of the entire range of CB antennas
> to those made for 10 meter ham use. If you don't
> want to drill a hole in your truck, use a mag-mount,
> 'stake-hole', or 'lip-mount' for the base. The
> problem isn't going to be in 'finding' an antenna,
> but in picking which you want to use...
> 'Doc

2958. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:17:00 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <Ldg1a.15$z7.11288@news.randori.com>
Source record: 125047

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b23fnk$574$1@sparta.btinternet.com...
> > I've read a fair bit
> > from google though none of them actually say what happens in terms of
> power
> > output from 1/4 wave 1/2wave and 3rd harmonic...
> >
> ================================
>
> That's because there's very little to say about it. The total amount of
> power radiated from an efficient antenna depends entirely on what is
> available from the transmitter regardless of antenna shape, lengths and
> number of elements.
>

Sounds right to me, I just want to see the difference from a very basic
arial.

> Shape, lengths and number of elements determine the 3-dimensional
radiation
> pattern, ie., the many directions between which power may be unequally
> shared, the SUM of ALL directions always being equal to the constant
amount
> of power available from the transmitter.

I think this holds out for the 3/4wave since power will be radiated with
multiple nodes if ran at higher than 1/4wave, overallpower I would expect to
be the same....

>
> Placing a reflector on one side of a light bulb has no effect on the TOTAL
> amount of light radiated into space.

Radiating in one direction does give more power in one direction though,
right ?

>
> Connecting 2 loud speakers, in series or parallel, in or out of phase, to
an
> amplifier generating 1 watt of undistorted audio has no effect on the
> overall sound level in the room regardless of what nit-picking Hi-fi
> enthusiasts might have to say.
> ---

What gets me is I read 1/2wave is supposed to give 180deg phase shift from
one end to the other, though this is the 1/2wave Hertz antenna, where the

ground node is in the middle of the antenna. It makes me wonder about the power going to ground for the 1/4wave system since the other side of the wave is made up in the ground connection. A 1/2wave antenna should be better since no power is radiated into ground and should give better results... I dont know how that would work out in actual use though. I'm even more unsure about 3/4wave since this is supposed to be the best frequency to use, theres a fair bit of stuff on 3/4wave though theres nothing to say really if its better or worse or what it does or doesn't to in releation to the normal 1/4wave.

I will have nother go at the program people suggested again, I don't need a exact model just interested to learn about the various waves used and what they look like, and why there are like that.... Its easy to see when its drawn as a 3D model, not so easy to explain I guess....

Chris

> Reg, G4FGQ
>
>
>
>
>
>
>
>

2959. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:30:49 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E459320.6DD800BB@attbi.com>
Source record: 125048

As you suggested I did the obvious! I learned something new! Thanks
guys!

This old dog still surprises himself!!

Deacon Dave, W1MCE

Reg Edwards wrote:
>
> Dave,
>
> Just do the obvious - a simultaneous Google on "Heaviside" and "Maxwell".
>
> Google is less tedious than obtaining the original scientific papers of both
> H and M and comparing both with what's been printed in the last 100 years of
> text books.
>
> ================================
>
> > Reg, What's your source for this claim?
> >
> > For almost 50 years, and in all my text books [circa 1950-1960], Maxwell
> > gets the credit.
> >
> > Who is rewriting history <grin>?
>
> ================================
>
> > Deacon Dave, W1MCE
> > +++
> >
> > Reg Edwards wrote:
> > >
> > > . . . . . and the equations of Maxwell . . . . .
> > >
> > > ============================
> > > If names MUST be dropped in order to bask in radiated glory then it's a
> good
> > > idea to drop the correct ones.
> > >
> > > Replace "Maxwell" with "Heaviside".

2960. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:31:11 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302081531.4beae266@posting.google.com>
Source record: 125049

David I must admit that I have read your long post several times since
I responded. I now must say that most of what you wrote was
interesting but did not appear to have a direct comment or response to
my original posting
At times I thought I read that anything new would be a violation of
natures laws thus what I was pursuing was futile. I read it again and
then think you are saying something different. I also struggled over
your comment regarding the E/H and contrawave antenna sort of boiled
down to nothing more than the wavelength comment in action (my words)
.You also added later the loop antenna suggesting that it was related
to a particular fraction of a wavelength which really surprised me but
without further info to substantiate that comment I must assume you
were unconciously drifting.
Could you please restate your position as to how the E/H,contrawave
and loop antenna specifically relates to a dipole, wavelength or a
fraction there of
so I can clarify in my own mind what the point was that you were
making.
Much obliged
regards
Art

"David Robbins" <k1ttt@arrl.net> wrote in message
news:<icGdnT8fjooFwdmjXTWcpw@crocker.com>...
> "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> news:85ed38d.0302070903.126bb8c6@posting.google.com...
> > When thinking about dissention on this newsgroup my mind
> > goes to Fractals, contrawound and E/H antennas.
> > Each of these forays into antenna design have one thing in common
> > in that they move away from the common starting point of the thinking
> > in ham radio which is 'wave lengths' or parts there of but go to the
> > starting point of 'aperture' and 'Q' . In looking at the experimental
> > path that I follow I suddenly realise that I also do exactly the same.
> > Yet, when one understands that these two factors outweigh any
> > prepoderance on 'wave length' with respect to antennas a whole new
> > frontier opens that can bring new life to antenna design.
> > Instead of total derision with the advent of new design thoughts could
> > we not discuss the new and good things that come from these
> > experiments that would encourage new ideas in the hobby.
> > I for one think that the hobby is in error in focussing its thoughts
> > on wavelength with respect to antennas. Am I the only one that thinks
> > this way? Is my thinking too far out to be called 'out of the box'.
> > Some noted thinkers state that radiation can emanate from a single point,
> > if this is so does in not add reason to move away from the 'Wave length'

> > term and restart with Q and aperture ?
> > Maybe the above is too deep to base a discussable post upon.
> > Regards
> > Art
>
> if you want, you can look at any antenna as an array of point sources. this
> is essentially what eznec and most other antenna analysis programs do.
> numerically combining point sources and calculating the interaction between
> them is the basis of most simulation code. now, since that method provides
> a reasonable approximation of how antennas work, can you not envision that
> for yourself? if so, then all antennas are nothing but collections of one
> or more point sources arranged in some kind of shape to generate a desired
> radiation pattern at some distance from them. what that shape is doesn't
> really matter, the interaction between all these point radiators still works
> the same way, the laws of Gauss and Faraday and the equations of Maxwell
> have never been shown to be violated by any know arrangement of radiators...
> fractal, eh, cfa, or simple dipole, break them down far enough and they all
> work the same way... so arrange away, shrink, stretch, coil, fold, or crunch
> into a flying saucer shape on top of your tv and you have nothing new, just
> another collection of point sources interacting via some relatively simple
> equations.
>
> now, why do 'wavelengths' and large fractions of them like 1/2 and 1/4 keep
> showing up in antenna designs? because 1/2 wavelength is the shortest free
> standing wire that is resonant at a given frequency. this makes such things
> as the yagi work, an approximately 1/2 wavelength conductor responds to the
> excitation by developing its own current with a predictable phase
> relationship and magnitude to the rest of the structure in such a way that
> this current can be used to form the radiated field into some desired
> pattern. 1/4 wavelength conductors over a good ground happen to have an
> impedance that is easy to get current into with common equipment. 1
> wavelength conductors folded into a loop also have an impedance that is
> relatively easy to use and have some interesting properties that make
> forming far fields into useful patterns. likewise a 1/2 wave conductor
> broken in the middle to make two 1/4 waves happens to have a nice feed point
> impedance and a useful radiation pattern.... there is nothing magic about
> them, they just happen to do things that have been found useful over the
> last 100 years or so.
>
> much smaller arrangements of conductors have also been used, but they
> frequently exhibit characteristics in one or more critical area that make
> them harder to work with and often less useful than 'wavelength' size
> conductors. short helically wound conductors while much smaller than a
> wavelength usually exhibit an impedance that is harder to efficiently get
> current into, and respond well over a narrower range of frequencies.
> folded, fractalized, crunched, zigzag, and all sorts of other arrangements
> have been succesfully used in certain circumstances and perform in
> accordance with physical laws, but they aren't a cure all and certainly
> aren't magical or 'new physics' as some would have you believe.
>

> in summary after this long rambling... keep experimenting, fold your wires,
> wind your coils, forge your plates, whatever turns you on, but you will have
> a hard time breaking the physical laws that describe how charges, currents,
> fields, and waves work.

2961. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:31:11 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302081531.3cee12f9@posting.google.com>
Source record: 125050

David I must admit that I have read your long post several times since
I responded. I now must say that most of what you wrote was
interesting but did not appear to have a direct comment or response to
my original posting
At times I thought I read that anything new would be a violation of
natures laws thus what I was pursuing was futile. I read it again and
then think you are saying something different. I also struggled over
your comment regarding the E/H and contrawave antenna sort of boiled
down to nothing more than the wavelength comment in action (my words)
.You also added later the loop antenna suggesting that it was related
to a particular fraction of a wavelength which really surprised me but
without further info to substantiate that comment I must assume you
were unconciously drifting.
Could you please restate your position as to how the E/H,contrawave
and loop antenna specifically relates to a dipole, wavelength or a
fraction there of
so I can clarify in my own mind what the point was that you were
making.
Much obliged
regards
Art

"David Robbins" <k1ttt@arrl.net> wrote in message
news:<icGdnT8fjooFwdmjXTWcpw@crocker.com>...
> "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> news:85ed38d.0302070903.126bb8c6@posting.google.com...
> > When thinking about dissention on this newsgroup my mind
> > goes to Fractals, contrawound and E/H antennas.
> > Each of these forays into antenna design have one thing in common
> > in that they move away from the common starting point of the thinking
> > in ham radio which is 'wave lengths' or parts there of but go to the
> > starting point of 'aperture' and 'Q' . In looking at the experimental
> > path that I follow I suddenly realise that I also do exactly the same.
> > Yet, when one understands that these two factors outweigh any
> > prepoderance on 'wave length' with respect to antennas a whole new
> > frontier opens that can bring new life to antenna design.
> > Instead of total derision with the advent of new design thoughts could
> > we not discuss the new and good things that come from these
> > experiments that would encourage new ideas in the hobby.
> > I for one think that the hobby is in error in focussing its thoughts
> > on wavelength with respect to antennas. Am I the only one that thinks
> > this way? Is my thinking too far out to be called 'out of the box'.
> > Some noted thinkers state that radiation can emanate from a single point,
> > if this is so does in not add reason to move away from the 'Wave length'

> > term and restart with Q and aperture ?
> > Maybe the above is too deep to base a discussable post upon.
> > Regards
> > Art
>
> if you want, you can look at any antenna as an array of point sources. this
> is essentially what eznec and most other antenna analysis programs do.
> numerically combining point sources and calculating the interaction between
> them is the basis of most simulation code. now, since that method provides
> a reasonable approximation of how antennas work, can you not envision that
> for yourself? if so, then all antennas are nothing but collections of one
> or more point sources arranged in some kind of shape to generate a desired
> radiation pattern at some distance from them. what that shape is doesn't
> really matter, the interaction between all these point radiators still works
> the same way, the laws of Gauss and Faraday and the equations of Maxwell
> have never been shown to be violated by any know arrangement of radiators...
> fractal, eh, cfa, or simple dipole, break them down far enough and they all
> work the same way... so arrange away, shrink, stretch, coil, fold, or crunch
> into a flying saucer shape on top of your tv and you have nothing new, just
> another collection of point sources interacting via some relatively simple
> equations.
>
> now, why do 'wavelengths' and large fractions of them like 1/2 and 1/4 keep
> showing up in antenna designs? because 1/2 wavelength is the shortest free
> standing wire that is resonant at a given frequency. this makes such things
> as the yagi work, an approximately 1/2 wavelength conductor responds to the
> excitation by developing its own current with a predictable phase
> relationship and magnitude to the rest of the structure in such a way that
> this current can be used to form the radiated field into some desired
> pattern. 1/4 wavelength conductors over a good ground happen to have an
> impedance that is easy to get current into with common equipment. 1
> wavelength conductors folded into a loop also have an impedance that is
> relatively easy to use and have some interesting properties that make
> forming far fields into useful patterns. likewise a 1/2 wave conductor
> broken in the middle to make two 1/4 waves happens to have a nice feed point
> impedance and a useful radiation pattern.... there is nothing magic about
> them, they just happen to do things that have been found useful over the
> last 100 years or so.
>
> much smaller arrangements of conductors have also been used, but they
> frequently exhibit characteristics in one or more critical area that make
> them harder to work with and often less useful than 'wavelength' size
> conductors. short helically wound conductors while much smaller than a
> wavelength usually exhibit an impedance that is harder to efficiently get
> current into, and respond well over a narrower range of frequencies.
> folded, fractalized, crunched, zigzag, and all sorts of other arrangements
> have been succesfully used in certain circumstances and perform in
> accordance with physical laws, but they aren't a cure all and certainly
> aren't magical or 'new physics' as some would have you believe.
>

> in summary after this long rambling... keep experimenting, fold your wires,
> wind your coils, forge your plates, whatever turns you on, but you will have
> a hard time breaking the physical laws that describe how charges, currents,
> fields, and waves work.

2962. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:31:53 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v4b4rc52aqe3f8@corp.supernews.com>
Source record: 125051

And if only people would give credit to the folks that developed the zero,
thus allowing notational number systems.

How effective would either Heaviside or Maxwell had been if all calculations
had been made in Roman numerals.

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20030208142900.04296.00000148@mb-bh.aol.com...
>
> Now, if people would only give credit to Hermann Grassmann and Josiah
> Willard Gibbs, whose mathematics made Heaviside's statements of Maxwell's
ideas
>
> possible, there might be some justice in the world.
> 73,
> Tom Donaly, KA6RUH
>
>

2963. Re: Stacking/Separation Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:35:39 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <qqg1a.6413$oc.5788@fe01.atl2.webusenet.com>
Source record: 125052

Ed, since the frequencies are so far apart from the tribander, and in the opposite plane, would think 4-5 foot above or below the tribander (or 2-3 foot, if mounted on PVC (or other non metalic boom) is used, and would think about 4 foot, or 1/2 the boomlength of the longest yagi (typically the 2 meter one) would be more than adiquate. As to feeding both from the same coax, might want to find (or build a duplexer) but, with the gamma match(s) having different properties , would expect that the 440 yagi would have a very high inpedence when fed a 146 mhz signal (and vice versa) you can test this on the ground- simply aim the yagis straight up, with coax to a "tee" connector, and then check the swr at the center output of the "tee" on both 2 meters, and 3/4 meters hopefully , the swr would be 2:1, on both bands the length of the coax WILL affect this, however - use 1/2 wave sections for 146 mhz, modified by the velocity factor (.66 for polyethelyne, or .80 for foam dielectric) (1/2 wave at 3/4 meters becomes 1-1/2 wavelengths at 440 mhz. DONT TRY WITH 1/4 (or odd multiples of 1/4 -eg, 3/4, ect. as this would create a inpedenence transformer- god only knows what those results would provide) and the impedence for the coax should be the same as the coax you are feeding this with 50 ohm coax, use the 2 runs , say 38 inchs long, X .66 (for polyethelyne,) or .80(for foam) coax for wach yagi figure 25 inches of coax (each), for poly, or 30 inches (each) for foam . give it a try, with any luck, should work Jim NN7K

"Hobbes" <hobbestg@voicenet.com> wrote in message
news:3E456BF4.67F2@voicenet.com...
> To the Group,
>
> Recently I acquired a dual band mobile radio. As part of the deal the
> seller threw in a 2 meter vertically polarized beam and a 440 vertically
> polarized beam. I would like to mount both beams vertically polarized on
> a horizontal boom which would then be attached to the mast above my
> tribander. To that end I am open to suggestions about:
>
> 1. What is the best distance to mount them above my tribander?
>
> 2. What is the best distance to separate the two beams from each other?
>
> 3. Any suggestions as to feeding the two beams with the same coax?
>
> Thanks in advance for reading this posting and any of your suggestions.
>
> Ed K2ZE

2964. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:42:56 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4b5if361ssc38@corp.supernews.com>
Source record: 125053

There is no free lunch, but you can design an antenna tuner into an antenna.
A 50 ohm resistor has a great SWR. There are no resistors in coax.
A double bazooka is a dipole with two quarter wave stubs in series across
the feed point.
Look up what a shorted quarter wave stub looks like, it's an open circuit at
resonance,
I measure >3000 ohms for RG8X at 7.15 MHz.
As you go off resonance the shunt stubs become reactive opposite to the way
the dipole becomes reactive.
The reactances cancel. It's an antenna tuner!
This maintains a resistive load over a range greater than 100 KHz. An SWR of
1:1 flat across the range.
Field strength measurements on 40 meters show the double bazooka to be
indistinguishable from a dipole at resonance, and better that the dipole off
(the dipole's) resonce.
I have not bothered on 80 and 40.
H.
NQ5H

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E458DBB.6050408@ieee.org...
> Larry D. Clark wrote:
> > wonder if anyone could comment on the
> > sensitivity of a double bazooka antenna
> > as opposed to a traditional wirev antenna
> > for 80m. i have done some research on
> > the internet and have learned that the 2:1
> > bandwidth is much greater for a bazooka.
> > i don't think that there are many free lunches
> > around, what's the tradeoff here?
>
> You can increase the bandwidth of a conventional dipole by putting
> a resistor across the feedpoint. The loss in the coax of a double
> bazooka is like a resistor across the feedpoint of a conventional
> dipole. You are right. There's no such thing as a free lunch.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2965. Re: Mobile10M Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:45:38 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E459698.1CB67D5B@attbi.com>
Source record: 125054

Picture yourself in the drivers seat! Right below your left hip, under the carpet, is a processing drain hole with a 1 inch diameter rubber plug in it!! Get the idea?? No holes to drill!!

Lift the carpet [4 screws to remove the runner], cut a small slit in the grommet, run your coax through the slit, use some self vulcanizing tape [HRO or Radio Shack] to seal the grommet. This gets your coax from the cab to the outside.

I also use the stake hole mount. I have used the Diamond #400. Both work fine and are available from HRO. The stake box mount is $20 while the Diamond is about $60.

Finally, I use Hamsticks for 10 through 40 meters.

PS: Rangers have lots of electrical/RADIO noise. Resistive plugs/ignition wires are a must. You may need the Fuel Pump filter. Lastly a good noise blanker makes a great installation.

Deacon Dave, W1MCE, ICOM 706 MK IIg, Hamsticks, Ford Ranger 2003.
+++

RadioFan wrote:
>
> Any recommendations for a mobile antenna for 10M? I will be using an old RS
> HTX-100 (25W).
>
> The vehicle is a Ford Ranger pickup, and I do not want to drill any holes,
> so mag mounts or other un-intrusive mounts are the main concern.
>
> TIA.
>
> RadioFan

2966. Re: What is polarity on the HI-Q 4:1 Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:53:45 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <zEg1a.6455$oc.6018@fe01.atl2.webusenet.com>
Source record: 125055

Shane- in this case (building a windom), would make no difference (could also use twinlead 300 ohms twinlead (t-v- antenna feedwire) to an antenna tuner, or balun near rig, from where the balun on your project shows being attached, I suspect). But if STACKING antennas , with separate baluns, polarity indeed makes a difference (from aprox 3 dB gain, to (theoretically)100 % loss (from the wave fronts canceling each other) . as info, jim nn7k

"Richard Clark" <kb7qhc@attbi.com> wrote in message news:3jqa4vctlu1qv3l454t5c4pn5gfjm6fs85@4ax.com...
> On 8 Feb 2003 05:38:53 -0800, shane0319@hotmail.com (Shane) wrote:
>
> >Thank you for reading my msg!
> >
> >I am building a HB windom antenna according to:
> >http://www.packetradio.com/windom.htm
> >
> >According to the diagram I need to connect the short leg to NEG ang
> >long leg to POS. I just recd the HI-Q 4:1 and there is no
> >documentation on which side is what. Ohming is not on option, due to
> >being DC grounded.
> >The instructions in the HI-Q say, "Do NOT disassemble the HI-Q Balun.
> >Once any of the hooks are disassembled, the balun can not be
> >reassembled."
> >Plus the PVC is glued well.
> >
> >Thank you for the help!
> >
> >Shane N0ZDI
>
> Hi Shane,
>
> BalUns do not have a polarity except within themselves for the purpose
> of design and construction (usually called phasing dots). Once built,
> you either use it right or you use it wrong. The physical
> construction reveals that difference much as illustrated at the site
> you offer above (there's the gozinta, a line, and the comesoutta, the
> two wires - not easy to mix up).
>
> I did not read the page fully, but I expect the + and - signs are for
> identification of the wire, not the BalUn; these symbols have no
> meaning beyond that.
>
> They warn you not to take it apart because it would be damn difficult

> to reassemble (they don't want to hear from you on this). You could
> as easily get the same advice from Timex about their watches. Also,
> the reason for this difficulty (at least from one vendor) is that the
> two hooks serve as a lightning gap within the shell (twist one or the
> other and you may short out the antenna). This purpose is more a
> calmative than a real protection though.
>
> 73's
> Richard Clark, KB7QHC

2967. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:55:05 UTC
From: tdonaly@aol.com
Message-ID: <20030208185505.10684.00000213@mb-ma.aol.com>
Source record: 125056

Fred said,
>
>And if only people would give credit to the folks that developed the zero,
>thus allowing notational number systems.
>
>How effective would either Heaviside or Maxwell had been if all calculations
>had been made in Roman numerals.
>

That's a real brilliant thought, Fred. You might want to write it down and
keep it in a Mason jar, somewhere. There is no doubt that Heaviside was
a genius, and contributed a great deal of fundamental importance to physics.
That he was also a great mathematician is somewhat of a stretch, although
it probably doesn't go beyond the 500% exaggeration southerners allow
a statement before it becomes a lie.
73,
Tom Donaly

2968. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-08 23:56:09 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4b6b73dv2fub6@corp.supernews.com>
Source record: 125057

Make that 80 and 160.
"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v4b5if361ssc38@corp.supernews.com...
> There is no free lunch, but you can design an antenna tuner into an
antenna.
> A 50 ohm resistor has a great SWR. There are no resistors in coax.
> A double bazooka is a dipole with two quarter wave stubs in series across
> the feed point.
> Look up what a shorted quarter wave stub looks like, it's an open circuit
at
> resonance,
> I measure >3000 ohms for RG8X at 7.15 MHz.
> As you go off resonance the shunt stubs become reactive opposite to the
way
> the dipole becomes reactive.
> The reactances cancel. It's an antenna tuner!
> This maintains a resistive load over a range greater than 100 KHz. An SWR
of
> 1:1 flat across the range.
> Field strength measurements on 40 meters show the double bazooka to be
> indistinguishable from a dipole at resonance, and better that the dipole
off
> (the dipole's) resonce.
> I have not bothered on 80 and 40.
> H.
> NQ5H
>
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E458DBB.6050408@ieee.org...
> > Larry D. Clark wrote:
> > > wonder if anyone could comment on the
> > > sensitivity of a double bazooka antenna
> > > as opposed to a traditional wirev antenna
> > > for 80m. i have done some research on
> > > the internet and have learned that the 2:1
> > > bandwidth is much greater for a bazooka.
> > > i don't think that there are many free lunches
> > > around, what's the tradeoff here?
> >
> > You can increase the bandwidth of a conventional dipole by putting
> > a resistor across the feedpoint. The loss in the coax of a double
> > bazooka is like a resistor across the feedpoint of a conventional
> > dipole. You are right. There's no such thing as a free lunch.
> > --

> > cheers, CAM http://www.qsl.net/w5dxp
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>

2969. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 00:01:59 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <3E459A29.7D5BA05D@parelectronics.com>
Source record: 125058

"H. Adam Stevens" wrote:

> There is no free lunch, but you can design an antenna tuner into an antenna.
> A 50 ohm resistor has a great SWR. There are no resistors in coax.
> A double bazooka is a dipole with two quarter wave stubs in series across
> the feed point.
> Look up what a shorted quarter wave stub looks like, it's an open circuit at
> resonance,
> I measure >3000 ohms for RG8X at 7.15 MHz.
> As you go off resonance the shunt stubs become reactive opposite to the way
> the dipole becomes reactive.
> The reactances cancel. It's an antenna tuner!
> This maintains a resistive load over a range greater than 100 KHz. An SWR of
> 1:1 flat across the range.
> Field strength measurements on 40 meters show the double bazooka to be
> indistinguishable from a dipole at resonance, and better that the dipole off
> (the dipole's) resonce.
> I have not bothered on 80 and 40.
> H.
> NQ5H

This analysis has been proved incorrect in QST and I believe QEX. Indeed it is loss in the stubs that accounts for the increased BW.
Subsequent articles that pointed out the fallacy of the 2X bazooka did present methods of broadening the dipole's response somewhat with coaxial sections- where the math made sense eg. Frank Witt- Broadband Matching with the Transmission line Radiator- ARRL Antenna Compendium Vol 4.

Dale W4OP

Dale W4OP

2970. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 00:06:11 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4b6u1bntvpm41@corp.supernews.com>
Source record: 125059

Where is it "proved incorrect" in QST or anywhere else that a shorted
quarter wave stub is an open circuit?
H.
NQ5H

"Dale Parfitt" <par@parelectronics.com> wrote in message
news:3E459A29.7D5BA05D@parelectronics.com...
>
>
> "H. Adam Stevens" wrote:
>
> > There is no free lunch, but you can design an antenna tuner into an
antenna.
> > A 50 ohm resistor has a great SWR. There are no resistors in coax.
> > A double bazooka is a dipole with two quarter wave stubs in series
across
> > the feed point.
> > Look up what a shorted quarter wave stub looks like, it's an open
circuit at
> > resonance,
> > I measure >3000 ohms for RG8X at 7.15 MHz.
> > As you go off resonance the shunt stubs become reactive opposite to the
way
> > the dipole becomes reactive.
> > The reactances cancel. It's an antenna tuner!
> > This maintains a resistive load over a range greater than 100 KHz. An
SWR of
> > 1:1 flat across the range.
> > Field strength measurements on 40 meters show the double bazooka to be
> > indistinguishable from a dipole at resonance, and better that the dipole
off
> > (the dipole's) resonce.
> > I have not bothered on 80 and 40.
> > H.
> > NQ5H
>
> This analysis has been proved incorrect in QST and I believe QEX. Indeed
it is
> loss in the stubs that accounts for the increased BW.
> Subsequent articles that pointed out the fallacy of the 2X bazooka did
present
> methods of broadening the dipole's response somewhat with coaxial
sections-
> where the math made sense eg. Frank Witt- Broadband Matching with the

> Transmission line Radiator- ARRL Antenna Compendium Vol 4.
>
> Dale W4OP
>
> Dale W4OP
>

2971. Re: Stacking/Separation Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 00:21:16 UTC
From: arrow146@aol.com
Message-ID: <20030208192116.00234.00000154@mb-fi.aol.com>
Source record: 125060

<< Subject: Re: Stacking/Separation Question
From: Dean Arthur dearthur@silverstar.com
Date: Sat, Feb 8, 2003 2:10 PM
Message-id: <3E458068.FCF52818@silverstar.com>

Try to find someone who will trade you your 2M/440 antennas for one
Arrow 2M/440 corner reflecter. Something like 10dBd gain on each band
with beam length each side of 8-feet. Much less wind loading than Yagi
of equivalent gain. Antennas West of Utah used to sell the brand [2M/440
was 165.00] but sold out to a company I believe to be in Arizona. A
websearch for Antennas West might still have the referral. >>

The Corner Reflector sold by Antennas West was made by
<A HREF="http://ArrowAntennas.com">ArrowAntenna.com</A>
<A HREF="http://ArrowAntennas.com/cornrefl.html">Arrow Antenna's Corner
Reflectors</A>

73 Al Lowe N0IMW

2972. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 00:41:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E45A3C6.3070508@ieee.org>
Source record: 125061

H. Adam Stevens wrote:
> Where is it "proved incorrect" in QST or anywhere else that a shorted
> quarter wave stub is an open circuit?

Never mind QST. We can prove that right here. An open circuit is infinite
impedance. A real world stub has losses. Ergo, that real world stub is a
high impedance but not an open circuit.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2973. Re: Mobile10M Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 00:57:50 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E45A78E.802811BD@cwis.net>
Source record: 125062

Jim,
Where the available thru-glass capacitance of that
type of mount is adiquate at VHF/UHF, it's wothrless
for HF. Make the 'thru-glass' mount large enough and
it would work fine. But when you do, I think you'd
loose the use of that window...
'Doc

2974. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 00:59:36 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ba26sp4u24ce@corp.supernews.com>
Source record: 125063

I just built one today with RG8X.
It's resonant at 7.15 MHz. It's 1:1 from 7.075 to 7.225.
Between 7.1 and 7.2 MHz the R component is measured greater than 3K ohm.
What's making the SWR flat? Not R.
H.
NQ5H

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E45A3C6.3070508@ieee.org...
> H. Adam Stevens wrote:
> > Where is it "proved incorrect" in QST or anywhere else that a shorted
> > quarter wave stub is an open circuit?
>
> Never mind QST. We can prove that right here. An open circuit is infinite
> impedance. A real world stub has losses. Ergo, that real world stub is a
> high impedance but not an open circuit.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2975. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 01:28:46 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302081728.494a25b6@posting.google.com>
Source record: 125064

W7TI <jamspam@upyours.now> wrote in message
news:<Xns931C5F751148Fpookster@216.168.3.50>...
> aunwin@insightbb.com (Art Unwin KB9MZ) wrote in
> news:85ed38d.0302080906.6c077bf9@posting.google.com:
>
> > I hope not otherwise followers would be chopping away at my fingers.
> >
> ----------
>
> Sounds good. Please give me the finger.
>
> BT
Sir,
Now why would I do that? I can give you a thumbs up!
I suspect that David is jewish and was exercising their first law of
debate. How does it go now....If during a debate you are asked a
searching or uncomfortable question, do not respond to it but
instead....
you ask a question. Apparently they have the belief that there is not
a 'goy'
that can handle that tactic and the debate thus comes to a halt
without loss of face. Having been born in the Docklands of East London
I do not allow that
aproach to phase me one bit.
regards
Art

2976. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 01:30:39 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4bbpsi8ivlk91@corp.supernews.com>
Source record: 125065

It's easy to calculate the resistance seen looking into a stub if the matched line loss is a few dB (say, 6) or less. The resistance looking into a shorted line of any odd number of quarter wavelengths or an open line of any even number of quarter wavelengths is approximately equal to the characteristic impedance divided by the matched loss in nepers. (One neper is about equal to 8.69 dB).

For example, a quarter wavelength of RG-58A at 3.8 MHz is about 52 feet long. RG-58 has a matched loss of about 0.75 dB/100' at this frequency, or about 0.39 dB for 52 feet. Divide by 8.69 to find the loss in nepers, about 0.045. Divide 50 by this to get the resistance looking into a shorted stub, of about 1100 ohms.

For an open line of an odd number of quarter wavelengths or shorted line of an even number of quarter wavelengths, the resistance looking in is approximately the characteristic impedance times the matched loss in nepers.

If the loss is greater than a few dB, replace the loss in nepers in the formulas with the hyperbolic tangent of the loss in nepers for greater accuracy.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> H. Adam Stevens wrote:
>
>> Where is it "proved incorrect" in QST or anywhere else that a shorted
>> quarter wave stub is an open circuit?
>
>
> Never mind QST. We can prove that right here. An open circuit is infinite
> impedance. A real world stub has losses. Ergo, that real world stub is a
> high impedance but not an open circuit.

2977. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 01:45:53 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4bcov3pbjg641@corp.supernews.com>
Source record: 125066

RG58A at 7.15 MHz loses >1 db per 100 feet.
RG8X about 0.55 db per 100 feet.
I'm measuring >1500 ohms 50 KHz or so off resonance.
The MFJ gives up closer. It thinks R is much higher.
Interesting model.
H.
NQ5H

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v4bbpsi8ivlk91@corp.supernews.com...
> It's easy to calculate the resistance seen looking into a stub if the
> matched line loss is a few dB (say, 6) or less. The resistance looking
> into a shorted line of any odd number of quarter wavelengths or an open
> line of any even number of quarter wavelengths is approximately equal to
> the characteristic impedance divided by the matched loss in nepers. (One
> neper is about equal to 8.69 dB).
>
> For example, a quarter wavelength of RG-58A at 3.8 MHz is about 52 feet
> long. RG-58 has a matched loss of about 0.75 dB/100' at this frequency,
> or about 0.39 dB for 52 feet. Divide by 8.69 to find the loss in nepers,
> about 0.045. Divide 50 by this to get the resistance looking into a
> shorted stub, of about 1100 ohms.
>
> For an open line of an odd number of quarter wavelengths or shorted line
> of an even number of quarter wavelengths, the resistance looking in is
> approximately the characteristic impedance times the matched loss in
nepers.
>
> If the loss is greater than a few dB, replace the loss in nepers in the
> formulas with the hyperbolic tangent of the loss in nepers for greater
> accuracy.
>
> Roy Lewallen, W7EL
>
> OC_CAM's Razor wrote:
> > H. Adam Stevens wrote:
> >
> >> Where is it "proved incorrect" in QST or anywhere else that a shorted
> >> quarter wave stub is an open circuit?
> >
> >
> > Never mind QST. We can prove that right here. An open circuit is
infinite
> > impedance. A real world stub has losses. Ergo, that real world stub is a

> > high impedance but not an open circuit.
>

2978. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 01:49:53 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302081749.3768a334@posting.google.com>
Source record: 125067

"exxos" <exxos@home.co.uk> wrote in message news:<rGR0a.44$tY3.106838@news.randori.com>...
> Hi all,
>
> I've been reading up on electrical harmonics and such with arials... What I
> dont kinda get is the frequency of the waves used.... Most arials seem to
> work on a 1/4th wave with basically the bottom end grounded to make up the
> other half of the wave... Though so I aead 1/2wave (no gound) is better
> for maximum radiation ? This then brings me onto the 3rd harmonic since this
> itself seems to give more power somehow than anything else ? Does anyone
> know of any good site which explains this kinda thing ? I've read a fair bit
> from google though none of them actually say what happens in terms of power
> output from 1/4 wave 1/2wave and 3rd harmonic...
>
> thanks,
> chris

Chris, I have heard of harmonics problems emanating from an 'overloaded balun',
if this is correct maybe one of the Gurus will follow up with relevant comments
Good luck
Art

2979. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 01:55:56 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <d7cb4v8nmqr7ofc2ifqd4dpq4jjf1epsof@4ax.com>
Source record: 125068

On Sat, 8 Feb 2003 17:45:24 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>> I've read a fair bit
>> from google though none of them actually say what happens in terms of
>power
>> output from 1/4 wave 1/2wave and 3rd harmonic...
>>
>================================
>
>That's because there's very little to say about it. The total amount of
>power radiated from an efficient antenna depends entirely on what is
>available from the transmitter regardless of antenna shape, lengths and
>number of elements.
>
>Shape, lengths and number of elements determine the 3-dimensional radiation
>pattern, ie., the many directions between which power may be unequally
>shared, the SUM of ALL directions always being equal to the constant amount
>of power available from the transmitter.
>
>Placing a reflector on one side of a light bulb has no effect on the TOTAL
>amount of light radiated into space.
>
>Connecting 2 loud speakers, in series or parallel, in or out of phase, to an
>amplifier generating 1 watt of undistorted audio has no effect on the
>overall sound level in the room regardless of what nit-picking Hi-fi
>enthusiasts might have to say.

For a little rephrasing to clarify what I think some have been
missing

This is where people often confuse "Effective Radiated Power" with
"Actual Power".

In the case of the two speakers, it is possible to arrange/place them
so that they do provide more volume in one area at the expense of
another.

The same is true with the antennas.
People start thinking in terms of gain and power. Unlike an amplifier
that has 10 db of gain which takes 10 watts input and gives 100 watts
output, an antenna with 10 db of gain still puts out the 10 watts.

However "in the main lobe" there should be a received signal that
would be that same had the power been raised 10 db. This is the
"Effective Radiated Power" and as you said, it can only come at the

expense of signals radiated in other directions.

An antenna can only give gain in one direction by taking part of the
signal radiated in other directions.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>---
>Reg, G4FGQ
>
>
>
>
>
>
>

2980. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 02:19:24 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <ZNj1a.790$v44.217673839@news.inreach.com>
Source record: 125120

> What's making the SWR flat? Not R.
> H.

I believe it was Walt Maxwells's analysis that the modest increase in bandwidth with this antenna is because of fatter conductors. He also showed that the reactance of the stub went the wrong way off resonance and didn't contribute to the bandwidth. It was in QST back in the 70's.

There are dipole designs that use coax stubs that have withstood analysis and they have appeared in the ARRL antenna compendiums and other places.

Roger K6XQ

2981. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 02:25:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E45BC13.8010106@ieee.org>
Source record: 125119

H. Adam Stevens wrote:
> I just built one today with RG8X.
> It's resonant at 7.15 MHz. It's 1:1 from 7.075 to 7.225.
> Between 7.1 and 7.2 MHz the R component is measured greater than 3K ohm.
> What's making the SWR flat? Not R.

Actually, it is R but just not that R. The SWR inside the stubs is nearly
infinite. That makes the current in the stubs nearly infinite. What do
you suppose the I^2*R losses will be with a nearly infinite current?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2982. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 02:28:44 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <3t8b4vg75f9j3lvr5tolapmagrin65vbbg@4ax.com>
Source record: 125121

On Sat, 8 Feb 2003 18:06:11 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

|Where is it "proved incorrect" in QST or anywhere else that a shorted
|quarter wave stub is an open circuit?

He didn't say that a quarter-wave stub made with coax isn't an
"open-circuit" but I will.

Contrary to what you claim, there is a resistance associated with
coax. A stub made with lossy line is far from an open circuit.

Your own measurements confirm this, although, I calculate more like
1900 +j0 for RG8X @ 90 deg., whatever the correct number, it isn't an
open circuit.

Suggested reading for the analysis:

F. J. Witt, "Broadband Dipoles--Some New Insights", QST, Oct 1986, pp
27-37

|H.
|NQ5H
|
|
|"Dale Parfitt" <par@parelectronics.com> wrote in message
|news:3E459A29.7D5BA05D@parelectronics.com...
|>
|>
|> "H. Adam Stevens" wrote:
|>
|> > There is no free lunch, but you can design an antenna tuner into an
|antenna.
|> > A 50 ohm resistor has a great SWR. There are no resistors in coax.
|> > A double bazooka is a dipole with two quarter wave stubs in series
|across
|> > the feed point.
|> > Look up what a shorted quarter wave stub looks like, it's an open
|circuit at
|> > resonance,
|> > I measure >3000 ohms for RG8X at 7.15 MHz.
|> > As you go off resonance the shunt stubs become reactive opposite to the
|way
|> > the dipole becomes reactive.
|> > The reactances cancel. It's an antenna tuner!
|> > This maintains a resistive load over a range greater than 100 KHz. An

|SWR of
|> > 1:1 flat across the range.
|> > Field strength measurements on 40 meters show the double bazooka to be
|> > indistinguishable from a dipole at resonance, and better that the dipole
|off
|> > (the dipole's) resonce.
|> > I have not bothered on 80 and 40.
|> > H.
|> > NQ5H
|>
|> This analysis has been proved incorrect in QST and I believe QEX. Indeed
|it is
|> loss in the stubs that accounts for the increased BW.
|> Subsequent articles that pointed out the fallacy of the 2X bazooka did
|present
|> methods of broadening the dipole's response somewhat with coaxial
|sections-
|> where the math made sense eg. Frank Witt- Broadband Matching with the
|> Transmission line Radiator- ARRL Antenna Compendium Vol 4.
|>
|> Dale W4OP
|>
|> Dale W4OP
|>
|

2983. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 02:33:14 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E45BDDF.C1157CD5@attbi.com>
Source record: 125122

An air wound balun is linear!! There is no maximum flux density to worry about. So, no harmonics.

A balun using ferrite is subject to a maximum flux density in it's 'linear' region. When overdriven the magnetic properties go from linear to sub-linear. This transition introduces harmonics. So, high power baluns using ferrite cores for antenna tuners, etc. generally use two or three cores to keep the total magnetic circuit in the linear region.

DD, W1MCE

Art Unwin KB9MZ wrote:
>
> "exxos" <exxos@home.co.uk> wrote in message
news:<rGR0a.44$tY3.106838@news.randori.com>...
> > Hi all,
> >
> > I've been reading up on electrical harmonics and such with arials... What I
> > dont kinda get is the frequency of the waves used.... Most arials seem to
> > work on a 1/4th wave with basically the bottom end grounded to make up the
> > other half of the wave... Though so I aead 1/2wave (no gound) is better
> > for maximum radiation ? This then brings me onto the 3rd harmonic since this
> > itself seems to give more power somehow than anything else ? Does anyone
> > know of any good site which explains this kinda thing ? I've read a fair bit
> > from google though none of them actually say what happens in terms of power
> > output from 1/4 wave 1/2wave and 3rd harmonic...
> >
> > thanks,
> > chris
>
> Chris, I have heard of harmonics problems emanating from an 'overloaded balun',
> if this is correct maybe one of the Gurus will follow up with relevant comments
> Good luck
> Art

2984. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 02:52:37 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4bgm3800kll5b@corp.supernews.com>
Source record: 125123

my antenna analyzer cannot read
it says the current and voltage remain in phase across over 100 khz

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:3t8b4vg75f9j3lvr5tolapmagrin65vbbg@4ax.com...
> On Sat, 8 Feb 2003 18:06:11 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> |Where is it "proved incorrect" in QST or anywhere else that a shorted
> |quarter wave stub is an open circuit?
>
> He didn't say that a quarter-wave stub made with coax isn't an
> "open-circuit" but I will.
>
> Contrary to what you claim, there is a resistance associated with
> coax. A stub made with lossy line is far from an open circuit.
>
> Your own measurements confirm this, although, I calculate more like
> 1900 +j0 for RG8X @ 90 deg., whatever the correct number, it isn't an
> open circuit.
>
> Suggested reading for the analysis:
>
> F. J. Witt, "Broadband Dipoles--Some New Insights", QST, Oct 1986, pp
> 27-37
>
>
>
>
> |H.
> |NQ5H
> |
> |
> |"Dale Parfitt" <par@parelectronics.com> wrote in message
> |news:3E459A29.7D5BA05D@parelectronics.com...
> |>
> |>
> |> "H. Adam Stevens" wrote:
> |>
> |> > There is no free lunch, but you can design an antenna tuner into an
> |antenna.
> |> > A 50 ohm resistor has a great SWR. There are no resistors in coax.
> |> > A double bazooka is a dipole with two quarter wave stubs in series
> |across

> |> > the feed point.
> |> > Look up what a shorted quarter wave stub looks like, it's an open
> |circuit at
> |> > resonance,
> |> > I measure >3000 ohms for RG8X at 7.15 MHz.
> |> > As you go off resonance the shunt stubs become reactive opposite to
the
> |way
> |> > the dipole becomes reactive.
> |> > The reactances cancel. It's an antenna tuner!
> |> > This maintains a resistive load over a range greater than 100 KHz. An
> |SWR of
> |> > 1:1 flat across the range.
> |> > Field strength measurements on 40 meters show the double bazooka to
be
> |> > indistinguishable from a dipole at resonance, and better that the
dipole
> |off
> |> > (the dipole's) resonce.
> |> > I have not bothered on 80 and 40.
> |> > H.
> |> > NQ5H
> |>
> |> This analysis has been proved incorrect in QST and I believe QEX.
Indeed
> |it is
> |> loss in the stubs that accounts for the increased BW.
> |> Subsequent articles that pointed out the fallacy of the 2X bazooka did
> |present
> |> methods of broadening the dipole's response somewhat with coaxial
> |sections-
> |> where the math made sense eg. Frank Witt- Broadband Matching with the
> |> Transmission line Radiator- ARRL Antenna Compendium Vol 4.
> |>
> |> Dale W4OP
> |>
> |> Dale W4OP
> |>
> |
>

2985. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 02:59:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4bh0chl6r3p54@corp.supernews.com>
Source record: 125124

Chuckle

There's only infinite current if the loss is zero. Even if there were infinite current, it would occur only at zero-length points along the cable. And the resistance of a zero-length section of cable is zero. So you're asking what's the I^2*R loss where I is infinite and R is zero. This oughta be good for another couple hundred postings at least.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> H. Adam Stevens wrote:
>
>> I just built one today with RG8X.
>> It's resonant at 7.15 MHz. It's 1:1 from 7.075 to 7.225.
>> Between 7.1 and 7.2 MHz the R component is measured greater than 3K ohm.
>> What's making the SWR flat? Not R.
>
>
> Actually, it is R but just not that R. The SWR inside the stubs is nearly
> infinite. That makes the current in the stubs nearly infinite. What do
> you suppose the I^2*R losses will be with a nearly infinite current?

2986. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 03:08:18 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4bhjgibpkrufb@corp.supernews.com>
Source record: 125125

oh
and two 1900 ohm stubs in series are a 3800 ohm load across a 50 ohm antenna
20log3800/50=37
point is the damn thing works; build one and see
but it is tedious to get both stubs and the dipole resonant on the same
frequency to 4 digits
the reward is nothing reflected over a 100+ khz bandwidth
H.
NQ5H

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v4bgm3800kll5b@corp.supernews.com...
> my antenna analyzer cannot read
> it says the current and voltage remain in phase across over 100 khz
>
>
> "Wes Stewart" <n7ws@#arrl.net> wrote in message
> news:3t8b4vg75f9j3lvr5tolapmagrin65vbbg@4ax.com...
> > On Sat, 8 Feb 2003 18:06:11 -0600, "H. Adam Stevens"
> > <solo@totalaccess.net> wrote:
> >
> > |Where is it "proved incorrect" in QST or anywhere else that a shorted
> > |quarter wave stub is an open circuit?
> >
> > He didn't say that a quarter-wave stub made with coax isn't an
> > "open-circuit" but I will.
> >
> > Contrary to what you claim, there is a resistance associated with
> > coax. A stub made with lossy line is far from an open circuit.
> >
> > Your own measurements confirm this, although, I calculate more like
> > 1900 +j0 for RG8X @ 90 deg., whatever the correct number, it isn't an
> > open circuit.
> >
> > Suggested reading for the analysis:
> >
> > F. J. Witt, "Broadband Dipoles--Some New Insights", QST, Oct 1986, pp
> > 27-37
> >
> >
> >
> >
> > |H.
> > |NQ5H

> > |
> > |
> > |"Dale Parfitt" <par@parelectronics.com> wrote in message
> > |news:3E459A29.7D5BA05D@parelectronics.com...
> > |>
> > |>
> > |> "H. Adam Stevens" wrote:
> > |>
> > |> > There is no free lunch, but you can design an antenna tuner into an
> > |antenna.
> > |> > A 50 ohm resistor has a great SWR. There are no resistors in coax.
> > |> > A double bazooka is a dipole with two quarter wave stubs in series
> > |across
> > |> > the feed point.
> > |> > Look up what a shorted quarter wave stub looks like, it's an open
> > |circuit at
> > |> > resonance,
> > |> > I measure >3000 ohms for RG8X at 7.15 MHz.
> > |> > As you go off resonance the shunt stubs become reactive opposite to
> the
> > |way
> > |> > the dipole becomes reactive.
> > |> > The reactances cancel. It's an antenna tuner!
> > |> > This maintains a resistive load over a range greater than 100 KHz.
An
> > |SWR of
> > |> > 1:1 flat across the range.
> > |> > Field strength measurements on 40 meters show the double bazooka to
> be
> > |> > indistinguishable from a dipole at resonance, and better that the
> dipole
> > |off
> > |> > (the dipole's) resonce.
> > |> > I have not bothered on 80 and 40.
> > |> > H.
> > |> > NQ5H
> > |>
> > |> This analysis has been proved incorrect in QST and I believe QEX.
> Indeed
> > |it is
> > |> loss in the stubs that accounts for the increased BW.
> > |> Subsequent articles that pointed out the fallacy of the 2X bazooka
did
> > |present
> > |> methods of broadening the dipole's response somewhat with coaxial
> > |sections-
> > |> where the math made sense eg. Frank Witt- Broadband Matching with the
> > |> Transmission line Radiator- ARRL Antenna Compendium Vol 4.
> > |>
> > |> Dale W4OP

> > |>
> > |> Dale W4OP
> > |>
> > |
> >
>
>

2987. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 03:17:12 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4bi46e0h4a640@corp.supernews.com>
Source record: 125127

fortunately the observable universe is finite
unfortunately so is this little planet
In my 40 meter double bazooka antenna the finite and measurable current and
voltage
remain constant and *in-phase* over a range exceeding 100 khz
Do that with loss.....
H.
NQ5H

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v4bh0chl6r3p54@corp.supernews.com...
> *Chuckle*
>
> There's only infinite current if the loss is zero. Even if there were
> infinite current, it would occur only at zero-length points along the
> cable. And the resistance of a zero-length section of cable is zero. So
> you're asking what's the I^2*R loss where I is infinite and R is zero.
> This oughta be good for another couple hundred postings at least.
>
> Roy Lewallen, W7EL
>
> OC_CAM's Razor wrote:
> > H. Adam Stevens wrote:
> >
> >> I just built one today with RG8X.
> >> It's resonant at 7.15 MHz. It's 1:1 from 7.075 to 7.225.
> >> Between 7.1 and 7.2 MHz the R component is measured greater than 3K
ohm.
> >> What's making the SWR flat? Not R.
> >
> >
> > Actually, it is R but just not that R. The SWR inside the stubs is
nearly
> > infinite. That makes the current in the stubs nearly infinite. What do
> > you suppose the I^2*R losses will be with a nearly infinite current?
>

2988. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 03:17:16 UTC
From: Andy KC2SSB <nospam@nospam.com>
Message-ID: <j1ib4vsfe9kc3o2q1c1po4p0arnfdhpt5r@4ax.com>
Source record: 125126

On 08 Feb 2003 21:36:13 GMT, wa8ulx@aol.com (WA8ULX) wrote:

>
> Dan I didnt know "Homo BOY Andy" was still here.

Ah, there she is now. Welcome back.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA Grid FM29vw
http://vhfradiobuff.tripod.com

2989. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 04:05:07 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302082005.2fe14e2c@posting.google.com>
Source record: 125128

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b21ldn$791$2@helle.btinternet.com>...
> Art, how many more times do I have to say they are NOT Maxwell's
> quations? - they are Oliver Heaviside's who came along about 20 years
> later.
>
> We should give credit where credit is due.
> ---
> ========================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ========================

Reg, do you realise that your mention of Heaviside has stolen the
thread away
from wavelength discussion. I leave you now to defend yourself and
Heaviside, I am sure you will do a great job .You may be able to keep
them on the run for 600 posts and thus beat Cecil's latest record with
wattmeters. With my E mail program gone as well as this thread I will
be left to continue with antenna work despite the cold weather. By the
way this country is now open to all
people, 8 million and counting much faster as the World hears that the
regular
amnesty is about to be given before the 10 million number occurs. Just
think, you could be basking in Texas near Cecil instead of enduring
the present weather in the U.K. I believe that you would also be
eligible for financial help and health care while you await legitimacy
even though you do not speak the same language
Cheers and beers
Art

2990. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 04:09:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E45D466.30502@ieee.org>
Source record: 125129

Roy Lewallen wrote:
> *Chuckle*
>
> There's only infinite current if the loss is zero.

Actually, I had my thinking cap on upside down. It's
the denominator being zero that makes the SWR infinite,
not the numerator being infinite.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2991. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 04:13:03 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302082013.c15e3c4@posting.google.com>
Source record: 125130

'Doc <w5lz@cwis.net> wrote in message news:<3E456BB9.127A62C@cwis.net>...
> W7TI,
> I sort of think we've all been given the finger,
> beginnging with this thread...
> 'Doc

Hang around Doc, I'm sure you will find somebody to follow if the last one discarded you. In the mean time use your own fingers to hang on or you will lose your self given title of Guru, Doctor and all that stuff.
Regards
Art

2992. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 04:45:28 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302082045.7083a0cf@posting.google.com>
Source record: 125131

Dick <rhughes33@cableone.net> wrote in message
news:<60na4vge6jcca2ibcdil5v44m0bn4l85p9@4ax.com>...
> Am I reading that there is no point to running a ground from my
> antenna mount directly to the earth? The only path then would be
> though the roof into the attic and down the wall to the service ground
> some 50 feet away. Of course I realize the air conditioner sitting up
> there on top is a pretty nice target in itself.
>
> Dick

I would run the wire. Your house is not a low resistance connection
with ground.
It will burn. The A/C is a fairly blunt object. It probably doesn't
stream too well compared to a vertical antenna. You might get struck,
or you might not, but if you do, having a #6 wire leading to a good
ground will save your lunch. Consider it cheap insurance.

> >Gary V. Deutschmann, Sr. wrote:
> >> Lightning does not necessarily seek out the highest point in an area.

I would think the best streamer in the area would get the call
usually.

> >
> >Lightning hit my five foot tall live oak tree, the shortest thing
> >on my property.

I once saw lightning strike a flat cement sidewalk about 20 ft in
front of me. I was about 15 or so. Almost wet my pants... The last
three strikes to this property have been to high objects. Two to my 42
ft mast, and one to the tall oak tree in the front yard which is
taller. The strikes to my mast hit the tip, not the sides. I know
because I had electrical tape sealing the top to keep water out. It
blew a hole in the tape. So far with those three strikes in the last 4
years or so, I've had no damage to anything in or around the house.
Why? Because I make it easy for the strike and direct it to ground
with an easy and low resistance path. If you do that, it's not likely
to burn the house down, or bother you in other ways. And yes, that
ground should be tied to any other house ground. IE: power co. ground,
etc.. All grounds should be at the same potential. MK

2993. competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 05:27:54 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4bpp7jf0n2v45@corp.supernews.com>
Source record: 125132

I am returning to drag racing; I built 13 cars from scratch in high school.
Eliminates the bullshit without the death of combat. Error.
As for the rest of you: get a field strength meter.
H.
NQ5H

--
Labor lawmaker Bob Marshall-Andrews
said U.S. policy was being driven by a
"ghastly mixture of fundamental Christian
evangelism, the ruthless Zionism and the
oil economy," and argued that if such
forces were allowed to control British
decision-making they "would bring us
nothing but disaster."

2994. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 05:43:25 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ijqb4vg8nrrn3c9i7g1vaggo2blfogarbt@4ax.com>
Source record: 125133

On Sat, 8 Feb 2003 23:27:54 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

|I am returning to drag racing; I built 13 cars from scratch in high school.
|Eliminates the bullshit without the death of combat. Error.
|As for the rest of you: get a field strength meter.
|H.
|NQ5H

Bye

2995. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 05:48:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E45EBC7.EB34403B@cwis.net>
Source record: 125134

Art,
That's odd, I certainly don't feel discarded.
Would you mind telling me who it was that threw
me away? As to a 'self given' title, is it the
nickname 'Doc' that bothers you? Believe me, I
didn't pick it, people I worked with did. It
doesn't pertain to a medical degree, or any type
of scholastic achievement, so don't let it bother
you (I don't know why it would any way). It is
interesting that the only other person that has
objected to it is ol'Frac. Puts you in 'good'
company, doesn't it?
'Doc

2996. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 08:24:59 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <vfo1a.96$z7.41406@news.randori.com>
Source record: 125135

> This is where people often confuse "Effective Radiated Power" with
> "Actual Power".
>
> In the case of the two speakers, it is possible to arrange/place them
> so that they do provide more volume in one area at the expense of
> another.
>
> The same is true with the antennas.
> People start thinking in terms of gain and power. Unlike an amplifier
> that has 10 db of gain which takes 10 watts input and gives 100 watts
> output, an antenna with 10 db of gain still puts out the 10 watts.
>
> However "in the main lobe" there should be a received signal that
> would be that same had the power been raised 10 db. This is the
> "Effective Radiated Power" and as you said, it can only come at the
> expense of signals radiated in other directions.
>
> An antenna can only give gain in one direction by taking part of the
> signal radiated in other directions.

What form of antenna would radiate in one direction ? I can only imagine in my mind a straight antenna which radiates in a circle type fassion around it. I tried to simulate the fields in EZNEC, I kept the length the same and ran a higher frequency for it, program said there was a error with it (which is to be expected) though the shape of the field ramains the same, no power radiated in one direction here ? The wave looks the same in all cases but does not seem to explain about the 3rd harmonic which someone said before this radiates more in one direction than another..

chris

2997. Re: Mobile10M Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 08:38:30 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <Jko1a.8774$oc.507@fe01.atl2.webusenet.com>
Source record: 125136

Doc-Kinda what I was thinking, too- need fair amount of capatance to couple power thru window- like a friend, during the cb craze stated "You could sell'em anything. Been thinking of marketing florescent purple paint, as when you hold a neon bulb to the tip of the antenna thats its color. If you could see the wave, that would be its color, so naturally this would increase radiation"!!!
his marketing theory, sadly, was right on for the folks that were into it! --Jim

"'Doc" <w5lz@cwis.net> wrote in message news:3E45A78E.802811BD@cwis.net...
>
>
> Jim,
> Where the available thru-glass capacitance of that
> type of mount is adiquate at VHF/UHF, it's wothrless
> for HF. Make the 'thru-glass' mount large enough and
> it would work fine. But when you do, I think you'd
> loose the use of that window...
> 'Doc

2998. Your opinion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 10:00:37 UTC
From: on4ja <wbac3361@wanadoo.be>
Message-ID: <b259kc$137q1$1@sinclair.be.wanadoo.com>
Source record: 125137

I'd like to know your opinion about GAP antennas
EAGLE DX and TITAN DX

Many thanks . Emil on4ja@wanadoo.be

2999. Directional beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 11:48:02 UTC
From: google@sale-net.com.au
Message-ID: <6a3f6a71.0302090348.1c1dff4c@posting.google.com>
Source record: 125138
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Hi all. This might be off topic but it is radio related.

I need to locate the position of a divice in my front yard and have it report it's position back to a computer. My yard isn't a paddock etc and it's got to be fairly accurate. Therefore GPS isn't an option.

I want to know how accurate a directional antenna can be? What I thought of doing is placing several 900 mhz transmitters around my yard. Have these separated by say 25 khz. A microprocessor contols their transmit strength from say max to min in steps. So they tranmit a signal at max power stop, transmit at say 1 % less, stopp, 1 % less etc

Now my mobile device has the direction arial on board. It chooses the first freq and rotates the arial till it finds the stongest point at the weekest level. It takes a reading of its position. Then it looks for the next and does the same, The next and so on.

From there it reports all these back to the main computer which using trigonomatry calculates the position...

My question is without spending $1000's of dollars for a hobby project, would the arial be accurate enough?

Regards, Peter

3000. Re: Directional beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 12:24:27 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <jNecnd2pZ63j1dujXTWcow@crocker.com>
Source record: 125139
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Peter" <google@sale-net.com.au> wrote in message
news:6a3f6a71.0302090348.1c1dff4c@posting.google.com...
> Hi all. This might be off topic but it is radio related.
>
> I need to locate the position of a divice in my front yard and have it
> report it's position back to a computer. My yard isn't a paddock etc
> and it's got to be fairly accurate. Therefore GPS isn't an option.
>
> I want to know how accurate a directional antenna can be? What I
> thought of doing is placing several 900 mhz transmitters around my
> yard. Have these separated by say 25 khz. A microprocessor contols
> their transmit strength from say max to min in steps. So they tranmit
> a signal at max power stop, transmit at say 1 % less, stopp, 1 % less
> etc
>
>
> Now my mobile device has the direction arial on board. It chooses the
> first freq and rotates the arial till it finds the stongest point at
> the weekest level. It takes a reading of its position. Then it looks
> for the next and does the same, The next and so on.
>
> From there it reports all these back to the main computer which using
> trigonomatry calculates the position...
>
> My question is without spending $1000's of dollars for a hobby
> project, would the arial be accurate enough?
>
> Regards, Peter
probably not, the beam width of any reasonably sized antenna even at 900mhz
is still fairly wide. you would also have to contend with reflections, side
lobes on the antennas, and other effects that may cause errors.

you would be better off measuring arrival times of signals from transmitters
around the yard similar to how the gps works... of course that requires
fairly accurate timing, a 1ns error would equate to .3m error.

another possibility is to set up one or two lasers on your roof and have
them scan the yard, then all the remote device needs is to report when it
detects the scan beam. (be sure to get ones that are low enough power to not
require the use of eye protection! an infrared led may be enough and is
much safer.) this is similar to how light pens work on computer screens.
it is much simpler to implement in the remote device as it needs no moving
parts or fancy calculation, all that is done in the fixed scanning device.
since the scan speed is mechanically controlled there is also no requirement

for super accurate timing.

you may also want to reverse your original idea, make the remote device the dumb transmitter and use fixed receiving antennas to locate it. I would think that in a small area measuring the arrival time difference in pulses transmitted by the rover would be the most accurate, but you might get adequate accuracy using a couple Doppler direction finder arrays around the yard.

3001. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 12:59:26 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4650A6.2311E8AA@attbi.com>
Source record: 125140

A Yagi, a Collinear, a Log Periodic, various 'curtains', a long wire, a
Quad, a rhombic, etc.

Deacon Dave, W1MCE
+++

exxos wrote:
>
> > This is where people often confuse "Effective Radiated Power" with
> > "Actual Power".
> >
> > In the case of the two speakers, it is possible to arrange/place them
> > so that they do provide more volume in one area at the expense of
> > another.
> >
> > The same is true with the antennas.
> > People start thinking in terms of gain and power. Unlike an amplifier
> > that has 10 db of gain which takes 10 watts input and gives 100 watts
> > output, an antenna with 10 db of gain still puts out the 10 watts.
> >
> > However "in the main lobe" there should be a received signal that
> > would be that same had the power been raised 10 db. This is the
> > "Effective Radiated Power" and as you said, it can only come at the
> > expense of signals radiated in other directions.
> >
> > An antenna can only give gain in one direction by taking part of the
> > signal radiated in other directions.
>
> What form of antenna would radiate in one direction ? I can only imagine in
> my mind a straight antenna which radiates in a circle type fassion around
> it. I tried to simulate the fields in EZNEC, I kept the length the same and
> ran a higher frequency for it, program said there was a error with it (which
> is to be expected) though the shape of the field ramains the same, no power
> radiated in one direction here ? The wave looks the same in all cases but
> does not seem to explain about the 3rd harmonic which someone said before
> this radiates more in one direction than another..
>
> chris

3002. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 13:39:38 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <BfucnWstgcWBx9ujXTWc3A@crocker.com>
Source record: 125141

I am an engineer... as such my job is mostly to find practical ways to apply existing technology to a problem within constraints of size, cost, power consumption, ect. since Hertz first started playing with radio waves there have been many, many scientists, engineers, hobbiests, etc who have been trying all sorts of different arrangements of conductors in search of various antenna properties like directionality and efficiency. There have also been generations of physicists studying electromagnetics which has been boiled down to a fairly small set of self consistent equations which have been tested over wide ranges of parameters and have not been shown to be violated. There have also been many generations of engineers and scientists working in other fields that rely on electromagnetic fields and waves to behave in certain ways, and they always have. (sometimes much to the consternation of the experimenter who thought he had found something new only to have it explained by someone else within the existing set of knowledge.) Now that we have a good understanding of the underlying equations and sufficient computing power to quickly evaluate the basic features of reasonably complex antennas it is possible to try many more arrangements than experimenters in the past could build and measure. and to this end engineers have been churning designs on computers to improve them for many years. countless megaflop-years of computing time have gone into this endevour resulting in improvements in performance of many older designs, and maybe even a few who might be considered unique enough to patent but nothing really new. (though of course a patent does not really require a breakthrough in technology or science, just a new or slightly improved application or implementation of a device.)

where is this going??? well, after all this time and experimentation many users of the electromagnetic spectrum have kept coming back to a fairly small set of antennas. most of these antennas are measured conveniently in 'wavelenghts' or large fractions of wavelengths. why? because they exhibit useful characteristics and are generally easy to build and use. for amateur use they can be called 'forgiving' antennas, they generally tolerate wide ranges of frequency, differences in surroundings, and various construction techniques, and still perform adequately.

antennas that are much smaller than a 'wavelength' have been around for a long time also. from the days of Tesla with his huge coils operating at fairly low frequencies there have been interesting and sometimes useful effects noted in them. unfortunately (and yes this is a gross generalization) they are generally harder to construct and use. for general amateur use i would not consider many of them to be 'forgiving', they are critical to tune, or very sensitive to their surroundings, or require special construction techniques because of high currents or voltages.. and while one person can construct one have it work well, someone else may have great difficulty duplicating it because of minor variations in construction

or surroundings. are they to be abandoned? no, they still have their uses, even applications where they are required because of frequency used or space constraints. would i use one? of course, if it was the best choice for the application.

i seem to be rambling again.... back to your specific questions.

no, i don't believe that anything new would be a violation of nature's laws... exactly the opposite, anything 'new' will be explained within the laws as we know them... the fallout from this is that anyone who tries to explain their 'new' antenna as requiring a new set of physical laws is most likely just not analyzing it properly. this is where i look very skeptically at antennas like the cfa and eh, while i am sure they obey the law, they have not been adequately analyzed and explained within that set of laws. others, like the use of fractal patterns for folding wires and, i believe, even the ctha have been adequately analyzed and explained within the accepted laws.... while they may not have any characteristics that i am interested in, they are adequately explained and characterized. (though i do think the ctha has been over hyped in some advertising)

i think my rambling above talks to the reason for the common use of 'wavelenth' antennas vs physically small antennas. it is mostly a matter of convenience and ease of construction and use. when i mentioned 'loop antenna' i should have been more specific, i was considering a full wavelength loop as is normally used in a 'delta loop' or 'quad' type of antenna, not any of the many varieties of physically small loops.

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0302081531.3cee12f9@posting.google.com...
> David I must admit that I have read your long post several times since
> I responded. I now must say that most of what you wrote was
> interesting but did not appear to have a direct comment or response to
> my original posting
> At times I thought I read that anything new would be a violation of
> natures laws thus what I was pursuing was futile. I read it again and
> then think you are saying something different. I also struggled over
> your comment regarding the E/H and contrawave antenna sort of boiled
> down to nothing more than the wavelength comment in action (my words)
> .You also added later the loop antenna suggesting that it was related
> to a particular fraction of a wavelength which really surprised me but
> without further info to substantiate that comment I must assume you
> were unconciously drifting.
> Could you please restate your position as to how the E/H,contrawave
> and loop antenna specifically relates to a dipole, wavelength or a
> fraction there of
> so I can clarify in my own mind what the point was that you were
> making.
> Much obliged
> regards
> Art
>

> "David Robbins" <k1ttt@arrl.net> wrote in message
news:<icGdnT8fjooFwdmjXTWcpw@crocker.com>...
> > "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> > news:85ed38d.0302070903.126bb8c6@posting.google.com...
> > > When thinking about dissention on this newsgroup my mind
> > > goes to Fractals, contrawound and E/H antennas.
> > > Each of these forays into antenna design have one thing in common
> > > in that they move away from the common starting point of the thinking
> > > in ham radio which is 'wave lengths' or parts there of but go to the
> > > starting point of 'aperture' and 'Q' . In looking at the experimental
> > > path that I follow I suddenly realise that I also do exactly the same.
> > > Yet, when one understands that these two factors outweigh any
> > > prepoderance on 'wave length' with respect to antennas a whole new
> > > frontier opens that can bring new life to antenna design.
> > > Instead of total derision with the advent of new design thoughts could
> > > we not discuss the new and good things that come from these
> > > experiments that would encourage new ideas in the hobby.
> > > I for one think that the hobby is in error in focussing its thoughts
> > > on wavelength with respect to antennas. Am I the only one that thinks
> > > this way? Is my thinking too far out to be called 'out of the box'.
> > > Some noted thinkers state that radiation can emanate from a single
point,
> > > if this is so does in not add reason to move away from the 'Wave
length'
> > > term and restart with Q and aperture ?
> > > Maybe the above is too deep to base a discussable post upon.
> > > Regards
> > > Art
> >
> > if you want, you can look at any antenna as an array of point sources.
this
> > is essentially what eznec and most other antenna analysis programs do.
> > numerically combining point sources and calculating the interaction
between
> > them is the basis of most simulation code. now, since that method
provides
> > a reasonable approximation of how antennas work, can you not envision
that
> > for yourself? if so, then all antennas are nothing but collections of
one
> > or more point sources arranged in some kind of shape to generate a
desired
> > radiation pattern at some distance from them. what that shape is
doesn't
> > really matter, the interaction between all these point radiators still
works
> > the same way, the laws of Gauss and Faraday and the equations of Maxwell
> > have never been shown to be violated by any know arrangement of
radiators...
> > fractal, eh, cfa, or simple dipole, break them down far enough and they

all
> > work the same way... so arrange away, shrink, stretch, coil, fold, or
crunch
> > into a flying saucer shape on top of your tv and you have nothing new,
just
> > another collection of point sources interacting via some relatively
simple
> > equations.
> >
> > now, why do 'wavelengths' and large fractions of them like 1/2 and 1/4
keep
> > showing up in antenna designs? because 1/2 wavelength is the shortest
free
> > standing wire that is resonant at a given frequency. this makes such
things
> > as the yagi work, an approximately 1/2 wavelength conductor responds to
the
> > excitation by developing its own current with a predictable phase
> > relationship and magnitude to the rest of the structure in such a way
that
> > this current can be used to form the radiated field into some desired
> > pattern. 1/4 wavelength conductors over a good ground happen to have an
> > impedance that is easy to get current into with common equipment. 1
> > wavelength conductors folded into a loop also have an impedance that is
> > relatively easy to use and have some interesting properties that make
> > forming far fields into useful patterns. likewise a 1/2 wave conductor
> > broken in the middle to make two 1/4 waves happens to have a nice feed
point
> > impedance and a useful radiation pattern.... there is nothing magic
about
> > them, they just happen to do things that have been found useful over the
> > last 100 years or so.
> >
> > much smaller arrangements of conductors have also been used, but they
> > frequently exhibit characteristics in one or more critical area that
make
> > them harder to work with and often less useful than 'wavelength' size
> > conductors. short helically wound conductors while much smaller than a
> > wavelength usually exhibit an impedance that is harder to efficiently
get
> > current into, and respond well over a narrower range of frequencies.
> > folded, fractalized, crunched, zigzag, and all sorts of other
arrangements
> > have been succesfully used in certain circumstances and perform in
> > accordance with physical laws, but they aren't a cure all and certainly
> > aren't magical or 'new physics' as some would have you believe.
> >
> > in summary after this long rambling... keep experimenting, fold your
wires,
> > wind your coils, forge your plates, whatever turns you on, but you will

have
> > a hard time breaking the physical laws that describe how charges,
currents,
> > fields, and waves work.

3003. Re: 2M USB antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 14:34:20 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3E4666F3.7060003@adelphia.net>
Source record: 125142

Jimnn7k@reno.rmci.net wrote:

> If that is the case, then ANY "contributions" to the league are NOT TAX
> DEDUCTABLE! for any purposes !

Better go back and check your references, Jim.

- Mike -

3004. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 15:26:48 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3E46733F.209@adelphia.net>
Source record: 125143

H. Adam Stevens wrote:

> I am returning to drag racing; I built 13 cars from scratch in high school.

You mean you built your cars from the same stuff my wife makes cakes from? Amazing stuff, this scratch!

- Mike KB3EIA -

3005. Masts/poles suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 16:14:38 UTC
From: Gary Boyer <gboyer@columbus.rr.com>
Message-ID: <O7v1a.170622$GF.46169745@twister.columbus.rr.com>
Source record: 125144

I am wanting to purchase/find/build a mast or pole that would get a couple of dipoles up about 35 to 40 feet...I checked with the local radio shack and they did not sell pushup tv type masts at their location...any advice would be most appreciated...tnx...Gary..K8BY

3006. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 16:32:22 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E46828D.F0DDE1D5@attbi.com>
Source record: 125145

Since I 'scratch' when I itch my doctor said try Coricedan[sp?] as a solution.

So, Shall I recommend the next car built from scratch be named Coricedan?

Deacon Dave, W1MCE

Mike Coslo wrote:
>
> H. Adam Stevens wrote:
>
> > I am returning to drag racing; I built 13 cars from scratch in high school.
>
> You mean you built your cars from the same stuff my wife makes cakes
> from? Amazing stuff, this scratch!
>
> - Mike KB3EIA -

3007. Re: Masts/poles suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 16:39:26 UTC
From: gmz79@aol.comnospam
Message-ID: <20030209113926.22075.00000606@mb-ca.aol.com>
Source record: 125146

R+L in Hamilton , OH has the 40' Rohn telescopic mast H-40 for
$51.95. Not a bad drive from Lancaster. Nice candy store.

73
Greg KC8VIF
Greg Z
to thine own sound be true

3008. Re: Mobile Antenna for 2m/70cms

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 16:49:14 UTC
From: gmz79@aol.comnospam
Message-ID: <20030209114914.22075.00000607@mb-ca.aol.com>
Source record: 125147

Mfj makes a nice 2m/440 base/ repeater ant. 4.5/7.2db fiberglass
about 5' ,real nice looking piece. 58 bucks.

Kc8vif
Greg Z
to thine own sound be true

3009. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 16:53:30 UTC
From: Fred Hambrecht Sr <w4jle@charter.net>
Message-ID: <v4d1sa6lbg07fd@corp.supernews.com>
Source record: 125148

wave guide is nothing more than shorted 1/4 wave stubs hooked together, are you saying it dos not work?

I will make a flat statement a 1/4 wave shorted is the same as a 1/2 wave open. (At the selected frequency)

Where are the losses incurred?

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E45A3C6.3070508@ieee.org...
> H. Adam Stevens wrote:
> > Where is it "proved incorrect" in QST or anywhere else that a shorted
> > quarter wave stub is an open circuit?
>
> Never mind QST. We can prove that right here. An open circuit is infinite
> impedance. A real world stub has losses. Ergo, that real world stub is a
> high impedance but not an open circuit.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3010. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 17:10:16 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302090910.6ed355ee@posting.google.com>
Source record: 125149

'Doc <w5lz@cwis.net> wrote in message news:<3E45EBC7.EB34403B@cwis.net>...
> Art,
> That's odd, I certainly don't feel discarded.
> Would you mind telling me who it was that threw
> me away? As to a 'self given' title, is it the
> nickname 'Doc' that bothers you? Believe me, I
> didn't pick it, people I worked with did. It
> doesn't pertain to a medical degree, or any type
> of scholastic achievement, so don't let it bother
> you (I don't know why it would any way). It is
> interesting that the only other person that has
> objected to it is ol'Frac. Puts you in 'good'
> company, doesn't it?
> 'Doc

Maybe it is the term 'doc' that irritates me, allow
me to turn that around.

Hi Doc, you have often shown scepticism about what I do even tho
you have heard me in the past on the high band.So let me bring you
up to date as to what I am doing now and you will be the first to
know and I also invite you to be a part of it by us arranging a schedule.
The antenna contraption that I am working on now is for multipurpose
experiments. The weather this year has forced me to combine many
as it has been too cold to undertake them one by one.
As always the contraption is not wavelength based and also has
provision to test the shielding aspect which you have commentated
upon earlier. It is also capable of use on any frequency so you may
choose the sched frequency. This contraption will be rotatable
of course, but in addition this one will be able to switch to verticle
polarisation. The main focus of this contraption is to find a way to
provide narrow band filtering at the antenna rather than filtering
to be done in the radio, the shielding test fits nicely with this
object.
Of course with the multiplicity of experiments many relays ,
wiring, camera with audio and video, multi wire harness many things
can go wrong and with you being at hand will have the first laugh.
So, I have given you an inkling of what the contraption was designed for,
I have also have confirmation in both mathematical and computor antenna
program formats so I have done my homework.
O.K.? that's the deal the cold weather will shortly come to an end
which will allow me to put it up.
My E mail plus this computor has given up on E mail so I will give
you my tel # 309 828 7204. if you wish private communication

Best regards
Art Unwin KB9MZ ...XG...American citizen...a retired nobody who is
cranky sometimes ..... in no way a guru even tho I have fooled the
Patent Office a few times..... inventor of many failures since
resume protection has never been a concern of mine

3011. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 17:15:14 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302090915.7abb29a5@posting.google.com>
Source record: 125150

David, glad you responded on that facet,your ennunciation with clarity
makes it more believable than if I had opted to do it
Regards
Art

Dave Shrader <david.shrader@attbi.com> wrote in message
news:<3E45BDDF.C1157CD5@attbi.com>...
> An air wound balun is linear!! There is no maximum flux density to worry
> about. So, no harmonics.
>
> A balun using ferrite is subject to a maximum flux density in it's
> 'linear' region. When overdriven the magnetic properties go from linear
> to sub-linear. This transition introduces harmonics. So, high power
> baluns using ferrite cores for antenna tuners, etc. generally use two or
> three cores to keep the total magnetic circuit in the linear region.
>
> DD, W1MCE
>
> Art Unwin KB9MZ wrote:
> >
> > "exxos" <exxos@home.co.uk> wrote in message
news:<rGR0a.44$tY3.106838@news.randori.com>...
> > > Hi all,
> > >
> > > I've been reading up on electrical harmonics and such with arials... What I
> > > dont kinda get is the frequency of the waves used.... Most arials seem to
> > > work on a 1/4th wave with basically the bottom end grounded to make up the
> > > other half of the wave... Though so I aead 1/2wave (no gound) is better
> > > for maximum radiation ? This then brings me onto the 3rd harmonic since this
> > > itself seems to give more power somehow than anything else ? Does anyone
> > > know of any good site which explains this kinda thing ? I've read a fair bit
> > > from google though none of them actually say what happens in terms of power
> > > output from 1/4 wave 1/2wave and 3rd harmonic...
> > >
> > > thanks,
> > > chris
> >
> > Chris, I have heard of harmonics problems emanating from an 'overloaded balun',
> > if this is correct maybe one of the Gurus will follow up with relevant comments
> > Good luck
> > Art

3012. Re: Stacking/Separation Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 17:50:00 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <qpw1a.10808$oc.8379@fe01.atl2.webusenet.com>
Source record: 125151

Oh, and why this works-- Impedences are equal to the load , every 1/2 wavelength, if open circuit, at the load (or source) end, the 1/2 wave piece of coax looks, to rf as being a open circuit, or NOT THERE! now, if the off band antenna impedence is, say , 200 ohms, when fed the other bands frequency, would be 200 ohms in parallel with the 50 ohm load presented by the right antenna, or 40 ohms! obviously, the higher the load impedence for the off band antenna goes, the closer to 50 ohms at the "tee" fitting, you become . all bets are off if the impedence drops to , say 80 ohms, but am assuming that a gamma match like a series resonant circuit (simplified, where off freq , the impedence goes quite high). the trick is to make the off band antenna a very high impedence tothe working antenna . the reason not useing 75 ohm (X2) is that only one antenna at a time will load, depending on frequency, so 2 loads from 1 source are unnecessary (as in a matching section) . --jim nn7k

<Jimnn7k@reno.rmci.net> wrote in message
news:qqg1a.6413$oc.5788@fe01.atl2.webusenet.com...
> Ed, since the frequencies are so far apart from the tribander, and in the
> opposite plane, would think 4-5 foot above or below the tribander (or 2-3
> foot, if mounted on PVC (or other non metalic boom) is used, and would
> think about 4 foot, or 1/2 the boomlength of the longest yagi (typically
the
> 2 meter one) would be more than adiquate. As to feeding both from the
same
> coax, might want to find (or build a duplexer) but, with the gamma
match(s)
> having different properties , would expect that the 440 yagi would have a
> very high inpedence when fed a 146 mhz signal (and vice versa) you can
test
> this on the ground- simply aim the yagis straight up, with coax to a "tee"
> connector, and then check the swr at the center output of the "tee" on
both
> 2 meters, and 3/4 meters hopefully , the swr would be 2:1, on both bands
> the length of the coax WILL affect this, however - use 1/2 wave sections
> for 146 mhz, modified by the velocity factor (.66 for polyethelyne, or .80
> for foam dielectric) (1/2 wave at 3/4 meters becomes 1-1/2 wavelengths at
> 440 mhz. DONT TRY WITH 1/4 (or odd multiples of 1/4 -eg, 3/4, ect. as
> this would create a inpedenence transformer- god only knows what those
> results would provide) and the impedence for the coax should be the same
as
> the coax you are feeding this with 50 ohm coax, use the 2 runs , say 38
> inchs long, X .66 (for polyethelyne,) or .80(for foam) coax for wach
yagi
> figure 25 inches of coax (each), for poly, or 30 inches (each) for foam

.
> give it a try, with any luck, should work Jim NN7K
>
>
>
> "Hobbes" <hobbestg@voicenet.com> wrote in message
> news:3E456BF4.67F2@voicenet.com...
> > To the Group,
> >
> > Recently I acquired a dual band mobile radio. As part of the deal the
> > seller threw in a 2 meter vertically polarized beam and a 440 vertically
> > polarized beam. I would like to mount both beams vertically polarized on
> > a horizontal boom which would then be attached to the mast above my
> > tribander. To that end I am open to suggestions about:
> >
> > 1. What is the best distance to mount them above my tribander?
> >
> > 2. What is the best distance to separate the two beams from each other?
> >
> > 3. Any suggestions as to feeding the two beams with the same coax?
> >
> > Thanks in advance for reading this posting and any of your suggestions.
> >
> > Ed K2ZE
>
>
>

3013. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 17:59:19 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <jc5d4v8aar8gtqa88juf3s1itf5tjg8jvb@4ax.com>
Source record: 125152

On Sat, 8 Feb 2003 23:27:54 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>I am returning to drag racing; I built 13 cars from scratch in high school.
>Eliminates the bullshit without the death of combat. Error.
>As for the rest of you: get a field strength meter.
>H.
>NQ5H

Hmmm, let's see. That's four cars per year plus an extra in a
four-year school. One every three months. I wonder when there was
time for, oh, study? Must have had the delivery truck coming every
day with parts.

Russ
Datsun/Nissan factory certified tech, '70 - '75

3014. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:00:15 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <vh5d4v8v95oq8guf75ruproodmgi4vjsbg@4ax.com>
Source record: 125153

On Sun, 9 Feb 2003 11:53:30 -0500, "Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

|wave guide is nothing more than shorted 1/4 wave stubs hooked together, are
|you saying it dos not work?

I wish I had a dollar for every flange I brazed onto WR90 waveguide.
All of our early Phoenix missile test stations were full of X-Band
waveguide, as was the missile transmitter-receiver (1/4 height).

I never ever found a lossless piece.

|
|I will make a flat statement a 1/4 wave shorted is the same as a 1/2 wave
|open. (At the selected frequency)
|
|Where are the losses incurred?

The same place they are in every other transmission line.
|
|
|
|"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
|news:3E45A3C6.3070508@ieee.org...
|> H. Adam Stevens wrote:
|> > Where is it "proved incorrect" in QST or anywhere else that a shorted
|> > quarter wave stub is an open circuit?
|>
|> Never mind QST. We can prove that right here. An open circuit is infinite
|> impedance. A real world stub has losses. Ergo, that real world stub is a
|> high impedance but not an open circuit.
|> --
|> cheers, CAM http://www.qsl.net/w5dxp
|>
|>
|>
|> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
|> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
|> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
|

3015. Re: Masts/poles suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:00:43 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <rp5d4vkk3bn1ef1kc8aa5cs9j2ihcboefo@4ax.com>
Source record: 125154

On Sun, 09 Feb 2003 16:14:38 GMT, "Gary Boyer"
<gboyer@columbus.rr.com> wrote:

>I am wanting to purchase/find/build a mast or pole that would get a couple
>of dipoles up about 35 to 40 feet...I checked with the local radio shack and
>they did not sell pushup tv type masts at their location...any advice would
>be most appreciated...tnx...Gary..K8BY
>

Telephone poles.

Russ

3016. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:16:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <m76d4v8fc639vf5o3j4f8s9kin621mrlac@4ax.com>
Source record: 125155

On Sun, 09 Feb 2003 08:24:59 GMT, "exxos" <exxos@home.co.uk> wrote:

>
>What form of antenna would radiate in one direction ? I can only imagine in
>my mind a straight antenna which radiates in a circle type fassion around
>it. I tried to simulate the fields in EZNEC, I kept the length the same and
>ran a higher frequency for it, program said there was a error with it (which
>is to be expected) though the shape of the field ramains the same, no power
>radiated in one direction here ? The wave looks the same in all cases but
>does not seem to explain about the 3rd harmonic which someone said before
>this radiates more in one direction than another..
>
>chris
>

Hi Chris,

You seem well motivated for this, congrats for your effort.

Yes, this can be a perplexing field. I've been actively dabbling in
it for a short dozen years or so and there is plenty of magic to go
around. Fields and the antenna are fascinating (I have a career in
developing sensors and real-world interface) and not always intuitive,
even if you cannot deny they may also be simple.

As to the question that heads you posting, yes one (1) wire can
radiate in one (1) direction and it is illustrative of wavelength
relationships (but requires more than the average treatment of some
100 lines in a newsgroup). That single wire example would be a
Beverage Antenna, which is not wholly appropriate for transmission
(won't go into that right now).

There are others of that class already mentioned by Dave. The Rhombic
is a bit more complex (two wires), but it is, as I mentioned, of that
class. That class is called a Traveling Wave antenna. This class of
antenna is noted by its generous dimensions that when measured in the
terms of wavelength is very long (typically 2 to 5 times the half wave
so common in application). By virtue of this length, the intrinsic Z
of the antenna, and its gain (gain accumulates with length here);
these antennas are both simple and useful but they demand a lot of
territory and are hardly suitable for 160M operation in the suburbs.
Hence they are also rare by example and discussion.

As a parting thought, it should be pointed out that for a great range
of wire length (in terms of wavelength), there is really no
appreciable difference in performance (if you can obtain a match).

That range runs from sub quarter wave (think down to 1/10th wave) out to 5/8th's. True, a range of numbers from very less than one to less than one doesn't seem remarkable - until you try hoisting it into the air.

73's
Richard Clark, KB7QHC

3017. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:24:14 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <327d4vsuvfbt5b5upmlfn6o5mnv7uv762l@4ax.com>
Source record: 125156

On Sun, 09 Feb 2003 02:33:14 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>An air wound balun is linear!! There is no maximum flux density to worry
>about. So, no harmonics.
>
>A balun using ferrite is subject to a maximum flux density in it's
>'linear' region. When overdriven the magnetic properties go from linear
>to sub-linear. This transition introduces harmonics. So, high power
>baluns using ferrite cores for antenna tuners, etc. generally use two or
>three cores to keep the total magnetic circuit in the linear region.
>
>DD, W1MCE
>

Hi OM,

BalUns that are designed with magnetic linkage are an example of
designing with failure built in. With that in mind, and if you are
not terribly proficient in the matter, it would do far better to put
ferrite to a more useful purpose found in current BalUn construction.

If you are speaking of that specie (current BalUns) that is suffering
from heating due to currents, then it is the system that is at fault,
not the BalUn. This is like blaming the fuse for an overloaded
circuit and putting a penny in its place to correct the situation
(common in the era of glass fuses and burning houses).

The use of two or three cored designs is for Z matching (although I am
sure there are those who like to think in terms of the old watch
manufacturers who sold product with 55 jewel movements, when only 5
were actually used in the movement itself).

73's
Richard Clark, KB7QHC

3018. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:35:52 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ps5d4vgnm9t60i3f87kak1uclp14i71vir@4ax.com>
Source record: 125157

On Sun, 09 Feb 2003 12:59:19 -0500, Russ <carlzomer@hotmail.com>
wrote:

|On Sat, 8 Feb 2003 23:27:54 -0600, "H. Adam Stevens"
|<solo@totalaccess.net> wrote:
|
|>I am returning to drag racing; I built 13 cars from scratch in high school.
|>Eliminates the bullshit without the death of combat. Error.
|>As for the rest of you: get a field strength meter.
|>H.
|>NQ5H
|
|Hmmm, let's see. That's four cars per year plus an extra in a
|four-year school. One every three months. I wonder when there was
|time for, oh, study? Must have had the delivery truck coming every
|day with parts.

Yeah. The best I could do during my high school years was stuff a '50
Olds engine in a '47 Plymouth Coupe and a '53 Caddy into my '36 Ford.
And my dad managed the largest automotive machine shop in Tucson.

3019. Re: Your opinion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:37:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <328d4vgfnn9h55idba68opglk3nesc77pl@4ax.com>
Source record: 125158

On Sun, 9 Feb 2003 11:00:37 +0100, "on4ja" <wbac3361@wanadoo.be>
wrote:

>I'd like to know your opinion about GAP antennas
>EAGLE DX and TITAN DX
>
>Many thanks . Emil on4ja@wanadoo.be
>

Hi OM,

Buy the one where you can ignore its one or two lowest bands (there
are better alternatives for them); otherwise, the higher bands'
operation are bullet proof. I have the Eagle DX and it has stood up
well in the face of many a gust without guying (it is up about ten
feet as recommended).

73's
Richard Clark, KB7QHC

3020. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:37:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E469FFD.4090303@ieee.org>
Source record: 125160

Fred Hambrecht Sr wrote:
> I will make a flat statement a 1/4 wave shorted is the same as a 1/2 wave
> open. (At the selected frequency)
>
> Where are the losses incurred?

Coax is lossy especially at high SWR. The SWR in a stub is infinite.
Please see matched line loss plus additional loss due to SWR in the
ARRL publications.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3021. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:40:21 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <pgx1a.7889$1q2.758321@newsread2.prod.itd.earthlink.net>
Source record: 125159

H. Adam Stevens <solo@totalaccess.net> wrote in message
news:v4bhjgibpkrufb@corp.supernews.com...
> oh
> and two 1900 ohm stubs in series are a 3800 ohm load across a 50 ohm
antenna
> 20log3800/50=37
> point is the damn thing works; build one and see
> but it is tedious to get both stubs and the dipole resonant on the same
> frequency to 4 digits
> the reward is nothing reflected over a 100+ khz bandwidth
> H.
> NQ5H
>
Sorry to disillusion all you gentlemen, but the bazooka doesn't work at all
the way you're thinking.

I made an in-depth analysis of the beast (and I mean 'beast') that I
published in Ham Radio, August 1976, with a shortened version published in
QST, Technical Correspondence, September 1976.

You can download a copy of the QST version from my web page at
http://home.iag.net/~w2du. From that paper you'll find proof that the
reactances found in the two stub portions are not reponsible for the
increased bandwidth, but rather it's the dielectric loss in the coax that
establishes a shunt resistance across the input terminals of the antenna,
resulting in lost power as if a dummy load were shunted across the antenna
terminals.

:You will observe in my paper that I give Frank Witt, AI1h, credit for
determining the resistance loss, proving my mathematical analysis correct.

Walt Maxwell, W2DU

3022. Re: Directional beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:41:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3c8d4v0fu6d41uim1p84fv2kdfsc626ceo@4ax.com>
Source record: 125161
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

On 9 Feb 2003 03:48:02 -0800, google@sale-net.com.au (Peter) wrote:

>Hi all. This might be off topic but it is radio related.
>
>I need to locate the position of a divice in my front yard and have it
>report it's position back to a computer. My yard isn't a paddock etc
>and it's got to be fairly accurate. Therefore GPS isn't an option.
>
>I want to know how accurate a directional antenna can be? What I
>thought of doing is placing several 900 mhz transmitters around my
>yard. Have these separated by say 25 khz. A microprocessor contols
>their transmit strength from say max to min in steps. So they tranmit
>a signal at max power stop, transmit at say 1 % less, stopp, 1 % less
>etc
>
>
>Now my mobile device has the direction arial on board. It chooses the
>first freq and rotates the arial till it finds the stongest point at
>the weekest level. It takes a reading of its position. Then it looks
>for the next and does the same, The next and so on.
>
>From there it reports all these back to the main computer which using
>trigonomatry calculates the position...
>
>My question is without spending $1000's of dollars for a hobby
>project, would the arial be accurate enough?
>
>Regards, Peter

Hi Peter,

Polaroid for years has sold a kit version of its ultrasonic camera
focusing system that has scads more accuracy than your RF plan, and is
more likely to succeed.

73's
Richard Clark, KB7QHC

3023. Re: Masts/poles suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:46:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rg8d4vc1jkhogmjivdjffreqjorcclj0go@4ax.com>
Source record: 125162

On Sun, 09 Feb 2003 16:14:38 GMT, "Gary Boyer"
<gboyer@columbus.rr.com> wrote:

>I am wanting to purchase/find/build a mast or pole that would get a couple
>of dipoles up about 35 to 40 feet...I checked with the local radio shack and
>they did not sell pushup tv type masts at their location...any advice would
>be most appreciated...tnx...Gary..K8BY
>

Hi Gary,

Check the surplus market for Army field deployable mast systems. They
come completely kitted up in what looks like the standard issue duffle
bag (weighs the same as my old sea bag too). Comes complete with a 5
pound sledge for driving in the stakes included. These units have a
price of less than $100 for 40 foot models (5 foot interlocking
tubes).

Warning: as per the usual service metric, it requires two men and a
boy to put up.

73's
Richard Clark, KB7QHC

3024. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:49:43 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <3E46A2C7.8EEFD56B@ziplog.com>
Source record: 125163

Here we sit with a broken heart. We've popped our last pill and the 'rod won't start!

Russ wrote:

> On Sat, 8 Feb 2003 23:27:54 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> >I am returning to drag racing; I built 13 cars from scratch in high school.
> >Eliminates the bullshit without the death of combat. Error.
> >As for the rest of you: get a field strength meter.
> >H.
> >NQ5H
>
> Hmmm, let's see. That's four cars per year plus an extra in a
> four-year school. One every three months. I wonder when there was
> time for, oh, study? Must have had the delivery truck coming every
> day with parts.
>
> Russ
> Datsun/Nissan factory certified tech, '70 - '75

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

3025. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 18:51:01 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qq8d4vov4ap5sdorgu586ms4spvgjkgrmm@4ax.com>
Source record: 125164

On Sun, 09 Feb 2003 12:59:19 -0500, Russ <carlzomer@hotmail.com>
wrote:

>On Sat, 8 Feb 2003 23:27:54 -0600, "H. Adam Stevens"
><solo@totalaccess.net> wrote:
>
>>I am returning to drag racing; I built 13 cars from scratch in high school.
>>Eliminates the bullshit without the death of combat. Error.
>>As for the rest of you: get a field strength meter.
>>H.
>>NQ5H
>
>Hmmm, let's see. That's four cars per year plus an extra in a
>four-year school. One every three months. I wonder when there was
>time for, oh, study? Must have had the delivery truck coming every
>day with parts.
>
>Russ
>Datsun/Nissan factory certified tech, '70 - '75

Hi Russ,

Was High School that so long ago? This is a description of the usual
teen age hormone suppression therapy of the time.

73's
Richard Clark, KB7QHC

3026. Want manual/instructions for Wilson System 36 beam.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 19:12:31 UTC
From: Michael Herron <Hurricane145@worldnet.att.net>
Message-ID: <zKx1a.29259$rq4.2170219@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125165

Looking for a manual or instruction booklet for the old Wilson System 36, a 6 element tribander beam. I will pay for copy and shipping costs. Any assistance much appreciated. Please e-mail K7MH@ARRL.net and it will be forwarded to me.

3027. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 19:14:00 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <h2ad4vsmucfhlpgblijjc0p7sm077qheck@4ax.com>
Source record: 125166

On Sun, 09 Feb 2003 18:40:21 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>
>H. Adam Stevens <solo@totalaccess.net> wrote in message
>news:v4bhjgibpkrufb@corp.supernews.com...
>> oh
>> and two 1900 ohm stubs in series are a 3800 ohm load across a 50 ohm
>antenna
>> 20log3800/50=37
>> point is the damn thing works; build one and see
>> but it is tedious to get both stubs and the dipole resonant on the same
>> frequency to 4 digits
>> the reward is nothing reflected over a 100+ khz bandwidth
>> H.
>> NQ5H
>>
>Sorry to disillusion all you gentlemen, but the bazooka doesn't work at all
>the way you're thinking.
>
>I made an in-depth analysis of the beast (and I mean 'beast') that I
>published in Ham Radio, August 1976, with a shortened version published in
>QST, Technical Correspondence, September 1976.
>
>You can download a copy of the QST version from my web page at
>http://home.iag.net/~w2du. From that paper you'll find proof that the
>reactances found in the two stub portions are not reponsible for the
>increased bandwidth, but rather it's the dielectric loss in the coax that
>establishes a shunt resistance across the input terminals of the antenna,
>resulting in lost power as if a dummy load were shunted across the antenna
>terminals.
>
>:You will observe in my paper that I give Frank Witt, AI1h, credit for
>determining the resistance loss, proving my mathematical analysis correct.
>
>Walt Maxwell, W2DU

Thanks Walt , finally the voice of reason prevails..
Dave ,KC1DI
>

3028. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 19:18:27 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <5Qx1a.64$xI.49763@news.randori.com>
Source record: 125167

Hi Richard,
> Hi Chris,
>
> You seem well motivated for this, congrats for your effort.
>
> Yes, this can be a perplexing field. I've been actively dabbling in
> it for a short dozen years or so and there is plenty of magic to go
> around. Fields and the antenna are fascinating (I have a career in
> developing sensors and real-world interface) and not always intuitive,
> even if you cannot deny they may also be simple.
>
> As to the question that heads you posting, yes one (1) wire can
> radiate in one (1) direction and it is illustrative of wavelength
> relationships (but requires more than the average treatment of some
> 100 lines in a newsgroup). That single wire example would be a
> Beverage Antenna, which is not wholly appropriate for transmission
> (won't go into that right now).
>
> There are others of that class already mentioned by Dave. The Rhombic
> is a bit more complex (two wires), but it is, as I mentioned, of that
> class. That class is called a Traveling Wave antenna. This class of
> antenna is noted by its generous dimensions that when measured in the
> terms of wavelength is very long (typically 2 to 5 times the half wave
> so common in application). By virtue of this length, the intrinsic Z
> of the antenna, and its gain (gain accumulates with length here);
> these antennas are both simple and useful but they demand a lot of
> territory and are hardly suitable for 160M operation in the suburbs.
> Hence they are also rare by example and discussion.
>
> As a parting thought, it should be pointed out that for a great range
> of wire length (in terms of wavelength), there is really no
> appreciable difference in performance (if you can obtain a match).
> That range runs from sub quarter wave (think down to 1/10th wave) out
> to 5/8th's. True, a range of numbers from very less than one to less
> than one doesn't seem remarkable - until you try hoisting it into the
> air.
>
> 73's
> Richard Clark, KB7QHC

I have ran a few designs in EZNEC and the field seems bascially the same. I tried to keep the antenna the same physical size and run various frequencys across it. Nothing seems to really alter but the gain of the antenna. I'm not sure really what this means in practice though. I can imagine the power

output must be the same in anycase.

In my mind I remember a graph which shows power at a given frequency for the same antenna. For example, if the resonante frequency was 1mhz then this would be say 100watts power, half that 0.5mhz would be 50watts, and double for the first harmonic 2mhz, also 50watts. I dont know if the figures were actually given in watts but I have proven this with a small experiment. what I now wonder if if I power the antenna on the first harmonic, for my 1mhz example I would run it at 3/4wave which I think is 3mhz, can't remember off hand now, though since the power was 50watts on the antenna, I then feed in the 100watts to this 3/4 wave frequency. This is one of the things which I can't imagine.... also hard to explain since I dont understand the terms for a lot of things yet.

Its like having a 100watts transmitter, 1mhz would show as 100watts on the 1/4 wave.... 100watts running at the first harmonic only seems to result in 50watts on the antenna, since it is a sub resonance I suppose it can only be less in power than the main resonate frequency (1mhz). I can't imagine that 50watts would just simply go missing like that so it must go somewhere. Driving the antenna at a sub frequency in terms of power levels, radiation power etc is what im trying to understand.

I suppose nothing will change apart from the height of the antenna, power would be all the same, though I feel the larger antenna would radiate further and give a wider radiation spread than a small antenna. Though what gets confusing now is if the height of the antenna is more, then the radiated field has got to be more, so wouldn't that in effect be a boost in transmission power ? its hard to imagine such things though im sure there is a simple answer to it all somewhere.....

Chris

3029. Want specs for self supporting tilt over base for Wilson TT45B

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 19:23:19 UTC
From: Michael Herron <Hurricane145@worldnet.att.net>
Message-ID: <HUx1a.29276$rq4.2171407@bgtnsc05-news.ops.worldnet.att.net>
Source record: 125168

Looking for the specs or manual for the Wilson TT45B (tubular 40 foot tower) self supporting tilt over base. I have the specs sheets for the tower itself, but not this base. I particularly need to know the specs for the concrete base it sits on. Is it the same as for the US Tower MA-40?? If you have any paperwork on this I would appreciate a copy and will pay for any copying or mailing costs. Please e-mail any info to this posting address Hurricane145@worldnet.att.net or K7MH@ARRL.net and it will be forwarded to me. Thank you.

3030. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 19:52:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <frad4voqvn6vr9v2siasiifnk5onclmbes@4ax.com>
Source record: 125069

On Sun, 09 Feb 2003 19:18:27 GMT, "exxos" <exxos@home.co.uk> wrote:

>
>I suppose nothing will change apart from the height of the antenna, power
>would be all the same, though I feel the larger antenna would radiate
>further and give a wider radiation spread than a small antenna. Though what
>gets confusing now is if the height of the antenna is more, then the
>radiated field has got to be more, so wouldn't that in effect be a boost in
>transmission power ? its hard to imagine such things though im sure there is
>a simple answer to it all somewhere.....
>
>Chris

Hi Chris,

I snipped you power discussion to make things simple by analogy (a common one used here and in texts). If you have a point source of radiation, it fills a 3-D space equally like a balloon (we have to divorce ourselves from earth, obviously and hence the "free space" ground selection). To accomplish this requires the unobtainable, mythic, isotropic antenna. Usually, when this is specified it is immediately rejected by the nabobs who scrabble like mice before the feet of dinosaurs. The mice may have survived the ice-age, but quite a few were stomped along the way.

OK, so you can't buy one, but you can come close:
http://www.qsl.net/kb7qhc/antenna/Inverted%20F/index.htm
Consult this page to observe the Inverted-F which will do half the job (especially applicable to non-astronauts).

However this strays to serve to illuminate the filling of space with power as though it were air in a balloon. The analogy extended from this point is that ALL antennas must (if useful and with a hint of respectable efficiency) employ the SAME power to different geometries. The simple translation of this is observed by every 3 year old at their birthday party as they squeeze a balloon. The air just moves around the hands and wall-la (as the french say) you have the same power in a new geometry. We called those squeezed out protrusions, lobes (makes sense I hope).

Now if you cast this analogy back into antenna and power considerations, it means simply that where power flowed away from the source (the antenna) it now presents LESS to the some of the original targets and MORE to others. The total power will always be the same (the same transmitter isn't it?).

Now, as to the matter of height. This includes and illustrates the power of reflection to contribute to the overall lobe construction by ground. To return to the analogy, think of squeezing the balloon near a table top where the table top refuses to allow a lobe to grow and thus the air seeks another path to bulge out. Move toward or away from the table top and the lobe characteristic follows (perhaps not directly, but you might catch the drift in where this is going by now).

In playing with antennas, almost everything contributes or resists change. So many factors are involved that you have to take care to set up a control (what is to be compared to) and changing one (1) variable instead of three to observe what you stand to gain or lose by that single action. This is a skill not unlike parallel parking (takes many co-ordinated actions to accomplish one thing - so you usually practice doing simple things first).

The free version of EZNEC was probably complaining of not having enough segments when you noticed error messages; but you can still rein in your scope to measure and note many, many first principles. Far too often we find folks who want to design the world's best array, and they ask which end of the wire is better for a purpose. They may have access to all the segments they could throw at the problem, but their question suggests they should have had a shorter leash for the first year.

If you want to see where more segments can lead, trace back up my link offered last time to my home page and observe the variety of wild concoctions (aka fractals) that go to great length to add nearly nothing to the quality of the two wires they attempt to replace (or, properly, the one wire of my usual vertical studies).

73's
Richard Clark, KB7QHC

3031. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 20:09:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E46B586.7000109@ieee.org>
Source record: 125070

exxos wrote:
> I have ran a few designs in EZNEC and the field seems bascially the same. I
> tried to keep the antenna the same physical size and run various frequencys
> across it. Nothing seems to really alter but the gain of the antenna.

You are probably not changing the view from elevation to azimuthal and
probably not changing the elevation angle or azimuthal angle. Figure
out how to do that and you will see the difference in radiation
patterns. Try the 3-D radiation pattern view.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3032. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 20:22:59 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b26db2$65q$1@knossos.btinternet.com>
Source record: 125081

Walt wrote -
>> You can download a copy of the QST version from my web page at
> http://home.iag.net/~w2du. From that paper you'll find proof that the
> reactances found in the two stub portions are not reponsible for the
> increased bandwidth, but rather it's the dielectric loss in the coax that
> establishes a shunt resistance across the input terminals of the antenna,
> resulting in lost power as if a dummy load were shunted across the antenna
> terminals.
==========

Walt, presumably if the coax dielectric is air, ie., sensibly zero loss, by what percent will the bandwidth decrease. A ball-park estimate will be OK.

Reg, G4FGQ

3033. Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 20:33:42 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b26dv4$cg5$1@slb0.atl.mindspring.net>
Source record: 125072

Where are some places to get good information on towers, bases, erection, bracing/guying, windstorm protection, etc...?

--
Peter K1PO
Indialantic By-the-Sea, FL.

3034. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 20:35:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4deribs09rhd9@corp.supernews.com>
Source record: 125071

EZNEC has a feature called Average Gain. It's very powerful for several uses, and I encourage all EZNEC users to look it up in the manual index and take a few minutes reading what its purpose is.

The Average Gain calculation is simply a comparison between the power leaving the source (or sources, if there are more than one) and the total power radiated in the whole far field. It determines the total field power by summing the power density in all directions. If there's no loss anywhere in the model (that is, no ground or wire loss, and no resistive loads), the total power in the radiated field should equal the total power entering the antenna from the sources. Any loss will reduce the ratio. This is simple conservation of energy. You'll usually see a small error (that is, a non-unity Average Gain when losses are zero), due to inevitable numerical limitations. A significant deviation from unity means that the program isn't doing the job right for some reason, and that reason should be found and corrected. (Or, as a last resort, the indicated gain should be modified by the Average Gain value.)

The important point is that the Average Gain is, or should be, the same for all antennas, regardless of pattern and gain. Total power out (as radiation, heat, or some combination) always equals total power in. You simply can't get something for nothing. (Unfortunately, though, you're always stuck with getting a bit of nothing -- heat, actually -- for something. Pesky thermodynamics!)

The Average Gain is shown at the bottom of the main window whenever a 3D plot is run.

Roy Lewallen, W7EL

3035. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 20:45:42 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <V5z1a.76$xI.58617@news.randori.com>
Source record: 125073

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E46B586.7000109@ieee.org...
> exxos wrote:
> > I have ran a few designs in EZNEC and the field seems bascially the
same. I
> > tried to keep the antenna the same physical size and run various
frequencys
> > across it. Nothing seems to really alter but the gain of the antenna.
>
> You are probably not changing the view from elevation to azimuthal and
> probably not changing the elevation angle or azimuthal angle. Figure
> out how to do that and you will see the difference in radiation
> patterns. Try the 3-D radiation pattern view.
> --
> 73, Cecil, W5DXP
>
>

Ah, I see the difference though everything still looks the same not matter
what.

Chris

>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3036. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 21:05:35 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <zoz1a.8069$1q2.750419@newsread2.prod.itd.earthlink.net>
Source record: 125074

Walt Maxwell wrote:
> Sorry to disillusion all you gentlemen, but the bazooka doesn't work at
all
> the way you're thinking.
>
> I made an in-depth analysis of the beast (and I mean 'beast') that I
> published in Ham Radio, August 1976, with a shortened version published in
> QST, Technical Correspondence, September 1976.
>
> You can download a copy of the QST version from my web page at
> http://home.iag.net/~w2du. From that paper you'll find proof that the
> reactances found in the two stub portions are not reponsible for the
> increased bandwidth, but rather it's the dielectric loss in the coax that
> establishes a shunt resistance across the input terminals of the antenna,
> resulting in lost power as if a dummy load were shunted across the antenna
> terminals.
>
> :You will observe in my paper that I give Frank Witt, AI1h, credit for
> determining the resistance loss, proving my mathematical analysis correct.
>
> Walt Maxwell, W2DU

Correction:

Roy Lewallen just now called attention in my post above concerning the dielectric loss being responsible for the R loss that improved the bandwidth. Sorry, fellas, I spoke before my brain was in gear. What I meant to say is that the total loss resistance in the coax resulting in the unwanted power dissipation that provides the increased bandwidth.

Walt, W2DU

3037. Re: Masts/poles suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 22:08:40 UTC
From: jgboyles@aol.com
Message-ID: <20030209170840.05111.00000622@mb-cn.aol.com>
Source record: 125075

>I am wanting to purchase/find/build a mast or pole that would get a couple
>of dipoles up about 35 to 40 feet

MFJ, and I think Kanga sell the 10 meter fiberglass masts. 2 of these should
do the trick. I have a couple and they work fine for temporary duty. I
usually use one to support an inverted vee.
For permanent installation, you should go with the metal push up masts, seems I
saw these in Lowes or HD not too long ago.
73 Gary N4AST

3038. Re: aluminium joints, vaseline or conductive grease?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 22:12:54 UTC
From: "Paulo E. P. Marcondes" <marcondes@netscape.net>
Message-ID: <3E46D266.80203@netscape.net>
Source record: 125076

Dave Platt wrote:
>
> Similar anti-oxidant greases (with or without zinc and/or copper dust)
> are used when connecting copper mains wire to breakers and switches.

This thread led to think about eletrochemical corrosion being enhanced
by such zinc/copper bearing greases...

It wouldn't be better if one could use a conductive grease with aluminun
dust instead of cooper or zinc?

3039. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 22:13:54 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <mc9P+EBiKtR+EAsf@ifwtech.co.uk>
Source record: 125077

Peter O. Brackett wrote:
>Where are some places to get good information on towers, bases, erection,
>bracing/guying, windstorm protection, etc...?

The TowerTalk list, sign-up at www.contesting.com

They would also tell you to buy the Rohn catalog, and do what it says.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3040. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 22:19:14 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E46D3E2.51176A84@cwis.net>
Source record: 125078

Peter,
You mean other than the manufacturers of towers?
'Doc

3041. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-09 23:01:13 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b26mjo$si7$1@slb3.atl.mindspring.net>
Source record: 125079

Doc:

[snip]
> You mean other than the manufacturers of towers?
> 'Doc
[snip]

Well Doc... Both really.

I know I can get information from the tower manufacturers, but...
since I live on the barrier island here a few miles South of Cape
Canaveral and only a few hundred feet from the Florida Atlantic beach...
I really wanted some "independent" information and advice as well.

Some factors I am interested in are...

Towers seem to be rated for certain wind speeds... I assume that is
for full height with the specified antenna wind square rating.
What is the rating when a tower is cranked down to half height, etc?

We are required to evacuate the island whenever a "windstorm" [a.k.a
hurricane] approaches... I assume at that point I need to crank a tower
down and remove any beams, etc... what/how are the best ways of
accomplishing that quickly, etc...

--
Peter K1PO
Indialantic By-the-Sea, FL.

3042. Re: aluminium joints, vaseline or conductive grease?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 00:24:55 UTC
From: Henrik <henrik>
Message-ID: <3e46f156$0$159$edfadb0f@dread15.news.tele.dk>
Source record: 125080

"Paulo E. P. Marcondes" <marcondes@netscape.net> wrote in message
news:3E46D266.80203@netscape.net...
> Dave Platt wrote:
> >
> > Similar anti-oxidant greases (with or without zinc and/or copper dust)
> > are used when connecting copper mains wire to breakers and switches.
>
> This thread led to think about eletrochemical corrosion being enhanced
> by such zinc/copper bearing greases...
>
> It wouldn't be better if one could use a conductive grease with aluminun
> dust instead of cooper or zinc?
>
Well, it seems that zink is OK, as it is next above to aluminium in the
electrochemical series (0,96v higher than aluminium), while copper is
further above (2,22v higher than Al). Copper is therefore less suitable from
a corrosion point of view under humid conditions...

I would therefore consider zink safer, while with aluminium i would doubt
that you get any improvement in conductivity compared to use of ordinary
grease on freshly polished surfaces. The theory being, that the zink
particles "grind" into the aluminium oxide layer, and provides electrical
connection protected by the grease against humidity.......while aluminium
powder would just be a more or less non conductive filler due to its oxide
layer...
An other commercial product that i have now identified called Never Seez is
available in a variant which contains nickel (1,47v above Al)...

Butternut seems to advice the use of a copper loaded grease....so perhaps
the humidity level in the grease interface makes these considerations less
important??

Please comment or speak up from experience!

73,
H.

3043. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 01:06:24 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E46FB10.99B12AC1@cwis.net>
Source record: 125082

Peter,
It's been my experience that the tower manufacturers
(at least Rohn, anyway) are willing to give you answers
to questions such as those you posed. It's 'off the cuff'
information though, they won't give you a 'firm' opinion
unless you pay them to do an engineering study. I guess
that's reasonable since that's their 'bid-nez'. You can
always hire an engineering firm to do a study, or, if
you're as broke as I am, learn how to do it yourself. Or
the always workable third alternative, build it like the
government would (if it needs 2 yards of concrete, put in
6 yards)...
'Doc

3044. Re: Need VHF/UHF antenna advice

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 03:01:37 UTC
From: bob et chris <bobetchris@videotron.ca>
Message-ID: <JtE1a.10256$%f.111725@wagner.videotron.net>
Source record: 125083

If you have a patio door , try a dipole for VHF . I would be very careful
with the RF inside, specially if you have a child.
Good luck.. You may also put a dual bander ,whip in a flower pot with an
artificial plant and groud the magnet to the balcony railling.
have fun !

<markt@mindmodel.com> wrote in message
news:3e40ccd6.261274342@news.prodigy.net...
> On Sun, 19 Jan 2003 23:35:20 GMT, "AC6V" <contact99@ac6v.com> wrote:
>
> >Other than beams -- the vertical antennas fit indoors nicely. I run a
> >diamond antenna dual band - indoors and get into most local repeaters
with
> >5 watts with no problems. My antenna is not next to any window. VHF seems
to
> >go thru walls (with or without chicken wire) just fine. My favorite
repeater
> >is 25 miles away and 5 watts gives full quieting. Have worked 90 miles
> >simplex (the other guy was on a mountain top).
> >
> >Maybe try a home brew 1/4 wave first (coathanger special).
> >For homebrew antennas -- see URL:
> >http://ac6v.com/antprojects.htm
> >
> >--
> >I Doubt, Therefore I Might Be
> >73 From AC6V, who is QBF most of the time !!
> >Rod In Oceanside, CA
> >Home Page http://ac6v.com
> >DX Book http://ac6v.com/DXSAMPLE.htm
> >
> >"Ben Sheehan" <bigddybn@adelphia.net> wrote in message
> >news:SUFW9.9261$Fj2.5460993@news2.news.adelphia.net...
> >> We live in a condo which pretty eliminates any possible outside antenna
> >> ideas. I'm looking for some type of antenna that can be used indoors. I
do
> >> have a window right next to my chosen area for a "station" that could
be
> >> utilized in some fashion. I realize that the gain on an indoor setup
isn't
> >> going to be the greatest but is there something I can buy/build that
would
> >> work at 144/440?
> >>

> >> I know these noob questions get old, but thanks in advance for any
advice
>
> Years ago I built a simple 2 element quad for 2M, and it worked very
> well. At some point I got a large yagi and threw the quad away. Wish I
> hadn't done that. I'm about to build another one. They are neat
> antennas and give you just a bit of gain F/B ratio. They can be built
> with simple wooden sticks and ROMEX house wiring wire (14awg copper).
> Try it, you'll like it.
>
> 73,
>
> Mark W1EOF
> w1eof@hamnutz.com

3045. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 03:05:18 UTC
From: bob et chris <bobetchris@videotron.ca>
Message-ID: <9xE1a.10271$%f.112302@wagner.videotron.net>
Source record: 125084

A good trick is to use your truck radio antenna ! Check out a radio store
for a Y connector .
VA2 Bik
bob
"Rich" <rk911@ANTISPAM.yahoo.com> wrote in message
news:2ln04vkuo86kng5iajv8dcibfqdpg7r36n@4ax.com...
> On Tue, 04 Feb 2003 13:09:16 -0500, Mark <marks@nospam.org> wrote:
>
> >I'm looking to mount a simple multiband scanner antenna on the truck, but
> >can't do it on the roof because it's garaged and it's real tight now.
> >
> >I'd prefer to keep away from mag mounts and bumper mounts. I'd also like
to
> >mount this without doing any drilling to the vehicle. Demanding, aren't
I ?
> >:)
> >
> >What I'm thinking is a way to build a bracket that will attach to some
factory
> >screws/bolts somewhere on the sides in where the rear hatch is.
Something
> >that will be able to protrude out at a "twisted L" type angle and I can
mount
> >the antenna on that plate.
> >
> >Has anyone done anything similar or have any input on this? Thanks.
>
> how 'bout a glass mount? a dual-band ham antenna (2m/440) works fine
> on most bands.
>
> 73,
> rich, n9dko
>

3046. Capacitors for gamma match/ and more Q's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 04:10:28 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E472634.F8052F74@netscape.net>
Source record: 125085

I need to build a (nice) gamma match for my cubical quad (please don't suggest other feed systems here - this is a requirement). I would like to build a adjustable capacitor for this purpose. Most (yagi) beams use the aluminum tube one inside another separated by some plastic. This is fine, but the size of this system might be too big to connect to wires (yes, I know the delta loop would simplify things). The sizes are typically 1/2" OD aluminum tubing separated from a 3/8" OD aluminum tubing by some plastic. Does it have to be this big? I can get a wide array of small sizes at the local hobby store that might serve the purpose.

I guess I can model the antenna and pick a fixed capacitor. Where is a good place to get a fixed capacitor for this purpose? Is this as efficient? Are capacitors rated in terms of how much "power" they can handle and how will this apply to the wattage handling capability of the gamma match? Once a value is picked for the capacitor, what effect does sliding the "tap" point have? Does my capacitor have to be spot on - or can I correct by adjusting the "tap" point on the loop?

Anybody have any experience / advice here? I've never actually seen anybody fit one to a loop on a beam and I am trying to devise a good (e.g. reliable, efficient, simple) way of fitting one (actually 2) onto my quad loop.

Lots of questions I know, but I don't ask out of curiousity - I model and build these things, for real.

Scott.

3047. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 04:13:05 UTC
From: macve3gro@aol.com
Message-ID: <20030209231305.14846.00000224@mb-cc.aol.com>
Source record: 125086

Efficiency, if I recall Maxwell's analysis in QST correctly. Same kind of improvement in 2:1 bandwidth as you'd get by putting a resistor in each leg of your dipole. ARRL Handbooks no longer show bazookas as a result Best way to increase bandwith is to fatten your elements by paralleling wires. No extra losses, and as a bonus, your antenna will come in slightly shorter (e.g. 80 metres: 115' or so with paralleled wires spaced 3' apart. Cheers es 73. Harry, VE3GRO

Harry MacLean, VE3GRO
500 Riverside Drive, London, ON N6H 2R7
(519) 473-1668

3048. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 04:14:08 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <kGF1a.8583$1q2.834769@newsread2.prod.itd.earthlink.net>
Source record: 125087

Reg Edwards <g4fgq.regp@btinternet.com> wrote in message
news:b26db2$65q$1@knossos.btinternet.com...
> Walt wrote -
> >> You can download a copy of the QST version from my web page at
> > http://home.iag.net/~w2du. From that paper you'll find proof that the
> > reactances found in the two stub portions are not reponsible for the
> > increased bandwidth, but rather it's the dielectric loss in the coax
that
> > establishes a shunt resistance across the input terminals of the
antenna,
> > resulting in lost power as if a dummy load were shunted across the
antenna
> > terminals.
> ==========
>
> Walt, presumably if the coax dielectric is air, ie., sensibly zero loss,
by
> what percent will the bandwidth decrease. A ball-park estimate will be
OK.
> ---
> Reg, G4FGQ

Sorry Reg, I don't know. It was Frank Witt, AI1H, who performed the computer analysis. His email address is either ai1h@arrl.net or ai1h@aol.com. Did you find my bazooka article on my web page?. In that article I showed that when the resonant resistance of the antenna impedance is roughly the same as the feed line impedance, reactance compensation off resonance doesn't work, because the parallel-circuit combination simply raises the resistive component of the antenna terminal impedance to the value that results in nearly as high an off-resonance SWR as without the shunt reactance. If you haven't seen the article, you should, because I provide the numbers that prove the case.

Walt, W2DU

3049. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 04:24:27 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <%PF1a.8599$1q2.836514@newsread2.prod.itd.earthlink.net>
Source record: 125088

Reg Edwards wrote:
> > Walt, presumably if the coax dielectric is air, ie., sensibly zero loss,
> by
> > what percent will the bandwidth decrease. A ball-park estimate will be
> OK.
> > ---
> > Reg, G4FGQ
>
> Sorry Reg, I don't know. It was Frank Witt, AI1H, who performed the
computer
> analysis. His email address is either ai1h@arrl.net or ai1h@aol.com. Did
you
> find my bazooka article on my web page?. In that article I showed that
when
> the resonant resistance of the antenna impedance is roughly the same as
the
> feed line impedance, reactance compensation off resonance doesn't work,
> because the parallel-circuit combination simply raises the resistive
> component of the antenna terminal impedance to the value that results in
> nearly as high an off-resonance SWR as without the shunt reactance. If you
> haven't seen the article, you should, because I provide the numbers that
> prove the case.
>
> Walt, W2DU

Reg, I goofed with the above post. What I should have said is that there will be insignificant band width increase if the quarter-wave sections are lossless, because it is the loss that establishes the shunt resistance that's responsible for the band width increase.

The increase with lossless coax will be insignificant, because the analysis I made was with the assumption that the coax was lossless, so the numbers in my article show the insignificance of the bazooka circuitry.

Walt, W2DU

3050. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 04:50:29 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <016dnT8sm64KstqjXTWcpw@comcast.com>
Source record: 125089

Did anybody ever bother to build one out of 9913, or better yet, Andrews Helax? That should settle it for good.

Tam/WB2TT

_____
> Roy Lewallen just now called attention in my post above concerning the
> dielectric loss being responsible for the R loss that improved the
> bandwidth. Sorry, fellas, I spoke before my brain was in gear. What I meant
> to say is that the total loss resistance in the coax resulting in the
> unwanted power dissipation that provides the increased bandwidth.
>
> Walt, W2DU
>
>
>

3051. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 05:10:52 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <tvce4vc72jjsge4ato8b8rvgmcf8tr4ije@4ax.com>
Source record: 125090

On Sat, 8 Feb 2003 18:31:53 -0500, "Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>And if only people would give credit to the folks that developed the zero,
>thus allowing notational number systems.
>
>How effective would either Heaviside or Maxwell had been if all calculations
>had been made in Roman numerals.

"There are ... methods for subtracting, multiplying, and even
dividing Roman numerals. However, they can be frustrating, and for a
good reason. Even the Romans didn't use them. When they wanted to do
complicated arithmetic problems, the Romans used a special counting
board or an abacus."

http://mathforum.org/dr.math/faq/faq.roman.html

3052. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 05:12:39 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <p4de4v0smm3tplpr2cbs6p15vk6dhjrauf@4ax.com>
Source record: 125091

On 8 Feb 2003 08:11:53 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>
>Reg you have to realise that we only have a handfull of news sources
>for the the whole of the U.S.A. and thus America is woefullty behind
>on newspaper corrections. We still not have been informed of the error
>regarding the first plane to cross the atlantic ocean was an american
>plane.

First solo crossing was not Lindbergh?

3053. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 05:20:49 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <jhde4vgrondl3n63s571p60pm4onv02jfp@4ax.com>
Source record: 125092

On Sat, 08 Feb 2003 00:43:11 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On 7 Feb 2003 16:13:06 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>wrote:
>
>>William Ewald <wgewald@att.net> wrote in message
news:<ic384v8nlprqjbvbv2fdiv63la371q7fs9@4ax.com>...
>>> On 7 Feb 2003 09:03:23 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>>> wrote:
>>>
>>> >When thinking about dissention on this newsgroup my mind
>>> >goes to Fractals, contrawound and E/H antennas.
>>> >Each of these forays into antenna design have one thing in common
>>>
>>> The fractal was different in that this newsgroup was used as a soap
>>> box for years by its adherent to draw attention to his commercial
>>> products which had no applications in amateur radio. His attempts to
>>> pretend the relevance of fractal antennas (which he claimed to have
>>> "invented") to this newsgroup were transparent and ludicrous.
>>>
>>> This message was posted after 30 January, 2003.
>>
>>Yes Richard I fully understand the 'soap box' allegation but what
>>about the actual antenna itself which I know you are knoweledgable
>>about. It did work
>>though I would not say it was optimum , but it was aproached on the
>>basis of resitance, capacitance and inductance without reference to
>>wavelength .
>>Is it foolish to contemplate foraging in a new frontier to obtain an
>>optimum antenna without being burdened by antenna length governed by
>>wave lengths?
>>Regards
>>Art
>
>
>Hmmm,
>
>Art, I don't know if I am to respond to this, or if you name all your
>critics Richard these days. I can understand why tho' if that is
>indeed the case. ;-)
>
>The Richard effect, kinda like Lou Gherig's disease hmmm?
> Homer Simpson: "Who's Lou Gherig?"

> Dr. Hibbard: "He's the fellow that got this terrible and rare
> illness with that name."
> Homer: "Wow! Can you imagine the odds on that?"
>
>If you want to forage a new frontier, remember to take condiments.
>
>However, to forge on has its own virtues, nothing is learned without
>mistakes. I make sure to pick projects with high prospects of making
>many mistakes. The latest one was a fixed price deliverables contract
>where I got the specification AFTER the end of the contract. Talk
>about mistakes.
>
>Now, perhaps William might want to pick up the lateral hand-off....
>
>73's
>Richard Clark, KB7QHC

Art said re the fractal antenna: " It did work though I would not say
it was optimum"; I don't disagree with that.

This message was posted after January 30, 2003.

3054. Re: Capacitors for gamma match/ and more Q's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 05:40:59 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <oqee4vgjsfv6vj9b237f9rv1gldcuiqerr@4ax.com>
Source record: 125093

On Sun, 09 Feb 2003 23:10:28 -0500, Scott <scott2rp789@netscape.net>
wrote:

>I need to build a (nice) gamma match for my cubical quad (please don't
>suggest other feed systems here - this is a requirement). I would like
>to build a adjustable capacitor for this purpose. Most (yagi) beams use
>the aluminum tube one inside another separated by some plastic. This is
>fine, but the size of this system might be too big to connect to wires
>(yes, I know the delta loop would simplify things). The sizes are
>typically 1/2" OD aluminum tubing separated from a 3/8" OD aluminum
>tubing by some plastic. Does it have to be this big? I can get a wide
>array of small sizes at the local hobby store that might serve the
>purpose.
>
>I guess I can model the antenna and pick a fixed capacitor. Where is a
>good place to get a fixed capacitor for this purpose? Is this as
>efficient? Are capacitors rated in terms of how much "power" they can
>handle and how will this apply to the wattage handling capability of the
>gamma match? Once a value is picked for the capacitor, what effect does
>sliding the "tap" point have? Does my capacitor have to be spot on - or
>can I correct by adjusting the "tap" point on the loop?
>
>Anybody have any experience / advice here? I've never actually seen
>anybody fit one to a loop on a beam and I am trying to devise a good
>(e.g. reliable, efficient, simple) way of fitting one (actually 2) onto
>my quad loop.
>
>Lots of questions I know, but I don't ask out of curiousity - I model
>and build these things, for real.
>
>Scott.

Hi Scott,

Look at your models and ask peak voltage across the capacitor. Then
think in terms of volts per inch breakdown (for various dielectrics).
If you can find a suitable dielectric, it becomes a matter or surface
area, distance, frequency, and so on using standard formulas for
computing capacitance. Include enough slop in the various factors to
allow for adjustment (10-20%). Without more data, only you can answer
your question from there.

73's
Richard Clark, KB7QHC

3055. Re: Capacitors for gamma match/ and more Q's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 05:55:28 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <3E473ECF.960E3F44@ziplog.com>
Source record: 125094

Duck soup! Use a small variable for finding the right size .. old receiving variable will work. Then use a chunk of RG-8 coax as a capacitor! Figure the needed general footage to get the desired capacitance. Cut the chunk longer than that. Strip the far end so that the insulation for the center contuctor is longer than the shield part. Use the other end for the two connections for your new high voltage all-weather capacitor! Then .. start whacking off the free end to trim down the length of the RG-8 for the desired value. When you get where you are going, seal up the far end with good tape or whatever. Your 'capacitor' will likely outlast your desire to use it and can be curled up in a coil to save space too.

I hit upon this game while using wire loop quads on 40 meters and feeding them with gamma match technique. To get the gamma section on them I used six inch porceline ladder line insulators to get a gamma section out of the same wire that was in the quad loop. Once set up you can forget the thing. I've used the same trick to get the desired capacitance on phased array verticals for low band work where the elements are all solid grounded and fed with gamma match sections as well. In this case I use a six inch TV twin lead standoff to make the gamma section for the tower on a leg of the tower or the mast. same stunt at the bottom to get the match and all.

Reason I mention it is that you can use the same trick on tubing elements to fashion the gamma section there. The voltage really isn't all that high and you can get, or thread down the six inch standoff rod to a shorter length if you need closer spacing for the match section.

If you do use this stunt, be prepared to replace the brown plastic insulator material in the center of the TV stand off thingees every four or five years or so. It deteriorates after about half a decade to my experience ..

Tip .. we are NOT talking about foam insuation RG-8. We need the old fashioned kind and the break down voltage for that center conductor will not be a problem unless you are intending to play VOA with a heck of a lot more power than ham's are supposed to use!

If you happen to have a small transmitting variable with enough voltage spacing to use for a trimmer, you can use the coax chunk trick for the bulk value. Then use the little one for trim work to zero the array right where you want it.

Scott wrote:

> I need to build a (nice) gamma match for my cubical quad (please don't
> suggest other feed systems here - this is a requirement). I would like
> to build a adjustable capacitor for this purpose. Most (yagi) beams use
> the aluminum tube one inside another separated by some plastic. This is

> fine, but the size of this system might be too big to connect to wires
> (yes, I know the delta loop would simplify things). The sizes are
> typically 1/2" OD aluminum tubing separated from a 3/8" OD aluminum
> tubing by some plastic. Does it have to be this big? I can get a wide
> array of small sizes at the local hobby store that might serve the
> purpose.
>
> I guess I can model the antenna and pick a fixed capacitor. Where is a
> good place to get a fixed capacitor for this purpose? Is this as
> efficient? Are capacitors rated in terms of how much "power" they can
> handle and how will this apply to the wattage handling capability of the
> gamma match? Once a value is picked for the capacitor, what effect does
> sliding the "tap" point have? Does my capacitor have to be spot on - or
> can I correct by adjusting the "tap" point on the loop?
>
> Anybody have any experience / advice here? I've never actually seen
> anybody fit one to a loop on a beam and I am trying to devise a good
> (e.g. reliable, efficient, simple) way of fitting one (actually 2) onto
> my quad loop.
>
> Lots of questions I know, but I don't ask out of curiousity - I model
> and build these things, for real.
>
> Scott.

--

W5WQN

--> Sleep well; OS2's still awake! ;)

Mike Luther

3056. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 06:15:12 UTC
From: "John D. Farr" <jfarr62@comcast.net>
Message-ID: <ko2dnfYvNbpA3tqjXTWcoQ@comcast.com>
Source record: 125095

Peter:
Getting a copy of the standard TIA/EIA 222F "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures" is a good place to start too. The folks on the TowerTalk list will know where to get it. It references a concrete code and a steel code. These are good to have also.
John KC4ZXX

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message news:mc9P+EBiKtR+EAsf@ifwtech.co.uk...
> Peter O. Brackett wrote:
> >Where are some places to get good information on towers, bases, erection,
> >bracing/guying, windstorm protection, etc...?
>
> The TowerTalk list, sign-up at www.contesting.com
>
> They would also tell you to buy the Rohn catalog, and do what it says.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

3057. Re: Capacitors for gamma match/ and more Q's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 06:25:44 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v4ehf833qfav5b@corp.supernews.com>
Source record: 125096

One I have used for years is a piece of tubing just large enough to insert the center conductor (with insulation) of the coax through. Next a second piece of tubing over the first to make fine adjustments. Put the coax center conductor through and let it hang out the end. Adjust the shorting bar first, then slide the second piece of tubing at the end opposite the shorting bar for best SWR.

Simple to make and works well. I hope I have described it well enough to make it work. If not drop me an e-mail and I will scan you a drawing. I came up with it a number of years ago and have never seen it published anywhere, so it is original, at least to me.

"Scott" <scott2rp789@netscape.net> wrote in message
news:3E472634.F8052F74@netscape.net...
> I need to build a (nice) gamma match for my cubical quad (please don't
> suggest other feed systems here - this is a requirement). I would like
> to build a adjustable capacitor for this purpose. Most (yagi) beams use
> the aluminum tube one inside another separated by some plastic. This is
> fine, but the size of this system might be too big to connect to wires
> (yes, I know the delta loop would simplify things). The sizes are
> typically 1/2" OD aluminum tubing separated from a 3/8" OD aluminum
> tubing by some plastic. Does it have to be this big? I can get a wide
> array of small sizes at the local hobby store that might serve the
> purpose.
>
> I guess I can model the antenna and pick a fixed capacitor. Where is a
> good place to get a fixed capacitor for this purpose? Is this as
> efficient? Are capacitors rated in terms of how much "power" they can
> handle and how will this apply to the wattage handling capability of the
> gamma match? Once a value is picked for the capacitor, what effect does
> sliding the "tap" point have? Does my capacitor have to be spot on - or
> can I correct by adjusting the "tap" point on the loop?
>
> Anybody have any experience / advice here? I've never actually seen
> anybody fit one to a loop on a beam and I am trying to devise a good
> (e.g. reliable, efficient, simple) way of fitting one (actually 2) onto
> my quad loop.
>
> Lots of questions I know, but I don't ask out of curiousity - I model
> and build these things, for real.
>
> Scott.
>

3058. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 07:34:30 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <5EEIoyBGY1R+EAvM@ifwtech.co.uk>
Source record: 125097

'Doc wrote:
>
>
>Peter,
> It's been my experience that the tower manufacturers
>(at least Rohn, anyway) are willing to give you answers
>to questions such as those you posed. It's 'off the cuff'
>information though, they won't give you a 'firm' opinion
>unless you pay them to do an engineering study. I guess
>that's reasonable since that's their 'bid-nez'. You can
>always hire an engineering firm to do a study, or, if
>you're as broke as I am, learn how to do it yourself. Or
>the always workable third alternative, build it like the
>government would (if it needs 2 yards of concrete, put in
>6 yards)...

The TowerTalk residents encourage everyone to read the Rohn literature
thoroughly, before calling the company. Think of it as the FAQ.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3059. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 10:17:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4ev0r2ustv788@corp.supernews.com>
Source record: 125098

The error was in the statement that it was coax dielectric that caused the loss, when in fact conductor resistance loss dominates in coax up to about 1 - 10 GHz. Above that frequency range, but not below, dielectric loss dominates in solid dielectric coax. One solid way to confirm the dominance of conductor resistance loss is to note that the dB loss of coax increases as the square root of frequency over the HF range. Where dielectric loss dominates, the loss becomes directly proportional to frequency.

The reason that foam dielectric coax or mostly-air coax like 9913 has lower loss in the HF range than solid dielectric coax is simply that for the same outside diameter and Z0, air or foam coax has a larger center conductor due to the lower effective dielectric constant. The larger conductor has less resistance loss and therefore the coax loss is lower. So while using air or foam dielectric coax reduces loss (at HF due to the larger center conductor), it certainly doesn't make it go away.

The fact that the coax loss is due to conductor resistance rather than its dielectric doesn't alter the conclusions Walt presented or the work that Frank Witt did. Neither gentleman made any mention of the source of the coax loss in their published works, and it's unimportant to the conclusions they drew about the primary source of the bazooka's bandwidth -- coax loss.

Roy Lewallen, W7EL

Tarmo Tammaru wrote:
> Did anybody ever bother to build one out of 9913, or better yet, Andrews
> Helax? That should settle it for good.
>
> Tam/WB2TT
>
> _____
>
>>Roy Lewallen just now called attention in my post above concerning the
>>dielectric loss being responsible for the R loss that improved the
>>bandwidth. Sorry, fellas, I spoke before my brain was in gear. What I
>
> meant
>
>>to say is that the total loss resistance in the coax resulting in the
>>unwanted power dissipation that provides the increased bandwidth.
>>
>>Walt, W2DU
>>

>>
>>
>
>
>

3060. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 11:44:09 UTC
From: Jan <fam.glade@chello.nl>
Message-ID: <dgM1a.1358464$xm4.54039795@Flipper>
Source record: 125099

tt

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.449 / Virus Database: 251 - Release Date: 27-1-2003

3061. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 14:07:57 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302100607.701ceb28@posting.google.com>
Source record: 125100

William Ewald <wgewald@att.net> wrote in message
news:<p4de4v0smm3tplpr2cbs6p15vk6dhjrauf@4ax.com>...
> On 8 Feb 2003 08:11:53 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
>
> > >Reg you have to realise that we only have a handfull of news sources
> > >for the the whole of the U.S.A. and thus America is woefullty behind
> > >on newspaper corrections. We still not have been informed of the error
> > >regarding the first plane to cross the atlantic ocean was an american
> > >plane.
>
> First solo crossing was not Lindbergh?

The ' first plane' which is what I said to cross the Atlantic came
from Europe to the U.S.
Lindburgh followed up by crossing without going asleep.
Since then somebody was the first to have intercourse on a plane.
Another was the first one to get on the plane sober and arrive on the
otherside drunk.
But the first aeroplane to achieve that long distance to open up the
frontier for aeroplanes was one that came from Europe to the U.S.A.
Unfortunately it is oft times said that the first plane
over....especialy the new generation, was by Lindburgh.
Sounds about right as I now see on T.V. that the U.S. saved Korea
without mention of the U.N..... All of this misinformation is because
we have by competition reduced our news sources to but a few who then
relay it around the States, this leaves us open to not only incorrect
information as stated but also to censorship.
Regards
Art

3062. Re: Directional beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 14:56:29 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <GbucnddgPegCINqjXTWcqg@comcast.com>
Source record: 125101
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

I think ultrasonic is the way to go. What would work is an approximately 30 KHz carrier, modulated by some low frequency like 100 Hz, on the target; then 3 fixed receivers that triangulate the target based on the phase difference of the detected 100 Hz signal. Requires no directional microphones, and no moving parts. Even 1 millisecond resolution would get him to within a foot.

Tam/WB2TT
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:3c8d4v0fu6d41uim1p84fv2kdfsc626ceo@4ax.com...
>
> Hi Peter,
>
> Polaroid for years has sold a kit version of its ultrasonic camera
> focusing system that has scads more accuracy than your RF plan, and is
> more likely to succeed.
>
> 73's
> Richard Clark, KB7QHC

3063. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 15:05:29 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0302100705.487add35@posting.google.com>
Source record: 125102
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"FM" <radiovintage@hotmail.com> wrote in message
news:<0%kX9.4879$Sv3.517903@newsread1.prod.itd.earthlink.net>...
> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A
> THANKS.

I stopped re-crystalling elements and started using Channel Element
Headquarters (http://home.fuse.net/cehinc/). This is a clearing house
of used elements.

3064. Re: Capacitors for gamma match/ and more Q's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 15:08:41 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <9qOcnbxLN8HnXdqjXTWcog@comcast.com>
Source record: 125103

Look at a Cuscraft VHF beam. They use a piece of coax with the shield removed. I would temporarily use a variable capacitor (any kind) to see how much capacitance you need, so you know how long a piece of coax is required. Final trim by moving the gamma rod in and out. If the coax fits reasonably snug into the gamma rod, the capacitance per foot will be the same as the native coax. You will end up with a distributed capacitance along a transmission line, so the capacitance probably won't be the same as for a lumped capacitor.

Tam/WB2TT
"Scott" <scott2rp789@netscape.net> wrote in message
news:3E472634.F8052F74@netscape.net...
> I need to build a (nice) gamma match for my cubical quad (please don't
> suggest other feed systems here - this is a requirement). I would like
> to build a adjustable capacitor for this purpose. Most (yagi) beams use
> the aluminum tube one inside another separated by some plastic. This is
> fine, but the size of this system might be too big to connect to wires
> (yes, I know the delta loop would simplify things). The sizes are
> typically 1/2" OD aluminum tubing separated from a 3/8" OD aluminum
> tubing by some plastic. Does it have to be this big? I can get a wide
> array of small sizes at the local hobby store that might serve the
> purpose.
>
> I guess I can model the antenna and pick a fixed capacitor. Where is a
> good place to get a fixed capacitor for this purpose? Is this as
> efficient? Are capacitors rated in terms of how much "power" they can
> handle and how will this apply to the wattage handling capability of the
> gamma match? Once a value is picked for the capacitor, what effect does
> sliding the "tap" point have? Does my capacitor have to be spot on - or
> can I correct by adjusting the "tap" point on the loop?
>
> Anybody have any experience / advice here? I've never actually seen
> anybody fit one to a loop on a beam and I am trying to devise a good
> (e.g. reliable, efficient, simple) way of fitting one (actually 2) onto
> my quad loop.
>
> Lots of questions I know, but I don't ask out of curiousity - I model
> and build these things, for real.
>
> Scott.
>

3065. Re: Masts/poles suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 15:11:10 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <UyadnbL1yruPXNqjXTWcqA@comcast.com>
Source record: 125104

Good article on pushup masts in the May 1994 issue of QST.

Tam/WB2TT
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:rg8d4vc1jkhogmjivdjffreqjorcclj0go@4ax.com...
> On Sun, 09 Feb 2003 16:14:38 GMT, "Gary Boyer"
> <gboyer@columbus.rr.com> wrote:
>
> >I am wanting to purchase/find/build a mast or pole that would get a
couple
> >of dipoles up about 35 to 40 feet...I checked with the local radio shack
and
> >they did not sell pushup tv type masts at their location...any advice
would
> >be most appreciated...tnx...Gary..K8BY
> >
>
> Hi Gary,
>
> Check the surplus market for Army field deployable mast systems. They
> come completely kitted up in what looks like the standard issue duffle
> bag (weighs the same as my old sea bag too). Comes complete with a 5
> pound sledge for driving in the stakes included. These units have a
> price of less than $100 for 40 foot models (5 foot interlocking
> tubes).
>
> Warning: as per the usual service metric, it requires two men and a
> boy to put up.
>
> 73's
> Richard Clark, KB7QHC

3066. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 15:13:12 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b28fi5$kr7$1@slb9.atl.mindspring.net>
Source record: 125105

Ian:

[snip]
> The TowerTalk list, sign-up at www.contesting.com
>
> They would also tell you to buy the Rohn catalog, and do what it says.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek
[snip]

Thanks for that information, I'll go check it out.

--
Peter K1PO
Indialantic By-the-Sea, FL.

3067. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 15:25:33 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b28g9b$7qt$1@slb3.atl.mindspring.net>
Source record: 125106

Ian, Doc:

Thanks for those suggestions.

Of course with a direct major hurricane eye "hit" on this island all bets are
off, and I realize that it is impossible to hurricane proof a standing tower
beam antenna installation.

I am not worried as much about destruction of the tower and beam
themselves by windstorm, but rather about ancilliary damage to
home and adjacent property owners homes and buildings should a
tower and beam come loose and become "unwilling" projectiles during
a windstorm/hurricane.

My thought was -on hurricane approach- crank the tower down, tilt
it over, remove the beam, then stake the beam and tower to the ground.
Having pre-set the stakes in advance. I'd like to be able to do so with
an hour or two advance notice and be able to do so while the wind was
already at substantial level.

I was trying to figure out if that is a practical/feasible approach and what the
"gotchas" are with this approach?

--
Peter K1PO
Indialantic By-the-Sea, FL.

3068. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 15:42:15 UTC
From: k3bu@aol.com
Message-ID: <20030210104215.27332.00000396@mb-ba.aol.com>
Source record: 125107

>> First solo crossing was not Lindbergh?

Art Unwin KB9MZ writes:
>
>The ' first plane' which is what I said to cross the Atlantic came
>from Europe to the U.S.
>Lindburgh followed up by crossing without going asleep.

How and when was that? On a boat?
More info?

Yuri

3069. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 16:51:16 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <8MQ1a.9314$1q2.915791@newsread2.prod.itd.earthlink.net>
Source record: 125108

Tarmo Tammaru wrote
> Did anybody ever bother to build one out of 9913, or better yet, Andrews
> Helax? That should settle it for good.
>
> Tam/WB2TT
>

Tam, have you looked at my QST article on the subject on my web page at
http://home.iag.net/~w2ldu, where you'll see that it would be a waste of
time and materials to build it.

Walt, W2DU

3070. FYI: Internet Jargon Defined i.e., BTW, FAQ, FYI, IOW, IMHO, RTFM, ROTFL

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 17:05:42 UTC
From: AC6V <none@nowhere.com>
Message-ID: <GZQ1a.11979$q91.1456906@news2.west.cox.net>
Source record: 125109

FYI: Internet Jargon Defined i.e., BTW, FAQ, FYI, IOW, IMHO, RTFM, ROTFL

At last a source for the Alphabet Soup
http://kb.indiana.edu/data/adkc.html

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

3071. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 17:13:06 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E47DD97.F63F1DA0@attbi.com>
Source record: 125110

Richard, I'm knowing that ALL materials with a relative permeability
greater than 1 exhibit non-linearity. At saturation, the B-H curve goes
sub linear and harmonics get into the system.

Even in balun design, if it is overdriven, it produces heat and
harmonics!

A QRP ferrite based balun will not support 1.5 KW!

Deacon Dave, W1MCE
+++

Richard Clark wrote:
>
> On Sun, 09 Feb 2003 02:33:14 GMT, Dave Shrader
> <david.shrader@attbi.com> wrote:
>
> >An air wound balun is linear!! There is no maximum flux density to worry
> >about. So, no harmonics.
> >
> >A balun using ferrite is subject to a maximum flux density in it's
> >'linear' region. When overdriven the magnetic properties go from linear
> >to sub-linear. This transition introduces harmonics. So, high power
> >baluns using ferrite cores for antenna tuners, etc. generally use two or
> >three cores to keep the total magnetic circuit in the linear region.
> >
> >DD, W1MCE
> >
>
> Hi OM,
>
> BalUns that are designed with magnetic linkage are an example of
> designing with failure built in. With that in mind, and if you are
> not terribly proficient in the matter, it would do far better to put
> ferrite to a more useful purpose found in current BalUn construction.
>
> If you are speaking of that specie (current BalUns) that is suffering
> from heating due to currents, then it is the system that is at fault,
> not the BalUn. This is like blaming the fuse for an overloaded
> circuit and putting a penny in its place to correct the situation
> (common in the era of glass fuses and burning houses).
>
> The use of two or three cored designs is for Z matching (although I am
> sure there are those who like to think in terms of the old watch
> manufacturers who sold product with 55 jewel movements, when only 5

> were actually used in the movement itself).
>
> 73's
> Richard Clark, KB7QHC

3072. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 17:17:40 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302100917.3cfd4f48@posting.google.com>
Source record: 125111

'Doc <w5lz@cwis.net> wrote in message news:<3E45EBC7.EB34403B@cwis.net>...
> Art,
snip
only other person that has
> objected to it is ol'Frac. Puts you in 'good'
> company, doesn't it?
> 'Doc

Doc, you didn't have the guts to follow up on my generous offer to
share my latest work and thus still leave me in the small group who
look for the new without fear of failure.
Even tho I may be laughed at I have always been curious of things
since I started working for a living at age 16.and frankly have
achieved a lot. Now that I have retired I have turned my attention
to antennas where I try to attain knoweledge and share what I've
gained.
My first antenna that I patented it after several years my hardest
critic Richard Clark finaly said I should be proud of what I
achieved.
On my second patent my other hardest critic Roy stated to the effect
that it seems that Art has discovered a way ...bla bla bla . In each
of
these cases I shared my views and thoughts and yet I am still
characterised as a member of a group that this newsgroup despises
even
tho I have no connection to any of that illustrious group which goes
right down to the beginning of not even having a college degree.
Yet in neither of the antennas alluded to was any evidence proffered
to
support breakage of any known natural or academic laws.
Now after a respite of many years of lazy retirement I have taken up
the challenge again and without a doubt will be writing up
another jump forward, regardles of the cynics and naysayers of this
group
Now I offer you be the first to have an oportunity to be part of this
new discovery even to review the mathematics and experimental proof
and data. What on earth do I have do, or to stop doing, to break away
from that small group that apparently all love to throw stones at ?
This is supposed to be a hobby for all types and where all are
supposed to be amoung friends not only those who seek to only
criticise.
Frankly Doc I have no respect for you, for you are nothing but a
talker
and not a do er, plus a follower who gets his courage to throw stones

by
being a follower . Frankly your disdain of my generous offer shows to me that you are not willing to expose your lack of understanding or to emerge from the pack and be your own man. I offered you my hand and you
turned away.
Art Unwin KB9MZ... XG

3073. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 17:20:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7jmf4vgh6erqrbafmk7nqf645nets802il@4ax.com>
Source record: 125112

On 10 Feb 2003 06:07:57 -0800, aunwin@insightbb.com (Art Unwin KB9MZ) wrote:

>All of this misinformation is because
>we have by competition reduced our news sources to but a few who then
>relay it around the States, this leaves us open to not only incorrect
>information as stated but also to censorship.
>Regards
>Art

Hi Art,

I will agree with you 100% on that (surprised?).

Even as a teenager during the escalation of the conflict in Vietnam (before we admitted it was one) I found that referring to distant headlines was far more informative. One particularly good example of information was a magazine I subscribed to back then was called "Atlas" which consisted of a summary of world headlines and columns that reported the Prague Spring back when it was hitting its pace in the WINTER before. I also sat close to my shortwave (another source of news) when the tanks rolled in.

It is not so much a matter of so few resources as it is a matter of so few interested. We wouldn't be going at it again with Iraq if we had done it right the first time (obviously not THE priority then or now). Now we are engaged in re-runs as the current regime of Right Whiners wholly ignore Ossama and cast off the 3000 dead as disposable patriotism (their votes don't count anymore). No doubt these limped wrist warriors will feign surprise with another of Ossama's attacks and they will claim they need a national police and mandatory internal passports.

Its a pain to listen to this crew of commy-hugging draft dodgers and profiteers mumbling about democracy and freedom. It seems from the heights of their new Politburo they are intent upon codifying every aspect of society in their attempts to re-engineer us toward their amerika.

However, not to diverge with an off topic comment; but, Art, why do you chastise others for divergence when you so contribute to it yourself? First plane across the Atlantic? Why do you hesitate to name it, its nationality, or its pilots? Were they on the wrong wavelength when they landed (where? Where did they start?). Obviously the French were far more impressed with Lindy than these earlier examples (are you reacting to a perceived snub for Lindy not

having landed at Trafalgar Square?).

73's
Richard Clark, KB7QHC

3074. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 17:31:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gjof4vkalq03uedpthge1aegq24k1q7tl1@4ax.com>
Source record: 125113

On Mon, 10 Feb 2003 10:25:33 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>Of course with a direct major hurricane eye "hit" on this island all bets
>are
>off

Hi Peter,

Lighten you reading demands and skip the chapter on ice loading. :-)

73's
Richard Clark, KB7QHC

3075. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 17:48:21 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <72pf4vov6vkj5qcss6ik6ka3k3dtp2r8pt@4ax.com>
Source record: 125114

On 10 Feb 2003 09:17:40 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>'Doc <w5lz@cwis.net> wrote in message news:<3E45EBC7.EB34403B@cwis.net>...
>> Art,
>snip
>only other person that has
>> objected to it is ol'Frac. Puts you in 'good'
>> company, doesn't it?
>> 'Doc
>
>Doc
> critic Richard Clark
>critic Roy
>Art has discovered a way ...bla bla bla

Hi Art,

Of the last half dozen postings from you, you seem more content in
railing against personality, planes across the atlantic, news
reporting and so on, and on, an on; than you have stomach for
discussion of Wave-length. Your reactions appear to be more a
function of ego in not being able to keep up on any topic than the
off-chance of learning or teaching anything about antennas. Please
note that more than half of the things you eventually reject as
spurious were in fact introduced by you.

Please exhibit the courtesy of newsgroup etiquette by not drifting off
topic so vigorously and try offering us something technical instead.
If you don't want to talk EH antennas, don't raise the subject. If
you don't want to talk CFAs, don't raise the topic. If you don't want
to talk fractals, don't raise the topic.

If you DO want to talk about your work, please don't talk AROUND it
and then complain of our effort to second guess you. We are not
responsible for your insufficiency of description.

73's
Richard Clark, KB7QHC

3076. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 17:58:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E47E85F.C8B21AB1@cwis.net>
Source record: 125115

Peter,
I can certainly understand that! If you get
an aswer to your questions, I'd be interested in
hearing about it. We don't get many hurricanes
in Oklahoma, but we do get the several of the
'dry' versions of them a year.
'Doc

3077. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:01:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8ppf4vct77oih4sb4itv1aceqmaljm61oq@4ax.com>
Source record: 125116

On Mon, 10 Feb 2003 17:13:06 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>Richard, I'm knowing that ALL materials with a relative permeability
>greater than 1 exhibit non-linearity. At saturation, the B-H curve goes
>sub linear and harmonics get into the system.
>
>Even in balun design, if it is overdriven, it produces heat and
>harmonics!
>
>A QRP ferrite based balun will not support 1.5 KW!
>
>Deacon Dave, W1MCE

Hi OM,

ALL materials exhibit a resistance, harmonics, capacitance,
non-linearity, inductance, gravity, nuclear instability, and on and on
down the line (you fail at completeness). However I am not putting
them to the test of ALL of such characteristics because they are not
germane nor particularly meaningful. Permeability, when it does
become germane, is an issue of system fault, or is a design feature
that already anticipates failure.

For every failure that you can summon up, I can find two that do not;
but this proves you are engaged in a beauty contest, not in a
particular concern for the mechanics of the issue. Your examples may
fail for a mechanical reason - like losing the bathing suit
competition.

There are better applications of ferrite, and my suggestion was to
skip the tedium of fixing a built in failure much like Microsoft's
security patches for their security patches for their secure servers
(intelligent people would recognize that security and Microsoft are
antithetical and not travel that road with built-in potholes sold as
enhancements to tourism).

73's
Richard Clark, KB7QHC

3078. Re: aluminium joints, vaseline or conductive grease?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:02:03 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <ETR1a.2058$HO.14476@newsfep4-glfd.server.ntli.net>
Source record: 125117

I've always used copperslip, a copper loaded grease for this function. As regards the electrochemical corrosion question, it seems to me that the grease carrier will lock out any humidity at the interface between any one copper particle and the aluminium.

When I lived in the far NW of Scotland (where I grew up) I had a few antennas for 27MHz which was my interest then as a child in the mid-late 70's. Very strong winds and massive amounts of salt spray hammered the antennas and the benefit of the copperslip could be seen on inspection for annual maintenance. Similarly now I have moved to NE England and again have a costal QTH, I use copperslip. I find that those antennas I have had fail have been primarily caused by poor internal construction (copper riveted to aluminium!). I have not (yet) ever seen significant electrochemical corrosion caused by the use of copper loaded grease.

Incidentally copperslip or similar is available in the UK at any motor factor (by which I do not mean Halfords).

Alec Wood M1BNK
Teesside UK

"Henrik" <henrik> wrote in message
news:3e46f156$0$159$edfadb0f@dread15.news.tele.dk...
>
> "Paulo E. P. Marcondes" <marcondes@netscape.net> wrote in message
> news:3E46D266.80203@netscape.net...
> > Dave Platt wrote:
> > >
> > > Similar anti-oxidant greases (with or without zinc and/or copper dust)
> > > are used when connecting copper mains wire to breakers and switches.
> >
> > This thread led to think about eletrochemical corrosion being enhanced
> > by such zinc/copper bearing greases...
> >
> > It wouldn't be better if one could use a conductive grease with aluminun
> > dust instead of cooper or zinc?
> >
> Well, it seems that zink is OK, as it is next above to aluminium in the
> electrochemical series (0,96v higher than aluminium), while copper is
> further above (2,22v higher than Al). Copper is therefore less suitable
from
> a corrosion point of view under humid conditions...
>
> I would therefore consider zink safer, while with aluminium i would doubt
> that you get any improvement in conductivity compared to use of ordinary

> grease on freshly polished surfaces. The theory being, that the zink
> particles "grind" into the aluminium oxide layer, and provides electrical
> connection protected by the grease against humidity.......while aluminium
> powder would just be a more or less non conductive filler due to its oxide
> layer...
> An other commercial product that i have now identified called Never Seez
is
> available in a variant which contains nickel (1,47v above Al)...
>
> Butternut seems to advice the use of a copper loaded grease....so perhaps
> the humidity level in the grease interface makes these considerations less
> important??
>
>
> Please comment or speak up from experience!
>
> 73,
> H.
>
>

3079. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:16:08 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b28q94$ie2$1@slb9.atl.mindspring.net>
Source record: 125118

Richard:

[snip]
"> Lighten you reading demands and skip the chapter on ice loading. :-)
>
> 73's
> Richard Clark, KB7QHC
[snip]

Ice, ice? What's that?

--
Peter K1PO
Indialantic By-the-Sea, FL.

3080. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:19:11 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ofS8OHCf0+R+EAcj@ifwtech.co.uk>
Source record: 124969

Yuri Blanarovich wrote:
>>> First solo crossing was not Lindbergh?
>
>Art Unwin KB9MZ writes:
>>
>>The ' first plane' which is what I said to cross the Atlantic came
>>from Europe to the U.S.
>>Lindburgh followed up by crossing without going asleep.
>
>How and when was that? On a boat?
>More info?

1919 – Alcock and Brown in a Vickers 'Vimy' biplane made the first
non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
57 minutes.

It was 1927 before Lindbergh made the first *solo* crossing - which was
also very much longer, from Long Island to Paris.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3081. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:25:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E47EE7C.8070705@ieee.org>
Source record: 124971

Peter O. Brackett wrote:
> Ice, ice? What's that?

That's the stuff you call "rocks" as in "scotch - rocks".
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3082. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:27:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9vrf4v0ai03f54pjklfdd5an32tt0itp0s@4ax.com>
Source record: 124970

On Mon, 10 Feb 2003 13:16:08 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>Richard:
>
>[snip]
>"> Lighten you reading demands and skip the chapter on ice loading. :-)
>>
>> 73's
>> Richard Clark, KB7QHC
>[snip]
>
>Ice, ice? What's that?

Look in your drink.

73's
Richard Clark, KB7QHC

3083. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:33:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <72sf4voa435fi0qmj88g9prt24v0169691@4ax.com>
Source record: 124972

On Mon, 10 Feb 2003 18:19:11 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Yuri Blanarovich wrote:
>>>> First solo crossing was not Lindbergh?
>>
>>Art Unwin KB9MZ writes:
>>>
>>>The ' first plane' which is what I said to cross the Atlantic came
>>>from Europe to the U.S.
>>>Lindburgh followed up by crossing without going asleep.
>>
>>How and when was that? On a boat?
>>More info?
>
>1919 ï¿½ Alcock and Brown in a Vickers 'Vimy' biplane made the first
>non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
>57 minutes.
>
>It was 1927 before Lindbergh made the first *solo* crossing - which was
>also very much longer, from Long Island to Paris.

Hi Ian,

This represents the difference between the Old Countries and the New
World.

We celebrate the myth of pioneering individualism, the continent likes
to believe the fantasy of multilateralism. That is still the
operating criteria as judged by today's headlines and possibly the
cause of two world wars and those to come.

73's
Richard Clark, KB7QHC

3084. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:45:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E47F358.9080901@ieee.org>
Source record: 124973

Ian White, G3SEK wrote:
> 1919 – Alcock and Brown in a Vickers 'Vimy' biplane made the first
> non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
> 57 minutes.

Not true, Ian. Mr. Ornithocheirus made countless "non-stop
trans-Atlantic flights" as far back as 125,000,000 B.C.,
continued to do so for millions of years, and did it
without an airplane. :-)

http://www.bbc.co.uk/dinosaurs/chronology/127/
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3085. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:48:16 UTC
From: Kevin Gunther <beeltee@optonline.net>
Message-ID: <QtS1a.238836$HG.39565655@news4.srv.hcvlny.cv.net>
Source record: 124974

"bob et chris" <bobetchris@videotron.ca> wrote in message
news:9xE1a.10271$%f.112302@wagner.videotron.net...
> A good trick is to use your truck radio antenna ! Check out a radio store
> for a Y connector .
> VA2 Bik
> bob
> "Rich" <rk911@ANTISPAM.yahoo.com> wrote in message
> news:2ln04vkuo86kng5iajv8dcibfqdpg7r36n@4ax.com...
> > On Tue, 04 Feb 2003 13:09:16 -0500, Mark <marks@nospam.org> wrote:
> >
> > >I'm looking to mount a simple multiband scanner antenna on the truck,
but
> > >can't do it on the roof because it's garaged and it's real tight now.
> > >
> > >I'd prefer to keep away from mag mounts and bumper mounts. I'd also
like> > >:)
> > >
> > >What I'm thinking is a way to build a bracket that will attach to some
> factory
> > >screws/bolts somewhere on the sides in where the rear hatch is.

Rich:

Did you get my e-mail about the bracket I had made for my '94 Explorer??

Kevin

W1FWB

3086. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 18:56:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E47F5F8.3442D24E@cwis.net>
Source record: 124975

Art,
As a famous 'Butler' once said, "Frankly, my dear,
I don't give a damn." (or words to that affect), about
how or what you feel about me. I have enough trouble
following your ramblings in print and am just not sure
I want to try following it by voice.
As to what I have accomplished, I can honestly say
that I've done pretty well on a personal level. I don't
hold any patents, public offices, or a large bank account,
and am not ashamed of the fact. I'm sure that if I really
wanted to, I could give examples of things that I have done
that would leave you a little 'envious' (for lack of a
better word?), or maybe feeling 'nervous' would be a good
description. But that really doesn't have anything to do
with this discussion (and who cares anyway? Besides, every
one can do/say the same thing about their life's experiences).
You're right, I'm not a 'leader' in most cases, but even a
blind pig finds an acorn every now and then. My 'disdain' of
some of your efforts is primarily in what and how you describe
them. I have to admit that I do have trouble understanding some
of them, as do others here.
So to make you feel better, I will be the first to say that
I am not a 'guru', am not and have not been a 'professional' in
electronics, am probably a 'beta' male instead of an 'alpha'
male, am almost certain that I will never patent anything, and
am 'comfortable' with what I am. I can also say that I've found
that I can 'do' anything I am physically capable of doing, if I
want to bad enough. I'm also smart enough to know my limitations
(well, mostly anyway). All in all, I'm pretty happy with myself
and don't feel a need to 'prove' anything to anyone. You can make
anything of that you care to...
'Doc

PS - The 'Doc' is short for 'Lieutenant Doc', and I got 'stuck'
with that nickname because I was fortunate enough to have delivered
a couple of babies. I'm also very proud of that fact!

3087. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 19:00:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E47F6BD.4060403@ieee.org>
Source record: 124976

'Doc wrote:
> PS - The 'Doc' is short for 'Lieutenant Doc', and I got 'stuck'
> with that nickname because I was fortunate enough to have delivered
> a couple of babies.

Was the stork fogged in that day or what?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3088. Re: What is polarity on the HI-Q 4:1 Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 19:37:31 UTC
From: shane0319@hotmail.com
Message-ID: <5e60425.0302101137.135f93a5@posting.google.com>
Source record: 124977

THANK YOU all for your input! Now I have learned something new and as
soon as the weather gets a little warmer a Windom is going in the air!

55 de N0ZDI!

<Jimnn7k@reno.rmci.net> wrote in message
news:<zEg1a.6455$oc.6018@fe01.atl2.webusenet.com>...
> Shane- in this case (building a windom), would make no difference (could
> also use twinlead 300 ohms twinlead (t-v- antenna feedwire) to an antenna
> tuner, or balun near rig, from where the balun on your project shows being
> attached, I suspect). But if STACKING antennas , with separate baluns,
> polarity indeed makes a difference (from aprox 3 dB gain, to
> (theoretically)100 % loss (from the wave fronts canceling each other) . as
> info, jim nn7k
>
>
>
> "Richard Clark" <kb7qhc@attbi.com> wrote in message
> news:3jqa4vctlu1qv3l454t5c4pn5gfjm6fs85@4ax.com...
> > On 8 Feb 2003 05:38:53 -0800, shane0319@hotmail.com (Shane) wrote:
> >
> > >Thank you for reading my msg!
> > >
> > >I am building a HB windom antenna according to:
> > >http://www.packetradio.com/windom.htm
> > >
> > >According to the diagram I need to connect the short leg to NEG ang
> > >long leg to POS. I just recd the HI-Q 4:1 and there is no
> > >documentation on which side is what. Ohming is not on option, due to
> > >being DC grounded.
> > >The instructions in the HI-Q say, "Do NOT disassemble the HI-Q Balun.
> > >Once any of the hooks are disassembled, the balun can not be
> > >reassembled."
> > >Plus the PVC is glued well.
> > >
> > >Thank you for the help!
> > >
> > >Shane N0ZDI
> >
> > Hi Shane,
> >
> > BalUns do not have a polarity except within themselves for the purpose
> > of design and construction (usually called phasing dots). Once built,
> > you either use it right or you use it wrong. The physical
> > construction reveals that difference much as illustrated at the site

> > you offer above (there's the gozinta, a line, and the comesoutta, the
> > two wires - not easy to mix up).
> >
> > I did not read the page fully, but I expect the + and - signs are for
> > identification of the wire, not the BalUn; these symbols have no
> > meaning beyond that.
> >
> > They warn you not to take it apart because it would be damn difficult
> > to reassemble (they don't want to hear from you on this). You could
> > as easily get the same advice from Timex about their watches. Also,
> > the reason for this difficulty (at least from one vendor) is that the
> > two hooks serve as a lightning gap within the shell (twist one or the
> > other and you may short out the antenna). This purpose is more a
> > calmative than a real protection though.
> >
> > 73's
> > Richard Clark, KB7QHC

3089. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 19:39:05 UTC
From: tdonaly@aol.com
Message-ID: <20030210143905.25222.00000416@mb-fe.aol.com>
Source record: 124978

```
Cecil wrote,
>
>'Doc wrote:
>> PS - The 'Doc' is short for 'Lieutenant Doc', and I got 'stuck'
>> with that nickname because I was fortunate enough to have delivered
>> a couple of babies.
>
>Was the stork fogged in that day or what?
>--
>73, Cecil, W5DXP
>

The stork fogged? He must have been blind drunk.
73,
Tom Donaly, KA6RUH
```

3090. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 19:44:57 UTC
From: tdonaly@aol.com
Message-ID: <20030210144457.25222.00000417@mb-fe.aol.com>
Source record: 124979

Ian White wrote,
>
>
>1919 â€“ Alcock and Brown in a Vickers 'Vimy' biplane made the first
>non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
>57 minutes.
>
>It was 1927 before Lindbergh made the first *solo* crossing - which was
>also very much longer, from Long Island to Paris.
>

Ireland doesn't count since it's been part of America since the
time of the Fenians.
73,
Tom Donaly

3091. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 19:58:04 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <fZecnXvZKLbRmdWjXTWc2Q@comcast.com>
Source record: 124980

Peter,

Assuming it will be a 2 or 3 section self supporting crankup tower, you might want to consider guying the top of the bottom section, then it won't move when cranked down.

BTW we had a Northeaster here about 10 years ago with 100 mph winds, which pointed out that things (trees, towers) close to a house are not as bad as things further away. My antennas/tower, which is fastened to the back of the garage made out OK. A 60 foot oak tree about 20 feet from the house did slight damage because it did not pick up a lot of speed coming down. My neighbor's house got hit by trees that were about 3/4 their height from the house; small branches broke off, and what was left punched all the way through to the basement. My damage was $2000, his $20,000+

Also, do not depend on switches, etc for lightning protection. You need to connectorize you feedline so you can get several feet of separation when disconnected.

Tam/WB2TTT
"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:b28g9b$7qt$1@slb3.atl.mindspring.net...
> Ian, Doc:
>
> Thanks for those suggestions.
>
> Of course with a direct major hurricane eye "hit" on this island all bets
> are
> off, and I realize that it is impossible to hurricane proof a standing
tower
> beam antenna installation.
>
> I am not worried as much about destruction of the tower and beam
> themselves by windstorm, but rather about ancilliary damage to
> home and adjacent property owners homes and buildings should a
> tower and beam come loose and become "unwilling" projectiles during
> a windstorm/hurricane.
>
> My thought was -on hurricane approach- crank the tower down, tilt
> it over, remove the beam, then stake the beam and tower to the ground.
> Having pre-set the stakes in advance. I'd like to be able to do so with
> an hour or two advance notice and be able to do so while the wind was
> already at substantial level.
>
> I was trying to figure out if that is a practical/feasible approach and

what
> the
> "gotchas" are with this approach?
>
> --
> Peter K1PO
> Indialantic By-the-Sea, FL.
>
>
>

3092. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 20:08:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4g1l4inkgh35e@corp.supernews.com>
Source record: 124981

Art Unwin KB9MZ wrote:
> . . .
> On my second patent my other hardest critic Roy . . .

If you'll review the postings I've made in response to yours, you'll find that they mainly ask for justification for claims you've made. For example, when you've claimed to have designed an antenna with superior efficiency, I've asked what the efficiency is. When you've claimed to have designed one with superior bandwidth, I've asked what the bandwidth is, and the bandwidth of the antenna you're claiming improvement over. I've never once gotten a straight answer to any of these simple questions -- only evasions, changes of topic, and complaints about how we narrow minded middle-age-clerical "gurus" are persecuting you neo-Galileos for your brilliant discoveries. Not surprisingly, the same sort of simple questions bring forth the same quality of response for other persecuted neo-Galileos like the proponents of the CFA and EH antenna.

If this qualifies me as your "hardest critic", I take pride in the appellation. For the record, I'm also a critic of astrology, phrenology, and curing cancer with quartz crystals.

Roy Lewallen, W7EL

3093. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 20:20:05 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <VPT1a.60270$tq4.2640@sccrnsc01>
Source record: 124982

Walt, the link you gave doesn't work.

Malcolm

"Walter Maxwell" <w2du@iag.net> wrote in message
news:8MQ1a.9314$1q2.915791@newsread2.prod.itd.earthlink.net...
>
> Tarmo Tammaru wrote
> > Did anybody ever bother to build one out of 9913, or better yet, Andrews
> > Helax? That should settle it for good.
> >
> > Tam/WB2TT
> >
>
> Tam, have you looked at my QST article on the subject on my web page at
> http://home.iag.net/~w2ldu, where you'll see that it would be a waste of
> time and materials to build it.
>
> Walt, W2DU
>
>

3094. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 20:45:28 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E480F68.6050503@ieee.org>
Source record: 124983

Bibby wrote:
> Walt, the link you gave doesn't work.

Change ~w21du to ~w2du, an obvious typo.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3095. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 20:58:51 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <foU1a.170$0L.51682@news.randori.com>
Source record: 124984

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E46B586.7000109@ieee.org...
> exxos wrote:
> > I have ran a few designs in EZNEC and the field seems bascially the
same. I
> > tried to keep the antenna the same physical size and run various
frequencys
> > across it. Nothing seems to really alter but the gain of the antenna.
>
> You are probably not changing the view from elevation to azimuthal and
> probably not changing the elevation angle or azimuthal angle. Figure
> out how to do that and you will see the difference in radiation
> patterns. Try the 3-D radiation pattern view.
> --
> 73, Cecil, W5DXP
>
>

I've tried just about every option, everything looks like a donut type shape
which is what I would expect, no other shapes arrise no matter what I put
in....

chris

>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3096. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:00:38 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b293u7$72s$1@slb5.atl.mindspring.net>
Source record: 124985

Richard, Cecil:

[snip]
> Look in your drink.
>
> 73's
> Richard Clark, KB7QHC
[snip]

Oh... what does "on the rocks" have to do with antennas?

On the other hand... maybe I'll need some "Jack on the rocks" just to screw up my courage in case I have to climb the tower?

--
Peter K1PO
Indialantic By-the-Sea, FL.

3097. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:00:39 UTC
From: exxos <exxos@home.co.uk>
Message-ID: <VpU1a.171$0L.52019@news.randori.com>
Source record: 124986

Hi Richard,

I understand what you are saying, I wonder if I can play with this type of thing actually in EZNEC to map what they would look like ? I keep trying though can't seem to make any shapes than the normal donut types ....

Chris

"Richard Clark" <kb7qhc@attbi.com> wrote in message news:frad4voqvn6vr9v2siasiifnk5onclmbes@4ax.com...
> On Sun, 09 Feb 2003 19:18:27 GMT, "exxos" <exxos@home.co.uk> wrote:
>
> > >
> > >I suppose nothing will change apart from the height of the antenna, power
> > >would be all the same, though I feel the larger antenna would radiate
> > >further and give a wider radiation spread than a small antenna. Though
> what
> > >gets confusing now is if the height of the antenna is more, then the
> > >radiated field has got to be more, so wouldn't that in effect be a boost
> in
> > >transmission power ? its hard to imagine such things though im sure there
> is
> > >a simple answer to it all somewhere.....
> > >
> > >Chris
>
> Hi Chris,
>
> I snipped you power discussion to make things simple by analogy (a
> common one used here and in texts). If you have a point source of
> radiation, it fills a 3-D space equally like a balloon (we have to
> divorce ourselves from earth, obviously and hence the "free space"
> ground selection). To accomplish this requires the unobtainable,
> mythic, isotropic antenna. Usually, when this is specified it is
> immediately rejected by the nabobs who scrabble like mice before the
> feet of dinosaurs. The mice may have survived the ice-age, but quite
> a few were stomped along the way.
>
> OK, so you can't buy one, but you can come close:
> http://www.qsl.net/kb7qhc/antenna/Inverted%20F/index.htm
> Consult this page to observe the Inverted-F which will do half the job
> (especially applicable to non-astronauts).
>
> However this strays to serve to illuminate the filling of space with
> power as though it were air in a balloon. The analogy extended from

> this point is that ALL antennas must (if useful and with a hint of
> respectable efficiency) employ the SAME power to different geometries.
> The simple translation of this is observed by every 3 year old at
> their birthday party as they squeeze a balloon. The air just moves
> around the hands and wall-la (as the french say) you have the same
> power in a new geometry. We called those squeezed out protrusions,
> lobes (makes sense I hope).
>
> Now if you cast this analogy back into antenna and power
> considerations, it means simply that where power flowed away from the
> source (the antenna) it now presents LESS to the some of the original
> targets and MORE to others. The total power will always be the same
> (the same transmitter isn't it?).
>
> Now, as to the matter of height. This includes and illustrates the
> power of reflection to contribute to the overall lobe construction by
> ground. To return to the analogy, think of squeezing the balloon near
> a table top where the table top refuses to allow a lobe to grow and
> thus the air seeks another path to bulge out. Move toward or away
> from the table top and the lobe characteristic follows (perhaps not
> directly, but you might catch the drift in where this is going by
> now).
>
> In playing with antennas, almost everything contributes or resists
> change. So many factors are involved that you have to take care to
> set up a control (what is to be compared to) and changing one (1)
> variable instead of three to observe what you stand to gain or lose by
> that single action. This is a skill not unlike parallel parking
> (takes many co-ordinated actions to accomplish one thing - so you
> usually practice doing simple things first).
>
> The free version of EZNEC was probably complaining of not having
> enough segments when you noticed error messages; but you can still
> rein in your scope to measure and note many, many first principles.
> Far too often we find folks who want to design the world's best array,
> and they ask which end of the wire is better for a purpose. They may
> have access to all the segments they could throw at the problem, but
> their question suggests they should have had a shorter leash for the
> first year.
>
> If you want to see where more segments can lead, trace back up my link
> offered last time to my home page and observe the variety of wild
> concoctions (aka fractals) that go to great length to add nearly
> nothing to the quality of the two wires they attempt to replace (or,
> properly, the one wire of my usual vertical studies).
>
> 73's
> Richard Clark, KB7QHC

3098. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:01:21 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <7AuIJoAhMBS+EA2O@ifwtech.co.uk>
Source record: 124996

Tdonaly wrote:
>Ian White wrote,
>>
>>
>>1919 â€“ Alcock and Brown in a Vickers 'Vimy' biplane made the first
>>non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
>>57 minutes.
>>
>>It was 1927 before Lindbergh made the first *solo* crossing - which was
>>also very much longer, from Long Island to Paris.
>>
>
>Ireland doesn't count since it's been part of America since the
>time of the Fenians.
>73,
>Tom Donaly

Sorry, too late - America has been part of Scandinavia since the time of the Vikings.

(We may eventually return you to your normal programming...)

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3099. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:09:17 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931E85D218250pookster@216.168.3.50>
Source record: 124987

Richard Clark <kb7qhc@attbi.com> wrote in
news:72sf4voa435fi0qmj88g9prt24v0169691@4ax.com:

> This represents the difference between the Old Countries and the New
> World.
>
> We celebrate the myth of pioneering individualism, the continent likes
> to believe the fantasy of multilateralism. That is still the
> operating criteria as judged by today's headlines and possibly the
> cause of two world wars and those to come.
>

The cause of two world wars? Both began with events entirely within
Europe as I recall. Archduke Ferdinand assumes room temp and Germany
invades Poland.

Please 'splain yourself.

--
Bill, W7TI

3100. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:12:08 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b294j5url1@slb3.atl.mindspring.net>
Source record: 124988

Tam:

[snip]
> pointed out that things (trees, towers) close to a house are not as bad as
> things further away. My antennas/tower, which is fastened to the back of
the
> garage made out OK. A 60 foot oak tree about 20 feet from the house did
> slight damage because it did not pick up a lot of speed coming down. My
> neighbor's house got hit by trees that were about 3/4 their height from
the
:
:
> Also, do not depend on switches, etc for lightning protection. You need to
> connectorize you feedline so you can get several feet of separation when
> disconnected.
>
> Tam/WB2TTT
[snip]

Thanks for those thoughts, here's what I was thinking... place a crank up
tower
next to the house and use a building brace of some kind instead of guys.
Then
when cranked down and unbolted from the building brace the tower could be
swung down to ground using a rope/wire/crank attached at the building brace.

Regarding lightning protection... I presume it's best to keep lightning
currents out of
concrete block tower bases, but... is there any special electrical
treatment needed for
re-bar in tower bases? i.e. should the approximately cubic yard of concrete
that a tower
sits on have its' iron re-bar connected and used as conductors for
lightning, or should
copper ground rods be placed beside the concrete block base to bypass the
base?

--
Peter K1PO
Indialantic By-the-Sea, FL.

3101. Re: Masts/poles suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:18:49 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302101318.5a420cc0@posting.google.com>
Source record: 124989

gmz79@aol.comnospam (greg z) wrote in message
news:<20030209113926.22075.00000606@mb-ca.aol.com>...
> R+L in Hamilton , OH has the 40' Rohn telescopic mast H-40 for
> $51.95. Not a bad drive from Lancaster. Nice candy store.
>
> 73
> Greg KC8VIF

I think thats actually a little better deal than the radio shack mast.
I think the r/s mast is about $70 +-??? Myself, I prefer a metal mast
because I'm in a high lightning strike area. Wood or glass would be a
disaster waiting to happen here without special precautions like
running a wire down the side to ground, etc...:(MK

3102. Re: Masts/poles suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:25:49 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <xNU1a.25896$ZK1.1306527@twister.southeast.rr.com>
Source record: 124990

Radio Shack special orders those. In my neck of the woods, Lowes Hardware stocks them.

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org

"Gary Boyer" <gboyer@columbus.rr.com> wrote in message news:O7v1a.170622$GF.46169745@twister.columbus.rr.com...
> I am wanting to purchase/find/build a mast or pole that would get a couple
> of dipoles up about 35 to 40 feet...I checked with the local radio shack and
> they did not sell pushup tv type masts at their location...any advice would
> be most appreciated...tnx...Gary..K8BY
>
>

3103. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:26:01 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4818E9.8050808@ieee.org>
Source record: 124991

exxos wrote:
> I've tried just about every option, everything looks like a donut type shape
> which is what I would expect, no other shapes arrise no matter what I put
> in....

Set the dipole length to 130 ft. Set the frequency to 28.4 MHz. Set the
displayed radiation pattern to azimuthal. Set the azimuth angle to 15
degrees. You will *NOT* get a donut shape. You will get a "cloverleaf"
pattern with four major lobes and four minor lobes.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3104. HF Balcony antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:33:35 UTC
From: Pierre Desjardins <pierred1@sympatico.ca>
Message-ID: <UUU1a.30366$5x6.284255@news20.bellglobal.com>
Source record: 124992

Hi to all.

I need advices on how to make or buy an hf antenna on a balcony. I live on a second floor appartment. The balcony is 16 feet long X 6 feet wide X 9 feet high (roof). Tthe ideal antenna would cover 10-40m or if possible 80m also. A solution (compromise) is a long wire with the MFJ-934 antenna tuner / artificial ground. Opinion on that last item would be also welcome.

Thanks !

ve2pid

ve2pid@sympatico.ca

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/2003

3105. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:43:55 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b296eq$ct5$1@venus.btinternet.com>
Source record: 124993

Bazookas fall in the same category as EH and similar antennas.

For many years they do no more than provide food for the wafflers, old wives, 'learned' article authors, even Ph.D's who frequent and degrade these newgroups.

Which doesn't say very much for 'technical editors' and proprietors of the amateur magazines and periodicals hoping to make some sort of a 'confidence trickster' living out of innocent novices sincerely hoping to learn something.

But t'was ever thus !
--
==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

3106. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:47:24 UTC
From: k3bu@aol.com
Message-ID: <20030210164724.27578.00000366@mb-ba.aol.com>
Source record: 124994

>
>1919 â€“ Alcock and Brown in a Vickers 'Vimy' biplane made the first
>non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
>57 minutes.
>
>It was 1927 before Lindbergh made the first *solo* crossing - which was
>also very much longer, from Long Island to Paris.
>>--
>73 from Ian G3SEK

That is true, but Art claims that

>>The ' first plane' which is what I said to cross the Atlantic came
>>from Europe to the U.S.

And it seems that he is not coming up with answer (keeping it secret) and then blaming media for misinformation?

We are getting into progressively difficult categories. First flight between NA and EU, was by US fliers in NC4 plane with stopover in Azores. Alcock and Brown followed with non-stop flight to Ireland (no mainland of Eu :-) and then Lindbergh as a solo, non-stop, single OP and between mainlands. Those were the firsts in their categories. Are we missing something? Besides first woman sucked into the toilet on transatlantic flight? :-)

Yuri, oK3BU
Jr. Lieutenant in Czechoslovakian Air Force
played with MIG15s, scraping them for RF connectors and coax

3107. Re: HF Balcony antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 21:52:05 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931E8D141BA4pookster@216.168.3.50>
Source record: 124995

"Pierre Desjardins" <pierred1@sympatico.ca> wrote in news:UUU1a.30366
$5x6.284255@news20.bellglobal.com:

> A solution (compromise) is a long wire with the MFJ-934 antenna tuner /
> artificial ground. Opinion on that last item would be also welcome.
>

That will work but you may have the classic "RF in the shack" problem
unless you get the antenna balanced.

I'd recommend a simple dipole - no traps - as long as will fit in the
space available, fed with open wire feedline and of course, a tuner. No
ground is needed this way, but you must have a tuner with balanced output
capability, or else an appropriate external balun. If you go this route,
get the most expensive, highest power tuner and balun you can afford.
Not for the power handling, but for the efficiency. And later, when you
get that full gallon amp, you'll be ready.

--
Bill, W7TI

3108. Re: HF Balcony antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 22:00:24 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931E8E7CFC6F2pookster@216.168.3.50>
Source record: 124997

"Bill, W7TI" <jamspam@upyours.now> wrote in news:Xns931E8D141BA4pookster@216.168.3.50:

> I'd recommend a simple dipole - no traps - as long as will fit in the
> space available,

A follow-up to my own follow-up:

I should have made clear you can bend the ends of the dipole around to go around a corner or whatever. Doesn't have to be in a straight line and longer is better unless you get really carried away, of course. :-)

--
Bill, W7TI

3109. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 22:04:38 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <zq2cnVBPj6NrvNWjXTWc3Q@comcast.com>
Source record: 124998

Peter,

I would go by the tower manufacturer's recommendation regarding grounding. I have read that you should not run the ground through the concrete, that it would explode in case of a direct hit. Somebody also recently claimed that was BS, and to ground the rebar and everything. Not sure whom to believe. Since my tower (tubular) is supported at about 10 feet, I have a very small amount of concrete, and no rebar.

Tam/WB2TT
"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message news:b294j5url1@slb3.atl.mindspring.net...
> [snip]
>
> Thanks for those thoughts, here's what I was thinking... place a crank up
> tower
> next to the house and use a building brace of some kind instead of guys.
> Then
> when cranked down and unbolted from the building brace the tower could be
> swung down to ground using a rope/wire/crank attached at the building
brace.
>
> Regarding lightning protection... I presume it's best to keep lightning
> currents out of
> concrete block tower bases, but... is there any special electrical
> treatment needed for
> re-bar in tower bases? i.e. should the approximately cubic yard of
concrete
> that a tower
> sits on have its' iron re-bar connected and used as conductors for
> lightning, or should
> copper ground rods be placed beside the concrete block base to bypass the
> base?
>
> --
> Peter K1PO
> Indialantic By-the-Sea, FL.
>
>

3110. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 22:16:23 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <XwV1a.9808$1q2.956261@newsread2.prod.itd.earthlink.net>
Source record: 125000

Bibby wrote ...
> Walt, the link you gave doesn't work.

Thanks for noticing, Bibby, you're right. I posted it correctely in the previous three posts, but in my response to Tam I inadvertantly slipped in an extra 1. So I'll now repeat the address, which I urge you to try again.

It's http://home.iag.net/~w2du.

Sorry about the error,

Walt

3111. Re: What is polarity on the HI-Q 4:1 Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 22:31:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2997ioqa1@knossos.btinternet.com>
Source record: 125002

"Shane" wrote
> Now I have learned something new and as
> soon as the weather gets a little warmer a Windom is going in the air!

==========

Shane, as the weather dictates, I suggest you first erect a very simple random length inverted-L in the same real-estate as you have available for for a Windom.

Then, if you feel you feel you might possibly do better, erect a Windom and see what happens. If you should notice any significant diference after a few weeks operation, taking all bands into account, please report your findings. If by some chance you don't notice any difference tell us about it. Not that plagiarising Guru's will take any notice of what you say anyway ;o)

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

3112. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 22:50:54 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3E482CCE.D6BBA8D1@raytheon.com>
Source record: 125004

OC_CAM's Razor wrote:

> H. Adam Stevens wrote:
> > I just built one today with RG8X.
> > It's resonant at 7.15 MHz. It's 1:1 from 7.075 to 7.225.
> > Between 7.1 and 7.2 MHz the R component is measured greater than 3K ohm.
> > What's making the SWR flat? Not R.

The increased bandwidth of the Bazooka over a simple wire dipole is the combination of three separate effects.

The first is that the diameter of the radiator is large than what would likely be used otherwise. This reduces the antenna characteristic impedance and therefore increases bandwidth slightly.

The second is due to the increased resistive losses arising from the current required to excite the stub. This is the predominant effect in the majority of the amateur installations and could probably be accomplished more easily another way.

The final effect is due to the reactance cancellation effect of the stubs attached in parallel at the feedpoint. The idea is that at resonance, the stubs act essentially as open circuits and have a negligible effect on the feedpoint impedance. Either side of resonance, the stub becomes reactive and compensates the antenna feedpoint reactance. The effect of the shunt reactance is also to increase the resistive component of the feedpoint. The resulting system will show two SWR dips if the characteristic impedance of the stub, and nominal feedpoint impedance are correctly chosen. The problem is that for the typical 75/80 m amateur installation, the desired feedpoint impedance (50 ohms usually) is too low, and the characteristic impedance of the stubs is too high, for significant bandwidth improvement.

Ideally, the nominal feedpoint impedance should be around 100 ohms, and the characteristic impedance of the stubs around 20 ohms, in which case the system will have a nice double humped SWR response, and significantly increased bandwidth over a simple centerfed wire dipole.

Frank Witt wrote a couple of nice articles describing the necessary relationship.

> Actually, it is R but just not that R. The SWR inside the stubs is nearly
> infinite. That makes the current in the stubs nearly infinite.

The maximum current in a quarter wave stub will be at the short circuited end. Assuming the transmission line is lossless, the current at the short is:

Ishort = j * Eo / Ro where
j = sqrt(-1)
Eo is the voltage at the non short circuited end
Ro is the characteristic resistance of the lossless line comprising the stub.

Assuming 1500 Watts RF power and a feedpoint impedance of 100 ohms resistive, the voltage at the open end of the stub is 387 volts. This results in 7.75 amps at the shorted end of a quarter wave stub made of 50 ohm cable.

bart
wb6hqk

3113. Re: Capacitors for gamma match/ and more Q's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 22:52:20 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <yXV1a.18244$oc.2322@fe01.atl2.webusenet.com>
Source record: 125005

The old center of the coax trick works great- one more thought-- If you look at the specs for various coax's you should find, in that chart, a table labled "capacatance per foot" - if you know the capacatance to tune it (useing a variable cap, then paralleled with a known indunctance, and measure the frequency of the tuned circuit, to determine that capacatance, then you know how many inches, of feet to cut that center to! just leave an extra couple inches, and "prune it" to best match. as info, jim nn7k

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:9qOcnbxLN8HnXdqjXTWcog@comcast.com...
> Look at a Cuscraft VHF beam. They use a piece of coax with the shield
> removed. I would temporarily use a variable capacitor (any kind) to see how
> much capacitance you need, so you know how long a piece of coax is required.
> Final trim by moving the gamma rod in and out. If the coax fits reasonably
> snug into the gamma rod, the capacitance per foot will be the same as the
> native coax. You will end up with a distributed capacitance along a
> transmission line, so the capacitance probably won't be the same as for a
> lumped capacitor.
>

3114. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 22:55:29 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302101455.5b62a02@posting.google.com>
Source record: 125006

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<72pf4vov6vkj5qcss6ik6ka3k3dtp2r8pt@4ax.com>...
> On 10 Feb 2003 09:17:40 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >'Doc <w5lz@cwis.net> wrote in message news:<3E45EBC7.EB34403B@cwis.net>...
> >> Art,
> >snip
> >only other person that has
> >> objected to it is ol'Frac. Puts you in 'good'
> >> company, doesn't it?
> >> 'Doc
> >
> >Doc
> > critic Richard Clark
> >critic Roy
> >Art has discovered a way ...bla bla bla
>
> Hi Art,
>
> Of the last half dozen postings from you, you seem more content in
> railing against personality, planes across the atlantic, news
> reporting and so on, and on, an on; than you have stomach for
> discussion of Wave-length. Your reactions appear to be more a
> function of ego in not being able to keep up on any topic than the
> off-chance of learning or teaching anything about antennas. Please
> note that more than half of the things you eventually reject as
> spurious were in fact introduced by you.
>
> Please exhibit the courtesy of newsgroup etiquette by not drifting off
> topic so vigorously and try offering us something technical instead.
> If you don't want to talk EH antennas, don't raise the subject. If
> you don't want to talk CFAs, don't raise the topic. If you don't want
> to talk fractals, don't raise the topic.
>
> If you DO want to talk about your work, please don't talk AROUND it
> and then complain of our effort to second guess you. We are not
> responsible for your insufficiency of description.
>
> 73's
> Richard Clark, KB7QHC
Hi RichardFirst I am surprised on your previous agreement. Also please
notice what I said to Reg about stealing the thread away by changing
to another subject

even tho I joined in with others. On the the subject of my thread no one refuted what I stated, you had a chance why didn't you? I have already stated that I can do nothing in this particular science without the help of others and if any of those antennas are based on wavelength why didn't you say so.
You also know that I have no intention of discussing my early antennas any more
as it took years of needless criticism before I eventualy got that one liner
from you and you didn't even share with others or even me why you did such a turn about. I am warned that I cannot change laws of nature by all but where is the evidence that I have.I would be happy to return to the original subject
of wavelength as I certainly tried hard to respond to all commers on the subject
I know you like to critisize me and Roy says he doesn't like people who spread untruths and so critisises . Well where have I broke any laws of nature. Where am I incorrect in naming some new aproaches to antennas that do not dwell on wavelength . Yes ,I made a mistake with the Chip subject(fractles) and yes, I reacted when somebody degraded the Terman book that I quoted from, because I also am able to critisize the same as you as it seems the American way. So Richard, you are a very smart guy as well as being knoweledgable, instead of waiting for somebody to say something that you can pounce upon, beat us all to the punch with the your answer and then we will not have threads that last over six hunndred entries. Now with all that put to one side I would be happy to return to the subject of wavelength so I can learn from such gurus like your self, Roy and the many others that frequent this thread, but I will go bananas if some place me in the same group of people or inovators that this newsgroup so despise. Let us all be friends and start again.
And be a bit softer on the nobodies like me who enjoy the learning that can be obtained from their peers.
Very, very, many regards
Still your friend
Art
Art

3115. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:02:50 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E482F8E.561B0074@attbi.com>
Source record: 125007

Phrenology !!! Aww C'mon Roy. You can't be serious!!

In early 1960s I had a Section Manager hire a Packaging Engineer based on the principles of Phrenology [seriously]. He provided a book for us non-believers as mandatory reading!

In his Phrenology review of candidates he came up with a qualifications tie!! So he invited them both back at the same time for a second interview. At that interview he gave each of the 100 poker chips and a deck of cards. Winner of all gets the job.

When I asked him about this ridiculous process he said he wanted people who were BOTH qualified AND lucky!!

Within a year he and his phrenology partner were released for sub standard performance.

Must of been the card playing <grin>.

The story is true. I'll claim pastoral privilege to protect the names of the innocent including the company.

Last heard the Section Manager had become a hermit somewhere outside of Denver.

Deacon Dave, W1MCE
+++

Roy Lewallen wrote:
>
> Art Unwin KB9MZ wrote:
> > . . .
> > On my second patent my other hardest critic Roy . . .
>
> If you'll review the postings I've made in response to yours, you'll
> find that they mainly ask for justification for claims you've made. For
> example, when you've claimed to have designed an antenna with superior
> efficiency, I've asked what the efficiency is. When you've claimed to
> have designed one with superior bandwidth, I've asked what the bandwidth
> is, and the bandwidth of the antenna you're claiming improvement over.
> I've never once gotten a straight answer to any of these simple
> questions -- only evasions, changes of topic, and complaints about how
> we narrow minded middle-age-clerical "gurus" are persecuting you
> neo-Galileos for your brilliant discoveries. Not surprisingly, the same
> sort of simple questions bring forth the same quality of response for
> other persecuted neo-Galileos like the proponents of the CFA and EH antenna.
>

> If this qualifies me as your "hardest critic", I take pride in the
> appellation. For the record, I'm also a critic of astrology, phrenology,
> and curing cancer with quartz crystals.
>
> Roy Lewallen, W7EL

3116. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:07:34 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302101507.334ccab9@posting.google.com>
Source record: 125008

'Doc <w5lz@cwis.net> wrote in message news:<3E47F5F8.3442D24E@cwis.net>...
> Art,
> As a famous 'Butler' once said, "Frankly, my dear,
> I don't give a damn." (or words to that affect), about
> how or what you feel about me. I have enough trouble
> following your ramblings in print and am just not sure
> I want to try following it by voice.
> As to what I have accomplished, I can honestly say
> that I've done pretty well on a personal level. I don't
> hold any patents, public offices, or a large bank account,
> and am not ashamed of the fact. I'm sure that if I really
> wanted to, I could give examples of things that I have done
> that would leave you a little 'envious' (for lack of a
> better word?), or maybe feeling 'nervous' would be a good
> description. But that really doesn't have anything to do
> with this discussion (and who cares anyway? Besides, every
> one can do/say the same thing about their life's experiences).
> You're right, I'm not a 'leader' in most cases, but even a
> blind pig finds an acorn every now and then. My 'disdain' of
> some of your efforts is primarily in what and how you describe
> them. I have to admit that I do have trouble understanding some
> of them, as do others here.
> So to make you feel better, I will be the first to say that
> I am not a 'guru', am not and have not been a 'professional' in
> electronics, am probably a 'beta' male instead of an 'alpha'
> male, am almost certain that I will never patent anything, and
> am 'comfortable' with what I am. I can also say that I've found
> that I can 'do' anything I am physically capable of doing, if I
> want to bad enough. I'm also smart enough to know my limitations
> (well, mostly anyway). All in all, I'm pretty happy with myself
> and don't feel a need to 'prove' anything to anyone. You can make
> anything of that you care to...
> 'Doc
>
> PS - The 'Doc' is short for 'Lieutenant Doc', and I got 'stuck'
> with that nickname because I was fortunate enough to have delivered
> a couple of babies. I'm also very proud of that fact!

If that is the case why did you bracket me with Doctor Cohen which you
and others so openly despise. I have never met Chip nor do I despise
him but when you bracket me with him, possibly because I asked for an
end to the bickering with him it would appear that you have the same
despise of me for something I know not what. Despite this I offerred
you my hand but it appears your despise of me was to great for you to

overcome.
Art

3117. Re: Capacitors for gamma match/ and more Q's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:09:05 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931E9A21621F1pookster@216.168.3.50>
Source record: 125009

<Jimnn7k@reno.rmci.net> wrote in news:yXV1a.18244$oc.2322
@fe01.atl2.webusenet.com:

> if you know the capacatance to tune it
> (useing a variable cap, then paralleled with a known indunctance, and
> measure the frequency of the tuned circuit

This works well as long as the piece of coax is considerably shorter than a wavelength. On the order of .05 wl or so should be ok. The longer it is, the less it looks like a pure capacitor.

Just something to keep in mind since this is a VHF antenna and wavelengths are short.

--
Bill, W7TI

3118. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:09:50 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302101509.1f52a93@posting.google.com>
Source record: 125010

tdonaly@aol.com (Tdonaly) wrote in message
news:<20030210144457.25222.00000417@mb-fe.aol.com>...
> Ian White wrote,
> >
> >
> >1919 â€“ Alcock and Brown in a Vickers 'Vimy' biplane made the first
> >non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
> >57 minutes.
> >
> >It was 1927 before Lindbergh made the first *solo* crossing - which was
> >also very much longer, from Long Island to Paris.
> >
>
> Ireland doesn't count since it's been part of America since the
> time of the Fenians.
> 73,
> Tom Donaly

So thats why all that money went to you know where !
Art

3119. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:10:20 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931E9A57A7332pookster@216.168.3.50>
Source record: 125011

Dave Shrader <david.shrader@attbi.com> wrote in news:3E482F8E.561B0074
@attbi.com:

> In early 1960s I had a Section Manager hire a Packaging Engineer based
> on the principles of Phrenology [seriously]. He provided a book for us
> non-believers as mandatory reading!
>
> In his Phrenology review of candidates he came up with a qualifications
> tie!! So he invited them both back at the same time for a second
> interview. At that interview he gave each of the 100 poker chips and a
> deck of cards. Winner of all gets the job.
>
> When I asked him about this ridiculous process he said he wanted people
> who were BOTH qualified AND lucky!!
>
> Within a year he and his phrenology partner were released for sub
> standard performance.
>

Great story, thanks!

Just when I think I've heard everything....

--
Bill, W7TI

3120. Re: FYI: Internet Jargon Defined i.e., BTW, FAQ, FYI, IOW, IMHO, RTFM, ROTFL

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:10:41 UTC
From: "Paulo E. P. Marcondes" <marcondes@netscape.net>
Message-ID: <3E483171.9080604@netscape.net>
Source record: 124999

AC6V wrote:
> FYI: Internet Jargon Defined i.e., BTW, FAQ, FYI, IOW, IMHO, RTFM, ROTFL
>
> At last a source for the Alphabet Soup
> http://kb.indiana.edu/data/adkc.html
>
There is also the jargon file,
http://catb.org/~esr/jargon/

3121. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:11:50 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302101511.5c30ce55@posting.google.com>
Source record: 125012

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<ofS8OHCf0+R+EAcj@ifwtech.co.uk>...
> Yuri Blanarovich wrote:
> >>> First solo crossing was not Lindbergh?
> > >
> > >Art Unwin KB9MZ writes:
> > >>
> > >>The ' first plane' which is what I said to cross the Atlantic came
> > >>from Europe to the U.S.
> > >>Lindburgh followed up by crossing without going asleep.
> > >
> > >How and when was that? On a boat?
> > >More info?
> >
> > 1919 – Alcock and Brown in a Vickers 'Vimy' biplane made the first
> > non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
> > 57 minutes.
> >
> > It was 1927 before Lindbergh made the first *solo* crossing - which was
> > also very much longer, from Long Island to Paris.

Now you are being anti american, got anything to add to the
downgrading of Maxwell ? Tee he
Art

3122. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:15:38 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <FgW1a.18285$oc.7841@fe01.atl2.webusenet.com>
Source record: 125013
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

There is (was?) an outfit named NKX, that provided REBUILT channel elements for about, as i remember, 35 bucks a piece. a good place to look for old elements is on ebay. but, with the MSR-2000, this radio in new enuff that may not be many surplus to be had. another good place (and still in business) is International crystal- tho dont know their prices, but should be able to find their web site. also, kxn 1086/ 88 sounds like maybe used by other motorola radios, but been too long ago since was full-blown radioman--- jim nn7k

"Derrick wrote:> > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having purchased crystals in many years where is the best place to buy them ?? We
> > will be using the repeater on 146.01/61.Also is there a site with the specs
> > for the channel elements ?
> > Rcvr Channel Element : KXN 1086A
> > Xmtr Channel Element : KXN 1088A
> > THANKS.
>

3123. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:18:20 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E48332E.60F3345C@attbi.com>
Source record: 125014

Richard, your opinion.

I spent four years designing magnetic components for the USAF. Components with a relative permeability greater than 1 introduce harmonics. PERIOD. One of my designs was faulted by the USAF for 0.1% Total Harmonic Distortion with ferrite core operating in the 'linear' region!

I'm not presenting a case for failure. The introduction of harmonics is 100% natural and in system design they are part of the system performance requirements.

The existence of Harmonics does not indicate failure! If that were the case we would all be running 10 to 20% efficient Class A amplifiers. [Which still generate harmonics, just fewer of them at lower amplitudes].

You introduced 'failure'; I'm focusing on 'normal performance'.

Deacon Dave, W1MCE
+++

Richard Clark wrote:

>
> Hi OM,
>
> SNIP

> Permeability, when it does
> become germane, is an issue of system fault, or is a design feature
> that already anticipates failure.
>
> For every failure that you can summon up, I can find two that do not;
> but this proves you are engaged in a beauty contest, not in a
> particular concern for the mechanics of the issue. Your examples may
> fail for a mechanical reason - like losing the bathing suit
> competition.
>
> There are better applications of ferrite,

SNIP The post asked about BALUNS. Some are air wound some are Ferrite cored!

> and my suggestion was to
> skip the tedium of fixing a built in failure

SNIP

> 73's
> Richard Clark, KB7QHC

3124. Re: aluminium joints, vaseline or conductive grease?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:26:53 UTC
From: "Paulo E. P. Marcondes" <marcondes@netscape.net>
Message-ID: <3E48353D.2020900@netscape.net>
Source record: 125001

Alexander S. Wood wrote:
>
> When I lived in the far NW of Scotland (where I grew up) I had a few
> antennas for 27MHz which was my interest then as a child in the mid-late
> 70's. Very strong winds and massive amounts of salt spray hammered the
> antennas and the benefit of the copperslip could be seen on inspection for
> annual maintenance. Similarly now I have moved to NE England and again have
> a costal QTH, I use copperslip. I find that those antennas I have had fail
> have been primarily caused by poor internal construction (copper riveted to
> aluminium!). I have not (yet) ever seen significant electrochemical
> corrosion caused by the use of copper loaded grease.

>>"Paulo E. P. Marcondes" <marcondes@netscape.net> wrote in message
>>news:3E46D266.80203@netscape.net...
>>
>>>Dave Platt wrote:
>>>
(...) <snip>
>>>This thread led to think about eletrochemical corrosion being enhanced
>>>by such zinc/copper bearing greases...
>>>
>>>It wouldn't be better if one could use a conductive grease with aluminun
>>>dust instead of cooper or zinc?

Well, thanks Alex for telling your experience.

I am concerned about eletrochemical corrosion because I live in Sï¿½o
Paulo, SE Brazil. I think the WX here is not so humid as in Scotland,
but the temperature here seldom goes below 10ï¿½C (maybe 3-5 days per
year), being higher than 20ï¿½C the other 200 days/year.

The air is not salty, but we wave 1500 mm rain per year, maybe 2000.
But, Sï¿½o Paulo being a well developed city, it is full of trucks, cars
and industries (which fortunatelly are going away). So, the air is full
of nasty substances which can (and do) increase corrosion.

I am not sure of the overall effect of air pollutants in eletrochemical
corrosion, but I am pretty sure that the higher temperatures would
increase the corrosion rate. Higher humidity could lead to increased
maintenance needs, for instance, checking the amaount of grease in the
joints after the rainy (summer) season.

73

3125. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:33:37 UTC
From: Rich Osman <Rich@osman.com>
Message-ID: <3E4836D1.1040209@osman.com>
Source record: 125015
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

FM wrote:
> Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> purchased crystals in many years where is the best place to buy them ?? We
> will be using the repeater on 146.01/61.Also is there a site with the specs
> for the channel elements ?
> Rcvr Channel Element : KXN 1086A
> Xmtr Channel Element : KXN 1088A
> THANKS.

I'm not certian, but I beleive these are the same element used in the
Mitrek mobile, making them fairly common.

--
mailto:Rich@Osman.com http://www.rich.osman.com
Rich Osman; POB 93167; Southlake, TX 76092 (Near DFW Airport) ARS: N1OZ

If you receive something that says "Send this to everyone you know,"
PLEASE pretend you don't know me.

3126. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:40:55 UTC
From: "Paulo E. P. Marcondes" <marcondes@netscape.net>
Message-ID: <3E483887.6080706@netscape.net>
Source record: 125003

Peter O. Brackett wrote:
>
> Regarding lightning protection... I presume it's best to keep lightning
> currents out of
> concrete block tower bases, but... is there any special electrical
> treatment needed for
> re-bar in tower bases? i.e. should the approximately cubic yard of concrete
> that a tower
> sits on have its' iron re-bar connected and used as conductors for
> lightning, or should
> copper ground rods be placed beside the concrete block base to bypass the
> base?

I think it was on thins NG that I've seen a link pointing to some page
(it happens all the time)...

Well, the page author suggested to build a "wire cage", i.e.: a
grounding cage around the hole for the tower base. Put lots of grounding
rods, one in the center of the hole, the others in the corners. Then
you out heavy wire (grounding cable) around the inside of the hole. You
have to maake very sound connections here, you won't be able to to
maintenance here....

Put a plastic layer over the copper stuff. Build the concrete base as
per procedure. Then you have to connect the tower base to the grouding
structure.

PLEASE NOTE: I am NOT a grounding expert. For instance I have not done
EVEN a single ground installation. I know that there are MANY people
here in the NG that if not experts, are the most able people to comment
on this.

3127. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:42:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4lbg4vo2qd032hk0s4fdmgr0lq5rre36is@4ax.com>
Source record: 125016

On Mon, 10 Feb 2003 21:09:17 -0000, "Bill, W7TI" <jamspam@upyours.now>
wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in
>news:72sf4voa435fi0qmj88g9prt24v0169691@4ax.com:
>
>> This represents the difference between the Old Countries and the New
>> World.
>>
>> We celebrate the myth of pioneering individualism, the continent likes
>> to believe the fantasy of multilateralism. That is still the
>> operating criteria as judged by today's headlines and possibly the
>> cause of two world wars and those to come.
>>
>____
>
>The cause of two world wars? Both began with events entirely within
>Europe as I recall. Archduke Ferdinand assumes room temp and Germany
>invades Poland.
>
>Please 'splain yourself.

Hi Bill,

What could lead to war faster than the illusion of peace? The
Europeans have a considerable talent for thinking they have the corner
on logic and diplomacy - events continue to bear out otherwise. The
Balkans would have mountains of skulls a la Cambodia if we hadn't
swept past the buried heads of Europe. This metaphor, of course,
reveals our abysmal indifference to Cambodia (destroyed by
Nixon/Kissinger); much less Africa with France's hypocritical
arrogance in relation to the Hutu/Tutsi problem.

Our Right Whining conservatives are working hard to turn that around
by cataloging our rights into the communist manifesto. Latest news in
the war on espionage reveals how their aryan brethren have been fed
information in constructing biological weapons of mass destruction
straight from Army labs. This, of course, can be explained by them as
"outsourcing," such that Osama can have the next wave of terrorism
carried out on a contract basis by natives here who have no
compunction in filling up another Ryder van full of anthrax for
Disneyworld.

73's
Richard Clark, KB7QHC

3128. Re: HF Balcony antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:46:07 UTC
From: Murray Neece <radioranch@qth.com>
Message-ID: <3E4839BF.83C2355@qth.com>
Source record: 125017
Body handling: Binary attachment payload not displayed: radioranch.vcf

Best Idea Ive seen Pierre, is the screwdriver antenn by Hi Sierra, made for balconies...10-40 but you can do a longer whip and get 80 also...the way my mobile works , Its hard even a compromise!! 73 Murray

Pierre Desjardins wrote:

> Hi to all.
>
> I need advices on how to make or buy an hf antenna on a balcony. I live on a
> second floor appartment. The balcony is 16 feet long X 6 feet wide X 9 feet
> high (roof). Tthe ideal antenna would cover 10-40m or if possible 80m also.
> A solution (compromise) is a long wire with the MFJ-934 antenna tuner /
> artificial ground. Opinion on that last item would be also welcome.
>
> Thanks !
>
> ve2pid
>
> ve2pid@sympatico.ca
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/2003

[One or more binary attachments are retained only in the source text.]

3129. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-10 23:52:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pmeg4vgrv2rf3a9g36h0hnpl7a9hpjrctl@4ax.com>
Source record: 125018

On Mon, 10 Feb 2003 21:00:39 GMT, "exxos" <exxos@home.co.uk> wrote:

>Hi Richard,
>
>I understand what you are saying, I wonder if I can play with this type of
>thing actually in EZNEC to map what they would look like ? I keep trying
>though can't seem to make any shapes than the normal donut types ....
>
>Chris

Hi Chris,

That is the miracle of marketing. You need to pony up the small bucks
to buy the full fledged (500 segments) version, or go you own way with
a free package that comes crippled with a poor interface.

Try playing with a 3-D view of EZNEC's NBS Yagi to view radiation
characteristics that present more interesting views.

By-the-by. You can ignore the warning that pops up (I presume for the
limited version) and simply accept the error. The results may not be
perfect, nor correct, but they may offer something close enough for
you to decide whether or not to reach for you wallet.

73's
Richard Clark, KB7QHC

3130. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 00:06:13 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <V7X1a.10049$1q2.971601@newsread2.prod.itd.earthlink.net>
Source record: 124919

Bart Rowlett <BHRowlett@raytheon.com> wrote in message
news:3E482CCE.D6BBA8D1@raytheon.com...
>
>
> OC_CAM's Razor wrote:
>
> > H. Adam Stevens wrote:
> > > I just built one today with RG8X.
> > > It's resonant at 7.15 MHz. It's 1:1 from 7.075 to 7.225.
> > > Between 7.1 and 7.2 MHz the R component is measured greater than 3K
ohm.
> > > What's making the SWR flat? Not R.
>
> The increased bandwidth of the Bazooka over a simple wire dipole is the
> combination of three separate effects.
>
> The first is that the diameter of the radiator is large than what would
likely
> be used otherwise. This reduces the antenna characteristic impedance and
> therefore increases bandwidth slightly.
>
> The second is due to the increased resistive losses arising from the
current
> required to excite the stub. This is the predominant effect in the
majority of
> the amateur installations and could probably be accomplished more easily
> another way.
>
> The final effect is due to the reactance cancellation effect of the stubs
> attached in parallel at the feedpoint. The idea is that at resonance, the
> stubs act essentially as open circuits and have a negligible effect on the
> feedpoint impedance. Either side of resonance, the stub becomes reactive
and
> compensates the antenna feedpoint reactance. The effect of the shunt
> reactance is also to increase the resistive component of the feedpoint.
The
> resulting system will show two SWR dips if the characteristic impedance of
the
> stub, and nominal feedpoint impedance are correctly chosen. The problem
is
> that for the typical 75/80 m amateur installation, the desired feedpoint
> impedance (50 ohms usually) is too low, and the characteristic impedance
of
> the stubs is too high, for significant bandwidth improvement.

>
> Ideally, the nominal feedpoint impedance should be around 100 ohms, and
the
> characteristic impedance of the stubs around 20 ohms, in which case the
system
> will have a nice double humped SWR response, and significantly increased
> bandwidth over a simple centerfed wire dipole.
>
> Frank Witt wrote a couple of nice articles describing the necessary
> relationship.
>
> > Actually, it is R but just not that R. The SWR inside the stubs is
nearly
> > infinite. That makes the current in the stubs nearly infinite.
>
> The maximum current in a quarter wave stub will be at the short circuited
> end. Assuming the transmission line is lossless, the current at the short
is:
>
> Ishort = j * Eo / Ro where
> j = sqrt(-1)
> Eo is the voltage at the non short circuited end
> Ro is the characteristic resistance of the lossless line comprising the
stub.
>
> Assuming 1500 Watts RF power and a feedpoint impedance of 100 ohms
resistive,
> the voltage at the open end of the stub is 387 volts. This results in
7.75
> amps at the shorted end of a quarter wave stub made of 50 ohm cable.
>
> bart
> wb6hqk

Bart, I urge you to read my QST Sept1976 article that proves the stub reactance effect on reducing SWR over a bandwidth is insignificant, in fact neglible. Since the stub reactances are in parallel with the antenna input impedance the terminal resistance off resonance is increased almost in proportion to the increasing antenna reactance. When the resonant resistance of the antenna is already nearly equal to line Zo there is no significant improvement off-resonance SWR when shunted with reactance. My QST article appears on my web page at http://home.iag.net/~w2du. I'm sure you'll find it informative.

Walt, W2DU

3131. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 00:12:16 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E483FE0.C82440C@cwis.net>
Source record: 124920

Cecil,
If you have trouble with that, you will
NEVER believe where one of them happened!
Would you believe the backseat of a police
car? At a drive-in movie? And that is the
God's honest truth.
'Doc

PS - I think the stork went for a coke and
popcorn...

3132. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 00:16:40 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4840E8.1126AA54@cwis.net>
Source record: 124921

Art,
Because the two of you are the only ones to ever
have a 'problem' with the nickname! If you would
substitute 'disinterest' for 'despise', you'd have
it correct.
-=<'Doc >=-

3133. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 00:20:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jcfg4vcd3mnfn9h1jksrju1j6tune28mc9@4ax.com>
Source record: 124922

On 10 Feb 2003 14:55:29 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Now with all that put to
>one side I would be happy to return to the subject of wavelength so I
>can learn from such gurus like your self, Roy and the many others that
>frequent this thread, but I will go bananas if some place me in the
>same group of people or inovators that this newsgroup so despise. Let
>us all be friends and start again.
> And be a bit softer on the nobodies like me who enjoy the learning
>that can be obtained from their peers.
>Very, very, many regards
>Still your friend
>Art

Hi Art,

Sounds fine by me, and I'll give you every credit I perceive, as long
as you don't hide your light under a bushel. However, don't blame us
for the gusty weather playing the dickens with that flame once you
reveal it.

The simple fact of the matter is that in this type of forum IT IS YOUR
CHOICE in what to discuss, what to respond to, and where to lead. If
YOU CHOOSE to focus on abuse (yours/ours/theirs/mine/his...), I can
guarantee you that there are many that WILL follow you there and you
plainly don't have the horsepower to keep the lead.

This reminds me of the movie where a sales motivator for a aluminum
(aluminium in English) siding company introduces a selling contest for
the salesmen where:
"First place is an all expense paid vacation to Hawaii;
Second place is a set of steak knives;
Third place - you're fired."

As for "despise": stop with this sentimentality if you don't want to
attract sharks. Nobody brought it up but you (difficult lesson isn't
it?) and if you don't want it responded to (it has absolutely nothing
to do with any topic here), then don't offer it like a target on your
back.

73's
Richard Clark, KB7QHC

3134. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 00:25:36 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b29ftu$4l5$1@knossos.btinternet.com>
Source record: 124924

Walt, my question went astray due to your 'typo' about dielectric loss.
Thanks for your correction.

Allow me to re-phrase it.

If it is power loss in the coax (and the resulting severe loss in
efficiency) which broadens the bandwidth of the bazooka, what would the
bandwidth be, relative to a simple dipole, if the coax could be considered
lossless?

Reg, G4FGQ.

3135. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 00:32:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E48448F.4090009@ieee.org>
Source record: 124926

Bart Rowlett wrote:
>
> OC_CAM's Razor wrote:
>>Actually, it is R but just not that R. The SWR inside the stubs is nearly
>>infinite. That makes the current in the stubs nearly infinite.
>
> The maximum current in a quarter wave stub will be at the short circuited
> end. Assuming the transmission line is lossless, the current at the short is:

Thanks, Bart, but I already corrected that brain fart last week.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3136. Re: Capacitors for gamma match/ and more Q's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 00:36:56 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <04ednW-XUtg12NWjXTWc3A@comcast.com>
Source record: 124925

Forgot one thing. Be sure to cauterize the end of the coax to make sure the center conductor is not exposed, or melt extra plastic on it. Else it will arc or produce corona.

Tam/WB2TT
"Bill, W7TI" <jamspam@upyours.now> wrote in message
news:Xns931E9A21621F1pookster@216.168.3.50...
> <Jimnn7k@reno.rmci.net> wrote in news:yXV1a.18244$oc.2322
> @fe01.atl2.webusenet.com:
>
> > if you know the capacatance to tune it
> > (useing a variable cap, then paralleled with a known indunctance, and
> > measure the frequency of the tuned circuit
> > ----------
>
> This works well as long as the piece of coax is considerably shorter than
> a wavelength. On the order of .05 wl or so should be ok. The longer it
> is, the less it looks like a pure capacitor.
>
> Just something to keep in mind since this is a VHF antenna and
> wavelengths are short.
>
> --
> Bill, W7TI

3137. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 00:39:34 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302101639.449f976b@posting.google.com>
Source record: 124923

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0302100917.3cfd4f48@posting.google.com>...
> 'Doc <w5lz@cwis.net> wrote in message news:<3E45EBC7.EB34403B@cwis.net>...
> > Art,
> snip
> only other person that has
> > objected to it is ol'Frac. Puts you in 'good'
> > company, doesn't it?
> > 'Doc
>
> Doc, you didn't have the guts to follow up on my generous offer to
> share my latest work and thus still leave me in the small group who
> look for the new without fear of failure.

Maybe he is busy...

> In each
> of
> these cases I shared my views and thoughts and yet I am still
> characterised as a member of a group that this newsgroup despises
> even
> tho I have no connection to any of that illustrious group which goes
> right down to the beginning of not even having a college degree.

Now Art, that is just ridiculous. I've never seen any hint that anyone
from this group despises you. And don't feel bad. I didn't even
graduate from high school.
I was expelled from school when I was a junior. "11th grade" I was
hitchhiking around the country taking in the view when most people
were going to their proms...

> Yet in neither of the antennas alluded to was any evidence proffered
> to
> support breakage of any known natural or academic laws.

I couldn't say about that. I don't even know which antennas you refer
to. Thats the problem that gets people here going over some of your
posts. You are so vague and secretive , no one really knows at any
given time what exactly you are refering to or talking about. In the
particular case where I modeled an antenna you were working on, I
found according to modeling, it would not work as you said it would. I
can't remember exactly, but it seems you either had little comment, or
pretty much closed your ears to what I had to say. All I did what
model what you described. To work as you described it would, it would
have to break a few laws somewhere along the way. But even if it
didn't work, I consider this no reflection upon you. Lots of things I

cook up don't pan out.

> Now after a respite of many years of lazy retirement I have taken up
> the challenge again and without a doubt will be writing up
> another jump forward, regardles of the cynics and naysayers of this
> group
> Now I offer you be the first to have an oportunity to be part of this
> new discovery even to review the mathematics and experimental proof
> and data. What on earth do I have do, or to stop doing, to break away
> from that small group that apparently all love to throw stones at ?

They like to throw stones, because they get tired of climbing through
hoops.

> This is supposed to be a hobby for all types and where all are
> supposed to be amoung friends not only those who seek to only
> criticise.
> Frankly Doc I have no respect for you, for you are nothing but a
> talker
> and not a do er, plus a follower who gets his courage to throw stones
> by
> being a follower .

Well, I would think he must "do" something. I see him on SSTV quite a
bit on 20m. Good pix too...

> Frankly your disdain of my generous offer shows to
> me that you are not willing to expose your lack of understanding or to
> emerge from the pack and be your own man. I offered you my hand and
> you
> turned away.
> Art Unwin KB9MZ... XG

Why don't you just build whatever it is you are talking about, test
it, and then announce it if it works? You start a thread over
"wavelength", wanting opinions, etc. It seems to me, if any opinions
are offered that clash with your views, either the other people are:
#1 "gurus" who's ideas are set in stone
#2 "troublemakers" who are just out to rile ole Art
#3 "old farts" who are against trying anything new

etc, etc....Dunno, Me thinks you take this stuff too personal. If
someone tells me I'm wrong, or what I propose won't work, I don't get
too defensive. I try to analyze what I'm doing or missing. If I prove
to be wrong, I'll either end up agreeing, or else I present a case to
try to prove what I say. Whatever...I don't view it as a personal
attack. You seem to view any dissention as personal attacks. This is
just not the case in my view. You should just ignore everyone, and
build it. Thats what I would do. if it works, it works. If not...
well...Another day, another 2.31 cents..

3138. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 01:02:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2rgg4v8ustg7sahf3nnnmjlqofagaannc8@4ax.com>
Source record: 124927

On Mon, 10 Feb 2003 23:18:20 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>Richard, your opinion.
>
>I spent four years designing magnetic components for the USAF.
>Components with a relative permeability greater than 1 introduce
>harmonics. PERIOD. One of my designs was faulted by the USAF for 0.1%
>Total Harmonic Distortion with ferrite core operating in the 'linear'
>region!
>
>I'm not presenting a case for failure. The introduction of harmonics is
>100% natural and in system design they are part of the system
>performance requirements.
>
>The existence of Harmonics does not indicate failure! If that were the
>case we would all be running 10 to 20% efficient Class A amplifiers.
>[Which still generate harmonics, just fewer of them at lower
>amplitudes].
>
>You introduced 'failure'; I'm focusing on 'normal performance'.
>
>Deacon Dave, W1MCE

Hi OM,

Opinion indeed. If you want to compare credentials, be prepared to
bend your knee.

You may have designed components with ferrites (not a simple task in
consideration of all the characteristics that attend it); but your
experience and shortfall of actual technical discussion to the matter
of BalUns is showing. The quality of your rebuttal is revealed in the
contradiction of
>One of my designs was faulted by the USAF... harmonic distortion
>,,,
>The existence of Harmonics does not indicate failure!
in the space of one, short posting.

There is no necessity of design that demands that BalUn construction
requires flux linkage that should lead to these issues. It may follow
as a consequence of System failure, but that is not a fault of the
component, that is a fault of the designer, or simple accident - take
your choice and live with it.

You may choose to design a BalUn on the model of an iron core power transformer, complete to the turns ratio and such. Perfectly useful item that, although not as generally useful as other models. In other words, not the best application of ferrite for the job. Your example (held closely in your mind, but unexpressed otherwise) may be perfectly suited to a range of frequencies that better suits the job than a current (AKA choke) BalUn, but you have made no offer to distinguish these issues.

Transmission line transformers and power transformers may use ferrite, cores, and windings; and yet be entirely different beasts designed along very different lines employing identical characteristics while safely ignoring others.

One simple question will reveal a telling difference. How much resistance is presented by the two leads of one (1) wire that passes once (1) through an Amidon type 43 ferrite core of half inch OD at 10 MHz? One order of magnitude within actual value is acceptable.

73's
Richard Clark, KB7QHC

3139. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 01:10:55 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <Sn6dnQiN1LIC0NWjXTWcrg@comcast.com>
Source record: 124928

"Walter Maxwell" <w2du@iag.net> wrote in message
news:8MQ1a.9314$1q2.915791@newsread2.prod.itd.earthlink.net...
>
> Tam, have you looked at my QST article on the subject on my web page at...
> Walt, W2DU
>

Walt,
I am printing it out right now.

BTW, I haven't built it, but according to EZNEC two crossed dipoles of lengths 132 and 119 feet fed with 50 ohm coax will have an SWR less than 2:1 over all of 75/80 meters. I have put other arrangements of multiple dipoles on one feedline, and have no doubt that it will work, it just requires a lot of supports.

Tam/WB2TT

3140. Base 2M/70CM Antenna Recos

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 01:21:35 UTC
From: Joe Guthart <jguthart@attbi.com>
Message-ID: <zeY1a.59487$2H6.1197@sccrnsc04>
Source record: 124929

Looking for what type of antenna and best place on the net to purchase.
Please advise. Thanks.

3141. Base 2M/70CM Antenna Recos

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 01:21:55 UTC
From: Joe Guthart <jguthart@attbi.com>
Message-ID: <1dY1a.61301$iG3.7662@sccrnsc02>
Source record: 124930

Looking for what type of antenna and best place on the net to purchase.
Please advise. Thanks.

3142. Base 2M/70CM Antenna Recommendations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 01:24:25 UTC
From: Joe Guthart <jguthart@attbi.com>
Message-ID: <tfY1a.59710$SD6.3821@sccrnsc03>
Source record: 124931

Looking for advise on the above. Type of antenna and best place on the web
to purchase. Thanks to all who reply.

3143. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 01:31:35 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302101731.4c9e863d@posting.google.com>
Source record: 124932

Ian,one of my co-workers in Nottingham told me many stories about
flying a biplane as a fighter pilot during the war (the big one
1914/1918)
He told me once that he made a emergency landing on the fields of
Flanders.
Didn't tell me what the emergency was but it was fixed and he took off
again
For all I know he may just have wanted to pee !!!
Cheers
Art

C"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<ofS8OHCf0+R+EAcj@ifwtech.co.uk>...
> Yuri Blanarovich wrote:
> >>> First solo crossing was not Lindbergh?
> >
> >Art Unwin KB9MZ writes:
> >>
> >>The ' first plane' which is what I said to cross the Atlantic came
> >>from Europe to the U.S.
> >>Lindburgh followed up by crossing without going asleep.
> >
> >How and when was that? On a boat?
> >More info?
>
> 1919 – Alcock and Brown in a Vickers 'Vimy' biplane made the first
> non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
> 57 minutes.
>
> It was 1927 before Lindbergh made the first *solo* crossing - which was
> also very much longer, from Long Island to Paris.

3144. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 01:34:42 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931EB2D2272pookster@216.168.3.50>
Source record: 124933

Richard Clark <kb7qhc@attbi.com> wrote in
news:4lbg4vo2qd032hk0s4fdmgr0lq5rre36is@4ax.com:

> Hi Bill,
>
> What could lead to war faster than the illusion of peace?

I've been pondering that sentence for a couple of minutes and still can't make any sense out of it. The dictionary says illusion is an erroneous perception of reality. If you are erroneously perceiving peace, then you are actually in a state of war. How can being at war lead *to* war?

You did some nice tap dancing, though. Kinda wish you'da answered my original question, but never mind.

--
Bill, W7TI

3145. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 02:29:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <irng4v8un0p3l96b48rurflhpaiak63g25@4ax.com>
Source record: 124934

On Tue, 11 Feb 2003 01:34:42 -0000, "Bill, W7TI" <jamspam@upyours.now>
wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in
>news:4lbg4vo2qd032hk0s4fdmgr0lq5rre36is@4ax.com:
>
>> Hi Bill,
>>
>> What could lead to war faster than the illusion of peace?
>____
>
>I've been pondering that sentence for a couple of minutes and still can't
>make any sense out of it. The dictionary says illusion is an erroneous
>perception of reality. If you are erroneously perceiving peace, then you
>are actually in a state of war. How can being at war lead *to* war?
>
>You did some nice tap dancing, though. Kinda wish you'da answered my
>original question, but never mind.

Hi Bill,

CNN News Flash (1830 PST):
"Iraq offers that it would accept the visit of Pope John Paul II"

Still willing to support the illusion of peace? Are we at war?
Expand upon how you distinguish the two again for the rest of us
before the grim joke above plays out. All the words of wisdom can be
found in a dictionary. Getting them in the right order is another,
more difficult task.

73's
Richard Clark, KB7QHC

3146. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 02:50:51 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931EBFB9A4E85pookster@216.168.3.50>
Source record: 124935

Richard Clark <kb7qhc@attbi.com> wrote in
news:irng4v8un0p3l96b48rurflhpaiak63g25@4ax.com:

> Hi Bill,
>
> CNN News Flash (1830 PST):
> "Iraq offers that it would accept the visit of Pope John Paul II"
>
> Still willing to support the illusion of peace? Are we at war?
> Expand upon how you distinguish the two again for the rest of us
> before the grim joke above plays out.

I thought I was pretty good at deciphering obscure phraseology but I
think I've met my match. If anyone can tell me what the h*** the above
means....

On second thought, never mind.

--
Bill, W7TI

3147. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 03:05:45 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <dMZ1a.8276$ji.680880@twister.southeast.rr.com>
Source record: 124936

For what it is worth I have seen an HF disc cone. I am not sure what it was used for but it was part of a fairly extensive antenna farm in South Florida. I am pretty sure it was part of some government installation Its been over 20 years since I last saw it. Think it was down around Ft Lauderdale. My guess it is of approximately the same size as being discussed here. Practicality be damned, I would like to see how it works first hand Might even learn a thing or two.

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:a8CcnWGKacBX86CjXTWcqA@comcast.com...
> I wouldn't connect copper wire to the aluminum. They must not have known
> that in the 50s. It will corrode, and possibly fall apart in a year. Use
Al
> ground wire instead. I suspect the #8 Al is no heavier than the #14 Cu.
>
> Tam/WB2TT
> "David Cook" <nospam.davepc2@oz.net> wrote in message
> news:_nc%9.74355$to3.89821@rwcrnsc51.ops.asp.att.net...
> > I've always wanted to build one for HF ever since I saw a plan for one
in
> my
> > Radio Handbook (16th Edition, 1962). I've had excellent success with my
> > Radio Shack discone on VHF/UHF. The Radio Handbook dimensions for a 20
> thru
> > 6 meter discone are:
> >
> > Base radius: 18 feet
> > Height: 15 feet 7 inches
> > Cone element lengths: 18 feet
> > Top hat diameter: 12 feet
> > Distance from top of cone and top hat: 10 inches
> >
> > It shows a 52 ohm coax feed with no balun or RF choke required. It
quotes
> > the original design from W2RYI in July 1950 CQ magazine. Quoting the
book,
> > "The top hat is constructed of 3/4 inch aluminum angle stock, the rods
> being
> > bolted to an aluminum plate a the center of the structure. The tips of
the
> > rods are all connected together by lengths of #12 copper wire. The cone
> > elements are made from #12 copper wire and act as guy wires for the
> discone
> > structure. A 4x4 post can be used to support the discone structure."

> >
> > Doesn't sound very difficult to build. I may have to give it a try
myself
> > one of these days! I hope this helps and good luck with your project.
> >
> > 73,
> > -- Dave, WA0TTN
> >
> > "Toni - ec3dds" <ec3dds@hotmail.com> wrote in message
> > news:h99l3v8kb3co0rsjo0obmov5jbjvl54m89@4ax.com...
> > > Hi all,
> > >
> > > Would it be a crazy idea to build an HF discone for the higher bands
> > > (something like 10m~20m)? I've never read on the gain of a discone,
> > > but I imagine that it must be a little less than an equivalent
> > > groundplane. OTOH it wouldn't be much bigger than an equivalent
> > > trapped vertical.
> > >
> > > Opinions? I know this is probably not a good idea for a beginner but I
> > > would really like to build my own antenna and I think a trapped
> > > vertical is too much for me (I don't have space for normal dipoles).
> > >
> > > Could it be better than a fanned inverted-v? It would probably be the
> > > same size except for the hat.
> > >
> > > Thanks
> > >
> > > Toni - ec3dds
> > >
> >
> >
>
>

3148. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 03:19:25 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <E2_1a.71180$lj.3151752@read1.cgocable.net>
Source record: 124937
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Rich: I think you are right..Norm

"Rich Osman" <Rich@osman.com> wrote in message
news:3E4836D1.1040209@osman.com...
> FM wrote:
> > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> > purchased crystals in many years where is the best place to buy them ??
We
> > will be using the repeater on 146.01/61.Also is there a site with the
specs
> > for the channel elements ?
> > Rcvr Channel Element : KXN 1086A
> > Xmtr Channel Element : KXN 1088A
> > THANKS.
>
> I'm not certian, but I beleive these are the same element used in the
> Mitrek mobile, making them fairly common.
>
>
> --
> mailto:Rich@Osman.com http://www.rich.osman.com
> Rich Osman; POB 93167; Southlake, TX 76092 (Near DFW Airport) ARS: N1OZ
>
> If you receive something that says "Send this to everyone you know,"
> PLEASE pretend you don't know me.
>

3149. Diplexer UHF/UHF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 03:39:31 UTC
From: Ryan Clement <raydiator@yahoo.com.au>
Message-ID: <b29rbluic1@bunyip.cc.uq.edu.au>
Source record: 124939

I want to receive television stations from two transmitters which are in different directions. Both are transmitting UHF signals and I was hoping someone could explain how a diplexer works and possibly if anyone knows how to build one could they please point me in the right direction.

Thanks
Ryan

3150. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 03:43:52 UTC
From: k3bu@aol.com
Message-ID: <20030210224352.10249.00000532@mb-fc.aol.com>
Source record: 124938

>
>> >Art Unwin KB9MZ writes:
>> >>
>> >>The ' first plane' which is what I said to cross the Atlantic came
>> >>from Europe to the U.S.

Art,
can explain this statement? Who? When? How?
Or are you just throwing statements around to piss us off? Learning from Frac?

(Third request)
If the same relates to your antenna postings, then it is all clear as mud.

Yuri

3151. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 04:14:50 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <_M_1a.10495$1q2.1010899@newsread2.prod.itd.earthlink.net>
Source record: 124940

Reg Edwards wrote ..
> Walt, my question went astray due to your 'typo' about dielectric loss.
> Thanks for your correction.
>
> Allow me to re-phrase it.
>
> If it is power loss in the coax (and the resulting severe loss in
> efficiency) which broadens the bandwidth of the bazooka, what would the
> bandwidth be, relative to a simple dipole, if the coax could be considered
> lossless?
> ---
> Reg, G4FGQ.

Well, Reg, considering the coax lossless, and with the reactance effect negligible, IMO the bandwidth would increase in proportion to the increase in the diameter of the dipole. As I understand the use of the bazooka was predominately on 80m, for a dipole length of somewhat greater than 120 feet, a coax the diameter of RG-8 or RG-213, the weight would likely be too unwieldly for the small increase in bandwidth for the diameter of that coax. RG-58 would be more manageable, but again, I don't think the increase in diameter from #12 wire to that of RG-58 would be worth the effort.

Walt, W2DU

Sorry about the typo in my address.

3152. Re: Diplexer UHF/UHF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 04:15:20 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <3E48788B.8605C6AB@parelectronics.com>
Source record: 124941

Ryan Clement wrote:

> I want to receive television stations from two transmitters which are in
> different directions. Both are transmitting UHF signals and I was hoping
> someone could explain how a diplexer works and possibly if anyone knows how
> to build one could they please point me in the right direction.
>
> Thanks
> Ryan

Hi Ryan,

You have a number of choices. If the staions are 180 degrees apart- or close-
you can buy a 4 bay bow tie from Winegard and remove the reflector screen
making it bidirectional- we have used this in hundreds of MATV systems wth
great results. It is by far the simplest.

The next approach is to place notch filters on each antenna that will reduce
the level of the unwanted channel. For example a station in the north will be
received on an antenna facing west, but with a lot of ghosting and vice versa-
so each unwanted channel is notched. Notch filters are the filter of choice,
especially if the CH are close to each other (from a freq standpoint).
Diplexers for this application are probably nor feasible as the transition
region from pass to reject is quite broad and would likely either attenuate the
desired signal or not provide enough attenuation to the unwanted signal.
Dale W4OP

3153. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 04:21:34 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302102021.7bf0ae79@posting.google.com>
Source record: 124942

Roy you are bull shitting again. I gave you all the information that I could give and yes I have difficulty in communicating but I held nothing back and somebody also brought out the patent numbers that should of helped. You talk like you have never attacked anybody well give me a break. When Richard finally understood I found that he had received computor info from you, such that he was able to refute that current was not 'exactly' zero on all frequencies at the load point. You could have shared that info while others were struggling but you chose not to Nor did Richard volunteer the information why he made a 180 degree turn on my claim. Roy you'r the supposed expert so if I broke any laws of nature it should have been easy for you to point it out but you failed. I also stated a comment from Terman where you instantly returned a criticism that I should get another book, ofcourse at that time you didn't know I was repeating Terman
Roy I am also sharing my information not making money out of it nor do I mention it as many times that you mention EZNEC I also have not attacked various people that you have in a despicable way because they started an antenna business or Chip who made a claim on Fractals and there are others you have attacked under the banner of 'exposing untruths' as if I was a expert in antenna things and knew full well everything that I said was false. It was only a little while ago that you infered that one of my patents was because I fooled the patent office where I would have to explain a lot more for the likes of you. Roy you have a lot of knoweledge ,information on computors plus have done a lot of writing about antennas and yet you cannot point where what I have stated is impossible or has broken laws of nature, yet it is still you and others I turn to for advice and info. Maybe it is you who has to rethink about his superiority attitude or the objections that you raise every year if I mention my antenna work, but nary a sound about your EZNEC marketing or Cecil who has a similar thoughts about his antenna page and I can't or will not blame you for that so why all this comments of yours about me . I am not an expert but I made the antennas and they worked as I claimed. Maybe the reasons why they worked is not how I think they did but I assure you I am not a liar.
You as a antenna expert could easily clear up for all how the antenna works as could Richard but you chose to allow me to stay in a hole and stayed quiet. Remember it was you you stated that apparently I had found a way to expand frequency coverage on my second patent and if you have read any of Terman and other books who will see that the basics are clearly stated but not assigned to antennas. You did not at any time state how this must be impossible or even thought about trying it out on your computor programs because it is easier to deride.

So Roy do two things
1 explain to all how the program which you would not share with others
persuaded Richard to accept certain parts of my claim on the first
patent which you so derided
2 Use your computor program again to decide on the second claim. In
neither case do you have to do what I did by experimenting and also
push to one side the allegation made that I must be taking unfare
credit for it.
Now on this very thread I am accused of changing the subject, yet in
the past I expressed annoyance at this practice but was told it was
the internet and part of the game. What does it take to satisfy such a
huge guru such as you ...buy all your programs? It is you that is
calling the tune and you could change attitudes overnight. Maybe it is
because I challenge you sometimes that raises your ire well If I don't
understand exactly what you have said I will always ask for
substantiation after all you are not an Emperor even tho I am a
nobody
Regards
Art

e.t.c.utherebobsecionwhatnecectRoy Lewallen <w7el@eznec.com> wrote in message
news:<v4g1l4inkgh35e@corp.supernews.com>...
> Art Unwin KB9MZ wrote:
> > . . .
> > On my second patent my other hardest critic Roy . . .
>
> If you'll review the postings I've made in response to yours, you'll
> find that they mainly ask for justification for claims you've made. For
> example, when you've claimed to have designed an antenna with superior
> efficiency, I've asked what the efficiency is. When you've claimed to
> have designed one with superior bandwidth, I've asked what the bandwidth
> is, and the bandwidth of the antenna you're claiming improvement over.
> I've never once gotten a straight answer to any of these simple
> questions -- only evasions, changes of topic, and complaints about how
> we narrow minded middle-age-clerical "gurus" are persecuting you
> neo-Galileos for your brilliant discoveries. Not surprisingly, the same
> sort of simple questions bring forth the same quality of response for
> other persecuted neo-Galileos like the proponents of the CFA and EH antenna.
>
> If this qualifies me as your "hardest critic", I take pride in the
> appellation. For the record, I'm also a critic of astrology, phrenology,
> and curing cancer with quartz crystals.
>
> Roy Lewallen, W7EL

3154. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 04:25:34 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <2X_1a.10525$1q2.1012739@newsread2.prod.itd.earthlink.net>
Source record: 124943

Tarmo Tammaru wrote
> Walt,
> I am printing it out right now.
>
> BTW, I haven't built it, but according to EZNEC two crossed dipoles of
> lengths 132 and 119 feet fed with 50 ohm coax will have an SWR less than
2:1
> over all of 75/80 meters. I have put other arrangements of multiple
dipoles
> on one feedline, and have no doubt that it will work, it just requires a
lot
> of supports.
>
Yer right about the crossed dipoles. But when you say crossed dipoles they don't have to be at right angles with each other. Many years ago I put two 125-foot dipoles in parallel, fed at the same point, but separated by a two-foot rod at the far ends, which gave a reasonable increase in bandwidth. However, it was too long ago to remember the numbers. I haven't tried using two different lengths, but I would guess that different lengths might be better than two of the same length. With two of the same length the effect is similar to that of a fatter dipole.

Walt, W2DU

3155. Re: Diplexer UHF/UHF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 04:34:47 UTC
From: Ryan Clement <s4012804@student.uq.edu.au>
Message-ID: <b29uharru1@bunyip.cc.uq.edu.au>
Source record: 124944

If I used filters for each antenna how do I get the two signals into one cable? Would I still end up needing a diplexer?

Thanks

Ryan
"Dale Parfitt" <par@parelectronics.com> wrote in message news:3E48788B.8605C6AB@parelectronics.com...
>
>
> Ryan Clement wrote:
>
> > I want to receive television stations from two transmitters which are in
> > different directions. Both are transmitting UHF signals and I was hoping
> > someone could explain how a diplexer works and possibly if anyone knows how
> > to build one could they please point me in the right direction.
> >
> > Thanks
> > Ryan
>
> Hi Ryan,
>
> You have a number of choices. If the staions are 180 degrees apart- or close-
> you can buy a 4 bay bow tie from Winegard and remove the reflector screen
> making it bidirectional- we have used this in hundreds of MATV systems wth
> great results. It is by far the simplest.
>
> The next approach is to place notch filters on each antenna that will reduce
> the level of the unwanted channel. For example a station in the north will be
> received on an antenna facing west, but with a lot of ghosting and vice versa-
> so each unwanted channel is notched. Notch filters are the filter of choice,
> especially if the CH are close to each other (from a freq standpoint).
> Diplexers for this application are probably nor feasible as the transition
> region from pass to reject is quite broad and would likely either attenuate the
> desired signal or not provide enough attenuation to the unwanted signal.
> Dale W4OP
>

3156. Re: Mobile antenna for Explorer? Can't be roof, bumper or mag mount.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 05:02:31 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <n01h4v41n9238u32kqrk1vloeejns6gtpn@4ax.com>
Source record: 124945

On Mon, 10 Feb 2003 18:48:16 GMT, "Kevin Gunther"
<beeltee@optonline.net> wrote:

>Did you get my e-mail about the bracket I had made for my '94 Explorer??
>
>Kevin
>
>W1FWB
>

no i didn't, kevin. but i didn't make the original post.

rich, n9dko

3157. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 05:07:03 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <Simdnf7FjMBoGdWjXTWcqw@comcast.com>
Source record: 124946

"Walter Maxwell" <w2du@iag.net> wrote in message
news:2X_1a.10525$1q2.1012739@newsread2.prod.itd.earthlink.net...
> >
> Yer right about the crossed dipoles. But when you say crossed dipoles they
> don't have to be at right angles with each other. Many years ago I put two
> 125-foot dipoles in parallel, fed at the same point, but separated by a
> two-foot rod at the far ends, which gave a reasonable increase in
bandwidth.
> However, it was too long ago to remember the numbers. I haven't tried
using
> two different lengths, but I would guess that different lengths might be
> better than two of the same length. With two of the same length the effect
> is similar to that of a fatter dipole.
>
> Walt, W2DU
>
>
>
It's easier to model in EZNEC if you go parallel to the x and y axis (I am
lazy). I took another look at the files, and the SWR is even better if the
dipoles are arranged in an inverted V configuration (OK this required math).
Only thing is the gain for either one is less than a single dipole, because
the antenna at 90 degrees element orientation is essentially non
directional. I have a 7/18/24 MHz multiple dipole with about 15 degree
spacing.

Here are the SWR numbers for the inverted V configuration: 3.5 @ 1.89; 3.6 @
1.19; 3.7 @ 1.67; 3.8 @ 1.66; 3.9 @ 1.17; 4.0 @ 1.54.

Tam/WB2TT

3158. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 05:09:23 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302102109.711f913f@posting.google.com>
Source record: 124947

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:<3E47F358.9080901@ieee.org>...
> Ian White, G3SEK wrote:
> > 1919 – Alcock and Brown in a Vickers 'Vimy' biplane made the first
> > non-stop trans-Atlantic flight from Newfoundland to Ireland in 15 hours
> > 57 minutes.
>
> Not true, Ian. Mr. Ornithocheirus made countless "non-stop
> trans-Atlantic flights" as far back as 125,000,000 B.C.,
> continued to do so for millions of years, and did it
> without an airplane. :-)
>
> http://www.bbc.co.uk/dinosaurs/chronology/127/

Cecil surely the Americas was part of Europe at that time
or do you know exactly what year centrifugal force pushed
the Americas away to make room for the Atlantic. Or, has somebody
found an old coin marked B.C to substantiate otherwise.
By the way Ornithocheirus sounds like some sort of antenna
fed by cheap twin lead, it certainly has no match... put a picture
of it on your page
Regards
Art

3159. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 05:38:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4h32ecce9c195@corp.supernews.com>
Source record: 124948

Art Unwin KB9MZ wrote:

> . . .
> So Roy do two things
> 1 explain to all how the program which you would not share with others
> persuaded Richard to accept certain parts of my claim on the first
> patent which you so derided

No. First of all, there is no "program which [I] would not share with others". Second, I believe you might be referring to email correspondence between Richard and me. I do not reveal the contents of private email correspondence without the permission of the sender, and Richard hasn't given me such permission. That goes also for email correspondence from you, which I also keep confidential. If you object to this policy, tough. Third, you're imagining my "deriding" your patent claim. I reviewed all my newsgroup postings which contained "Unwin" and "patent" and can't find any posting meeting your description. If you can find it on Google or in your own records, I'll be glad to respond to it.

> 2 Use your computor program again to decide on the second claim. In
> neither case do you have to do what I did by experimenting and also
> push to one side the allegation made that I must be taking unfare
> credit for it.

As often happens, I don't understand what you're talking about, to "decide on the second claim". If you want me to run an EZNEC analysis for you regarding a specific patent claim, you can:

1. Explain why you're not able to do this yourself;
2. Tell me the patent number, and exactly what it is you want to know;
3. Give me permission to post the results and conclusions on the newsgroup; and
4. Ask me politely.

Then, if it looks to me like it would be of general interest to readers of the newsgroup, I'll take the time to do it.

Once again, you've publicly accused me of statements I never made and actions I never took. The last time you did this, I asked for an apology, which you never gave. It's sad that you feel it necessary to continue this sort of groundless attack. Your time would really be better spent in making even some simple measurements or calculations to back up the claims you've made about antenna improvements you've accomplished. Or even putting some numbers on your claims so they can be tested by others.

Roy Lewallen, W7EL

3160. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 05:42:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4h39pbu8h9u2e@corp.supernews.com>
Source record: 124949

You can easily make a two-wire dipole(*) into an inverted vee with the wire rotate feature -- no math required. The method is featured in the "Test Drive" tutorial. Likewise, a two-wire dipole can be rotated in azimuth using the same feature (but rotating in azimuth rather than elevation).

Roy Lewallen, W7EL

(*) A dipole made from two equal length wires, with a "split" source at their junction, instead of a single wire of twice the length with the source in the middle.

Tarmo Tammaru wrote:
>
> It's easier to model in EZNEC if you go parallel to the x and y axis (I am
> lazy). I took another look at the files, and the SWR is even better if the
> dipoles are arranged in an inverted V configuration (OK this required math).
> Only thing is the gain for either one is less than a single dipole, because
> the antenna at 90 degrees element orientation is essentially non
> directional. I have a 7/18/24 MHz multiple dipole with about 15 degree
> spacing.
>
> Here are the SWR numbers for the inverted V configuration: 3.5 @ 1.89; 3.6 @
> 1.19; 3.7 @ 1.67; 3.8 @ 1.66; 3.9 @ 1.17; 4.0 @ 1.54.
>
> Tam/WB2TT

3161. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 07:51:34 UTC
From: William Ewald <wgewald@att.net>
Message-ID: <bjah4v4mmt556tqhddp6psdehgsrbrovr1@4ax.com>
Source record: 124950

On 11 Feb 2003 03:43:52 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

>>
>>> >Art Unwin KB9MZ writes:
>>> >>
>>> >>The ' first plane' which is what I said to cross the Atlantic came
>>> >>from Europe to the U.S.
>
>Art,
>can explain this statement? Who? When? How?
>Or are you just throwing statements around to piss us off? Learning from Frac?
>
>(Third request)
>If the same relates to your antenna postings, then it is all clear as mud.
>
>Yuri

Maybe he's talking about this.

http://www.najaco.com/books/aviationchorus/firsttransatlanticflight.htm

The first non-stop solo flight was Lindbergh's.

You're right, Art is as "mysterious" as Frac. Needs the attention, I
guess.

3162. Re: HF Balcony antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 07:57:19 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0302102357.3ec93f20@posting.google.com>
Source record: 124951

"Pierre Desjardins" <pierred1@sympatico.ca> wrote in message
news:<UUU1a.30366$5x6.284255@news20.bellglobal.com>...
> Hi to all.
>
> I need advices on how to make or buy an hf antenna on a balcony.

Hi Pierre,
look at http://w1.859.telia.com/~u85920178/antennas/balcant2.htm .
Also the DL7PE monopole http://home.t-online.de/home/dl7pe/antenna.htm
or a small magnetic loop e.g. from http://www.qsl.net/dj3tz/loop2.html
might do.

73 Ivan OK1SIP

3163. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 08:45:05 UTC
From: Toni - ec3dds <ec3dds@hotmail.com>
Message-ID: <lndh4v47vcmvs5hasmkv7m09dr073kit94@4ax.com>
Source record: 124952

On 7 Feb 2003 09:45:07 -0800, paranoia28@yahoo.com (spyce girl) wrote:

>We're on the 6th floor of a concrete building. We're getting an
>extension office on the ground floor. The relative location of both
>offices inside the building is exactly the same, just on different
>floors, meaning if I looked down from the window of our 6th floor
>office, I can directly see the window of our ground floor office. Is
>this a valid line-of-sight for a wireless lan to work properly?
>
>We currently have a wired LAN on the 6th floor office. We hope to be
>able to connect PCs from the extension office to this LAN for file
>sharing purposes. I talked to a local PC vendor about this and his
>response was that "line-of-sight" standard only applied to horizontal
>distances, not vertical ones. Is this true?
>What about omni-directional antennas? Would these help and is it
>strong enough to traverse the distance of 5 floors vertically?
>
>Any info/advice would be greatly appreciated!
>
>Yours truly,
>Spycegirl

Novice question: Could a ventilation chimney (toilet, kitchen...) be
used as a waveguide?

Toni - ec3dds

3164. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 12:27:12 UTC
From: k1bqt@aol.com
Message-ID: <20030211072712.01544.00000494@mb-mk.aol.com>
Source record: 124953

>Your time would really be better spent in making even some simple measurements or calculations to back up the claims you've made<

I'm nobody to be handing out advice, Art, but isn't the awkwardness of being a first-time student more interesting than the certitude of being a long-time apologist?

Rick K1BQT

3165. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 14:13:03 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4i19tqv6fgj87@corp.supernews.com>
Source record: 124954

Hey, I'm a PhD dropout!! ;^)
I build wire antennas and measure the field strength. It's fun!
I have RG8X bazookas on 160, 80 and 40.
They work, but only if they're tuned precisely. I have the scrap coax to prove it!
1:1 SWR over >100KHZ with the same field strength as a wire dipole.
Trying to understand them is not silly, of course. Can't be much loss, the field strength holds up.
If anyone has some peer-reviewed literature articles I'd like to see 'em.
I'll be at The University of Texas on Friday,
I can go to the Engineering and Physics libraries.
In the mean time I'm going to put an RF ammeter at the short and see.
H.
NQ5H

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message news:b296eq$ct5$1@venus.btinternet.com...
> Bazookas fall in the same category as EH and similar antennas.
>
> For many years they do no more than provide food for the wafflers, old
> wives, 'learned' article authors, even Ph.D's who frequent and degrade these
> newgroups.
>
> Which doesn't say very much for 'technical editors' and proprietors of the
> amateur magazines and periodicals hoping to make some sort of a 'confidence
> trickster' living out of innocent novices sincerely hoping to learn
> something.
>
> But t'was ever thus !
> --
> ========================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ========================
>
>

3166. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 14:32:51 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302110632.1bf88d95@posting.google.com>
Source record: 124955

William Ewald <wgewald@att.net> wrote in message
news:<bjah4v4mmt556tqhddp6psdehgsrbrovr1@4ax.com>...
> On 11 Feb 2003 03:43:52 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:
>
> >>
> >>> >Art Unwin KB9MZ writes:
> >>> >>
> >>> >>The ' first plane' which is what I said to cross the Atlantic came
> >>> >>from Europe to the U.S.
> > >
> > >Art,
> > >can explain this statement? Who? When? How?
> > >Or are you just throwing statements around to piss us off? Learning from Frac?
> > >
> > >(Third request)
> > >If the same relates to your antenna postings, then it is all clear as mud.
> > >
> > >Yuri
>
> Maybe he's talking about this.
>
> http://www.najaco.com/books/aviationchorus/firsttransatlanticflight.htm
>
> The first non-stop solo flight was Lindbergh's.
>
> You're right, Art is as "mysterious" as Frac. Needs the attention, I
> guess.

Now , now usualy by the time I get an update the question has already
been answered as it was for Yuri.
Secondly it was you who made the distinction regarding "solo" which
was exactly my point. Many people here the same thing so often that
they then accept it as truth, in fact Yuri makes my point with his
"boat" comment. Is it possible the same thing happened with Maxwell
and Heaviside ?
Regards
AQrt

3167. LNB Polarization Difficulty and Physical Orientation

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 14:54:44 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E490EC3.355FFF31@earthlink.net>
Source record: 124956

I have an older Chaparral/HTS LNB. See attached jpg file. I got it used and without instructions.
I have it in operation on a 10' sat dish, but the polarization seems to be off in that when I look
at Galaxy 1 channel 5 (Arts Showcase) it appears on 6. When I looked down the feedhorn, I could see
the antenna rotates to the opposite position than required. For example, channel 6 should be Vert
polarized but the wire hook antenna is horizontal. Rotating the feedhorn effectively from 0, 90 and
180 degrees failed to get a signal on channel 5. Maybe this LNB requires some position other than
the ones I tried. At least one orientation produces no signal at all. Is there some sort of mounting
template that I need?

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

A computer buzz word: TWAIN, used with devices like a scanner. Ever wonder
what it means? Technology without an interesting name.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

3168. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 15:10:18 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4i4l995svjb23@corp.supernews.com>
Source record: 124957

Sorry..... Bourbon talking.
Not all from scratch, alcohol and permutations inflate the count.
Built two from scratch with old sheet metal and a then owned a few rods.
I have included mobile rigs and antennas for the group
Study? I went to high school in Waco TX in the 60's. Study what?.It was a joke.
1930 Ford roadster body on a tube frame, Pontiac V8
1932 Ford 5-window coupe with a 60 over 283.(Wheelies)
1937 Ford coupe with a 60 over 283. (Chromed dash, Broken drive shafts)
1961 Rambler (Gonset Sidewinder 5/8 wave whip - worked W2HVC in Wichita from Waco on 2 meters)
(Indestructible car, I tried)
1964 Malibu with a 283 and three-on-the-tree, dropped a valve
1964 Malibu with a 425 horse 396 and Muncie 4 speed from a 66 Impala - brutal car-
67 GTO (added headers which helped mileage a LOT)
68 Grand Prix (Swan 260 and a Hustler on the trunk)
69 Vette (worst car I ever owned, hell it was the worst five cars I ever owned)
70 VW Microbus (the hippie years)
69 BMW 2002 (these things are fast! ICOM 735 and a Hustler, very quiet ignition)
72 BMW 2002tii (Best car so far -period- , drove it 24 years and 300,000 miles. Never broke.)
Mobile rig was a Kenwood tri-bander on 2, 220, and UHF with Larsen on glass antennas.
87 Carrera (Why didn't I do this sooner?)
97 Carrera Cab
01 Carrera4 Cab (I never knew anything could go around wet corners like this.)
(Wichita - Austin 7 hours) It is in the garage. I use a handheld.
H.
NQ5H

"Russ" <carlzomer@hotmail.com> wrote in message news:jc5d4v8aar8gtqa88juf3s1itf5tjg8jvb@4ax.com...
> On Sat, 8 Feb 2003 23:27:54 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> >I am returning to drag racing; I built 13 cars from scratch in high school.
> >Eliminates the bullshit without the death of combat. Error.
> >As for the rest of you: get a field strength meter.
> >H.

> >NQ5H
>
> Hmmm, let's see. That's four cars per year plus an extra in a
> four-year school. One every three months. I wonder when there was
> time for, oh, study? Must have had the delivery truck coming every
> day with parts.
>
> Russ
> Datsun/Nissan factory certified tech, '70 - '75

3169. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 15:11:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E49129E.3050406@ieee.org>
Source record: 124958

Art Unwin KB9MZ wrote:
> OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote:
>>http://www.bbc.co.uk/dinosaurs/chronology/127/
>
> Cecil surely the Americas was part of Europe at that time
> or do you know exactly what year centrifugal force pushed
> the Americas away to make room for the Atlantic.

They were closer then than now but still quite a flight from
Brazil during our winter to England in the summer.

> By the way Ornithocheirus sounds like some sort of antenna
> fed by cheap twin lead, it certainly has no match... put a picture
> of it on your page

The above web page contains a picture including where the
continents were 127 million years ago. With a wingspan of
12M, Ornithocheirus would have been resonant on 24.95 MHz.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3170. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 15:18:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E491437.5070303@ieee.org>
Source record: 124959

H. Adam Stevens wrote:
> 1:1 SWR over >100KHZ with the same field strength as a wire dipole.

The ARRL Antenna Book indicates that the bazooka is about 3%
less efficient than a dipole at the resonant frequency. Can
you measure field strength with better than 1% accuracy?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3171. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 15:33:38 UTC
From: k3bu@aol.com
Message-ID: <20030211103338.01077.00000240@mb-fh.aol.com>
Source record: 124960

```
>
>> >>
>> >>> >Art Unwin KB9MZ writes:
>> >>> >>
>> >>> >>The ' first plane' which is what I said to cross the Atlantic came
>> >>> >>from Europe to the U.S.
>> >
>> >Art,
>> >can explain this statement? Who? When? How?
>> >Or are you just throwing statements around to piss us off? Learning from
>Frac?
>> >
>> >(Third request)
>> >If the same relates to your antenna postings, then it is all clear as mud.
>> >
>> >Yuri
>>
>> Maybe he's talking about this.
>>
>> http://www.najaco.com/books/aviationchorus/firsttransatlanticflight.htm
>>
>> The first non-stop solo flight was Lindbergh's.
>>
>> You're right, Art is as "mysterious" as Frac. Needs the attention, I
>> guess.
>
>Now , now usualy by the time I get an update the question has already
>been answered as it was for Yuri.
>Secondly it was you who made the distinction regarding "solo" which
>was exactly my point. Many people here the same thing so often that
>they then accept it as truth, in fact Yuri makes my point with his
>"boat" comment. Is it possible the same thing happened with Maxwell
>and Heaviside ?
>Regards
>AQrt
>
>

No, it was not answered!
Art made the statement: "The ' first plane' which is what I said to cross the
Atlantic came FROM Europe TO the U.S."
In my poor English I understand that that there was (Art claims) a plane which
CROSSED Atlantic (on a boat?) FROM Europe TO the US.
```

Again, no explanation or references, just mumbo-jumbo. I guess this example 'splains "problems" Art has with us stupid mortals. Amen to that one, goes to the same jokers file with Frac and other "inventors."

If one makes the statement, than it should be able to explain it to those unenlightened or argue with those who know more/less.

As far as the planes go, first was the American Navy NC4 team who flew from NY to Portugal with stopover in Azores. Followed by nonstop team of British from Newfoundland to Ireland. Followed by solo from NY to Paris by Lindbergh. If the British brought their plane from Britannia to Canadia on a boat, than it might have been the first plane to CROSS Atlantic. But Art knows something that media are "suppressing" and can't tell.
My regards to Maxwell and Heaviside, were they on the same boat?

73 and sayonara

Yuri

3172. Re: LNB Polarization Difficulty and Physical Orientation

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 15:40:53 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <3E491936.2B98B03@parelectronics.com>
Source record: 124961

Wayne Watson wrote:

> I have an older Chaparral/HTS LNB. See attached jpg file. I got it used and without instructions.
> I have it in operation on a 10' sat dish, but the polarization seems to be off in that when I look
> at Galaxy 1 channel 5 (Arts Showcase) it appears on 6. When I looked down the feedhorn, I could see
> the antenna rotates to the opposite position than required. For example, channel 6 should be Vert
> polarized but the wire hook antenna is horizontal. Rotating the feedhorn effectively from 0, 90 and
> 180 degrees failed to get a signal on channel 5. Maybe this LNB requires some position other than
> the ones I tried. At least one orientation produces no signal at all. Is there some sort of mounting
> template that I need?
>

Hi Wayne,
Vertical and horizontal are w/ respect to the earth's equator. Stand behind your dish and look at the
axis of rotation (it points to the north star)- when the feed probe is parallel to this axis, you have
horizontal polarity. Vertical then is obviously 90 degrees to this axis.
With that said, your CH5/CH6 problem is likely related to long term drift in the LNB's Local Oscillator.
This can be compensated for in the receiver by selecting the menu that allows for global (meaning every
CH) LNB offset- going to CH5 and the proper polarity, vary the L.O. freq until CH 5 video appears.

Dale W4OP

3173. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 15:46:49 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4i6pnsadu9o20@corp.supernews.com>
Source record: 124962

Maybe, but definitely not 0.1%.....
(and 3% is very little to give up for the bandwidth)
Here's the SWR vs RF data for my 40 meter RG8X bazooka
I measured this yesterday using a 1 meter dipole about 300 feet
from the bazooka for the sense antenna .....
MHz SWR RF
7.00 1.2 89
7.03 1.1 93
7.06 1.0 97
7.09 1.0 97
7.12 1.0 97
7.15 1.0 99
7.18 1.0 100
7.21 1.0 97
7.24 1.0 97
7.27 1.1 93
7.30 1.2 89
it's 3% down at the 1:1 SWR extremes and it's not tuned perfectly
the alternative is a tuner with the associated insertion loss and
inconvenience
H.
NQ5H

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E491437.5070303@ieee.org...
> H. Adam Stevens wrote:
> > 1:1 SWR over >100KHZ with the same field strength as a wire dipole.
>
> The ARRL Antenna Book indicates that the bazooka is about 3%
> less efficient than a dipole at the resonant frequency. Can
> you measure field strength with better than 1% accuracy?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3174. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 16:18:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2b7ogcip1@sparta.btinternet.com>
Source record: 124963

"H. Adam Stevens" wrote
> Here's the SWR vs RF data for my 40 meter RG8X bazooka
> I measured this yesterday using a 1 meter dipole about 300 feet
> from the bazooka for the sense antenna ....
> MHz SWR RF
> 7.00 1.2 89
> 7.03 1.1 93
> 7.06 1.0 97
> 7.09 1.0 97
> 7.12 1.0 97
> 7.15 1.0 99
> 7.18 1.0 100
> 7.21 1.0 97
> 7.24 1.0 97
> 7.27 1.1 93
> 7.30 1.2 89
> it's 3% down at the 1:1 SWR extremes and it's not tuned perfectly
> the alternative is a tuner with the associated insertion loss and
> inconvenience

==========

Interesting. Could you provide a little more information please?

What is length and Zo of feedline?

Is there a tuner between feedline and transmitter?

Where in the system is the SWR meter located?

Reg, G4FGQ

3175. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 16:23:48 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4i8v2l5tlko7f@corp.supernews.com>
Source record: 124964

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b2b7ogcip1@sparta.btinternet.com...
> "H. Adam Stevens" wrote
> > Here's the SWR vs RF data for my 40 meter RG8X bazooka
> > I measured this yesterday using a 1 meter dipole about 300 feet
> > from the bazooka for the sense antenna ....
> > MHz SWR RF
> > 7.00 1.2 89
> > 7.03 1.1 93
> > 7.06 1.0 97
> > 7.09 1.0 97
> > 7.12 1.0 97
> > 7.15 1.0 99
> > 7.18 1.0 100
> > 7.21 1.0 97
> > 7.24 1.0 97
> > 7.27 1.1 93
> > 7.30 1.2 89
> > it's 3% down at the 1:1 SWR extremes and it's not tuned perfectly
> > the alternative is a tuner with the associated insertion loss and
> > inconvenience
>
> ==========
>
> Interesting. Could you provide a little more information please?
>
> What is length and Zo of feedline?
100 feet of the same RG8X as the bazooka is made from
>
> Is there a tuner between feedline and transmitter?
no
>
> Where in the system is the SWR meter located?
feed point
> ---
> Reg, G4FGQ
>
>
cheers
H.
NQ5H

3176. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 16:31:16 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v4i9aj79277o98@corp.supernews.com>
Source record: 124965

This might cause one to believe the bazooka works in a real world
environment, all protestations by the learned guru's to the contrary.

While one may argue that the originator missed the mark on the explanation
of how it works, in fact if one is willing to trade 3% efficiency for a wide
bandwidth, it accomplishes it's stated purpose.

Many of us are more concerned with making contacts, rather than the mental
masturbation of the specific location of an electron in a conjunctive match.

That is not to take one wit from you and others on this forum who obviously
enjoy counting the attendees at the angels ball on the pinhead.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E491437.5070303@ieee.org...
> H. Adam Stevens wrote:
> > 1:1 SWR over >100KHZ with the same field strength as a wire dipole.
>
> The ARRL Antenna Book indicates that the bazooka is about 3%
> less efficient than a dipole at the resonant frequency. Can
> you measure field strength with better than 1% accuracy?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3177. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 16:36:02 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4i9m0r6a786c0@corp.supernews.com>
Source record: 124966

ROTFLMAO made my day!
Build one.
Tune it PERFECTLY. It will reward you. Don't and it won't.
H.
NQ5H

PS
I still don't understand how R can be converted to L or C, but I don't care.

"Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in message
news:v4i9aj79277o98@corp.supernews.com...
> This might cause one to believe the bazooka works in a real world
> environment, all protestations by the learned guru's to the contrary.
>
> While one may argue that the originator missed the mark on the explanation
> of how it works, in fact if one is willing to trade 3% efficiency for a
wide
> bandwidth, it accomplishes it's stated purpose.
>
> Many of us are more concerned with making contacts, rather than the mental
> masturbation of the specific location of an electron in a conjunctive
match.
>
> That is not to take one wit from you and others on this forum who
obviously
> enjoy counting the attendees at the angels ball on the pinhead.
>
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E491437.5070303@ieee.org...
> > H. Adam Stevens wrote:
> > > 1:1 SWR over >100KHZ with the same field strength as a wire dipole.
> >
> > The ARRL Antenna Book indicates that the bazooka is about 3%
> > less efficient than a dipole at the resonant frequency. Can
> > you measure field strength with better than 1% accuracy?
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>

3178. WTB: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 16:36:07 UTC
From: SWL <radiovintage@hotmail.com>
Message-ID: <XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net>
Source record: 124967
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only
needs 3 frequencies and it is easier and cheaper for him to count the
clicks.Low power is fine too.
A plus would be any of the frequencies he needs which are:
444.55 +
443.70 +
446.00 simplex
THANKS

3179. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 16:52:02 UTC
From: k3bu@aol.com
Message-ID: <20030211115202.23144.00000452@mb-bd.aol.com>
Source record: 124819

W4JLE:
>
>This might cause one to believe the bazooka works in a real world
>environment, all protestations by the learned guru's to the contrary.
>
....snippydy duda

Very well formulated Fred!
Now, will we see recall of all the torn down Bazooka dipoles?

Now stand by for posts: "where could NQ5H go wrong measuring it"
Ain't antennas fun?

Yuri

3180. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 16:52:03 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E492A28.4E20AF4A@attbi.com>
Source record: 124968

Hey Guys we have a fabulous bird here!!
Go to the web page and read the tag line on Ornithocheirus!

Why that critter can fly 500KM with A [emphasis added][does that mean one] flap of it's wings.

Wing span of 12 meters!! Do you think the freebanders have discovered that?

DD, W1MCE

OC_CAM's Razor wrote:
>
> Art Unwin KB9MZ wrote:
> > OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote:
> >>http://www.bbc.co.uk/dinosaurs/chronology/127/
> >
> > Cecil surely the Americas was part of Europe at that time
> > or do you know exactly what year centrifugal force pushed
> > the Americas away to make room for the Atlantic.
>
> They were closer then than now but still quite a flight from
> Brazil during our winter to England in the summer.
>
> > By the way Ornithocheirus sounds like some sort of antenna
> > fed by cheap twin lead, it certainly has no match... put a picture
> > of it on your page
>
> The above web page contains a picture including where the
> continents were 127 million years ago. With a wingspan of
> 12M, Ornithocheirus would have been resonant on 24.95 MHz.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3181. What place makes good custom QSL cards?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 17:06:53 UTC
From: fch <na@hle.com>
Message-ID: <3E492DAD.3F124E2@hle.com>
Source record: 124824

.

3182. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 17:07:11 UTC
From: richardharrison@webtv.net
Message-ID: <27109-3E492DBF-137@storefull-2313.public.lawson.webtv.net>
Source record: 124820

Richard Clark wrote:
"R = E/I

IS Ohm`s Law, by mandate of the World`s Metrology Bureaus through the construction of the Primary Standard for Resistance. We start with a known volume of mercury in a toleranced trough---."

I agree that Ohm`s law arranged or solved for "R" is the reasonable way to define "R". R is the ratio of voltage to current, not a resistor.

I don`t recall the mercurial standard for "ohms", but that sure doesn`t mean it doesn`t exist.

I have read:
The "ohm" is related to the ampere on the basis of heating effect. The power dissipated in a resistor is proportional to the resistance and the square of the current flowing through the resistance. One ohm is that resistance which will dissipate one watt (determined by calorimeter?) when a current of one ampere is flowing through it. This definition was adopted at the Paris Congress of Electricians in 1881, according to John A. Kuecken in "How to Measure Anything with Electronic Instruments".

Best regards, Richard Harrison, KB5WZI

3183. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 17:17:31 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ic3qef7du088@corp.supernews.com>
Source record: 124821

yup!
Ani't it amazing?
Grown man strings wires between oak trees;
Walks around in a pasture with a fishing pole!
Cows are bewildered!
<grin>
H.
NQ5H

"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030211115202.23144.00000452@mb-bd.aol.com...
> W4JLE:
> >
> >This might cause one to believe the bazooka works in a real world
> >environment, all protestations by the learned guru's to the contrary.
> >
> ....snippydy duda
>
> Very well formulated Fred!
> Now, will we see recall of all the torn down Bazooka dipoles?
>
> Now stand by for posts: "where could NQ5H go wrong measuring it"
> Ain't antennas fun?
>
> Yuri

3184. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 17:28:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ou8i4vs5fi7aeutl68ioorilrhkq7lfrs9@4ax.com>
Source record: 124822

On Tue, 11 Feb 2003 01:02:12 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>
>Transmission line transformers and power transformers may use ferrite,
>cores, and windings; and yet be entirely different beasts designed
>along very different lines employing identical characteristics while
>safely ignoring others.
>
>One simple question will reveal a telling difference. How much
>resistance is presented by the two leads of one (1) wire that passes
>once (1) through an Amidon type 43 ferrite core of half inch OD at 10
>MHz? One order of magnitude within actual value is acceptable.
>
>73's
>Richard Clark, KB7QHC

Hi All,

Given the paucity of response, and in serving the purpose of a
newsgroup's function to spread information, the solution follows with
annotations.

For those proficient in the arts of employing ferrite for the purpose
of building a BalUn or power transformer, Amidon provides a very
detailed reference of their ferrite formulations across the spectrum
of their inventory of beads, cores, inductors and other product.

For applications above 1 MHz, ferrite offers what would normally be a
huge liability: LOSS. This is not the loss described by my
correspondent, which is more properly a failure mode of poor
application, but rather the loss usefully engineered to a purpose and
by that so purposely multiplied as to snub that same misapplication's
fate.

According to Amidon, their #43 Material for a '101' sized bead (OD
.138") at 10 MHz is 15 Ohms. There are other formulations that offer
more, there are formulations that offer less. This was selected as an
obvious mid-range example for that frequency and to illustrate I did
not have to hi-grade the selection to force an argument. Their chart
reveals that this formulation exhibits lower resistance to that single
wire at lower frequencies, and higher resistance at higher
frequencies. So again, this is a middlin' value and not one from the
far reaches of the galaxy employed as the outlier to challenge a
statement with bogus interference.

But wait! That's not ALL! For that simple dimension, Amidon offers a correlation to other size beads and cores to extrapolate the answer to them. For a bead/core of OD = 0.5" (actually 0.562") increases that value to 6.4 * 15 Ohms = 96 Ohms

A value offered to me of 10 Ohms to 1000 Ohms would have been sufficient as a response to my question quoted above.

Lets take that lowest value to illustrate that this argument does not need to be leveraged from the outrageous selection of the most extreme characteristics: 10 Ohms (if I am allowed to round up).

This is for ONE WIRE passing through the center of the core, a modest core (again, I have not employed any absurd selection that stretches the imagination, simply one that should easily fit descriptions offered and common, ordinary experience). ONE WIRE does not a BalUn make, nor does ONE pass through the core constitute a transformer of the conventional usage. No, the type of transformer I am responding to is the type that conforms to the method of employing winding turns ratio to employ step-up/step-down relationships commonly understood in the low frequency (60 Hz) power transformers, audio transformers (20-20KHz), and even DC-DC converters (up to 100 KHz).

For those applications I would expect that we might find as many at 5 turns? Would I be charged with the abuse of design to go that far? 5 passes through the core will jack up the impressed resistance from 10 Ohms (the lowest value of a middlin' example) to 250 Ohms FOR ONE CONVENTIONAL WINDING. This is 250 Ohms of loss, not reactance (which is also present, but not discussed here at this time).

For the transformer designer who maintains there are problems to expect from core saturation, the obvious question is how do you pump enough current through those same 5 turns (passes through the core) to achieve this, much less even approach a fraction of it? Could I expect a current of 1 Ampere to survive? to fail? Would I be chastised for forcing an argument to select this current arbitrarily? That means that the coil will drop 250V as a dummy load without any discussion of its secondary or its principle load, the antenna. We face the obvious symptoms of failure long before we move to the question of: does the current saturate the core? That question is so far off the mark as to characterize a wholesale misapplication of ferrite for THAT form of transformer design.

Clearly this is the start of a "designed for failure" scenario. I could complete the analysis but the accumulation of erroneous application and poor design has already eclipsed any useful purpose and condemns this example to the dust-heap.

73's
Richard Clark, KB7QHC

3185. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 17:31:40 UTC
From: tdonaly@aol.com
Message-ID: <20030211123140.20741.00000443@mb-fq.aol.com>
Source record: 124823

Dave wrote,
>
>Hey Guys we have a fabulous bird here!!
>Go to the web page and read the tag line on Ornithocheirus!
>
>Why that critter can fly 500KM with A [emphasis added][does that mean
>one] flap of it's wings.
>
>Wing span of 12 meters!! Do you think the freebanders have discovered
>that?
>
>DD, W1MCE
>
The BBC exaggerates. The Illustrated Encyclopedia of Prehistoric Flying Reptiles, by Dr. Peter Wellnhofer lists Ornithocheirus wing span as being 2.5 meters. The really big one was Quetzalcoatlus Northropi with a wingspan of 11 to 12 meters. It lived in west Texas at the end of the cretaceous and became extinct at the end of that period, along with the Texas Democratic Party which dates from the same time.
73,
Tom Donaly

3186. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 17:37:19 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302110937.56af482a@posting.google.com>
Source record: 124825

Roy Lewallen <w7el@eznec.com> wrote in message news:<v4h32ecce9c195@corp.supernews.com>...
> Art Unwin KB9MZ wrote:
>
> > . . .
> > So Roy do two things
> > 1 explain to all how the program which you would not share with others
> > persuaded Richard to accept certain parts of my claim on the first
> > patent which you so derided
>
> No. First of all, there is no "program which [I] would not share with
> others". Second, I believe you might be referring to email
> correspondence between Richard and me. I do not reveal the contents of
> private email correspondence without the permission of the sender, and
> Richard hasn't given me such permission. That goes also for email
> correspondence from you, which I also keep confidential. If you object
> to this policy, tough. Third, you're imagining my "deriding" your patent
> claim. I reviewed all my newsgroup postings which contained "Unwin" and
> "patent" and can't find any posting meeting your description. If you can
> find it on Google or in your own records, I'll be glad to respond to it.
>
> > 2 Use your computor program again to decide on the second claim. In
> > neither case do you have to do what I did by experimenting and also
> > push to one side the allegation made that I must be taking unfare
> > credit for it.
>
> As often happens, I don't understand what you're talking about, to
> "decide on the second claim". If you want me to run an EZNEC analysis
> for you regarding a specific patent claim, you can:
>
> 1. Explain why you're not able to do this yourself;
> 2. Tell me the patent number, and exactly what it is you want to know;
> 3. Give me permission to post the results and conclusions on the newsgroup;
> and
> 4. Ask me politely.

Now you are bullshitting again, It is not a coincidence that a thread
could last for more than 600 entries which I didn't even open but I
bet you were one of the parties in that long debate. You also talk
like i never was polite to you in fact I was in awe of you and your
knoweledge but now I realise that before you took on this banner to
critisize the propergation of untruths
with the use of a knife that you yourself was a part of the QST
publications that reprinted untruths in advertising before Force !2
came along and forced a turn around in policy

Now #1 I have done it all myself by programing and by experimental work and I have shared it with all. Yes I used a competitive program called AO which is not to your liking and yes what I offered in that area was rejected.
Since I am not educated as well as others I have shared my info with all in the hope that further light on the subject would emerge and I have brought it up each year for many years. I confided with one perpetual critic that I would not bring that subject any more because it becomes an open door for attack and dissention. On top of that your particular product by not being able to revolve around impeadance makes it very difficult to arrive at the came conclusions that can be deduced by the reading of academic books. And let me state again I am not an expert in this field but I read because it is a hobby and logic is not only confined to those in the antenna field.
Now to number 2
I brought up the actual antenna subject for discussion for many years on this newsgroup, it was the newsgroup who obtained the patent numbers and even printed them last year. I don't commit such numbers to memory, if it was my first patent then I would have as a matter of pride. A6t the same time you must be aware that what and how something is written in a patent is largely up to the examiner. Mine was one whose primary language was not englisha d also was not skilled enough to know the difference between series and parallel circuits such that I had to appeal to Congressb for help and eventually the patent office dropped it to one claim which they devised.
#3 Nobod, I welcome different points of view if they are constructive needs permission to prove or disprove my statements or claims o9r indeed the logic that forms my statements. True the idea of combining a loop with a radiator of random lenth seems strange,after all the hobby is spread around wavelength so I can understand resistance to change as it is a human characteristic. But after many threads over time I was flabergasted when Richard finally saw the logic and swung around no one questioned him as it seems there was more interest in derision. I would also point out that in a E mail to you I offerred the oportunity for you to write it up and I would give you all the academic and test results required not because of being nice but a recognitition of info that you supply to all plus the acknowledgement that I am a poor communicator.
Note also the offer I made to the Doctor in a effort to share and unite but it seems nothing has changed over the years.
Now #3
Yes I can aski you nicely pretty please again but I know you are playing games
of debate but I repeat I would give you all regardless that evidence will make me a fool but on one condition and that is you hold back for a while anything that relates to my present work even though I will make you privy to the academic links,logic, previous scientists and anything that I have. Then you can move on and do the same thing on the second pattern e.t.c.but now I question again Richard has done this already it was also obviouse when he moved on to the fact that

current does not always stays at zero at the load point as frequency
is changed, I would have preffered we used the term A.C. current but
again all went off tangent. Richard is a clever and knoweledgable
person and is acvcepted as a guru ask him to explain instead of
focussing on a nobody like me
Note again it was noit my wish to bring the subject to my former
obsession, the thread was on wavelength,the biggest change was on
Reg's post on heaviside which for some reason was directed at me and
the aeroplane was in response to that where I indicated to the effect
that if it is repeated enough times things become believable. Yuri,
bless his heart gave confirmation to that thought, Reg was also a
recipience of an unkind comment at the same time regarding the
russling of his dress e.t.c. and moved away leaving me as the only
target left.
I think I have said enough, I have no intention in spreading this
thread to 600 issues since the original question has gone by the
wayside in the absence of logical responce. I would also say I have
deep respect for you and your knoweledge and have no emnity towards
you but if I feal I am a recipient of a rabid crowd of stone throwers
then I will respond even tho my methods of
reaction or communications are poor....I am reacting not instigating
and dislike extremely pissing contests that revolve around winning a
debate as opposed to the seach for knoweledge.
Still your friend
Best regards
Art Unwin KB9MZ....XG
a nobody as far as antennas go and somebody who is imperfect in many
ways as well as being cranky but, and it is a big but, I am
not a liar or pursuing a trail to mislead.
I am willing to put all this aside and hold out my hand even tho it
will appear as a sign of weakness and thus increases the growth of
manure

snip..... done to shorten the response space

> accomplished. Or even putting some numbers on your claims so they can be
> tested by others.
>
> Roy Lewallen, W7EL

3187. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 17:40:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rhdi4vkstafk9pkdf8ur759uqghid09ifk@4ax.com>
Source record: 124826

On 11 Feb 2003 17:31:40 GMT, tdonaly@aol.com (Tdonaly) wrote:

>Dave wrote,
>>
>>Hey Guys we have a fabulous bird here!!
>>Go to the web page and read the tag line on Ornithocheirus!
>>
>>Why that critter can fly 500KM with A [emphasis added][does that mean
>>one] flap of it's wings.
>>
>>Wing span of 12 meters!! Do you think the freebanders have discovered
>>that?
>>
>>DD, W1MCE
>>
>The BBC exaggerates. The Illustrated Encyclopedia of Prehistoric
>Flying Reptiles, by Dr. Peter Wellnhofer lists Ornithocheirus wing
>span as being 2.5 meters. The really big one was Quetzalcoatlus
>Northropi with a wingspan of 11 to 12 meters. It lived in west Texas
>at the end of the cretaceous and became extinct at the end of that
>period, along with the Texas Democratic Party which dates
>from the same time.
>73,
>Tom Donaly
>

Hi Tom,

Was it found snagged in the trailing twin lead feed of a long dipole?

73's
Richard Clark, KB7QHC

3188. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:12:18 UTC
From: tdonaly@aol.com
Message-ID: <20030211131218.20699.00000445@mb-fq.aol.com>
Source record: 124827

Richard Clark wrote,
>
>>The BBC exaggerates. The Illustrated Encyclopedia of Prehistoric
>>Flying Reptiles, by Dr. Peter Wellnhofer lists Ornithocheirus wing
>>span as being 2.5 meters. The really big one was Quetzalcoatlus
>>Northropi with a wingspan of 11 to 12 meters. It lived in west Texas
>>at the end of the cretaceous and became extinct at the end of that
>>period, along with the Texas Democratic Party which dates
>>from the same time.
>>73,
>>Tom Donaly
>>
>
>Hi Tom,
>
>Was it found snagged in the trailing twin lead feed of a long dipole?
>
>73's
>Richard Clark, KB7QHC
>
Hi Richard,
the book doesn't say, but most likely, yes.
73,
Tom Donaly, KA6RUH

3189. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:22:29 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E493F65.7060700@ieee.org>
Source record: 124828

H. Adam Stevens wrote:
> Maybe, but definitely not 0.1%.......
> (and 3% is very little to give up for the bandwidth)

Well, that's your opinion. IMO, a bazooka is not worth
the effort. And we are looking at exactly the same set
of tradeoffs. Different strokes for different folks.

My 130 ft. dipole covers the entire 80m band with a
low SWR without a tuner simply by varying the length
of the ladder-line. And it is more efficient than your
bazooka.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3190. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:27:44 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ig7e48n9v676@corp.supernews.com>
Source record: 124829

But you didn't have to build it over and over to get it right!
;^)
H.
NQ5H
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E493F65.7060700@ieee.org...
> H. Adam Stevens wrote:
> > Maybe, but definitely not 0.1%.......
> > (and 3% is very little to give up for the bandwidth)
>
> Well, that's your opinion. IMO, a bazooka is not worth
> the effort. And we are looking at exactly the same set
> of tradeoffs. Different strokes for different folks.
>
> My 130 ft. dipole covers the entire 80m band with a
> low SWR without a tuner simply by varying the length
> of the ladder-line. And it is more efficient than your
> bazooka.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3191. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:29:06 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4940F2.1090009@ieee.org>
Source record: 124830

H. Adam Stevens wrote:
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
>>What is length and Zo of feedline?
>
> 100 feet of the same RG8X as the bazooka is made from.

Hmmmm, a 7% loss in the transmission line. My variable
length ladder-line has much less loss than that and my
dipole is a more efficient radiator than a bazooka.
What's wrong with this picture?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3192. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:32:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4941AC.3060708@ieee.org>
Source record: 124831

H. Adam Stevens wrote:
> ROTFLMAO made my day!
> Build one.
> Tune it PERFECTLY. It will reward you. Don't and it won't.

By my calculations, it will reward me with 10% more loss and
less bandwidth than my variable length open-wire fed 130 ft.
dipole which is useful on all other HF bands without a tuner.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3193. Re: What place makes good custom QSL cards?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:38:32 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3E494328.22116FE8@yahoo.com>
Source record: 124835

If you have the resources to design and print in color. Do what I did.
I designed it on Freelance then took it to my local printer and for
15.00 for 100 sheets they copied on sturdy bond paper and Cut the cards
out at 3 1/2 X 5.

Viola 400 cards for 15 bucks.

3194. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:44:04 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E494468.FF562D69@attbi.com>
Source record: 124832

Richard, my last and final comment on this subject.

The Flux density in any magnetic material is:

B= uH

and u is NOT linear [except for air, under normal conditions]. The magnetizing force [H in the equation, Ampere Turns], even for Amidon products, is non-linear. The question is not about losses, resistance, or any other phenomena. It is simply that the presence of magnetizing material requires that a non linear current component, the MMF, be provided from the primary and this results in distortion [harmonics] in the secondary.

Restated:

Is = [Ip - Im]*[N1/N2] ,

Where Im is the magnetizing current
Ip is the primary current
Is is the secondary current
N1/N2 is the applicable turns ratio

If I view both the primary and secondary currents on a dual trace oscilloscope THEY DON'T MATCH!!!! The Im term is missing from the secondary.

Therefore HARMONICS.

Now if you want to use a magnetic material in a choke you have a related issue;

The counter EMF, E, is as follows:

E = -L[di/dt],

where L = N[d(phi)/dt]

where the total flux density, phi, is k*uH, right back to the Im of the above equation.

Therefore HARMONICS.

My sole assertion is the magnetic material in the act of being magnetic introduces distortion [harmonics].

Dave, W1MCE
+++

3195. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:49:39 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ihghnc27c04f@corp.supernews.com>
Source record: 124833

Bet I had more fun making it!
The antenna is 3% below a resonant dipole at +/1 50 KHz.
A non-resonant dipole will not result in the same field strength as a
resonant dipole.
Few back-of-the-envelope calculations, lots of measurement, damned
physicists!!.
It's really neat when you get it tuned juuust right and the 1:1 SWR
bandwidth spreads out.
Oh, and transmission line was never relevant to the discussion.
H.
NQ5H

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E4941AC.3060708@ieee.org...
> H. Adam Stevens wrote:
> > ROTFLMAO made my day!
> > Build one.
> > Tune it PERFECTLY. It will reward you. Don't and it won't.
>
> By my calculations, it will reward me with 10% more loss and
> less bandwidth than my variable length open-wire fed 130 ft.
> dipole which is useful on all other HF bands without a tuner.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3196. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:50:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E49460B.4070802@ieee.org>
Source record: 124834

H. Adam Stevens wrote:
> But you didn't have to build it over and over to get it right!
> ;^)

That's true and one of the big advantages of throwing up a dipole,
feeding it with open-wire line, and tuning it at the hamshack where
it's warm in the winter, cool in the summer, and there's always a
cold beer to keep me company.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3197. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 18:58:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4ihuj8hd56k6c@corp.supernews.com>
Source record: 124836

OC_CAM's Razor wrote:
> H. Adam Stevens wrote:
>
>> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
>>
>>> What is length and Zo of feedline?
>>
>>
>> 100 feet of the same RG8X as the bazooka is made from.
>
>
> Hmmmm, a 7% loss in the transmission line. My variable
> length ladder-line has much less loss than that and my
> dipole is a more efficient radiator than a bazooka.
> What's wrong with this picture?

1. The ladder line loss is low only when it's dry. When wet, the loss is likely to be greater than the RG8X. You also can't lay it on the ground, run it through wet foliage, or coil up any excess.

2. 7% loss is 0.3 dB, a completely insignificant amount. A system with zero loss is no better than a system with 7% loss from any practical standpoint.

Roy Lewallen, W7EL

3198. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:00:08 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ii46m11c1qd4@corp.supernews.com>
Source record: 124837

I think we're drifting toward a subject we may
be in complete agreement about:
cold 807's.
;^)
H.
NQ5H

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E49460B.4070802@ieee.org...
> H. Adam Stevens wrote:
> > But you didn't have to build it over and over to get it right!
> > ;^)
>
> That's true and one of the big advantages of throwing up a dipole,
> feeding it with open-wire line, and tuning it at the hamshack where
> it's warm in the winter, cool in the summer, and there's always a
> cold beer to keep me company.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3199. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:04:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4ii9vm64g3k3b@corp.supernews.com>
Source record: 124838

OC_CAM's Razor wrote:
> H. Adam Stevens wrote:
>
>> ROTFLMAO made my day!
>> Build one.
>> Tune it PERFECTLY. It will reward you. Don't and it won't.
>
>
> By my calculations, it will reward me with 10% more loss and
> less bandwidth than my variable length open-wire fed 130 ft.
> dipole which is useful on all other HF bands without a tuner.

10% loss is less than half a dB, so it's of no consequence. If one antenna covers an entire ham band, even broader bandwidth is of no consequence either. The use on other HF bands might be advantageous if you don't particularly care which directions you radiate best in, don't mind constructing and maintaining the switching arrangement, and accept significantly reduced performance when the feedline gets wet. (That's a condition which would exist here about 50% of the time.)

All antennas are compromises, and the best set of tradeoffs for one person isn't necessarily the best for someone else.

Roy Lewallen, W7EL

3200. Re: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:04:52 UTC
From: The Simpsons <grant@simtronics.co.nz>
Message-ID: <CPb2a.82049$F63.1673928@news.xtra.co.nz>
Source record: 124839
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

A synthesised rig will work if you can program just the frequencies he needs in to memory. If the rig uses UP and DOWN buttons on the mic, then he only needs to count the button pushes from the first to last memory. This works as long as the memories don't roll over. If they do, most rigs beep at memory position 1. Probably easier to find one of these than a crystal controlled rig, and more versatile if you need to add or change frequencies later.

Grant, ZL2BK

"SWL" <radiovintage@hotmail.com> wrote in message
news:XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net...
> Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only
> needs 3 frequencies and it is easier and cheaper for him to count the
> clicks.Low power is fine too.
> A plus would be any of the frequencies he needs which are:
> 444.55 +
> 443.70 +
> 446.00 simplex
> THANKS
>
>

3201. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:05:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E49498E.6010407@ieee.org>
Source record: 124840

H. Adam Stevens wrote:
> Bet I had more fun making it!

Bet I was on the air faster than you. :-)

> The antenna is 3% below a resonant dipole at +/1 50 KHz.
> A non-resonant dipole will not result in the same field strength as a
> resonant dipole.

A 130 ft. dipole resonant on 3.6 MHz will radiate virtually as well
on any frequency between 3.5 MHz and 4.0 MHz if it is resonated using
a tuned low-loss feedline. It will also yield a low SWR across the
band that is actually lower than the bazooka's SWR at the antenna.

> Oh, and transmission line was never relevant to the discussion.

My tuned transmission line is what resonates my dipole system. Of
course it is relevant. :-) It is like a resonating stub that is
tuned in the comfort the hamshack instead of at the antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3202. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:12:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E494B16.4070402@ieee.org>
Source record: 124841

Roy Lewallen wrote:
> 1. The ladder line loss is low only when it's dry. When wet, the loss is
> likely to be greater than the RG8X. You also can't lay it on the ground,
> run it through wet foliage, or coil up any excess.

Well, I don't lay it on the ground, run it through wet foliage, or coil
up any excess. And I don't use it during thunderstorms.

> 2. 7% loss is 0.3 dB, a completely insignificant amount. A system with
> zero loss is no better than a system with 7% loss from any practical
> standpoint.

I must have used the voltage dB equation instead of the power dB equation.
So the loss is 14%, not 7%. Now tell me again why I should expend all that
energy in putting up and tuning a bazooka that is 17% less efficient than
my open-wire fed dipole and costs three times as much.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3203. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:15:12 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ij0ecqf3lb46@corp.supernews.com>
Source record: 124842

touche'
tuned xmission line is bazooka equivalent methinks
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E49498E.6010407@ieee.org...
> H. Adam Stevens wrote:
> > Bet I had more fun making it!
>
> Bet I was on the air faster than you. :-)
>
> > The antenna is 3% below a resonant dipole at +/1 50 KHz.
> > A non-resonant dipole will not result in the same field strength as a
> > resonant dipole.
>
> A 130 ft. dipole resonant on 3.6 MHz will radiate virtually as well
> on any frequency between 3.5 MHz and 4.0 MHz if it is resonated using
> a tuned low-loss feedline. It will also yield a low SWR across the
> band that is actually lower than the bazooka's SWR at the antenna.
>
> > Oh, and transmission line was never relevant to the discussion.
>
> My tuned transmission line is what resonates my dipole system. Of
> course it is relevant. :-) It is like a resonating stub that is
> tuned in the comfort the hamshack instead of at the antenna.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3204. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:19:06 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302111119.17bb8303@posting.google.com>
Source record: 124843

Yuri since english is not your first language let me explain myself
The subject came up on this thread near the top of the thread where
Reg directed a question at me I gave reasons that I believe could be
resonsible for such errors pointing to a similar fact that many of the
present generationn believe that the first plane to cross was that of
Lindburg why neglecting the term 'solo" or at least intimated that.
Now you are carrying on with what constitutes Europe as if I am trying
to tee everybody off when I had no intention of straying from the
question that I posed i.e. wavelength. But it doesn't seem to matter,
it is more enjoyable to throw stones and dirisive comments rather than
staying on track and I can understand that sort of thing at a bar.
Your latest accusation is that I do not respond, others say I am
evasive because I went along with the debating change
and yet I believe I am doing my fair share of responding to each and
every one. It seems like I have written a dozen or more responses but
it doesn't matter more accusation and more 'advice', more derogatory
comments will continue. If that is a cross I must bear to be part of
this group of antenna knoweledge then so be it,in America it is
called hazing and part of a process and I am now an American. I will
continue to hang in here until I drop but be assured eventually I will
get up and regain my energy to hang on some more to achieve my desire
for knoweledge even if my questions label me as a nobody.
You seem to have a short memory to the fact that I came to your
support when you were attacked for questioning a statement but now you
seem to find it more convenient and fun to join the 'pack'... stiffen
up your back bone again and return to being your own man.
Your friend
Art

rk3bu@aol.com (Yuri Blanarovich) wrote in message
news:<20030211103338.01077.00000240@mb-fh.aol.com>...
> >
> >> >>
> >> >>> >Art Unwin KB9MZ writes:
> >> >>> >>
> >> >>> >>The ' first plane' which is what I said to cross the Atlantic came
> >> >>> >>from Europe to the U.S.
> >> >
> >> >Art,
> >> >can explain this statement? Who? When? How?
> >> >Or are you just throwing statements around to piss us off? Learning from
> Frac?
> >> >
> >> >(Third request)

> >> >If the same relates to your antenna postings, then it is all clear as mud.
> >> >
> >> >Yuri
> >>
> >> Maybe he's talking about this.
> >>
> >> http://www.najaco.com/books/aviationchorus/firsttransatlanticflight.htm
> >>
> >> The first non-stop solo flight was Lindbergh's.
> >>
> >> You're right, Art is as "mysterious" as Frac. Needs the attention, I
> >> guess.
> >
> >Now , now usualy by the time I get an update the question has already
> >been answered as it was for Yuri.
> >Secondly it was you who made the distinction regarding "solo" which
> >was exactly my point. Many people here the same thing so often that
> >they then accept it as truth, in fact Yuri makes my point with his
> >"boat" comment. Is it possible the same thing happened with Maxwell
> >and Heaviside ?
> >Regards
> >AQrt
> >
> >
>
> No, it was not answered!
> Art made the statement: "The ' first plane' which is what I said to cross the
> Atlantic came FROM Europe TO the U.S."
> In my poor English I understand that that there was (Art claims) a plane which
> CROSSED Atlantic (on a boat?) FROM Europe TO the US.
>
> Again, no explanation or references, just mumbo-jumbo. I guess this example
> 'splains "problems" Art has with us stupid mortals. Amen to that one, goes to
> the same jokers file with Frac and other "inventors."
>
> If one makes the statement, than it should be able to explain it to those
> unenlightened or argue with those who know more/less.
>
> As far as the planes go, first was the American Navy NC4 team who flew from NY
> to Portugal with stopover in Azores. Followed by nonstop team of British from
> Newfoundland to Ireland. Followed by solo from NY to Paris by Lindbergh. If the
> British brought their plane from Britannia to Canadia on a boat, than it might
> have been the first plane to CROSS Atlantic. But Art knows something that media
> are "suppressing" and can't tell.
> My regards to Maxwell and Heaviside, were they on the same boat?
>
> 73 and sayonara
>
> Yuri

3205. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:25:41 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E494E35.4040100@ieee.org>
Source record: 124844

Roy Lewallen wrote:
> 10% loss is less than half a dB, so it's of no consequence.

Actually, I was wrong in that calculation. It is closer to 20%.

> ... and accept
> significantly reduced performance when the feedline gets wet. (That's a
> condition which would exist here about 50% of the time.)

I'm using open-wire feedline from W7FG. Has anyone run wet losses on
that line? It's open-wire with hollow 1/2" dia. plastic spacers every
20 inches. I don't see how rain could affect it all that much.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3206. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:29:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4ijo7ijoh25b@corp.supernews.com>
Source record: 124845

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> 1. The ladder line loss is low only when it's dry. When wet, the loss
>> is likely to be greater than the RG8X. You also can't lay it on the
>> ground, run it through wet foliage, or coil up any excess.
>
>
> Well, I don't lay it on the ground, run it through wet foliage, or coil
> up any excess. And I don't use it during thunderstorms.
>
>> 2. 7% loss is 0.3 dB, a completely insignificant amount. A system with
>> zero loss is no better than a system with 7% loss from any practical
>> standpoint.
>
>
> I must have used the voltage dB equation instead of the power dB equation.
> So the loss is 14%, not 7%. Now tell me again why I should expend all that
> energy in putting up and tuning a bazooka that is 17% less efficient than
> my open-wire fed dipole and costs three times as much.

First of all, I don't see why you'd go to any trouble at all to gain 14% efficiency. That's still only 0.7 dB. And you gain that insignificant advantage only when your feedline is dry.

As for expense, I must have the wrong idea about your dipole. I was under the impression that you used knife switches or some such arrangement to switch various lengths of ladder line in and out. My junk box has lots of coax I've gotten for nearly free, and no knife switches. (And no ladder line, for that matter.) How could I build a system like yours for 1/3 the cost of a bazooka?

I'm not recommending that anyone build a bazooka or any other kind of antenna, and I'm not recommending against emulating Cecil's method. I'm simply trying to point out that it's silly to fuss about a fraction of a dB and, again, that there's no single antenna that's best for everyone. We each need to look realistically at the tradeoffs involved and decide what's best for us in our own particular situation.

There's a great tendency for people to want to simplify things and put them in neat little binary pigeonholes of "good" and "bad". If you insist on using this simple-minded system to sort antennas, you'll never have the tools to arrive at an intelligent decision about what might be best for a particular set of circumstances.

Roy Lewallen, W7EL

3207. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:30:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E494F51.6030104@ieee.org>
Source record: 124846

H. Adam Stevens wrote:
> touche' tuned xmission line is bazooka equivalent methinks

With one exception ... the tuned Xmission line must be switched
to cover the entire band. That 5 seconds might be important
under certain circumstances.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3208. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:43:15 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ikl0ltojqb26@corp.supernews.com>
Source record: 124847

these days, especially
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E494F51.6030104@ieee.org...
> H. Adam Stevens wrote:
> > touche' tuned xmission line is bazooka equivalent methinks
>
> With one exception ... the tuned Xmission line must be switched
> to cover the entire band. That 5 seconds might be important
> under certain circumstances.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3209. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:43:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E49526A.5010405@ieee.org>
Source record: 124848

Roy Lewallen wrote:
> First of all, I don't see why you'd go to any trouble at all to gain 14%
> efficiency. That's still only 0.7 dB. And you gain that insignificant
> advantage only when your feedline is dry.

Wow, Roy, you've got the wrong impression. I'm going to *LESS trouble* to gain 14%. Throwing up a dipole is *lots and lots* less trouble than putting up a bazooka and tuning it to resonance. Let me ask you this. In an emergency, would you bother putting up a bazooka? Only a masochist would go to more trouble to lose efficiency. :-)

> As for expense, I must have the wrong idea about your dipole. I was
> under the impression that you used knife switches or some such
> arrangement to switch various lengths of ladder line in and out. My junk
> box has lots of coax I've gotten for nearly free, and no knife switches.
> (And no ladder line, for that matter.) How could I build a system like
> yours for 1/3 the cost of a bazooka?

I paid $20 for my knife switches. RG-8x costs 20 cents a foot. That's about $40 worth of coax that I would have to buy. OTOH, I got 500 ft. of copper wire from Lowe's for less than $20. The irrigation tubing that I use for spacers on my open-wire line cost about $10. The only coax that I use anymore is RG-400 teflon which is great for short runs and winding on toroids.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3210. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 19:47:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4ikq3si23au69@corp.supernews.com>
Source record: 124849

Toni - ec3dds wrote:
>
> Novice question: Could a ventilation chimney (toilet, kitchen...) be
> used as a waveguide?
>
> Toni - ec3dds

Yes, but it probably wouldn't be practical for most applications.

These structures would be lossy as waveguides go because of the seams, ridges, and poor surface quality, but signals would propagate in it like waveguide. The problem is the frequency. The lowest frequency you can get any distance through a circular waveguide, in MHz, is about 175 MHz divided by the diameter in meters. And the highest frequency you can propagate is a bit less than 1.5 times the lowest. So, for example, a 10 cm diameter pipe could be used only for sending signals of about 1750 MHz to 2600 MHz. (These represent extreme values. A practical range of frequencies would be a bit less than this.) Consequently, you'd need to be able to choose the frequency to suit the waveguide diameter. And there's the practical problem of efficiently getting the signal in and out of the waveguide.

Roy Lewallen, W7EL

3211. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 20:09:23 UTC
From: ovni90901@aol.com
Message-ID: <20030211150923.10142.00000369@mb-fk.aol.com>
Source record: 124850

>69 Vette (worst car I ever owned, hell it was the worst five cars I ever
>owned)

Amen! Well said, but not stated forcefully enough. Mine was yellow.
--Wayne

3212. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 20:12:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4imah1ie7f164@corp.supernews.com>
Source record: 124851

Open wire line should be fine when wet. I thought you had said ladder line, and also that you were touting the low cost of your antenna as compared to a bazooka. Guess I was wrong on both counts.

Now 20% is just about one dB. That just might make a tiny difference when conditions are extremely marginal, although you'll certainly get some argument about that.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> 10% loss is less than half a dB, so it's of no consequence.
>
>
> Actually, I was wrong in that calculation. It is closer to 20%.
>
>> ... and accept significantly reduced performance when the feedline
>> gets wet. (That's a condition which would exist here about 50% of the
>> time.)
>
>
> I'm using open-wire feedline from W7FG. Has anyone run wet losses on
> that line? It's open-wire with hollow 1/2" dia. plastic spacers every
> 20 inches. I don't see how rain could affect it all that much.

3213. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 20:17:10 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4imkk5l7le6df@corp.supernews.com>
Source record: 124852

Turn it over 5 grand and all the fan belts hit the ground; No two pulleys lay in the same plane.
The under floor insulating plates came off on a Houston freeway: sparks and noise.
Wiring harness spontaneously combusted.
Treacherous suspension. Spins like a top.
Dies in remote places for no discernable reason.
One of the goddamn things killed a very good friend of mine in 1971.
Is PIECE OF GM SHIT forceful enough?
H.
Red 69 350hp 350 cid Conv

Oh and the Firestone Tires sucked, too.

"Ovni90901" <ovni90901@aol.com> wrote in message news:20030211150923.10142.00000369@mb-fk.aol.com...
> >69 Vette (worst car I ever owned, hell it was the worst five cars I ever
> >owned)
>
> Amen! Well said, but not stated forcefully enough. Mine was yellow.
> --Wayne

3214. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 20:28:33 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302111228.537da9a9@posting.google.com>
Source record: 124853

"Bill, W7TI" <jamspam@upyours.now> wrote in message
news:<Xns931EBFB9A4E85pookster@216.168.3.50>...
> Richard Clark <kb7qhc@attbi.com> wrote in
> news:irng4v8un0p3l96b48rurflhpaiak63g25@4ax.com:
>
> > Hi Bill,
> >
> > CNN News Flash (1830 PST):
> > "Iraq offers that it would accept the visit of Pope John Paul II"
> >
> > Still willing to support the illusion of peace? Are we at war?
> > Expand upon how you distinguish the two again for the rest of us
> > before the grim joke above plays out.
> --
>
> I thought I was pretty good at deciphering obscure phraseology but I
> think I've met my match. If anyone can tell me what the h*** the above
> means....
>
> On second thought, never mind.

Please Bill don't give up, join him in the dance. I am a newshound and
am very interestred in politics. If we are going to veer of again on
another subject,
politics and political action and reaction would be one of my
favorites before this computor finally goes out and leads to my
demise.
Best Regards and stick with it . Hopefully he will start with our war
with Islam and the handing over of the holy places to another
religeon. And why the
citizens are unhappy with the failure of the Royal families to support
the religeon by supporting infidels. No need to go as far back as the
early Crusades,just start from this one.
If all want to argue instead of revolving around antennas then Richard
has chosen a subject that fits alround and I can become an equal
Regards
Art

3215. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 20:40:06 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302111240.6d08feb0@posting.google.com>
Source record: 124854

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<jcfg4vcd3mnfn9h1jksrju1j6tune28mc9@4ax.com>...
> On 10 Feb 2003 14:55:29 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >Now with all that put to
> >one side I would be happy to return to the subject of wavelength so I
> >can learn from such gurus like your self, Roy and the many others that
> >frequent this thread, but I will go bananas if some place me in the
> >same group of people or inovators that this newsgroup so despise. Let
> >us all be friends and start again.
> > And be a bit softer on the nobodies like me who enjoy the learning
> >that can be obtained from their peers.
> >Very, very, many regards
> >Still your friend
> >Art
>
> Hi Art,
>
> Sounds fine by me, and I'll give you every credit I perceive, as long
> as you don't hide your light under a bushel. However, don't blame us
> for the gusty weather playing the dickens with that flame once you
> reveal it.
>
> The simple fact of the matter is that in this type of forum IT IS YOUR
> CHOICE in what to discuss, what to respond to, and where to lead. If
> YOU CHOOSE to focus on abuse (yours/ours/theirs/mine/his...), I can
> guarantee you that there are many that WILL follow you there and you
> plainly don't have the horsepower to keep the lead.
>
> This reminds me of the movie where a sales motivator for a aluminum
> (aluminium in English) siding company introduces a selling contest for
> the salesmen where:
> "First place is an all expense paid vacation to Hawaii;
> Second place is a set of steak knives;
> Third place - you're fired."
>
> As for "despise": stop with this sentimentality if you don't want to
> attract sharks. Nobody brought it up but you (difficult lesson isn't
> it?) and if you don't want it responded to (it has absolutely nothing
> to do with any topic here), then don't offer it like a target on your
> back.
>
> 73's

> Richard Clark, KB7QHC
Fine. I hope you will do me the honour of continuing by reading my
last paragragh where I assume the critisism will not be a prime factor
in future responses.
By the way Roman slaves who worked so hard at pulling the oars of the
ships were once given to bits of news!
! The Queen has invited you ALL to a party with large amounts of drink
and food
Hip, Hip, hooray, hip, hip,......
And now the second piece of news...
The Queen wants to do some water skiing tomorrow !!!
Cheers
Art

3216. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 20:43:40 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E49607C.7020902@ieee.org>
Source record: 124855

Roy Lewallen wrote:
> Open wire line should be fine when wet. I thought you had said ladder
> line, ...

W7FG advertises his open-wire line as "True Ladder Line"...
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3217. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 20:46:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E496141.1030904@ieee.org>
Source record: 124856

H. Adam Stevens wrote:
> Turn it over 5 grand and all the fan belts hit the ground; No two pulleys
> lay in the same plane.
> The under floor insulating plates came off on a Houston freeway: sparks and
> noise.
> Wiring harness spontaneously combusted.
> Treacherous suspension. Spins like a top.
> Dies in remote places for no discernable reason.
> One of the goddamn things killed a very good friend of mine in 1971.
> Is PIECE OF GM SHIT forceful enough?

I actually called mine a Shitvette back in the mid-70's.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3218. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 20:51:07 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302111251.4a490412@posting.google.com>
Source record: 124857

Yuri, forgive me but I can't carry on and respond to every comment
like that. I consider this thread to be exhausted having no stomach in
being held to my chair until we reach 600 postings
Start a thread of your own if your verbal diarrea cannot be held thus
providing
for those only who wish to participate the opportunity of
participating.
My obligation of answering all who join in this thread started by me
is exhausting.
Regards
Art

ok3bu@aol.com (Yuri Blanarovich) wrote in message
news:<20030211103338.01077.00000240@mb-fh.aol.com>...
> >
> >> >>
> >> >>> >Art Unwin KB9MZ writes:
> >> >>> >>
> >> >>> >>The ' first plane' which is what I said to cross the Atlantic came
> >> >>> >>from Europe to the U.S.
> >> >
> >> >Art,
> >> >can explain this statement? Who? When? How?
> >> >Or are you just throwing statements around to piss us off? Learning from
> Frac?
> >> >
> >> >(Third request)
> >> >If the same relates to your antenna postings, then it is all clear as mud.
> >> >
> >> >Yuri
> >>
> >> Maybe he's talking about this.
> >>
> >> http://www.najaco.com/books/aviationchorus/firsttransatlanticflight.htm
> >>
> >> The first non-stop solo flight was Lindbergh's.
> >>
> >> You're right, Art is as "mysterious" as Frac. Needs the attention, I
> >> guess.
> >
> >Now , now usualy by the time I get an update the question has already
> >been answered as it was for Yuri.
> >Secondly it was you who made the distinction regarding "solo" which
> >was exactly my point. Many people here the same thing so often that

> >they then accept it as truth, in fact Yuri makes my point with his
> >"boat" comment. Is it possible the same thing happened with Maxwell
> >and Heaviside ?
> >Regards
> >AQrt
> >
> >
>
> No, it was not answered!
> Art made the statement: "The ' first plane' which is what I said to cross the
> Atlantic came FROM Europe TO the U.S."
> In my poor English I understand that that there was (Art claims) a plane which
> CROSSED Atlantic (on a boat?) FROM Europe TO the US.
>
> Again, no explanation or references, just mumbo-jumbo. I guess this example
> 'splains "problems" Art has with us stupid mortals. Amen to that one, goes to
> the same jokers file with Frac and other "inventors."
>
> If one makes the statement, than it should be able to explain it to those
> unenlightened or argue with those who know more/less.
>
> As far as the planes go, first was the American Navy NC4 team who flew from NY
> to Portugal with stopover in Azores. Followed by nonstop team of British from
> Newfoundland to Ireland. Followed by solo from NY to Paris by Lindbergh. If the
> British brought their plane from Britannia to Canadia on a boat, than it might
> have been the first plane to CROSS Atlantic. But Art knows something that media
> are "suppressing" and can't tell.
> My regards to Maxwell and Heaviside, were they on the same boat?
>
> 73 and sayonara
>
> Yuri

3219. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 20:52:40 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ion6h3omqm39@corp.supernews.com>
Source record: 124858

two

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E496141.1030904@ieee.org...
> H. Adam Stevens wrote:
> > Turn it over 5 grand and all the fan belts hit the ground; No two
pulleys
> > lay in the same plane.
> > The under floor insulating plates came off on a Houston freeway: sparks
and
> > noise.
> > Wiring harness spontaneously combusted.
> > Treacherous suspension. Spins like a top.
> > Dies in remote places for no discernable reason.
> > One of the goddamn things killed a very good friend of mine in 1971.
> > Is PIECE OF GM SHIT forceful enough?
>
> I actually called mine a Shitvette back in the mid-70's.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3220. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 21:14:32 UTC
From: Harold Burton <hwburton@cableone.net>
Message-ID: <v4iptldkchju0e@corp.supernews.com>
Source record: 124859

"Ovni90901" <ovni90901@aol.com> wrote in message
news:20030211150923.10142.00000369@mb-fk.aol.com...
> >69 Vette (worst car I ever owned, hell it was the worst five cars I ever
> >owned)
>
> Amen! Well said, but not stated forcefully enough. Mine was yellow.
> --Wayne

Was it lemon yellow or Teddy Kennedy yellow?

3221. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 21:17:51 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4iq6du2nce37@corp.supernews.com>
Source record: 124860

by the by
TK's daddy thought Hitler was no threat
look it up

"Harold Burton" <hwburton@cableone.net> wrote in message
news:v4iptldkchju0e@corp.supernews.com...
>
> "Ovni90901" <ovni90901@aol.com> wrote in message
> news:20030211150923.10142.00000369@mb-fk.aol.com...
> > >69 Vette (worst car I ever owned, hell it was the worst five cars I
ever
> > >owned)
> >
> > Amen! Well said, but not stated forcefully enough. Mine was yellow.
> > --Wayne
>
> Was it lemon yellow or Teddy Kennedy yellow?
>
>

3222. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 21:26:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E496A68.2070100@ieee.org>
Source record: 124861

H. Adam Stevens wrote:
> by the by
> TK's daddy thought Hitler was no threat
> look it up

Hitler by himself was no threat. Hitler plus Germany was
something else. It was Attila-the-Hun all over again but
this time with Blitzkrieg.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3223. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 21:40:35 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <e4ri4v86dnf1p3oru64rq0796asue7edbb@4ax.com>
Source record: 124862

On Tue, 11 Feb 2003 12:49:39 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

[snip]
|A non-resonant dipole will not result in the same field strength as a
|resonant dipole.

Total bullshit. And you're a broadcast engineer? There are a lot of
BC stations around that don't have resonant towers. Especially the
ones radiating two or three frequencies at the same time.

3224. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 21:42:01 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4irjtskue2k0a@corp.supernews.com>
Source record: 124863

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E496A68.2070100@ieee.org...

snip

****
> Hitler by himself was no threat.
****

snip

> cheers, CAM http://www.qsl.net/w5dxp

deletia....

..now we have a serious sanity question

my late (now ex) father-in-law spent 4 years in a Nazi prison camp in Poland
blown out of his tank in Africa, he survied to father my children's mother

my father wrote the FM6-40 artillery field manual

directed artillery fire at el quatar
taking the same dirt back to be frustrated that Rommel wasn't there!!!!!!

and the punch bowl in korea, what a stupid waste!!!!!!!!

**********We Will Regret That One.***************

I grew up thinking Earthquake McGoon was a comic strip character
Turns out this mythic character I knew as a very small boy died in viet nam.

Bush is lying

3225. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 21:45:46 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4irqnpc3p8g4e@corp.supernews.com>
Source record: 124864

got any data?
no ?
I retied after making willie nelson famous at (snort KOKE) FM in 1974
I bought DELL in 91
beat that

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:e4ri4v86dnf1p3oru64rq0796asue7edbb@4ax.com...
> On Tue, 11 Feb 2003 12:49:39 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> [snip]
> |A non-resonant dipole will not result in the same field strength as a
> |resonant dipole.
>
> Total bullshit. And you're a broadcast engineer? There are a lot of
> BC stations around that don't have resonant towers. Especially the
> ones radiating two or three frequencies at the same time.
>
>

3226. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 21:53:11 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4970C7.95C84742@cwis.net>
Source record: 124865

And the cause of death was choking on a balun...
'Doc

3227. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 21:58:22 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4isibopieb98a@corp.supernews.com>
Source record: 124866

something's gonna getcha
so make a resonant circuit sing
while you can
H.
NQ5H

no chokes here
I do have a toroidal autoformer in my truck.
Kudos to Frank McIntosh.

"'Doc" <w5lz@cwis.net> wrote in message news:3E4970C7.95C84742@cwis.net...
>
>
> And the cause of death was choking on a balun...
> 'Doc

3228. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 22:21:50 UTC
From: k3bu@aol.com
Message-ID: <20030211172150.16097.00000941@mb-mo.aol.com>
Source record: 124867

Aqrt writes:

>Yuri, forgive me but I can't carry on and respond to every comment
>like that. I consider this thread to be exhausted having no stomach in
>being held to my chair until we reach 600 postings
>Start a thread of your own if your verbal diarrea cannot be held thus
>providing
>for those only who wish to participate the opportunity of
>participating.

Art,
Smells fractally to me. All you had to do is say the name and date who and when fulfilled your statement. You made the comment and you can not back it up. Obviously there is nothing, or achievemnt like that would not be burried in the history. I think that completes the picture about validity of your postings (verbal diarrhea) and welcome to my "inventors" (of baseless) stuff file. You should apply for job with Frac's Fractal, you would fit there nicely.

73 and GL
EoD

Yuri

3229. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 22:52:45 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931F975CD4EC4pookster@216.168.3.50>
Source record: 124868

> Here's the SWR vs RF data for my 40 meter RG8X bazooka
> I measured this yesterday using a 1 meter dipole about 300 feet
> from the bazooka for the sense antenna ....
> MHz SWR RF
> 7.00 1.2 89
> 7.03 1.1 93
> 7.06 1.0 97
> 7.09 1.0 97
> 7.12 1.0 97
> 7.15 1.0 99
> 7.18 1.0 100
> 7.21 1.0 97
> 7.24 1.0 97
> 7.27 1.1 93
> 7.30 1.2 89
> it's 3% down at the 1:1 SWR extremes and it's not tuned perfectly
> the alternative is a tuner with the associated insertion loss and
> inconvenience
>

Pretty impressive. Must be one of those Fractal Bazookas.

--
Bill, W7TI

3230. specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 23:01:02 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302111501.194a5327@posting.google.com>
Source record: 124869

I am looking for known scientific equations that relate to
optimum and efficient communication regardless of frequency
which includes lossless transference to a reciever.
I am very interested in the mandtory influence that wavelength
has with regard to optimum communication and efficiency.
No other communication is required only the salient equations
that go to the relavence of wavelength in these matters or that
points to the inscapable relavence of such.
repeat,Supply equations only,further justification is not
required in help formulating such a list
Thankyou for your consideration
Art

3231. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 23:01:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4j06pfojbpo0f@corp.supernews.com>
Source record: 124870

I apologize. I was thinking "window line" while reading "ladder line".
My mistake. While the polyethlene-insulated twinlead with punched holes
gets lossy when wet, open-wire line should be ok unless maybe the
insulators have gotten really dirty.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Open wire line should be fine when wet. I thought you had said ladder
>> line, ...
>
>
> W7FG advertises his open-wire line as "True Ladder Line"...

3232. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 23:03:23 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4j0c8snb3u37b@corp.supernews.com>
Source record: 124871

nope

fractal schmactal

I actually saw Mandelbrot's office door once;
Had a picture of Gauss on it;
You figure it out.

The bazerker.......er bazooka......
it's one of them hangin' 'tween the trees in the front pasture bazookas
want a picture?
ask anyone on the 7290 net
H.
NQ5H

"Bill, W7TI" <jamspam@upyours.now> wrote in message
news:Xns931F975CD4EC4pookster@216.168.3.50...
>
> > Here's the SWR vs RF data for my 40 meter RG8X bazooka
> > I measured this yesterday using a 1 meter dipole about 300 feet
> > from the bazooka for the sense antenna ....
> > MHz SWR RF
> > 7.00 1.2 89
> > 7.03 1.1 93
> > 7.06 1.0 97
> > 7.09 1.0 97
> > 7.12 1.0 97
> > 7.15 1.0 99
> > 7.18 1.0 100
> > 7.21 1.0 97
> > 7.24 1.0 97
> > 7.27 1.1 93
> > 7.30 1.2 89
> > it's 3% down at the 1:1 SWR extremes and it's not tuned perfectly
> > the alternative is a tuner with the associated insertion loss and
> > inconvenience
> >
> ----------
>
> Pretty impressive. Must be one of those Fractal Bazookas.
>
> --
> Bill, W7TI

3233. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 23:06:05 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <xlf2a.8723$ji.889896@twister.southeast.rr.com>
Source record: 124872

For whoever started this thread, I received an email with reference for building one for 20 m and up. I knew I had plans for one somewhere The email reminded me where. Dusted off my 15th edition of William Orr's Radio Handbook and there it was. I will forward the info I received to anyone who wants it. All of which also reminds me that back in the 70s some were built that covered CB and vhf freq to 150Mhz or so that was used by local fire and EMS people.

"Toni - ec3dds" <ec3dds@hotmail.com> wrote in message
news:ac007f55.0302011020.2969d2bc@posting.google.com...
> artie <silli_artie@hotmail.com> wrote in message
news:<31012003190437396%silli_artie@hotmail.com>...
>
> > I did one for 10m, chicken wire for the cone. My favourite reference
> > for discones is the RSGB VHF/UHF manual, Fourth Edition, by Jessop
> > (well, that's a good introductory reference that doesn't start out with
> > Maxwell's equations). Discones are in section 8.38 through 8.40.
> >
> > The impedance of a discone is set by the diameter of the top of the
> > cone and the spacing to the disc. Once you make the hub portion, which
> > sets the impedance, the length of the elements sets the lowest
> > frequency.
> >
> > An important fact of life about discones -- yes, they are wide band.
> > But the take-off angle increases with frequency. In the legend on Fig
> > 101 of Jessop, he states, "As the frequency increases above 2:1, the
> > pattern tends to rise above the horizontal lebel until at about 5:1 in
> > frequency the main direction of radiation is about 45 degrees from the
> > horizontal."
> >
> .....
> >
> > Using the formulas in Jessop, the length of the sides of your cone for
> > 20 meters (14.25 MHz) is 17.275 feet.
> >
> > The diameter of the cone at the base, and of the disc, is 70% of that,
> > or about 12.09 feet.
> >
> .....
> >
> >
>
> I remember to have read somewhere that the practical frequency range
> of a discone is about 3:1 to 4:1, so this means that the 20m one could

> maybe work on 6m, but I won't be able to test it (on TX) because I
> don't have a license for that band. What I really want to see it
> working is on 10-12-15-17 and 20. That would make a nice multiband
> antenna out of some tv masts, wire and whips for the disc, even if it
> needs to use the tuner to adjust SWR.
>
> 73, Toni - ec3dds

3234. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 23:10:29 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <Fpf2a.8724$ji.889510@twister.southeast.rr.com>
Source record: 124873

Last time I was at the beach there was a guy doing exactly that. He had a icom706 an MFJ tunner and the battery out of his motor home and using a box kite to bail out the wire.

"Rik van Riel" <riel@surriel.com> wrote in message news:pan.2003.01.27.23.20.20.80471@msgid.surriel.com...
> On Mon, 27 Jan 2003 20:00:57 +0000, Richard Clark wrote:
>
> > For Short Wave, a very long antenna may become quite deaf as it would
> > favor listening straight up. This may be useful to listening to the
> > RF emissions from Jupiter (for the hour or so it was above you); but
> > other wise deaf as I indicated.
>
> That depends on how steep the wire is. If you manage to make the kite fly
> in such a way that the antenna wire is at a 30 degree angle you've made
> yourself a very nice directional antenna.
>
> People on the Live-Wire mailing list (on yahoo) are doing exactly this.
> Their usual setup is to use a strong military kite which is flying fairly
> high up and is ankered to the ground with nonconductive wire. The antenna
> wire is also attached to the kite, but is much longer.
>
> That way the kite can fly "straight up" but the antenna can still be aimed
> at whatever part of the world you want to work.
>
> > If you then chanced to tune for AM DX it might just be the killer
> > antenna and big gun on the island.
>
> > Your major, major asset is that vast ground plane of the ocean
> > offering you fantastic low angle opportunities that most would give
> > their eye teeth for. That, in itself, would bring you considerable
> > advantage even with a rubber duckie.
>
> I wonder if there's a good beach for flying kites. Having a 1/4 wave
> antenna on mediumwave with the infinite groundplane of the pacific ocean
> would be about the best any dxer could hope for....
>
> Rik
> --
> Bravely reimplemented by the knights who say "NIH".
> http://www.surriel.com/ http://distro.conectiva.com/
> Spam goes to october@surriel.com
>

3235. Re: Base 2M/70CM Antenna Recos

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-11 23:35:48 UTC
From: 6MtrSSB <nospam@tome.com>
Message-ID: <oNf2a.48009$zF6.3180529@bgtnsc04-news.ops.worldnet.att.net>
Source record: 124874

Diamond is the way to go for dualband verticals. I have two and they work great. I have the X50 and X510MA and they are great antenna's. Don't buy Cushcraft, you get what you pay for just like everything else. So just keep that in mind.
There are plenty of places on the net to purchase from.
HRO
Hamcity

Lou

3236. Antenna on my truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 00:18:25 UTC
From: starsekr@aol.com
Message-ID: <f2828edc.0302111618.59fcb218@posting.google.com>
Source record: 124875

While I read with interest the various positions on resonant vs un-res antennas they didn't really answer my problem. I think I need an Elmer on this one. I have a mag mount, baseloaded, vertical whip for the cab of my truck. It has an attached coax which is difficult to get to/alter where it attaches to the loading coil. Coax is about 12 feet, RG 58 of dubious origin. Your standard Radio Shack, mag mount,cheaper CB antenna, being used on 10 meters. Test instruments are a dip meter, a noise bridge and a (so far unused)vswr meter. I know that this isn't the best/most efficient rig, but let's consider this a class on getting the most out of the antenna I have. What I have found so far. Using the noise bridge, attached to my receiver by a 2 foot piece of coax, I adjust the antenna length to a really good quieting (@ 50 ohms, 0 Reactance) and a frequency of 28.4 MHz. When I measure this antenna system with the dip meter I get a nice symmetrical dip at 27.3 Mhz.
Thats measuring from the coax end into the feedline-antenna combination.
So a couple or three questions. With the dip meter, should I be measuring at the antenna, with the receiver connected or 50 ohms across the coax connector at the receiver end? Should I leave the antenna so it shows 50 ohms -0j at the noise bridge and not worry about the dip meter? So many combinations and so little time. Oh yes, the RS manual said don't cut the coax because its part of the matching system. I somehow feel this statement really only holds true with the original 27.3 Mhz it was marketed for, because it might be working against me now.
Elmer, help!

Jim, KA6TPR

3237. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 00:23:58 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <rug2a.30914$Ww1.433906@news20.bellglobal.com>
Source record: 124876

"Art Unwin KB9MZ"
> ...influence that wavelength has with regard
> to optimum communication and efficiency.

There was an article in QST a few (okay - ...many...) years ago that stated that the 160m band was optimal for EME (Moon bounce) since it resulted in "fewer wavelengths" to the Moon and back. I think it was in the April edition.

3238. Re: Diplexer UHF/UHF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 00:32:34 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E499624.FEA55E04@silverstar.com>
Source record: 124877

Go to radio shack and get two 10 dB in-line amplifiers [$29.99 each, #15-1170] at radio shack and a two-into-one mixer [$3.99, #15-1141 -. only about 0.5 dB loss. Two fixed freq antennas [available custom built for about 100/each] or radio shack UHF-only [$19.99 each, #15-2160], into the 10 dB gain in-line amplifiers with their outputs into mixer will carry signals to the monitors/TVs you will be using. Plus cost of 75-ohm coax and crimp tool/connectors.

3239. Re: Antenna Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 00:39:35 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E4997CA.F45820F@silverstar.com>
Source record: 124878

WW II emergency radio called Gibson Girl [hourglass shape to hold between legs while operating] used either stainless steel box kite or hydrogen gas generator/baloon to hoist antenna wire into air. I had one of the kites I used to fly when living at edge of desert on plateau south of Yuma Air Force base in 50s. Had bridle attach points for winds below 7 mph and for winds over 7 mph. Neat kite. I've seen modern vinyl versions in Fair Radio catalog.

3240. Re: LNB Polarization Difficulty and Physical Orientation

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 00:50:36 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <pTg2a.30960$Ww1.441003@news20.bellglobal.com>
Source record: 124879

"Dale Parfitt"
> With that said, your CH5/CH6 problem is likely
> related to long term drift in the LNB's Local Oscillator.

I seem to recall that older C-band TVRO channel plans often assigned channels sequentially to alternating polarities. In other words, misalignment of a V/H system could result in the channels being mixed-up as described.

BTW - excellent description of vertical and horizontal as relates to satellite. The whole LNB needs to be tilted (relative to the local ground) to accomodate the difference in longitude between the satellite and the receiver. Circular Polarization (LH/RH) is much easier as it eliminates that angle as an installation variable. Just aim and go.

There are many on-line calculators to make the math trivial:
www.google.com/search?q=satellite+angle+calculator

3241. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 01:05:47 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <E5h2a.30989$Ww1.445436@news20.bellglobal.com>
Source record: 124880

"Roy Lewallen" on waveguides:
> And the highest frequency you can
> propagate is a bit less than 1.5 times
> the lowest. So, for example, a 10 cm
> diameter pipe could be used only for
> sending signals of about 1750 MHz
> to 2600 MHz.

Hmmm...

'Light' (a.k.a. EM with a frequency of ~500 THz) seems to go right through a 10cm diameter pipe (lengthwise of course) without much problem.

I understand the 'waveguide beyond cutoff' limit for big waves in small pipes (they simply don't fit), but the other limit (at the high frequency end) is only related to "mode". Right ?

3242. Re: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 01:28:22 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v4j8t8mcubfuea@corp.supernews.com>
Source record: 124881
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I recently programmed a 706 for a blind friend. What he did was to have me program an FM broadcast station on a particular channel, then he could count from that channel (most synthesized rigs have encoders with no end stops so if you ever loose your place you're done).

I had more or less assumed that the 706 was impossible for a blind ham because of the menu, but some of the menu beeps turn out to have a slightly different sound than others, so he was able to navigate the menus quite well.

On a 440 only rig I don't know of any places you could find an "always on" station like that, but on a dual bander you could program the weather station into channel 1, then his stations into 2, 3, and 4. He would then be able to tune around until he heard the computer voice and count from there.

..

"The Simpsons" <grant@simtronics.co.nz> wrote in message
news:CPb2a.82049$F63.1673928@news.xtra.co.nz...
> A synthesised rig will work if you can program just the frequencies he
needs
> in to memory. If the rig uses UP and DOWN buttons on the mic, then he only
> needs to count the button pushes from the first to last memory. This works
> as long as the memories don't roll over. If they do, most rigs beep at
> memory position 1. Probably easier to find one of these than a crystal
> controlled rig, and more versatile if you need to add or change
frequencies
> later.
>
> Grant, ZL2BK
>
> "SWL" <radiovintage@hotmail.com> wrote in message
> news:XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net...
> > Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only
> > needs 3 frequencies and it is easier and cheaper for him to count the
> > clicks.Low power is fine too.
> > A plus would be any of the frequencies he needs which are:
> > 444.55 +
> > 443.70 +
> > 446.00 simplex
> > THANKS
> >
> >

>
>

3243. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 01:38:31 UTC
From: richardharrison@webtv.net
Message-ID: <16650-3E49A597-55@storefull-2318.public.lawson.webtv.net>
Source record: 124883

Richard Clark wrote:
"We start with a known volume of mercury in a toleranced trough---."

I recall (I haven`t looked anything up, Ian, though I probably should have, beyond the definition of "ohm" in a Radio Shack dictionary) the resistance of a uniform body is rho (the resistivity) times l (the length) divided by a (the cross-sectional area). So, a stable known material at a given temperature could provide a predictable resistance.

Radio Shack`s dictionary says: "---the resistance, at 0 degrees C, of a uniform column of mercury 106.300 cm long and weighing 14.451 grams (is defined as being one ohm).

Best regards, Richard Harrison, KB5WZI

3244. Re: Antenna on my truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 01:43:39 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E49A69C.D5AAB57B@attbi.com>
Source record: 124882

1) Use the Dipper AT the antenna. A shortened antenna has a radiation resistance of less than 50 ohms and if slightly off frequency it has a reactance. The grid dipper is telling you the natural resonance of the system, not a 50 ohm match, including any mismatch and coax that may be connected. A very small U loop at the bottom of the antenna is the way to do it.

2) The noise bridge will get you close. It's a better measure than the dipper. That said, I use a dipper ;-(

3) Finish up with the VSWR meter. You may have to adjust the tap on the coil, assuming you can get to it, to bring it in at 28.4 MHz.

Deacon Dave, W1MCE

I volunteer to be an on site Elmer IF you volunteer to pay my plane fair. The Temperature outside is 5 F and going to -10 tonight and you're so close to Mission Bay!!

+++

3245. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 01:54:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0haj4vk6f4t26kedh16pf9jgp1rncpanp8@4ax.com>
Source record: 124884

On Tue, 11 Feb 2003 19:38:31 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"We start with a known volume of mercury in a toleranced trough---."
>
>I recall (I haven`t looked anything up, Ian, though I probably should
>have, beyond the definition of "ohm" in a Radio Shack dictionary) the
>resistance of a uniform body is rho (the resistivity) times l (the
>length) divided by a (the cross-sectional area). So, a stable known
>material at a given temperature could provide a predictable resistance.
>
>Radio Shack`s dictionary says: "---the resistance, at 0 degrees C, of a
>uniform column of mercury 106.300 cm long and weighing 14.451 grams (is
>defined as being one ohm).
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Nice to see a dictionary that is more useful than the IEEE.
Especially to the matter of resistance.

73's
Richard Clark, KB7QHC

3246. Re: Ground Question for the Guru's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 01:56:35 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e49b1b2_3@news1.prserv.net>
Source record: 124888

Dick:

Since you already realize that you won't survive a direct hit, consider the rest of the possibilities. A nearby strike may generate a few hundred amps or so, but it really doesn't take much to conduct that for the duration of the pulse. So, tying everything together, as required by the code, and disconnecting the antenna at the radio, is likely the most cost effective option. An additional conductor and rod will provide an additional parallel path, which won't hurt, but may not help much either unless it is engineered for low impedance lightning protection. I doubt that the lightning would differentiate between the antenna and the air conditioner anyway, so tie them together well and make sure the A/C circuit is properly fused and grounded. Putting heavy surge suppressors on the A/C at the cabinet will help protect the compressor windings from breaking down to the case. Been there, done that.

--
Crazy George
Remove NO and SPAM from return address
"Dick" <rhughes33@cableone.net> wrote in message
news:djc84v8bgbpfde9kcq2jqmnn2amgua0hvf@4ax.com...
> I am going to mount a VHF/UHF vertical on the stand that holds my air
> conditioner on the roof. This is the highest point on my house, and
> makes a perfect mount for the antenna. The A/C runs on 220 VAC, and
> the stand is at service ground. I want to ground my antenna to an 8'
> ground rod in the ground below. This will be dedicated to the
> antenna, however, it would put the antenna ground at the same
> potential as the service ground. Something tells me I shouldn't tie
> service ground to an antenna ground. Seems like it would violate the
> NEC. Comments? Suggestions?
>
> Dick - W6CCD

3247. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:03:27 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns931FB7B19C3F6pookster@216.168.3.50>
Source record: 124885

Gilbert Mouget <no.spam@thank.you> wrote in
news:MPG.18b3c3fc32b305ba989c1e@news.free.fr:

> A laver la t�te d'un �ne, on n'y perd que son temps, sa peine,
> sa brosse et son savon.
>

OK! Get to practice my French.

A lever on the tit is fine, on my **** which has time, is a pain, says my
boss and my savant son.

How'd I do? :-)

--
Bill, W7TI

3248. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:04:05 UTC
From: k3bu@aol.com
Message-ID: <20030211210405.11175.00001349@mb-ch.aol.com>
Source record: 124886

>repeat,Supply equations only,further justification is not
>required in help formulating such a list

Standby!
Frac just went to wake up Phil.
(He will most likely tell you to look it up.)
Want it metric or English (oops Imperial)?

U-sama

3249. Re: 10m-20m hf discone

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:05:01 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e49b1b4_3@news1.prserv.net>
Source record: 124890

The commercial manufacturers take advantage of the elevation angle change
and mount them upside down. Also call them inverted cones. You'll find one
on every OCONUS U. S. Air Base in the world, and many Navy, USCG and other
government sites here. The conical monopole is preferred for single antenna
3 - 30 MHz omnidirectional use, however.

--
Crazy George
Remove NO and SPAM from return address

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:dMZ1a.8276$ji.680880@twister.southeast.rr.com...
> For what it is worth I have seen an HF disc cone. I am not sure what it
was
> used for but it was part of a fairly extensive antenna farm in South
> Florida. I am pretty sure it was part of some government installation Its
> been over 20 years since I last saw it. Think it was down around Ft
> Lauderdale. My guess it is of approximately the same size as being
discussed
> here. Practicality be damned, I would like to see how it works first hand
> Might even learn a thing or two.
>
>
> "Tarmo Tammaru" <t-tammaru@home.com> wrote in message
> news:a8CcnWGKacBX86CjXTWcqA@comcast.com...
> > I wouldn't connect copper wire to the aluminum. They must not have known
> > that in the 50s. It will corrode, and possibly fall apart in a year. Use
> Al
> > ground wire instead. I suspect the #8 Al is no heavier than the #14 Cu.
> >
> > Tam/WB2TT
> > "David Cook" <nospam.davepc2@oz.net> wrote in message
> > news:_nc%9.74355$to3.89821@rwcrnsc51.ops.asp.att.net...
> > > I've always wanted to build one for HF ever since I saw a plan for one
> in
> > my
> > > Radio Handbook (16th Edition, 1962). I've had excellent success with
my
> > > Radio Shack discone on VHF/UHF. The Radio Handbook dimensions for a 20
> > thru
> > > 6 meter discone are:
> > >
> > > Base radius: 18 feet
> > > Height: 15 feet 7 inches
> > > Cone element lengths: 18 feet

> > > Top hat diameter: 12 feet
> > > Distance from top of cone and top hat: 10 inches
> > >
> > > It shows a 52 ohm coax feed with no balun or RF choke required. It
> quotes
> > > the original design from W2RYI in July 1950 CQ magazine. Quoting the
> book,
> > > "The top hat is constructed of 3/4 inch aluminum angle stock, the rods
> > being
> > > bolted to an aluminum plate a the center of the structure. The tips of
> the
> > > rods are all connected together by lengths of #12 copper wire. The
cone
> > > elements are made from #12 copper wire and act as guy wires for the
> > discone
> > > structure. A 4x4 post can be used to support the discone structure."
> > >
> > > Doesn't sound very difficult to build. I may have to give it a try
> myself
> > > one of these days! I hope this helps and good luck with your project.
> > >
> > > 73,
> > > -- Dave, WA0TTN
> > >
> > > "Toni - ec3dds" <ec3dds@hotmail.com> wrote in message
> > > news:h99l3v8kb3co0rsjo0obmov5jbjvl54m89@4ax.com...
> > > > Hi all,
> > > >
> > > > Would it be a crazy idea to build an HF discone for the higher bands
> > > > (something like 10m~20m)? I've never read on the gain of a discone,
> > > > but I imagine that it must be a little less than an equivalent
> > > > groundplane. OTOH it wouldn't be much bigger than an equivalent
> > > > trapped vertical.
> > > >
> > > > Opinions? I know this is probably not a good idea for a beginner but
I
> > > > would really like to build my own antenna and I think a trapped
> > > > vertical is too much for me (I don't have space for normal dipoles).
> > > >
> > > > Could it be better than a fanned inverted-v? It would probably be
the
> > > > same size except for the hat.
> > > >
> > > > Thanks
> > > >
> > > > Toni - ec3dds
> > > >
> > >
> > >
> >

> >
>
>

3250. Re: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:13:49 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e49b1b4$1_3@news1.prserv.net>
Source record: 124889
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

It might be easier to find a Kenwood with the voice synthesizer which will allow him to do much more then just the three channels. I don't know about recent rigs, but I remember it being an available option on the TW-4000A, which includes two meters also.

Another possibility is one of the thumbwheel programmed rigs. A Braille mark on each thumbwheel would provide a reference.

You see, I don't recall very many crystal UHF ham radios except for GE/Motorola/RCA, and those are a little ancient and cumbersome. Also very cheap these days, I have to admit.

--
Crazy George
Remove NO and SPAM from return address
"SWL" <radiovintage@hotmail.com> wrote in message
news:XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net...
> Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only
> needs 3 frequencies and it is easier and cheaper for him to count the
> clicks.Low power is fine too.
> A plus would be any of the frequencies he needs which are:
> 444.55 +
> 443.70 +
> 446.00 simplex
> THANKS
>
>

3251. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:16:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g0bj4v47nvdscf4iem9qmqu7ep6oj74idg@4ax.com>
Source record: 124887

Hi Art,

It is clear you have much to do to learn the lesson of not wearing a target. Your assaults against Roy are the breeze over the rock.

Watching you rush headlong to several of your perceived allies for their warm embrace is all too embarrassing to watch. Especially when they spit in your face and you call it the fresh morning dew.

That's fine if it makes you feel refreshed, but when you meet those who try to take your position, it doesn't pay to exercise this method of greeting with them.

You owe Roy an apology. Anymore than one word, would be insincere.

73's
Richard Clark, KB7QHC

3252. Re: harmonics

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:30:15 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mjcj4vsdttf59q37j8h3vq1gjb5dvvmtrb@4ax.com>
Source record: 124891

On Tue, 11 Feb 2003 18:44:04 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>Richard, my last and final comment on this subject.

Hi Dave,

So you don't know how much current the suggested core could support
with five windings of wire either?

Could you show me how to do it with your math?

73's
Richard Clark, KB7QHC

3253. Re: wattmeter readings Vs reality

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:31:45 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <emi2a.31188$Ww1.467765@news20.bellglobal.com>
Source record: 124892

"Richard Harrison"
> ...definition of "ohm" in a Radio Shack dictionary...
> "---the resistance, at 0 degrees C, of a uniform
> column of mercury 106.300 cm long and weighing
> 14.451 grams (is defined as being one ohm).

These sorts of fundamental definitions of physical units tend to change every few years as techniques in metrology improve. The definition of ohm as listed above smells just a bit ripe (to say the least). Based on my suspicion, some quick research with Google:

http://nvl.nist.gov/pub/nistpubs/sp958-lide/html/005-006.html
"At the 1908 (!!!) International Conference on Electrical Units and Standards in London, it was recommended that representatives of the National Measurement Institutes should meet and agree on new values of international units as defined by the *mercury ohm*..."

www.boulder.nist.gov/div814/div814/whatwedo/set/set.htm
"...the ohm, based on the quantum Hall effect..."

Obviously, they set the new definitions to closely match the old ones so that the world doesn't have to suddenly shift to a new calibration for day-to-day use. In other words, a column of mercury (as described) will still be one ohm, but it just won't be *exactly* one ohm after a certain date.

Never trust a dictionary.

3254. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:36:13 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rpcj4v08u0fph1vh173oqsbn2ttgf3lmjd@4ax.com>
Source record: 124893

On Tue, 11 Feb 2003 20:05:47 -0500, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

>"Roy Lewallen" on waveguides:
>> And the highest frequency you can
>> propagate is a bit less than 1.5 times
>> the lowest. So, for example, a 10 cm
>> diameter pipe could be used only for
>> sending signals of about 1750 MHz
>> to 2600 MHz.
>
>Hmmm...
>
>'Light' (a.k.a. EM with a frequency of ~500 THz) seems to go right through a
>10cm diameter pipe (lengthwise of course) without much problem.
>
>I understand the 'waveguide beyond cutoff' limit for big waves in small
>pipes (they simply don't fit), but the other limit (at the high frequency
>end) is only related to "mode". Right ?
>

Hi Jeff,

It would seem so but not by much. Almost every piece of gear on my
Microwave Standards bench came in octave relations(1-2, 2-4, 4-8 and
so on).

73's
Richard Clark, KB7QHC

3255. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:39:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <p2dj4vg6kf7n6bh7ikd43qfoqjtgk84uu9@4ax.com>
Source record: 124894

On 11 Feb 2003 15:01:02 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>I am looking for known scientific equations that relate to
>optimum and efficient communication regardless of frequency
>which includes lossless transference to a reciever.
>I am very interested in the mandtory influence that wavelength
> has with regard to optimum communication and efficiency.
>No other communication is required only the salient equations
>that go to the relavence of wavelength in these matters or that
> points to the inscapable relavence of such.
>repeat,Supply equations only,further justification is not
>required in help formulating such a list
>Thankyou for your consideration
>Art

Hi Art,

First resource:
Bell Labs
from that resource:
Shannon
Nyquist

Shannon for information accuracy in the presence of noise.

Nyquist for the correlation of sampling and accuracy.

73's
Richard Clark, KB7QHC

3256. Re: Motorola Channel Elements Best place to buy??

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:49:10 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <Oui2a.3186$FT2.3016@fe01.atl2.webusenet.com>
Source record: 124895
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Bingo! and has dev pot on it, too-- jim

"Norm VE3CZI" <ve3czi@arrl.net> wrote in message
news:E2_1a.71180$lj.3151752@read1.cgocable.net...
> Rich: I think you are right..Norm
>
>
> "Rich Osman" <Rich@osman.com> wrote in message
> news:3E4836D1.1040209@osman.com...
> > FM wrote:
> > > Our club recently acquired a Motorola MSR 2000 VHF repeater.Not having
> > > purchased crystals in many years where is the best place to buy them
??
> We
> > > will be using the repeater on 146.01/61.Also is there a site with the
> specs
> > > for the channel elements ?
> > > Rcvr Channel Element : KXN 1086A
> > > Xmtr Channel Element : KXN 1088A
> > > THANKS.
> >
> > I'm not certian, but I beleive these are the same element used in the
> > Mitrek mobile, making them fairly common.
> >
> >
> > --
> > mailto:Rich@Osman.com http://www.rich.osman.com
> > Rich Osman; POB 93167; Southlake, TX 76092 (Near DFW Airport) ARS: N1OZ
> >
> > If you receive something that says "Send this to everyone you know,"
> > PLEASE pretend you don't know me.
> >
>
>

3257. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 02:53:47 UTC
From: richardharrison@webtv.net
Message-ID: <26031-3E49B73B-48@storefull-2314.public.lawson.webtv.net>
Source record: 124900

Art, KB9MZ wrote:
"I am looking for known scientific equations that relate to optimum and efficient communication regardless of frequency which includes lossless transference to a receiver."

Taking Art seriously as I normally do, he has access to Terman`s 1955 opus. On page 923 is: "Behavior of Antennas When Receiving Radio Signals".

It boils down to reciprocity.

A receiving antenna is simultaneously retransmitting 50% of its energy if it is perfectly matched to the receiver. If the receiver is mismatched, it gets less than 50% of the signal.

Source impedance for the receiver is based on the antenna`s radiation resistance. As W2DU has insisted, you must have a conjugate match between the radio and the antenna for maximum power transfer. It`s true for reception same as for transmission.

Terman gives equations (23-35). (23-36), (23-37) etc.

No one can learn antenna behavior for someone else. Learning is an onus on the learner.

Best regards, Richard Harrison, KB5WZI

3258. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 03:01:57 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <NGi2a.3262$FT2.2628@fe01.atl2.webusenet.com>
Source record: 124896

Boy , if that the case, Jim Creek, Wa. would really be "optimal" (around 18 kHz, 1/2 Megawatt !! more bang for the wbuck, and wavelength that really gets with it !!), and speaking of April, was this tome authored by Larson E. Rapp ??? This famous author has a habit of publishing in QST, in APRIL, like Dr. Shorza Gitchigumi, used to appear in CQ, in their April Issues!
Jim NN7K

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message news:rug2a.30914$Ww1.433906@news20.bellglobal.com...
> "Art Unwin KB9MZ"
> > ...influence that wavelength has with regard
> > to optimum communication and efficiency.
>
> There was an article in QST a few (okay - ...many...) years ago that stated
> that the 160m band was optimal for EME (Moon bounce) since it resulted in
> "fewer wavelengths" to the Moon and back. I think it was in the April
> edition.
>
>

3259. Re: Directional beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 03:07:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4bdj4vkhh4abhi1cb107fnvnsa9ooacf4j@4ax.com>
Source record: 124897
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

On Wed, 12 Feb 2003 02:05:05 +0100, Gilbert Mouget <no.spam@thank.you>
wrote:

>In article <GbucnddgPegCINqjXTWcqg@comcast.com>,
> dated Mon, 10 Feb 2003 09:56:29 -0500,
> Tarmo Tammaru, <t-tammaru@home.com> says...
>
>
>> I think ultrasonic is the way to go. What would work is an approximately 30
>> KHz carrier, modulated by some low frequency like 100 Hz, on the target;
>> then 3 fixed receivers that triangulate the target based on the phase
>> difference of the detected 100 Hz signal. Requires no directional
>> microphones, and no moving parts. Even 1 millisecond resolution would get
>> him to within a foot.
>
>Why not measure the phase difference of the 30 KHz carrier ?

Hi Gilbert,

You would have to "home" the unit on every power-up of the system.
All you know is relative phase otherwise, and positioning requires
absolute phase. It is the difference between 3960ï¿½ and 0ï¿½.

Actually, a fixed 100 Hz signal mocks the system designed to do much
better. The way the boys at Polaroid do it is as follows:
You apply a pulse to the emitter

the pulse is typically a "chirp" function.
That is, it sweeps a range of frequencies quickly and then stays
off for a considerable time.

You then listen for the response.

The unique signature (there are many waveforms that so qualify) of
the modulation (the swept freq. in this case) is applied to a
transform known as autocorrelation.

Autocorrelation will reveal the initial conditions and their
differences such that ranging is a snap and very precise.
FFT methods (Autocorrelation being an equation of FFTs)
can also reveal the accuracy of its results and boast faithful
resolution.

Through other FFT routines (Coherence is the name of the routine of
FFTs that display accuracy) you can also measure the unique
characteristics of a two port system. This means one measurement

(consisting of a set of readings taken over an interval - a chirp so qualifies) can completely describe the system that the original signal went through. This is of no significance to ranging, per se, but it does start the bedwork for building a finger print of the territory the robot traverses. In essence, it is the basis of how ultrasonics are applied to view, sonically. If you archive and assemble the data, it would reveal the features of growing grass, dropped leaves, and footprints in the snow. It would also distinguish a lamp post from a post man.

I was a consultant to HP in the mid 80's when I spent 6 months testing their FFT generation of analyzers. There is a world of application that has hardly scratched the surface.

73's
Richard Clark, KB7QHC

3260. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 03:09:57 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <3Wi2a.31264$Ww1.473511@news20.bellglobal.com>
Source record: 124899

"Richard Clark"
> It would seem so but not by much. Almost every
> piece of gear on my Microwave Standards bench
> came in octave relations (1-2, 2-4, 4-8 and so on).

Because on a microwave standards bench, waveguide 'modes' are important for purposes of calibration and repeatability.

My contribution to this thread was simply intended to clarify that the upper limit frequency specification for waveguides is related only to control of waveguide 'modes', not to 'cut-off'.

There is no upper frequency 'cut-off' for waveguides.

That's all.

3261. Re: What place makes good custom QSL cards?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 03:12:29 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <FQi2a.3342$FT2.2362@fe01.atl2.webusenet.com>
Source record: 124898

or see w7nn's wares -- he has 8-1/2 X 11 sheets, perforated card stock - can
make 400 qsls with his material, (and has software , for WORD) for around
25 bucks, delivered. also, could take this stock to printer. also couple of
programs available on web to make cards, but artwork is up to you. Jim
"R. Scott" <washingtonham@yahoo.com> wrote in message
news:3E494328.22116FE8@yahoo.com...
> If you have the resources to design and print in color. Do what I did.
> I designed it on Freelance then took it to my local printer and for
> 15.00 for 100 sheets they copied on sturdy bond paper and Cut the cards
> out at 3 1/2 X 5.
>
> Viola 400 cards for 15 bucks.

3262. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 03:25:13 UTC
From: richardharrison@webtv.net
Message-ID: <26031-3E49BE99-53@storefull-2314.public.lawson.webtv.net>
Source record: 124902

Yuri wrote:
"As far as planes go, first was the American Navy NC4 team who flew from NY to Portugal with stopover in the Azores."

That`s a route still often taken today. Military planes stopover at the American air base on Teceira (third) Island, and commercial aircraft land at Santa Maria enroute to Lisboa.

Best regards, Richard Harrison, KB5WZI

3263. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 03:41:29 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qtfj4vss4h4lsib2ipbjiid78sbnsq2shc@4ax.com>
Source record: 124901

On Tue, 11 Feb 2003 22:09:57 -0500, "J. Harvey"
<JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote:

>"Richard Clark"
>> It would seem so but not by much. Almost every
>> piece of gear on my Microwave Standards bench
>> came in octave relations (1-2, 2-4, 4-8 and so on).
>
>Because on a microwave standards bench, waveguide 'modes' are important for
>purposes of calibration and repeatability.
>
>My contribution to this thread was simply intended to clarify that the upper
>limit frequency specification for waveguides is related only to control of
>waveguide 'modes', not to 'cut-off'.
>
>There is no upper frequency 'cut-off' for waveguides.
>
>That's all.
>
>

Hi Jeff,

Good point, but by the same proposition, one form of pick up for a variety of modes must be reflective and inappropriate somewhere in that above-octave region. I never suffered the problem at the bench as you already note. I had the universal match of dead load and all paths lead to carbon.

However, in my Radar years it was important to position such items as stubs and loops that coupled into, and out of the plumbing, and it was quite clear how the relationship existed when you viewed the physical picture illustrated with the mathematical constructs of mode lines, flux linkage for a loop, or potential excitation for a capacitive probe.

The Navy text was heavily influenced upon, and drew material from Terman for courses of study in Electronics. Especially useful are his graphics in the descriptions of fields in waveguides. The elegance of SHF reveals visual correlatives that can illustrate simply what is extremely difficult to express in words. Terman's editorial style imposed a high water mark of quality in the continuity and relevance of illustration.

So I can agree that waveguides operate far in excess of twice their fundamental, but it is not a cakewalk.

73's
Richard Clark, KB7QHC

3264. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 03:49:02 UTC
From: richardharrison@webtv.net
Message-ID: <26029-3E49C42E-436@storefull-2314.public.lawson.webtv.net>
Source record: 124904

Ian, G3SEK wrote:
"America has been part of Scandinavia since the time of the Vikings."

You might think so in Minnesota or Wisconsin, but the Viking settlement in North America doesn`t really count because the "Skralings" (Indians) wiped out all those Viking settlements on the East Coast and the Vikings did not persist.

Best regards, Richard Harrison, KB5WZI

3265. Re: Crystal 440 F.M. transceiver

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 04:04:13 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v4ji0a602o9v6f@corp.supernews.com>
Source record: 124903
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

In fact, my friend's 706 has a voice synthesizer, which is useful to him on HF where there really isn't much of an alternative. But on VHF/UHF, you would rather just go 2 clicks and be there. He has, if I recall, around 2 dozen channels programmed, but he also operates HF. Clicking past the broadcast channel is a little more convenient than pressing the "talk the frequency" button and waiting to hear the droning voice.

..

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message news:3e49b1b4$1_3@news1.prserv.net...
> It might be easier to find a Kenwood with the voice synthesizer which will
> allow him to do much more then just the three channels. I don't know about
> recent rigs, but I remember it being an available option on the TW-4000A,
> which includes two meters also.
>
> Another possibility is one of the thumbwheel programmed rigs. A Braille
> mark on each thumbwheel would provide a reference.
>
> You see, I don't recall very many crystal UHF ham radios except for
> GE/Motorola/RCA, and those are a little ancient and cumbersome. Also very
> cheap these days, I have to admit.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> "SWL" <radiovintage@hotmail.com> wrote in message
> news:XD92a.10953$tO2.1062259@newsread1.prod.itd.earthlink.net...
> > Wanted to buy a 440 crystal F.M. transceiver for a blind friend.He only
> > needs 3 frequencies and it is easier and cheaper for him to count the
> > clicks.Low power is fine too.
> > A plus would be any of the frequencies he needs which are:
> > 444.55 +
> > 443.70 +
> > 446.00 simplex
> > THANKS
> >
> >
>
>

3266. Re: Johnson Matchbox#250 Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 04:20:35 UTC
From: macve3gro@aol.com
Message-ID: <20030211232035.23275.00000301@mb-da.aol.com>
Source record: 124905

Actually, you need to do that to make the Matchbox usable with a transceiver. Bypassing with a short length of wire is easiest and preserves the resale value for diehard collectors. 73. Harry, VE3GRO

Harry MacLean, VE3GRO
500 Riverside Drive, London, ON N6H 2R7
(519) 473-1668

3267. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 04:28:35 UTC
From: macve3gro@aol.com
Message-ID: <20030211232835.23275.00000302@mb-da.aol.com>
Source record: 124906

Try a shorter length, 170-180 feet. This works out to be 3/4 wavelength on 80 metres, and if you trim carefully, you will be able to feed it, against ground or ground radials of course, with 52-ohm coax without a tuner. On 160, this antenna will be 3/8 wavelength. To use on 160, put a variable capacitor (I would try 250 pf or so, but even 500 pf might be needed) in series with the feed point to tune out the reactance. Short this capacitor to put the antenna back on 80 metres. W6SAI describes this antenna in several of his antenna books. I've used a half-sized version (88-90 feet) on 80 and 40. Worked well, simple and neat. 73. Harry, VE3GRO
Harry MacLean, VE3GRO
500 Riverside Drive, London, ON N6H 2R7
(519) 473-1668

3268. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 04:42:32 UTC
From: richardharrison@webtv.net
Message-ID: <13170-3E49D0B8-401@storefull-2315.public.lawson.webtv.net>
Source record: 124909

Jim, NN7K wrote:
"Boy, if that the case, Jim Creek Wa. would really be optimal (around 18 KHz, 1/2 Megawatt)!!"

Not bad, but antenna gain and directivity are elusive at low frequencies. Beamwidth which exceeds the projected area (outline) of the target doesn`t reflect from it and also accepts noise from elsewhere on reception.

But, signal loss is a function of frequency. In space, a signal declines 22 dB in the first wavelength of departure from a radiator. After that, it loses another 6 dB every time the distance doubles.

Distances for the same signal decline are obviously less for the distance traveled at lower frequencies unless you are measuring the distance in wavelengths.

Best regards, Richard Harrison, KB5WZI

3269. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 04:59:43 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302112059.782a57a8@posting.google.com>
Source record: 124907

Wes Stewart <n7ws@#arrl.net> wrote in message
news:<e4ri4v86dnf1p3oru64rq0796asue7edbb@4ax.com>...
> On Tue, 11 Feb 2003 12:49:39 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> [snip]
> |A non-resonant dipole will not result in the same field strength as a
> |resonant dipole.
>
> Total bullshit. And you're a broadcast engineer? There are a lot of
> BC stations around that don't have resonant towers. Especially the
> ones radiating two or three frequencies at the same time.

Wes,
If a antenna is resonant then there CAN be a 'loss less' match,
if there is reactance present then work/energy must used to remove the
useless component, thus there obviosly is a reduction in energy
available for radiation which in turn changes the radiated field.
This reflects the old adage/law that to achieve maximum efficiency one
must have a radiator that is RESONANT at its LOWEST possible resistive
value. This in no way violates the understanding that energy cannot
be created or destroyed . You should be able to find corroberating
statements in any reputable book associated with communication.
Best regards
Art

3270. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 05:01:01 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <hyk2a.9102$ji.961445@twister.southeast.rr.com>
Source record: 124908

All bazookas I have seen were made with small coax, RG58 or similar. Would be interesting to see what would happen if the antenna was made with low loss coax, perhaps hardline. Instead of arguing it to death lets prove it one way or another. If the primary cause of improved bandwidth is coax loss using quality cable should make a marked reduction in the bandwidth of the antenna. Perhaps this has already been done. Would like to here from those who have.

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:3t8b4vg75f9j3lvr5tolapmagrin65vbbg@4ax.com...
> On Sat, 8 Feb 2003 18:06:11 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> |Where is it "proved incorrect" in QST or anywhere else that a shorted
> |quarter wave stub is an open circuit?
>
> He didn't say that a quarter-wave stub made with coax isn't an
> "open-circuit" but I will.
>
> Contrary to what you claim, there is a resistance associated with
> coax. A stub made with lossy line is far from an open circuit.
>
> Your own measurements confirm this, although, I calculate more like
> 1900 +j0 for RG8X @ 90 deg., whatever the correct number, it isn't an
> open circuit.
>
> Suggested reading for the analysis:
>
> F. J. Witt, "Broadband Dipoles--Some New Insights", QST, Oct 1986, pp
> 27-37
>
>
>
>
> |H.
> |NQ5H
> |
> |
> |"Dale Parfitt" <par@parelectronics.com> wrote in message
> |news:3E459A29.7D5BA05D@parelectronics.com...
> |>
> |>
> |> "H. Adam Stevens" wrote:
> |>

> |> > There is no free lunch, but you can design an antenna tuner into an
> |antenna.
> |> > A 50 ohm resistor has a great SWR. There are no resistors in coax.
> |> > A double bazooka is a dipole with two quarter wave stubs in series
> |across
> |> > the feed point.
> |> > Look up what a shorted quarter wave stub looks like, it's an open
> |circuit at
> |> > resonance,
> |> > I measure >3000 ohms for RG8X at 7.15 MHz.
> |> > As you go off resonance the shunt stubs become reactive opposite to
the
> |way
> |> > the dipole becomes reactive.
> |> > The reactances cancel. It's an antenna tuner!
> |> > This maintains a resistive load over a range greater than 100 KHz. An
> |SWR of
> |> > 1:1 flat across the range.
> |> > Field strength measurements on 40 meters show the double bazooka to
be
> |> > indistinguishable from a dipole at resonance, and better that the
dipole
> |off
> |> > (the dipole's) resonce.
> |> > I have not bothered on 80 and 40.
> |> > H.
> |> > NQ5H
> |>
> |> This analysis has been proved incorrect in QST and I believe QEX.
Indeed
> |it is
> |> loss in the stubs that accounts for the increased BW.
> |> Subsequent articles that pointed out the fallacy of the 2X bazooka did
> |present
> |> methods of broadening the dipole's response somewhat with coaxial
> |sections-
> |> where the math made sense eg. Frank Witt- Broadband Matching with the
> |> Transmission line Radiator- ARRL Antenna Compendium Vol 4.
> |>
> |> Dale W4OP
> |>
> |> Dale W4OP
> |>
> |
>

3271. Re: Directional beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 05:22:38 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <u5OdnWutC_GBR9SjXTWc3A@comcast.com>
Source record: 124910
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Because the wavelength is too short, and you don't know how many cycles of
delay there are. Speed of sound is about 1100 feet per second.

Tam/WB2TT
"Gilbert Mouget" <no.spam@thank.you> wrote in message
news:MPG.18b3bc2f2d77422c989c1d@news.free.fr...
> In article <GbucnddgPegCINqjXTWcqg@comcast.com>,
> dated Mon, 10 Feb 2003 09:56:29 -0500,
> Tarmo Tammaru, <t-tammaru@home.com> says...
>
>
> > I think ultrasonic is the way to go. What would work is an approximately
30
> > KHz carrier, modulated by some low frequency like 100 Hz, on the target;
> > then 3 fixed receivers that triangulate the target based on the phase
> > difference of the detected 100 Hz signal. Requires no directional
> > microphones, and no moving parts. Even 1 millisecond resolution would
get
> > him to within a foot.
>
> Why not measure the phase difference of the 30 KHz carrier ?
>
> --
> "You cannot move mountains if you believe them to be mountains.
> You must think of them as collections of small stones,
> Which can be moved one at a time, and then reassembled."
> -- The Tao of Meow

3272. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 05:32:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pvmj4v0pghmmgaicjuag2ci7mjmj6h0f4v@4ax.com>
Source record: 124911

On Tue, 11 Feb 2003 22:42:32 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Jim, NN7K wrote:
>"Boy, if that the case, Jim Creek Wa. would really be optimal (around 18
>KHz, 1/2 Megawatt)!!"
>
>Not bad, but antenna gain and directivity are elusive at low
>frequencies. Beamwidth which exceeds the projected area (outline) of the
>target doesn`t reflect from it and also accepts noise from elsewhere on
>reception.
>

Jim Creek, NLK / NPG, is situated in a valley, floor at 300 Meters
elevation, 6 North Towers, bases at 700 & 800 Meters; 6 South Towers,
bases at 700 Meters. The north group and south group are separated by
1700 Meters. Each of the groups of towers (easily 200' tall) supports
six elements (12 towers) with no more than 100M between them. From the
midpoint of the combined elements (not sure of that, actually), a
vertical wire drops to the valley floor and a small shack with the
conventional accouterments.

What is described is correlated from topo maps and my own direct
observation from a distance of 1000 meters from the base - the Main
Gate.

73's
Richard Clark, KB7QHC

3273. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 05:38:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jdnj4vkfjrfmf9ntmpstuboatj785j3snp@4ax.com>
Source record: 124912

On Tue, 11 Feb 2003 21:49:02 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Ian, G3SEK wrote:
>"America has been part of Scandinavia since the time of the Vikings."
>
>You might think so in Minnesota or Wisconsin, but the Viking settlement
>in North America doesn`t really count because the "Skralings" (Indians)
>wiped out all those Viking settlements on the East Coast and the Vikings
>did not persist.
>
>Best regards, Richard Harrison, KB5WZI

A recent scholar announced that the Chinese beat all the dead white
men by 1000 years - but they didn't give a damn about what they found
and went home (presumably the Indians were not interested in Ceramics
or maybe the Chinese wouldn't accept salted salmon). Scholar offers
no evidence but what is in the historical record.

Recent announcement from scholars in China: same scholar above is a
nut.

Whatcha gonna do?

73's
Richard Clark, KB7QHC

3274. Re: Directional beacon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 05:41:45 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <45mdnXAyb4IKQ9SjXTWc3Q@comcast.com>
Source record: 124913
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Whoops, I messed up. Did it in my head and slipped a decimal or two. 100 Hz would only be good out to 10 feet. 10 Hz would be good to about 100. Actually, with the low rates, using pulses like Richard mentioned would be easier to do. However, for a home project I would use a fixed rep rate. 1 to 10 pps seems to make sense.

The reason RF won't work with this scheme is that to even get 1 foot resolution, you would have to measure delay to a total error of 1 nanosecond.

Tam/WB2TT
"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:u5OdnWutC_GBR9SjXTWc3A@comcast.com...
> Because the wavelength is too short, and you don't know how many cycles of
> delay there are. Speed of sound is about 1100 feet per second.
>
> Tam/WB2TT
> "Gilbert Mouget" <no.spam@thank.you> wrote in message
> news:MPG.18b3bc2f2d77422c989c1d@news.free.fr...
> > In article <GbucnddgPegCINqjXTWcqg@comcast.com>,
> > dated Mon, 10 Feb 2003 09:56:29 -0500,
> > Tarmo Tammaru, <t-tammaru@home.com> says...
> >
> >
> > > I think ultrasonic is the way to go. What would work is an
approximately
> 30
> > > KHz carrier, modulated by some low frequency like 100 Hz, on the
target;
> > > then 3 fixed receivers that triangulate the target based on the phase
> > > difference of the detected 100 Hz signal. Requires no directional
> > > microphones, and no moving parts. Even 1 millisecond resolution would
> get
> > > him to within a foot.
> >
> > Why not measure the phase difference of the 30 KHz carrier ?
> >
> > --
> > "You cannot move mountains if you believe them to be mountains.
> > You must think of them as collections of small stones,
> > Which can be moved one at a time, and then reassembled."
> > -- The Tao of Meow
>
>

3275. Small 2 Watt Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 10:09:07 UTC
From: Stefan Moscibroda <stefan.moscibroda@gr.admin.ch>
Message-ID: <3e4a1d44@news.admin.ch>
Source record: 124914

To further improve the radiation efficiency of a simple body worn dipole I'm thinking
to use a balun to feed the symmetric dipole by the assymetric coax. The maximum
output transmit power which should be supported is 2 W. All device I found
(e.g. in SMT techology are for much lower power) Does anybody out there where
to find very small balun still supporting that power. Thanks!
Stefan

3276. Re: Vertical Line-of-Sight ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 10:21:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4k8139g300k51@corp.supernews.com>
Source record: 124915

J. Harvey wrote:
> "Roy Lewallen" on waveguides:
>
>>And the highest frequency you can
>>propagate is a bit less than 1.5 times
>>the lowest. So, for example, a 10 cm
>>diameter pipe could be used only for
>>sending signals of about 1750 MHz
>>to 2600 MHz.
>
>
> Hmmm...
>
> 'Light' (a.k.a. EM with a frequency of ~500 THz) seems to go right through a
> 10cm diameter pipe (lengthwise of course) without much problem.
>
> I understand the 'waveguide beyond cutoff' limit for big waves in small
> pipes (they simply don't fit), but the other limit (at the high frequency
> end) is only related to "mode". Right ?

Yes. My answer was a bit oversimplified, but it looked like the original poster didn't know much about the topic, so I kept it simple.

For each common waveguide shape, there's a lowest common "mode". Different modes are characterized by different distributions (shapes) of the E and H fields. When sending a modulated signal (that is, one containing information) down a waveguide, it's usually desirable to have it propagated primarily by a single mode. The reason is that energy in different modes travels with different velocities and attenuation. The result of multiple mode propagation is dispersion, or smearing, of the information content. At frequencies where multiple modes can exist, various modes can be excited by anomalies in the waveguide, which would certainly be the case with the sorts of structures the original poster asked about. So even if a single mode were carefully excited, multiple modes would appear along the waveguide, resulting in dispersion. Consequently, it's common practice to not use waveguide at frequencies high enough to support multiple modes, which is why the high frequency limit I gave.

This is still very simplified, and for that matter I'm not at all an expert on this topic. There are many whole books written about waveguide propagation, most involving some pretty complex math. One of my favorites is _Engineering Electromagnetic Fields and Waves_ by Carl T.A. Johnk, which has numerous detailed drawings showing the fields for various modes. I recall seeing Dr. Johnk a good hour before a lecture

laboriously drawing some of those diagrams on the blackboard (well before they could be drawn with a computer), and really appreciating all his effort when lecture time came.

Roy Lewallen, W7EL

3277. Re: What place makes good custom QSL cards?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 11:15:01 UTC
From: Larry Gauthier <larryg_at_ismi.net>
Message-ID: <v4kb5jhqjnrn95@corp.supernews.com>
Source record: 124916

If the original question was asking for recommendations about graphics/print shops that will work with you to design and print professional-looking QSL cards, I have worked with both FDS Graphics (UK, www.fds-praphics.com) and The QSL Shop (Germany, www.qslshop.com), and have been very pleased with the work from both of them.

I purchased the photo for my card from NASA (a hi-res bitmap image) , and then designed my "draft" QSL card in PowerPoint (front and back sides). I then shipped the draft PowerPoint version and the graphics image to the graphics/print shop. The print shops refined it, made suggestions about making it a little better (some suggestions I accepted, others I rejected) and then sent me a PDF of the "final" for my approval. It took a few iterations before I was ready to say "print it" - but the product I received two weeks later was better than I could ever do using my color laser printer. (see a lo-res copy of my card on www.qrz.com)

-larry
K8UT

<Jimnn7k@reno.rmci.net> wrote in message
news:FQi2a.3342$FT2.2362@fe01.atl2.webusenet.com...
> or see w7nn's wares -- he has 8-1/2 X 11 sheets, perforated card stock -
can
> make 400 qsls with his material, (and has software , for WORD) for around
> 25 bucks, delivered. also, could take this stock to printer. also couple
of
> programs available on web to make cards, but artwork is up to you. Jim
> "R. Scott" <washingtonham@yahoo.com> wrote in message
> news:3E494328.22116FE8@yahoo.com...
> > If you have the resources to design and print in color. Do what I did.
> > I designed it on Freelance then took it to my local printer and for
> > 15.00 for 100 sheets they copied on sturdy bond paper and Cut the cards
> > out at 3 1/2 X 5.
> >
> > Viola 400 cards for 15 bucks.
>
>
>

3278. Re: What place makes good custom QSL cards?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 11:21:10 UTC
From: jan-martin.hertzsch@rz.hu-berlin.de
Message-ID: <b2dan6str1@lnews.rz.hu-berlin.de>
Source record: 124917

Try www.qsl.cz - I had my QSL cards printed there.

73 de DL2LFH/p, Jan-Martin

3279. Re: Small 2 Watt Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 12:55:08 UTC
From: John DeGood <nu3e@arrl.net>
Message-ID: <3E4A442C.9060205@arrl.net>
Source record: 124918

This isn't SMT size, but it might still be small enough for your purposes:

http://www.njqrp.org/balun/index.html

73,

John NU3E

Stefan Moscibroda wrote:
> To further improve the radiation efficiency of a simple body worn dipole I'm
> thinking
> to use a balun to feed the symmetric dipole by the assymetric coax. The
> maximum
> output transmit power which should be supported is 2 W. All device I found
> (e.g. in SMT techology are for much lower power) Does anybody out there
> where
> to find very small balun still supporting that power. Thanks!
> Stefan
>
>
>

3280. Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 13:18:14 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2dhimcpi1@sparta.btinternet.com>
Source record: 124769

Can someone perhaps help me understand something?

I don't quite see how open wire feeder does not actually radiate. I can only guess it's something to do with the fact that the cables are run in parallel and show a given impedance, but I'd appreciate the text book answer.

Thanks,

Dean

3281. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 13:42:36 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4kjt31c6tcm36@corp.supernews.com>
Source record: 124770

If you move far enough away from open wire line such that the distance from the line is large compared to the conductor spacing, and the currents in the two wires are equal and opposite, the electromagnetic fields from the two conductors cancel. At "infinity" they exactly cancel. Up close open wire feeder will interact with it's environment, therefore lead dress and mechanical stability are important with ladder line. The advantage of ladder line over coax is it has much less loss, especially when the SWR goes up.
Just my 2 cents
H.
NQ5H

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:b2dhimcpi1@sparta.btinternet.com...
> Can someone perhaps help me understand something?
>
> I don't quite see how open wire feeder does not actually radiate. I can
only
> guess it's something to do with the fact that the cables are run in
parallel
> and show a given impedance, but I'd appreciate the text book answer.
>
> Thanks,
>
> Dean
>
>

3282. WTB:MIDLAND UHF RADIOS

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 14:09:54 UTC
From: n2ion@aol.com
Message-ID: <20030212090954.19886.00001092@mb-cu.aol.com>
Source record: 124771

I'M LOOKING TO BUY A FEW MIDLAND RADIOS
MODEL# 70-565B, OR 70-530A, OR 70-526A&B
THE RADIOS MUST BE CAPABLE OF GOING DOWN TO THE 430 MHz PORTION OF THE BAND.
MUST HAVE MICROPHONE AND MOUNTING BRACKETS.

IF YOU HAVE ANY OF THESE RIGS, EMAIL ME WITH THE CORRESPONDING DETAILS.

THANKS IN ADVANCE

3283. help with homemade antenna for SW 3.3 - 12.0

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 14:10:46 UTC
From: Duber <dphill16@tampabay.rr.com>
Message-ID: <GBs2a.61217$QQ4.953451@twister.tampabay.rr.com>
Source record: 124772

Hi everyone,

I have a Baygen radio that was purchased for yk2. I am thinking it may be time to get it out and get it working!!! I live not that far from Orlanda and a nuclear power plant.

I want to add an external antenna for the SW and the FM. (must be home-made) I assume this is two separate antenna??

can anyone give me details, point me to a site etc.

much appreciated

thks
bg

--
"Not everything that can be counted counts, and not everything that counts can be counted. "
Albert Einstein (1879-1955)

3284. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 14:29:45 UTC
From: richardharrison@webtv.net
Message-ID: <2039-3E4A5A59-9@storefull-2317.public.lawson.webtv.net>
Source record: 124773

Richard Clark wrote:
"Whatcha going to do?"

A recent PBS program displayed the exploits of a "scientist" who set out to prove Australian Aborigines descended from Africans, by using genetic tracers.

His success led him to expand his studies worldwide, taking blood samples everywhere he went. His results are evidence of our species propagation throughout the world from African origins. He deduced the routes taken and times in which migration occurred.

By the researcher`s evidence, Columbus wasn`t so far off when he called natives of the new world "Indians".

Best regards, Richard Harrison, KB5WZI

3285. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 14:59:48 UTC
From: richardharrison@webtv.net
Message-ID: <18062-3E4A6164-27@storefull-2318.public.lawson.webtv.net>
Source record: 124774

Ian, G3SEK wrote:
"America has been part of Scandinavia since the time of the Vikings."

More so, the British Isles. Viking conquerors invaded and persisted in many parts. My own family traces its roots back to Denmark via the British Isles.

The Vikings also fought their way through Russia to Constantinople and stayed. The invaders claimed they had been invited by the Russians to supply new leadership and a royal family for Russia. The Vikings said they were complying. They were also establishing a connection with oriental trading routes.

Best regards, Richard Harrison, KB5WZI

3286. N-jack assembly?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 15:18:19 UTC
From: cprstn54zz@att.net
Message-ID: <3e4a6397.116267468@news-server.optonline.net>
Source record: 124775

I have a no-name in-line N-type jack (female) that is different from the Amphenol one shown in the ARRL Handbook. It is my first N connector and I am guessing -- without success after three tries. When I tighten the rear nut, the bushing that the braid is spread back on (the "braid bushing") moves up and shorts the braid to the center receptacle. If it helps identify the connector (vs. Amphenol) , there is an extra bushing around 1/8" thick that I think goes in front of the braid bushing and makes the sandwich.

1) Can anyone point me to some diagrams for other brands of N jacks so I can get a better idea?

2) I have been soldering the coax center conductor to the N receptacle. Should it just be pushed in instead? If I can shorten the distance to the receptacle, the movement on tightening might not happen.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3287. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 15:34:07 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E4A69D1.ABFFA39B@att.net>
Source record: 124776

Hi Richard,

You have made the quoted comment numerous times.

The 6 dB part is well understood, but how do you come up with the 22 dB part?

Does this depend on the exact antenna size and shape?

How do you define "signal" in the first wavelength, especially right up close to the antenna?

It would seem that you are mixing induction fields and radiation fields in some manner, but it is not clear how you are doing so.

73,
Gene
W4SZ

Richard Harrison wrote:

[snip]

> But, signal loss is a function of frequency. In space, a signal declines
> 22 dB in the first wavelength of departure from a radiator. After that,
> it loses another 6 dB every time the distance doubles.

3288. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 15:43:51 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302120743.70431433@posting.google.com>
Source record: 124777

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<26031-3E49B73B-48@storefull-2314.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "I am looking for known scientific equations that relate to optimum and
> efficient communication regardless of frequency which includes lossless
> transference to a receiver."
>
> Taking Art seriously as I normally do,
snip

Richard,
A short while ago you were the only one who stood beside
me when I denounced the jewish slur made regarding 'The final solution.
Now again you are allowing sentiment to affect your personal standing
again.
It does no use if you put your professional standing at risk such that
gurus with knives can force you into the snake pit along with others
that they so despise.
Please desist so I can continue to have the benefit of your professional insights.
Thankyou
Art
Art
>
> Best regards, Richard Harrison, KB5WZI

3289. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 15:53:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4A6DE4.2090503@ieee.org>
Source record: 124778

Richard Harrison wrote:
> By the researcher`s evidence, Columbus wasn`t so far off when he called
> natives of the new world "Indians".

Yep, it's pretty clear that the Asians discovered America and
that there were multiple waves at different times from different
parts of Asia.

What was interesting was at the end of the program, a blond
native of Poland and a Native American were proven to have
had the same common genetic ancestor.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3290. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 15:57:07 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2dqsj$j1l$1@knossos.btinternet.com>
Source record: 124779

So does coax interfere less with it's close surroundings?

In my attic, which will have close surroundings to the feeder and I can't really avoid it, do you think I'm better off feeding coax to a balun at the dipole centre, or having the balun at the radio end and running ladder line to the dipole?

Thanks for the 2 cents,

D

"H. Adam Stevens" <solo@totalaccess.net> wrote in message news:v4kjt31c6tcm36@corp.supernews.com...
> If you move far enough away from open wire line such that the distance from
> the line is large compared to the conductor spacing, and the currents in the
> two wires are equal and opposite, the electromagnetic fields from the two
> conductors cancel. At "infinity" they exactly cancel. Up close open wire
> feeder will interact with it's environment, therefore lead dress and
> mechanical stability are important with ladder line. The advantage of ladder
> line over coax is it has much less loss, especially when the SWR goes up.
> Just my 2 cents
> H.
> NQ5H
>
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> news:b2dhimcpi1@sparta.btinternet.com...
> > Can someone perhaps help me understand something?
> >
> > I don't quite see how open wire feeder does not actually radiate. I can
> only
> > guess it's something to do with the fact that the cables are run in
> parallel
> > and show a given impedance, but I'd appreciate the text book answer.
> >
> > Thanks,
> >
> > Dean
> >
> >
>
>

3291. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 16:16:27 UTC
From: richardharrison@webtv.net
Message-ID: <2001-3E4A735B-22@storefull-2313.public.lawson.webtv.net>
Source record: 124784

Art, KB9MZ wrote:
"Some noted thinkers state that radiation can emanate from a single point, if this is so does it not add reason to move away from the Wave length term---?"

Art could consult his 1955 Terman opus on page 871, footnote no. 1:
"An isotropic antenna produces waves that are of equal strength in all directions. Although an isotropic radiator of coherent waves does not exist because it cannot satisfy Maxwell`s equations---."

Radiation from a single point in space is equipotential and equiphase at any equidistant point from the point source.

Read sentence no.1 in your 1955 Terman:
"The essential properties of a radio wave are frequency (wavelength), intensity, direction of travel, and plane of polarization. The radio waves produced by an alternating current will vary in intensity with the frequency of the current---."

The idea of moving away from the "Wave length term" is a wild idea which does not fly.

Best regards, Richard Harrison, KB5WZI

3292. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 16:24:01 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ktbnoi4ufe06@corp.supernews.com>
Source record: 124780

Dean
Well-shielded coax contains the electric fields inside the dielectric
between the conductors
and the magnetic fields perfectly cancel since the two conductors are
coaxial.
(Assuming equal and opposite currents! If you have a reactive load at the
antenna, you can get the coax to radiate.
A balun pins the inner conductor and shield currents together at the feed
point, since it effectively shorts them with the few inches of wire in the
balun primary, minimizing feedline radiation.)
Good quality, matched coax interacts very little with it's surroundings.
Do you have a lot of metal in the attic? In the 50's, before low loss coax,
folks used 300 ohm twin lead for TV antennas. The typical standoff insulator
held the twin lead about 4 inches from the metal antenna mast. It was
twisted 1/2 half turn every foot or so.
The ladder line you are using is, I assume, 2 or 3 times as wide as TV twin
lead, so if you can keep a foot or so away from conductors and mount it
securely with some twists, it just might work fine.
You didn't say if you were going to use a resonant antenna or a tuner and
subsequent high SWR.
For low SWR and HF coax will work fine.
For high SWR and or higher frequencies the ladder line loss is much better.
Most of all, have fun with antennas!
H.
NQ5H

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:b2dqsj$j1l$1@knossos.btinternet.com...
> So does coax interfere less with it's close surroundings?
>
> In my attic, which will have close surroundings to the feeder and I can't
> really avoid it, do you think I'm better off feeding coax to a balun at
the
> dipole centre, or having the balun at the radio end and running ladder
line
> to the dipole?
>
> Thanks for the 2 cents,
>
> D
>
> "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> news:v4kjt31c6tcm36@corp.supernews.com...
> > If you move far enough away from open wire line such that the distance

> from
> > the line is large compared to the conductor spacing, and the currents in
> the
> > two wires are equal and opposite, the electromagnetic fields from the
two
> > conductors cancel. At "infinity" they exactly cancel. Up close open wire
> > feeder will interact with it's environment, therefore lead dress and
> > mechanical stability are important with ladder line. The advantage of
> ladder
> > line over coax is it has much less loss, especially when the SWR goes
up.
> > Just my 2 cents
> > H.
> > NQ5H
> >
> > "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> > news:b2dhimcpi1@sparta.btinternet.com...
> > > Can someone perhaps help me understand something?
> > >
> > > I don't quite see how open wire feeder does not actually radiate. I
can
> > only
> > > guess it's something to do with the fact that the cables are run in
> > parallel
> > > and show a given impedance, but I'd appreciate the text book answer.
> > >
> > > Thanks,
> > >
> > > Dean
> > >
> > >
> >
> >
>
>

3293. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 16:34:57 UTC
From: ovni90901@aol.com
Message-ID: <20030212113457.04229.00000337@mb-fj.aol.com>
Source record: 124781

>Turn it over 5 grand and all the fan belts hit the ground; No two pulleys
>lay in the same plane.
>The under floor insulating plates came off on a Houston freeway: sparks and
>noise.
>Wiring harness spontaneously combusted.
>Treacherous suspension. Spins like a top.
>Dies in remote places for no discernable reason.
>One of the goddamn things killed a very good friend of mine in 1971.
>Is PIECE OF GM SHIT forceful enough?
>H.
>Red 69 350hp 350 cid Conv
>
>Oh and the Firestone Tires sucked, too.
>
Now we're talking....
-Paint peeled off the roof every year
-Accelerator broke and stuck in the full throttle position on the 75 freeway in
Dallas, on my way home from buying it.
-At 2000 miles, self destructed on the 10 freeway inTyler, TX with all fan
belts going, fan knocking hole in radiator.
- Huge fire when the air conditioner clutch froze
-Had to drive with the window down, so you wouldn't be overcome by battery
fumes
-Headlights wouldn't elevate when turned on, unless the car was stopped (wind
pushed a plastic cover against the mechanism.)
-Two new mufflers every year
-New alternator every year
-New waterpump twice a year
....they should have given me the car, just to collect the maintenance
money....
--Wayne

(OK....now back to antennas)

3294. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 16:38:45 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ku7amo5ntad7@corp.supernews.com>
Source record: 124782

Oh yes, antennas, another problem with the plasticmobile..
H.
"Ovni90901" <ovni90901@aol.com> wrote in message
news:20030212113457.04229.00000337@mb-fj.aol.com...
Corvette agony mercifully deleted.....
> ....they should have given me the car, just to collect the maintenance
> money....
> --Wayne
>
> (OK....now back to antennas)
>

3295. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 16:40:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4A7904.2040407@ieee.org>
Source record: 124783

Dean Elwood wrote:
> So does coax interfere less with it's close surroundings?

Unless you have common-mode currents flowing on the outside
braid of the coax, the fields are confined to the inside of
the coax. That's the beauty of coax and probably why it was
invented. It is "shielded" where two-wire balanced line isn't.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3296. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 16:50:00 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2dtvk$dt1$1@slb4.atl.mindspring.net>
Source record: 124785

Art:

Here's a few, take what you want...

E = mc^2

C = W lg(1 + Eb/No)

e^(j*pi) - 1 = 0

more?

--
Peter K1PO

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0302111501.194a5327@posting.google.com...
> I am looking for known scientific equations that relate to
> optimum and efficient communication regardless of frequency
> which includes lossless transference to a reciever.
> I am very interested in the mandtory influence that wavelength
> has with regard to optimum communication and efficiency.
> No other communication is required only the salient equations
> that go to the relavence of wavelength in these matters or that
> points to the inscapable relavence of such.
> repeat,Supply equations only,further justification is not
> required in help formulating such a list
> Thankyou for your consideration
> Art

3297. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 16:56:56 UTC
From: richardharrison@webtv.net
Message-ID: <2001-3E4A7CD8-25@storefull-2313.public.lawson.webtv.net>
Source record: 124788

Gene, W4SZ wrote:
"How do you define signal in the first wavelength---?"

It`s the radiated signal of course because that`s the only siignal of interest in the far field.

You have doubts? Check graphs found by measurements and you will find most fit the rule very well.

Long ago, I solved an equation for radiation field attenuation versus distance for a distance of one wavelength. To my satisfaction the answer came out exactly 22 dB. It was so many years ago, I don`t even remember the derivation, but since it worked so well, I`ve had no reason to question.

You can find the same thing in print in Pete Saveskie`s book, "Radio Propagation Handbook" on page 326:
"The loss between two isotropic antennae separated by one wavelength is 22 dB, thereafter increasing by 6.0 dB for each doubling of the inter-antenna distance." I`m sure Pete didn`t get this from me because I don`t ever remember discussing this with him.
Pete`s book is listed in the ARRL bibliography.

Best regards, Richard Harrison, KB5WZI

3298. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 17:05:30 UTC
From: k3bu@aol.com
Message-ID: <20030212120530.15998.00001157@mb-mo.aol.com>
Source record: 124786

>His success led him to expand his studies worldwide, taking blood
>samples everywhere he went. His results are evidence of our species
>propagation throughout the world from African origins. He deduced the
>routes taken and times in which migration occurred.

So we are all brothers, major minority, not just African Americans, but African Worldies?
That's it, I want to go back to my African roots and instead of lurkin here tangled in antenna wires, I will get my PhD in Rap music, phew, phew ...

I keep wondering if the "evolution" wasn't really "devolution" - that is all those primitives and monkeys didn't devolve from humans who went way of getting drunk, doing nothing and degenerating into lower species. Those that kept using their brains and God's word stayed around and matured to be Hams.
Prove it wasn't so!

Yuri

3299. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 17:11:51 UTC
From: k3bu@aol.com
Message-ID: <20030212121151.15998.00001158@mb-mo.aol.com>
Source record: 124787

Richard KB5WZI proclaims:
>
>The idea of moving away from the "Wave length term" is a wild idea which
>does not fly.

Yea, they also said that Earth is flat. Just give'm time we might be surprised.
Watch for non-wave Fractals, CFAs, EHs, pointies...
I bet Frac Laboratories are feverishly patenting the idea already, just in
case. All you need to separate the wavelength from frequency and itsa piece of
cake. (SWR might be a problem, we might need SFR :-)

Yuri

3300. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 17:25:34 UTC
From: k3bu@aol.com
Message-ID: <20030212122534.15998.00001159@mb-mo.aol.com>
Source record: 124789

>"The loss between two isotropic antennae separated by one wavelength is
>22 dB, thereafter increasing by 6.0 dB for each doubling of the
>inter-antenna distance." I`m sure Pete didn`t get this from me because
>I don`t ever remember discussing this with him.
>Pete`s book is listed in the ARRL bibliography.
>
>Best regards, Richard Harrison, KB5WZI
>

So how many wavelengths do we need for signal to drop to near zero or noise floor?
So how come we can hear 5W QRP on long path?

Interesting articles on the web about Ignosphere in conjuction with Space Shuttle disaster and admission that we know very little about it. Perhaps more proof for my "conduction" propagation theory?

Yuri, K3BU

3301. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 17:44:50 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2e16i$h88$1@helle.btinternet.com>
Source record: 124790

"Peter O. Brackett" wrote in message
>
> E = mc^2
>
> C = W lg(1 + Eb/No)
>
> e^(j*pi) - 1 = 0
>
============================

My favourite has got to be : " e^(j*pi) + 1 = 0"

. . . . . the eutectic point of all mathematics. When combined with a glass of Californian red plonk and a slice of mature cheese its beauty brings tears to my eyes.

Reg.

3302. Re: What place makes good custom QSL cards?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 17:46:53 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <b2e1adbih0@216.39.144.81>
Source record: 124791

On 12 Feb 2003 11:21:10 GMT, jan-martin.hertzsch@rz.hu-berlin.de wrote:
> Try www.qsl.cz - I had my QSL cards printed there.
>
> 73 de DL2LFH/p, Jan-Martin
>

I'm not sure how this thread relates to antennas, but I had very good
results with http://www.octavia.com.

Bob, N7XY

3303. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 18:22:51 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E4A915B.31B09B@att.net>
Source record: 124792

Richard,

This was not intended to be controversial or to be a trick question.

How do you measure or even define the radiated signal up close to the antenna?

The real question is: 22 dB down from what?

I think I understand the theoretical isotropic antennae example, since these are by definition infinitesimally small. How does your formula work for a typical practical antenna?

73,
Gene
W4SZ

Richard Harrison wrote:
>
> Gene, W4SZ wrote:
> "How do you define signal in the first wavelength---?"
>
> It`s the radiated signal of course because that`s the only siignal of
> interest in the far field.
>
> You have doubts? Check graphs found by measurements and you will find
> most fit the rule very well.
>
> Long ago, I solved an equation for radiation field attenuation versus
> distance for a distance of one wavelength. To my satisfaction the answer
> came out exactly 22 dB. It was so many years ago, I don`t even remember
> the derivation, but since it worked so well, I`ve had no reason to
> question.
>
> You can find the same thing in print in Pete Saveskie`s book, "Radio
> Propagation Handbook" on page 326:
> "The loss between two isotropic antennae separated by one wavelength is
> 22 dB, thereafter increasing by 6.0 dB for each doubling of the
> inter-antenna distance." I`m sure Pete didn`t get this from me because
> I don`t ever remember discussing this with him.
> Pete`s book is listed in the ARRL bibliography.
>
> Best regards, Richard Harrison, KB5WZI
>

3304. Re: What place makes good custom QSL cards?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 18:34:20 UTC
From: fch <na@hle.com>
Message-ID: <3E4A93AC.CF4F75F6@hle.com>
Source record: 124795

Great info Larry.
And great looking Qsl card.
Think I'm going to follow your design.
What do you have printed on the back.

Please reply to NG.

thanks

Larry Gauthier wrote:

> If the original question was asking for recommendations about graphics/print
> shops that will work with you to design and print professional-looking QSL
> cards, I have worked with both FDS Graphics (UK, www.fds-praphics.com) and
> The QSL Shop (Germany, www.qslshop.com), and have been very pleased with the
> work from both of them.
>
> I purchased the photo for my card from NASA (a hi-res bitmap image) , and
> then designed my "draft" QSL card in PowerPoint (front and back sides). I
> then shipped the draft PowerPoint version and the graphics image to the
> graphics/print shop. The print shops refined it, made suggestions about
> making it a little better (some suggestions I accepted, others I rejected)
> and then sent me a PDF of the "final" for my approval. It took a few
> iterations before I was ready to say "print it" - but the product I received
> two weeks later was better than I could ever do using my color laser
> printer. (see a lo-res copy of my card on www.qrz.com)
>
> -larry
> K8UT
>
> <Jimnn7k@reno.rmci.net> wrote in message
> news:FQi2a.3342$FT2.2362@fe01.atl2.webusenet.com...
> > or see w7nn's wares -- he has 8-1/2 X 11 sheets, perforated card stock -
> can
> > make 400 qsls with his material, (and has software , for WORD) for around
> > 25 bucks, delivered. also, could take this stock to printer. also couple
> of
> > programs available on web to make cards, but artwork is up to you. Jim
> > "R. Scott" <washingtonham@yahoo.com> wrote in message
> > news:3E494328.22116FE8@yahoo.com...
> > > If you have the resources to design and print in color. Do what I did.
> > > I designed it on Freelance then took it to my local printer and for
> > > 15.00 for 100 sheets they copied on sturdy bond paper and Cut the cards
> > > out at 3 1/2 X 5.
> > >

> > > Viola 400 cards for 15 bucks.
> >
> >
> >

3305. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 18:41:50 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <Ozw2a.22118$KM2.3271668@twister.southeast.rr.com>
Source record: 124793

Let's not leave out the Phoenicians!
http://www.askwhy.co.uk/awmike/ac2/AmericaPhoen01.html

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:18062-3E4A6164-27@storefull-2318.public.lawson.webtv.net...
> Ian, G3SEK wrote:
> "America has been part of Scandinavia since the time of the Vikings."
>
> More so, the British Isles. Viking conquerors invaded and persisted in
> many parts. My own family traces its roots back to Denmark via the
> British Isles.
>
> The Vikings also fought their way through Russia to Constantinople and
> stayed. The invaders claimed they had been invited by the Russians to
> supply new leadership and a royal family for Russia. The Vikings said
> they were complying. They were also establishing a connection with
> oriental trading routes.
>
> Best regards, Richard Harrison, KB5WZI
>

3306. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 18:46:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4A9694.9010004@ieee.org>
Source record: 124794

Yuri Blanarovich wrote:
> I keep wondering if the "evolution" wasn't really "devolution" - that is all
> those primitives and monkeys didn't devolve from humans who went way of getting
> drunk, doing nothing and degenerating into lower species. Those that kept using
> their brains and God's word stayed around and matured to be Hams.
> Prove it wasn't so!

In the general case, it is logically impossible to prove a negative. The onus
of logical proof is accepted to be upon the person who asserts the positive
premise. You seem to be asserting that God exists. Please prove it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3307. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 19:11:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2e68nnnq1@helle.btinternet.com>
Source record: 124797

Open wire and other balanced-twin lines DO radiate. Radiation occurs as if from a short antenna with a length equal to the spacing between the conductors. So with ordinary spaced lines at HF and VHF radiation is negligible compared with what comes from the antenna.

Coax lines radiate only when a current flows on the outside of the outer conductor - just like any other length of wire carrying current on its outside.

What current flows on the inner conductor and the values of the source and terminating impedances are immaterial.

Reg, G4FGQ

3308. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 19:11:20 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2e68onnq2@helle.btinternet.com>
Source record: 124796

Rich wrote -
> "An isotropic antenna produces waves that are of equal strength in all
> directions. Although an isotropic radiator of coherent waves does not
> exist because it cannot satisfy Maxwell`s equations---."

==========

Don't you mean Heaviside's equations ?

3309. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 19:16:53 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <b2e6j5nep0@216.39.144.81>
Source record: 124798

On Wed, 12 Feb 2003 17:44:50 +0000 (UTC), Reg Edwards wrote:
> "Peter O. Brackett" wrote in message
>>
>> E = mc^2
>>
>> C = W lg(1 + Eb/No)
>>
>> e^(j*pi) - 1 = 0
>>
>============================
>
> My favourite has got to be : " e^(j*pi) + 1 = 0"
>
> . . . . . the eutectic point of all mathematics. When combined with a glass
> of Californian red plonk and a slice of mature cheese its beauty brings
> tears to my eyes.

For us non-brits:

plonk
n 1: (British and Australian) a cheap wine of inferior quality

I haven't tried contemplating such mathematical truths with "plonk",
but I have a nice bottle of "Two-buck Chuck" which hopefully will
suffice (due to Washington State's tax policies, it is really
"Three-buck Chuck" around here).

73, Bob N7XY

3310. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 19:28:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4l832660ltlea@corp.supernews.com>
Source record: 124799

I see you've gotten quite a variety of answers. But I'll try to explain it a little differently.

Radiation occurs whenever a current flows along a conductor. Each of the two conductors of a transmission line carries a current. But if the currents are equal in magnitude and opposite in direction, the radiation caused by one wire is equal and opposite the radiation caused by the other. If the two wires were exactly on top of each other, there would be no radiation at all. But when they're very close together in terms of wavelength, there is a small amount of radiation even when the currents are equal and opposite. In most applications it's very much smaller than the radiation from the antenna, so can be ignored.

However, there's no guarantee that the currents in the two conductors will be equal and opposite. The difference between the currents (or half the difference) is often called "common mode", "even mode", or "antenna" current, and when the line currents are unbalanced, it radiates just as though that current were flowing on a single wire (or the two wires in parallel, with currents in the same direction, depending on how you've defined the common mode current). What causes current imbalance? There are a couple of common causes. One is if the feedline is placed asymmetrically with respect to the antenna, so one half the antenna couples more strongly to the feedline than the other. The other common cause is a conducted current path from one side of the transmission line that's different or doesn't exist for the other. For example, if you plug one conductor of the feedline into the center conductor of your rig's antenna connector and connect the other conductor to the chassis, the second conductor sees an extra current path (along the outside of the rig to ground) that the other conductor doesn't. And the line will be imbalanced and radiate.

Line imbalance and therefore radiation is NOT caused by high SWR, or by reactance as H. said in his posting.

Roy Lewallen, W7EL

Dean Elwood wrote:
> Can someone perhaps help me understand something?
>
> I don't quite see how open wire feeder does not actually radiate. I can only
> guess it's something to do with the fact that the cables are run in parallel
> and show a given impedance, but I'd appreciate the text book answer.
>
> Thanks,
>
> Dean

>
>

3311. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 19:45:44 UTC
From: richardharrison@webtv.net
Message-ID: <18062-3E4AA468-52@storefull-2318.public.lawson.webtv.net>
Source record: 124801

Yuri, K3BU wrote:
"So how many wavelengths do we need to drop to zero or noise floor?"

The answer is many in most cases. We can communicate with our robotic voygers throughout the solar system by radio. We can communicate a million miles in space and by quadrupling our ERP we communicate 2 million miles.

You couldn`t communicate with a geosynchronous satellite less than 20,000 miles away by wire which had a loss of only 1 dB per mile, or even much less loss, without 100`s of repeaters enroute.

Yuri also wrote:
"So how come we can hear 5W QRP on the long path?"

5W is +37 dBm. You may have a receiver sensitivity of -90 dBm. So path loss could total 127 db. A 5000-mile path will just about work with no antenna gain or loss.

My guess is you can hear because you have antenna gains and the path is less than 12000 miles.

Best regards, Richard Harrison, KB5WZI

3312. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 20:02:38 UTC
From: richardharrison@webtv.net
Message-ID: <18062-3E4AA85E-55@storefull-2318.public.lawson.webtv.net>
Source record: 124800

Gene, W4SZ wrote:
"The real question is 22 dB down from what?"

We express the transmitter power output in dBw or dBm. An example is a klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7 dBw, or + 37 dBm. The radiated power level in a square meter at a distance of one wavelength from the source is 22 dB less.

Best regards, Richard Harrison, KB5WZI

3313. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 20:16:19 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4lav8hq14b4cc@corp.supernews.com>
Source record: 124802

oops
I didn't mean to imply reactance and subsequent high SWR => imbalance.
But if I am running high SWR, ladder line has much less loss.
73
H.
NQ5H
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v4l832660ltlea@corp.supernews.com...
> I see you've gotten quite a variety of answers. But I'll try to explain
> it a little differently.
cogent repky snipped
>
> Line imbalance and therefore radiation is NOT caused by high SWR, or by
> reactance as H. said in his posting.
>
> Roy Lewallen, W7EL
>
> Dean Elwood wrote:
> > Can someone perhaps help me understand something?
> >
> > I don't quite see how open wire feeder does not actually radiate. I can
only
> > guess it's something to do with the fact that the cables are run in
parallel
> > and show a given impedance, but I'd appreciate the text book answer.
> >
> > Thanks,
> >
> > Dean
> >
> >
>

3314. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 20:25:27 UTC
From: k3bu@aol.com
Message-ID: <20030212152527.11342.00001351@mb-ch.aol.com>
Source record: 124803

>You seem to be asserting that God exists. Please prove it.
>--
>cheers, CAM

I am not sure you can use term "exists" maybe IS would be more appropriate.
Itsa long story and I will be happy to sit down with you with fine glass of
fine California Plonk and go over it if you don't got it.
But lets not detract from this fine thread. I am eager to learn how dismember
wavelength from the wave.

Eureka, I got it!

Wave.length
__________ = length

Wave

Even SWR gurus have to admit, this is briliant!

Yuri, BUm

3315. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 20:34:06 UTC
From: k3bu@aol.com
Message-ID: <20030212153406.11342.00001352@mb-ch.aol.com>
Source record: 124804

>
>Yuri, K3BU wrote:
>"So how many wavelengths do we need to drop to zero or noise floor?"
>

Richard wrote:
>The answer is many in most cases. We can communicate with our robotic
>voygers throughout the solar system by radio. We can communicate a
>million miles in space and by quadrupling our ERP we communicate 2
>million miles.
>

The whole point was to use the formula to arrive at the answer. This formula was the reason why SW were abandoned to hams for being useless, "you couldn't get too far". But we did and do it.

Just like explanations of propagation by bouncing has some problems in it.

Yuri

3316. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 20:41:56 UTC
From: richardharrison@webtv.net
Message-ID: <18671-3E4AB194-51@storefull-2312.public.lawson.webtv.net>
Source record: 124807

Yuri, K3BU wrote:
"So how come we can have 5W QRP on the long path?"

I answered:
"My guess is you can hear because you have antenna gains on a path of less than 12,000 miles."

The loss formula is for free-space. With ionospheric and earth reflections, the signal path is confined and several dB may not be lost that would have further spread out in unrestricted space. So, Yuri`s feat is made easier.

Best regards, Richard Harrison, KB5WZI

3317. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 20:50:00 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4AB36B.264E8E28@attbi.com>
Source record: 124805

Richard, please do the math for us poor math challenged engineers. I
don't get -22 dB!!

+37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
or 300 meters away.

A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface

Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter

dB down = 10*log(17.7e-6/5) = -54.509 dB

What have I done incorrectly??

Deacon Dave, W1MCE
+++

Richard Harrison wrote:
>
> Gene, W4SZ wrote:
> "The real question is 22 dB down from what?"
>
> We express the transmitter power output in dBw or dBm. An example is a
> klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> dBw, or + 37 dBm. The radiated power level in a square meter at a
> distance of one wavelength from the source is 22 dB less.
>
> Best regards, Richard Harrison, KB5WZI

3318. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 20:56:58 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E4AB51A.1D42FC95@uci.edu>
Source record: 124809

Dave,

Do a units check. You took the log of inverse meters.

73, Jim

Dave Shrader wrote:
>
> Richard, please do the math for us poor math challenged engineers. I
> don't get -22 dB!!
>
> +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
> or 300 meters away.
>
> A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
>
> Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
>
> dB down = 10*log(17.7e-6/5) = -54.509 dB
>
> What have I done incorrectly??
>
> Deacon Dave, W1MCE
> +++
>
> Richard Harrison wrote:
> >
> > Gene, W4SZ wrote:
> > "The real question is 22 dB down from what?"
> >
> > We express the transmitter power output in dBw or dBm. An example is a
> > klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> > dBw, or + 37 dBm. The radiated power level in a square meter at a
> > distance of one wavelength from the source is 22 dB less.
> >
> > Best regards, Richard Harrison, KB5WZI

3319. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 20:57:19 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E4AB589.1638058E@att.net>
Source record: 124806

Richard,

Thanks for trying, but I will give up at this point.

FYI, I did research work with klystrons many years ago. I understand
dBw, dBm, and all that stuff. I was just trying to find the reference
for your oft-repeated 22 dB comment.

73,
Gene
W4SZ

Richard Harrison wrote:
>
> Gene, W4SZ wrote:
> "The real question is 22 dB down from what?"
>
> We express the transmitter power output in dBw or dBm. An example is a
> klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> dBw, or + 37 dBm. The radiated power level in a square meter at a
> distance of one wavelength from the source is 22 dB less.
>
> Best regards, Richard Harrison, KB5WZI

3320. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 21:30:02 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E4ABD35.2E84F849@att.net>
Source record: 124808

Dave,

Don't waste your time trying to make the math work; it won't.

I asked my original question in innocence and a bit of laziness. When Richard came back without a real answer but with a reference to two isotropic antennas I decided to dig into the books a bit.

Here's the deal.

The field strength does NOT decrease by 22 dB in the first wavelength. Actually, this comparison is essentially meaningless. Down 22 dB with respect to what?

What is well established theoretically is that two isotropic radiators spaced one wavelength apart have a path transmission loss of 22 dB. That means if you source one isotropic radiator with some power and then measure the received power in the second isotropic radiator the received power will be 22 dB less than the source power. This is not at all the same thing as saying the field strength falls by 22 dB in the first wavelength.

This same example can be calculated for other types of antennas. For example, a pair of short dipoles will exhibit a loss of at least 18.5 dB. A pair of half-wave dipoles will exhibit a loss of at least 17.7 dB. I use the term "at least" because the actual path loss depends on the orientation of the dipoles. Other antenna configurations will have different path loss numbers.

All of this is based on the so-called Friis Transmission Formula, which is outlined in "Antennas" by Kraus.

These examples do not say anything directly about field strength decrease in the first wavelength. If I had understood the physical situation referenced by Richard I would not have asked the question.

Forget about the specific number of 22 dB. It has no special importance in the real world.

73,
Gene
W4SZ

Dave Shrader wrote:
>
> Richard, please do the math for us poor math challenged engineers. I
> don't get -22 dB!!
>

> +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
> or 300 meters away.
>
> A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
>
> Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
>
> dB down = 10*log(17.7e-6/5) = -54.509 dB
>
> What have I done incorrectly??
>
> Deacon Dave, W1MCE
> +++
>
> Richard Harrison wrote:
> >
> > Gene, W4SZ wrote:
> > "The real question is 22 dB down from what?"
> >
> > We express the transmitter power output in dBw or dBm. An example is a
> > klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> > dBw, or + 37 dBm. The radiated power level in a square meter at a
> > distance of one wavelength from the source is 22 dB less.
> >
> > Best regards, Richard Harrison, KB5WZI

3321. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 21:33:01 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4ABD80.EF44CABB@attbi.com>
Source record: 124810

Oops! I have an error in the area of the sphere.

A = pi*D^2 as stated. But I inserted values for Pi*R^2.

The corrected area should be: 3.14*2*300^2 = 565200 square meters. The corrected power density in a 1 square meter portion of the surface of radiation is now 8.846E-6 watts per square meter.

So, my answer is now -57.2 dB!! [for a wavelength of 300 meters]

Excursis:

The power density in a surface of integration of 1 square wavelength at a distance of 1 wavelength from an isotropic radiator is -7.97 dB.

I still can't get your -22 dB.

Show me where I made my error.

Deacon Dave, W1MCE
+++

Dave Shrader wrote:
>
> Richard, please do the math for us poor math challenged engineers. I
> don't get -22 dB!!
>
> +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
> or 300 meters away.
>
> A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
>
> Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
>
> dB down = 10*log(17.7e-6/5) = -54.509 dB
>
> What have I done incorrectly??
>
> Deacon Dave, W1MCE
> +++
>
> Richard Harrison wrote:
> >
> > Gene, W4SZ wrote:
> > "The real question is 22 dB down from what?"
> >
> > We express the transmitter power output in dBw or dBm. An example is a

> > klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> > dBw, or + 37 dBm. The radiated power level in a square meter at a
> > distance of one wavelength from the source is 22 dB less.
> >
> > Best regards, Richard Harrison, KB5WZI

3322. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 21:40:45 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4ABF50.19C16593@attbi.com>
Source record: 124811

Nope. It's correct. [17.7E-6 watts/square meter]* 1 square meter =
17.7E-6 watts]. I divided Watts by watts!!

It's still a corrected -57.2 dB!!

Jim Kelley wrote:
>
> Dave,
>
> Do a units check. You took the log of inverse meters.
>
> 73, Jim
>
> Dave Shrader wrote:
> >
> > Richard, please do the math for us poor math challenged engineers. I
> > don't get -22 dB!!
> >
> > +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
> > or 300 meters away.
> >
> > A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
> >
> > Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
> >
> > dB down = 10*log(17.7e-6/5) = -54.509 dB
> >
> > What have I done incorrectly??
> >
> > Deacon Dave, W1MCE
> > +++
> >
> > Richard Harrison wrote:
> > >
> > > Gene, W4SZ wrote:
> > > "The real question is 22 dB down from what?"
> > >
> > > We express the transmitter power output in dBw or dBm. An example is a
> > > klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> > > dBw, or + 37 dBm. The radiated power level in a square meter at a
> > > distance of one wavelength from the source is 22 dB less.
> > >
> > > Best regards, Richard Harrison, KB5WZI

3323. Re: Long wire/random wire feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 21:40:55 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302121340.40a3ac34@posting.google.com>
Source record: 124812

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<717-3E393D27-36@storefull-2312.public.lawson.webtv.net>...
> Roy, G4FGQ wrote:
> "In this case it is USA taxpayers who suffer the loss."
>
> We had many losses. The battleship used inverted L antennas. These were
> matched at the transmitter, far from the drivepoint of that "L". The
> drivepoint could be just a few ohms or a thousand ohms, so the
> designer`s low-loss solution was enormous air-dielectric coax.
>
> Best regards, Richard Harrison, KB5WZI

Was that for the original ship radios? Being they always had that room closed off in the past, I've never really had a good look at those original radios.
I do have a picture of the radio room in operation in an old turn of the century vintage picture though. "The original Texas, not the 2nd rebuilt version". I was part of a group that once ran a special events station on that ship. We set up in the combat information center, about half way up the bridge. They still had thr WW2 vintage radar sets in there. Were ancient things in wood boxes much like an old TV set from the 40's. They stood up on end, and you looked down into them. Ourselves, we ran 160-10 meters using various dipoles, etc. We ran some power too. I remember we used a Dentron MLA-2500. We were on that thing overnight, and it was in Dec. Nearly froze to death sitting in all that cold metal. I did get a chance to take a very good tour of that thing the next day.
I was on my own, so I could go anywhere that wasn't chained off. Saw nearly everything but the radio room. Actually, I could get about 10 ft from the door, but couldn't really see anything inside. Lots of interesting stuff on there. Still have all the original WW2 coke machines, etc in the dining hall. Also the doctors/operating room was fairly intact. Looked really primitive. A wonder any of them lived after visting that room...:(That was about in 1985?? or so. Right before it was moved to be overhauled.
MK

3324. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 22:08:58 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4AC5FA.4020500@ieee.org>
Source record: 124813

Yuri Blanarovich wrote:
>>You seem to be asserting that God exists. Please prove it.
>
> I am not sure you can use term "exists" maybe IS would be more appropriate.

Using that definition, Santa Claus IS. Homo sapiens create their own
reality.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3325. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 22:21:58 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2ehe2$vt8$1@slb0.atl.mindspring.net>
Source record: 124814

Reg:

[snip]
> My favourite has got to be : " e^(j*pi) + 1 = 0"
>
> . . . . . the eutectic point of all mathematics. When combined with a
glass
> of Californian red plonk and a slice of mature cheese its beauty brings
> tears to my eyes.
>
> ---
> Reg.
[snip]

Hey thanks for the correction, indeed as you so graciously noted, and
without
making a big deal, I did have the mathematical operation sign wrong in my
rendition of Euler's celebrated equation.

The cause?

Well, heh, heh... although I have often been accused of "reckless
mathematics"
such recklessness generally occurs when I am imbibing my personal favorite
essence of grape...

Liebfraumilch...the "milk of life"...

Like Euler himself, Liebfraumilch -produced along the banks of the Rhine-
is another important contribution to life and science by our friends the
Germans.

But my doctor won't allow me to eat cheese any more!

Best,
--
Peter K1PO

3326. Re: N-jack assembly?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 22:25:00 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <cJz2a.948$%h4.50@fe01.atl2.webusenet.com>
Source record: 124815

Ken, are you sure that you have the RIGHT N connector for your coax impedence? you should only need the (for want of a better term "cup shaped" bushing, the flat washer , and the waterproofing gasket. the center pin should be soldered to the coax before you assemble the connector, and even the female center pins come out of the connector for this purpose (backwards, thru the connector, NOT from the plug front. only exception are for the newer male types that assemble like a pl-259 - these have a small hole at the base of the center pin, on the outside of the connector, then you screw the outer part to the connector body. There are several sizes of these, depending on the coax being used (unlike the ome size fits all pl-259), so it is important that you have the RIGHT connector! usually, the center pin will give you the clue you need, as its inside diameter for the coax should be just slightly bigger than your center conductor of your coax (this is to keep these, and bnc connectors constant impedence) . these come in sizes for rg-8, rg-11, and 90 ohm, and have seen some that will use rg-58. and, there are probably more styles available!
b.t.w., if you need a quicl adaptor to a bnc connector, you will note that the inner sleve of a n is the same diameter as the inside of a bnc, and that the center pins are also the same diameter! simply plug in your n male to a femal bnc, tho only recomend this for quick tests. hope this helps-- as info, jim nn7k nn7k@reno.rmci.net
\
"Ken" <cprstn54zz@att.net> wrote in message
news:3e4a6397.116267468@news-server.optonline.net...
> I have a no-name in-line N-type jack (female) that is different from
> the Amphenol one shown in the ARRL Handbook. It is my first N
> connector and I am guessing -- without success after three tries.
> When I tighten the rear nut, the bushing that the braid is spread back
> on (the "braid bushing") moves up and shorts the braid to the center
> receptacle. If it helps identify the connector (vs. Amphenol) , there
> is an extra bushing around 1/8" thick that I think goes in front of
> the braid bushing and makes the sandwich.
>
> 1) Can anyone point me to some diagrams for other brands of N jacks so
> I can get a better idea?
>
> 2) I have been soldering the coax center conductor to the N
> receptacle. Should it just be pushed in instead? If I can shorten
> the distance to the receptacle, the movement on tightening might not
> happen.
>
> Ken KC2JDY
>
>

>
> Ken
> (to reply via email
> remove "zz" from address)

3327. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 22:47:59 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <xaA2a.3137$606.727057@news20.bellglobal.com>
Source record: 124817

Waaay OT...

"OC_CAM's Razor"
> What was interesting was at the end of the program,
> a blond native of Poland and a Native American were
> proven to have had the same common genetic ancestor.

Not at all... ...it is inevitable through trivial logic.
http://www3.sympatico.ca/jeff.harvey/InevitableEve.htm

3328. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 22:51:43 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <b6A2a.961$%h4.547@fe01.atl2.webusenet.com>
Source record: 124816

'Corse, I realize these loss's however, making the comment, facetiously,
that if a matter of wavelength, then the lower frequency (longer wavelength)
then this would be the station to use (admittedly , with a directional
antenna aimed at the moon!) Also, would think that loss's anywhere below
the MUF would encounter loss's trying to pass thru the atmosphere,
deminishing any such cyclical length's advantage. Remember , as a kid,
reading of sam harris gaining access to aricebo, P.R., on 432 (around 30
years ago), running next to nothing, and being heard in portland ,or. with a
432 converter with a 1/4 wave whip! LOUDLY!
And speaking of sam harris, he wrote an article describeing the first
parametric amps . that article was also published in april, but this time
was discussing a real event! but, when hear any quote about april articles,
get very sceptical of ANYTHING described-- jim nn7k nn7k@reno.rmci.net

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:pvmj4v0pghmmgaicjuag2ci7mjmj6h0f4v@4ax.com...
> On Tue, 11 Feb 2003 22:42:32 -0600 (CST), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >Jim, NN7K wrote:
> >"Boy, if that the case, Jim Creek Wa. would really be optimal (around 18
> >KHz, 1/2 Megawatt)!!"
> >
> >Not bad, but antenna gain and directivity are elusive at low
> >frequencies. Beamwidth which exceeds the projected area (outline) of the
> >target doesn`t reflect from it and also accepts noise from elsewhere on
> >reception.
> >
>
> Jim Creek, NLK / NPG, is situated in a valley, floor at 300 Meters
> elevation, 6 North Towers, bases at 700 & 800 Meters; 6 South Towers,
> bases at 700 Meters. The north group and south group are separated by
> 1700 Meters. Each of the groups of towers (easily 200' tall) supports
> six elements (12 towers) with no more than 100M between them. From the
> midpoint of the combined elements (not sure of that, actually), a
> vertical wire drops to the valley floor and a small shack with the
> conventional accouterments.
>
> What is described is correlated from topo maps and my own direct
> observation from a distance of 1000 meters from the base - the Main
> Gate.
>
> 73's
> Richard Clark, KB7QHC

>

3329. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:00:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <oikl4v8c9lfn8nmoeadsicpq4lttl467o8@4ax.com>
Source record: 124818

On Wed, 12 Feb 2003 14:51:43 -0800, <Jimnn7k@reno.rmci.net> wrote:

>hear any quote about april articles,
>get very sceptical of ANYTHING described-- jim nn7k nn7k@reno.rmci.net

Hi Jim,

I would expect a coarser sieve applies to newsgroup postings. ;-)

73's
Richard Clark, KB7QHC

3330. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:00:36 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <crjl4vgg8v0glqjuh0p4r1r058dt4d87bu@4ax.com>
Source record: 124719

On 12 Feb 2003 19:16:53 GMT, Bob Nielsen <nielsen@remove_this.oz.net>
wrote:

[snip]
|
|For us non-brits:
|
| plonk
| n 1: (British and Australian) a cheap wine of inferior quality

How can an *Englishman* call a California wine "inferior quality?"

|
|I haven't tried contemplating such mathematical truths with "plonk",
|but I have a nice bottle of "Two-buck Chuck" which hopefully will
|suffice (due to Washington State's tax policies, it is really
|"Three-buck Chuck" around here).

In your old hometown, it's $2.99. Not too bad either.

I am reminded of meeting a friend of my brothern-in-law's in SW
Oregon. The friend owns a winery and we went to see the new mansion
that he was building on the grounds. (A "business expense.") While we
viewed the place we drank a few bottles of beer (yes beer) and talked.
He mentioned that while he doesn't actually grow Zinfandel grapes, to
keep his people employed, he bottles White Zin that he purchased in
bulk from California for $0.75 per gallon!

3331. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:09:55 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <snA2a.972$%h4.909@fe01.atl2.webusenet.com>
Source record: 124720

Dave, as a isotropic radiates in ALL directions, you are useing the wrong area calculation, believe should be 4/3 pi * radius raised to the THIRD power (4/3 pi * r ^3) , would it not?

Jim nn7k

"Dave Shrader" <david.shrader@attbi.com> wrote in message news:3E4AB36B.264E8E28@attbi.com...
> Richard, please do the math for us poor math challenged engineers. I
> don't get -22 dB!!
>
> +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
> or 300 meters away.
>
> A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
>
> Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
>
> dB down = 10*log(17.7e-6/5) = -54.509 dB
>
> What have I done incorrectly??
>
> Deacon Dave, W1MCE
> +++
>
>
>
>
>
> Richard Harrison wrote:
> >
> > Gene, W4SZ wrote:
> > "The real question is 22 dB down from what?"
> >
> > We express the transmitter power output in dBw or dBm. An example is a
> > klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> > dBw, or + 37 dBm. The radiated power level in a square meter at a
> > distance of one wavelength from the source is 22 dB less.
> >
> > Best regards, Richard Harrison, KB5WZI

3332. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:13:04 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2ekdt$e62$1@slb2.atl.mindspring.net>
Source record: 124721

Roy:

Pardon, my interference with your post, but I believe that one of
your statments in the previous post might benefit from a little
clarification.

[snip]
> Radiation occurs whenever a current flows along a conductor.
[snip]

I know *you* know that's not true. If it was true then a DC current would
cause radiation, which it does not. But there is a proportionality for sine
wave [sinusoidal] currents.

Current, proportional to the velocity of charges, does not cause radiation
per se,
rather the *acceleration* of electric charges -not their velocity- causes
radiation.

That said, however -again as I know you know- the conventional way to
calculate
the field strengths of the radiated fields of antennas excited by sinusoidal
currents is
to compute integrals [summations] of the currents flowing in/on the antenna
elements.
The resultant radiated fields are found to be proportional to the magnitudes
of the
sinusoidal currents since the integrals of sinusoids are also sinusoids
proportional to the
magnitudes of the original sinusoids.

Twin lead transmission conductors carrying *balanced* -i.e. equal and
opposite-
currents will produce radiation fields that tend to approximately cancel
each other
at a distance from the lines, depending upon the orientation of the lines,
simply
because of the opposite signs of the currents in each conductor. This
cancellation,
or subtraction of fields, can only be complete if the two conductors
completely overlap,
i.e. the twin conductors are separated by an infinitesimal distance.
Otherwise there is a
residual radiation, at a distance from the conductors, proportional to the
distance
between the twin conductors. This residual radiation from twin lead

transmission lines
is usually engineered to negligible by the simple artifice of operating the twin lead
transmission line only below frequencies for which the separation of the two conductors
is a small fraction of a wavelength.

Coaxial transmission lines carrying *balanced* currents will produce fields only
within the space between the outer and inner conductors and so will not
produce external radiated fields. Unless...

In theory, for most transmission line applications, transmission lines are not
intended to carry unbalanced currents but in practice... both coaxial and twin
lead transmission lines may actually carry unintended unbalanced currents which
will cause "stray" [parasitic] radiation at a distance from the lines.

Coaxial transmission lines are just as vulnerable to unbalanced currents and
external radiatiation as are twin lead transmission lines unless close attention
is paid to current balance. Hence the need for current choke baluns or their
equivalent in most coaxial line applications.

Whenever I hear folks who are surprised about *unbalanced* feedline radiation,
and this is especially with coaxial cables, I am reminded of one of the great
Brooklyn Dodger player's favorite sayings.

"In theory, theory and practice are the same, but in practice they are different."
-- Yogi Berra.

--
Peter K1PO
Indialantic By-the-Sea, FL.

3333. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:16:54 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <b2ekl6$qt4$0@216.39.144.81>
Source record: 124722

On Wed, 12 Feb 2003 20:50:00 GMT, Dave Shrader wrote:
> Richard, please do the math for us poor math challenged engineers. I
> don't get -22 dB!!
>
> +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
> or 300 meters away.
>
> A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
>
> Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
>
> dB down = 10*log(17.7e-6/5) = -54.509 dB
>
> What have I done incorrectly??
>
> Deacon Dave, W1MCE
> +++
>

Since we live in a three-dimensional world, you need to calculate the
area of a sphere with a diameter D, rather than a circle. A= 4*pi*D^2.
Therefore the area == 1,130,973 m^2 and Pd = 4.42e-6 watts/sq. meter.

The power received by the second antenna is equal to the
power density times the effective area. The effective area is equal to

(wavelength^2)*G/(4*pi) = (300^2)*1/(4*pi) = 7163 and the received
power would be equal to 4.42e-6x7163 = .032 watts

.032/5 = .0064 = -22 dB

73, Bob N7XY

>
>
>
>
> Richard Harrison wrote:
>>
>> Gene, W4SZ wrote:
>> "The real question is 22 dB down from what?"
>>
>> We express the transmitter power output in dBw or dBm. An example is a
>> klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
>> dBw, or + 37 dBm. The radiated power level in a square meter at a
>> distance of one wavelength from the source is 22 dB less.

>>
>> Best regards, Richard Harrison, KB5WZI

--
Bob Nielsen, N7XY n7xy@n7xy.net
Bainbridge Island, WA http://www.n7xy.net
IOTA NA-065, USI WA-028S

3334. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:17:00 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <NBA2a.31095$ns3.597705@news20.bellglobal.com>
Source record: 124723

<Jimnn7k@reno.rmci.net>
> Dave, as a isotropic radiates in ALL directions,
> you are using the wrong area calculation, believe
> should be 4/3 pi * radius raised to the THIRD
> power (4/3 pi * r ^3) , would it not?

Nope.

3335. Balun 9:1

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:18:48 UTC
From: CARLOS GOMES <ct1hix@sapo.pt>
Message-ID: <3e4ad717$0$12378$a729d347@news.telepac.pt>
Source record: 124724

I need a help to build a 9:1 Balun .

Thanks !

CT1HIX Gomes

3336. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:25:54 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4AD802.3140DD73@cwis.net>
Source record: 124725

OC_CAM's Razor,
I think you just proved that 'people' quit being
homo sapiens around the age of 8-12 years old, and
that some never are to start with! But, if so, and
since I get a lot of coal in December, does that mean
I'm still a homo sapien??
'Doc

3337. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:29:35 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4AD8DF.534F7F6F@cwis.net>
Source record: 124726

Alan,
By all means we can't leave the Phoenicians out!
After they migrated to California, they started the
phonetic's method of reading...
'Doc

3338. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:37:18 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4ADAAE.9A52965D@cwis.net>
Source record: 124727

Richard,
As I understand it, frequency and wave length are
just two ways of describing the same thing ('thing'
in this instance is a scientific term used because
I can't spell phenomenon, whatever). Sort of like
saying 1 = 1. So if you disassociate wave length
from frequency, then 1 = X, where 'X' does not equal
1. Yep, that's Art...
'Doc

3339. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-12 23:51:56 UTC
From: k3bu@aol.com
Message-ID: <20030212185156.27095.00001119@mb-mq.aol.com>
Source record: 124728

>
>But my doctor won't allow me to eat cheese any more!
>
>Best,
>--
>Peter K1PO
>
>

Warum nicht?
Not one of those "no fat, no cholesterol"?

Yuri

3340. J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 00:34:51 UTC
From: Benny Miller <bennymiller@core.com>
Message-ID: <v4lq3mqgkaq862@corp.supernews.com>
Source record: 124729

I am trying to find ideas for creating a 1/2" copper tube J-Pole that does not use solder. I have the tubing and the caps and the T & L connectors. Is there a way that I could put the whole thing together with out having to solder any of the pieces together? I am a super poor college student (living on loans) and i do not want to spend (nor do i have) the money to purchase a butane-type torch to solder the connections. I do have a little hobby soldering iron (pen style not gun) that doesn't seem to generate enough heat to get the solder flowing. Could I use aluminum foil around the connections to make them tight and then just wrap electrical tape around the connections? Any suggestions would be well used.
73
Benny
KC8TRN

3341. G-line ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 00:41:18 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v4lqdgef6lgb1d@corp.supernews.com>
Source record: 124730

When I was in high school, mid 1950s, I kind of recall a single insulated wire feed to a residence from a hilltop antenna. It was extemely low loss but couldn't turn corners. I've done a little searching but have not found a good explantion on how G-line works and doesn't. Also would like to know why you don't see much about it today.
tnx
hank wd5jfr

3342. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 00:46:54 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <b2eptu$6ep$0@216.39.144.81>
Source record: 124731

On 12 Feb 2003 23:16:54 GMT, Bob Nielsen wrote:
> On Wed, 12 Feb 2003 20:50:00 GMT, Dave Shrader wrote:
>> Richard, please do the math for us poor math challenged engineers. I
>> don't get -22 dB!!
>>
>> +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
>> or 300 meters away.
>>
>> A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
>>
>> Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
>>
>> dB down = 10*log(17.7e-6/5) = -54.509 dB
>>
>> What have I done incorrectly??
>>
>> Deacon Dave, W1MCE
>> +++
>>
>
> Since we live in a three-dimensional world, you need to calculate the
> area of a sphere with a diameter D, rather than a circle. A= 4*pi*D^2.
> Therefore the area == 1,130,973 m^2 and Pd = 4.42e-6 watts/sq. meter.

I meant radius instead of diameter.

>
> The power received by the second antenna is equal to the
> power density times the effective area. The effective area is equal to
>
> (wavelength^2)*G/(4*pi) = (300^2)*1/(4*pi) = 7163 and the received
> power would be equal to 4.42e-6x7163 = .032 watts
>
> .032/5 = .0064 = -22 dB
>
> 73, Bob N7XY
>
>>
>>
>>
>>
>> Richard Harrison wrote:
>>>
>>> Gene, W4SZ wrote:
>>> "The real question is 22 dB down from what?"

>>>
>>> We express the transmitter power output in dBw or dBm. An example is a
>>> klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
>>> dBw, or + 37 dBm. The radiated power level in a square meter at a
>>> distance of one wavelength from the source is 22 dB less.
>>>
>>> Best regards, Richard Harrison, KB5WZI
>
>

--
Bob Nielsen, N7XY n7xy@n7xy.net
Bainbridge Island, WA http://www.n7xy.net
IOTA NA-065, USI WA-028S

3343. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 00:51:43 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4AEC1F.38443576@cwis.net>
Source record: 124732

Benny,
Try usinf one continuous piece of copper an
bend it. No soldering required. Don't need the
end caps either. Bend the ends over and crimp.
'Doc

3344. Wire dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 00:56:45 UTC
From: Tom DeYoung <tdeyoung@n0spam.mn.rr.com>
Message-ID: <f6C2a.65812$wE.2092620@twister.kc.rr.com>
Source record: 124733

Okay gang-
I am (weather permitting) going to be installing a dipole this weekend.
What I need to know is this:

Can I feed the dipole with ladder line?
If yes,
Do I need to connect the antenna end to a balun, or will the tuner do the job? It's an MFJ VersaTuna II

Any and all suggestions are welcome

73-
Tom DeYoung, KB0LIV

3345. Re: G-line ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 01:01:40 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <T7C2a.31377$ns3.615176@news20.bellglobal.com>
Source record: 124735

"Henry Kolesnik"
> When I was in high school, mid 1950s, I kind of recall a
> single insulated wire feed to a residence from a hilltop antenna.
> It was extemely low loss but couldn't turn corners. I've done
> a little searching but have not found a good explantion on
> how G-line works and doesn't. Also would like to know
> why you don't see much about it today.

Although I'm not quite as old as that - I still remember reading about that type of single wire transmission line with the launch cones at each end.

I poked around with www.Google.com and ending up getting some good hits with the following search terms: "g-line" "transmission line" single

www.amasci.com/tesla/tmistk.html
www.icubed.com/~thunter/experime/g-line.htm
www.old555.com/LPE/unit/7FDEBDCA6AF463ED.shtml

3346. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 01:03:51 UTC
From: Terry <ve1trb@hotmail.com>
Message-ID: <2aC2a.221$cB3.2420@nnrp1.uunet.ca>
Source record: 124734

At your school, if they have a plumbing class, or a machine shop or something, maybe someone there can do the soldering for you. At any rate, assuming you cut the copper pipe with a tubing cutter, sometimes, if you're real careful, if you run the tubing cutter around the female connections, you can cause the female part to tighten up enough on the male part to make fair contact. If you used a hack saw to cut your pieces of pipe to length, you might want to use the hack saw to cut slots in the female parts, then use something to cause the female part to squeeze against the male parts, like a hose clamp if you can scrounge some up. At any rate, it would probably be a good idea to weatherproof your joints and upper ends with something so as to stop rain snow etc from getting inside or between the parts. Most important, have fun, and be creative! Try a couple of condoms on the ends :).

Terry VE1TRB

"Benny Miller" <bennymiller@core.com> wrote in message
news:v4lq3mqgkaq862@corp.supernews.com...
> I am trying to find ideas for creating a 1/2" copper tube J-Pole that does
> not use solder. I have the tubing and the caps and the T & L connectors.
> Is there a way that I could put the whole thing together with out having
to
> solder any of the pieces together? I am a super poor college student
> (living on loans) and i do not want to spend (nor do i have) the money to
> purchase a butane-type torch to solder the connections. I do have a
little
> hobby soldering iron (pen style not gun) that doesn't seem to generate
> enough heat to get the solder flowing. Could I use aluminum foil around
the
> connections to make them tight and then just wrap electrical tape around
the
> connections? Any suggestions would be well used.
> 73
> Benny
> KC8TRN
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/2003

3347. Price reduced MN-4 TUNER

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 01:18:20 UTC
From: ardujenski@aol.com
Message-ID: <20030212201820.27543.00000510@mb-ba.aol.com>
Source record: 124736

Drake MN-4 tuner reduced to $99 plus shipping and original manual extra

3348. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 01:19:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4lsl83tip8ifb@corp.supernews.com>
Source record: 124737

Thanks for the the correction. Please amend my statement to read,

>>Radiation occurs whenever a TIME-VARYING current flows along a conductor.

Roy Lewallen, W7EL

Peter O. Brackett wrote:
> Roy:
>
> Pardon, my interference with your post, but I believe that one of
> your statments in the previous post might benefit from a little
> clarification.
>
> [snip]
>
>>Radiation occurs whenever a current flows along a conductor.
>
> [snip]
>
> I know *you* know that's not true. If it was true then a DC current would
> cause radiation, which it does not. But there is a proportionality for sine
> wave [sinusoidal] currents.
>. . .

3349. Re: Wire dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 01:45:59 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4AF8D7.5C229B3@cwis.net>
Source record: 124738

Tom,
No balun at the antenna, and it ought to work
just fine.
'Doc

3350. Re: G-line ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 01:47:22 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4AF92A.4185CDBD@cwis.net>
Source record: 124739

Henry,
Try searching for 'passive repeater'. Not a
single wire, but the same thing.
'Doc

3351. Re: Wire dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 01:49:26 UTC
From: Tom DeYoung <tdeyoung@n0spam.mn.rr.com>
Message-ID: <GQC2a.99716$Gm2.2677322@twister.rdc-kc.rr.com>
Source record: 124740

I'm gonna play stupid here-

I'm just now getting on HF for the first time in nearly ten years of being licensed.

I assume this means that I can solder the wire directly to each lead on the 400 (or is it 300 that's used) ohm ladder line, and connect the other end of the ladder line onto the "balanced wire" posts on the tuner?

TDD
"'Doc" <w5lz@cwis.net> wrote in message news:3E4AF8D7.5C229B3@cwis.net...
>
>
> Tom,
> No balun at the antenna, and it ought to work
> just fine.
> 'Doc

3352. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 02:04:24 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <dVC2a.14488$S8.12992@fe03.atl2.webusenet.com>
Source record: 124741

"Terry" <ve1trb@hotmail.com> wrote in message
news:2aC2a.221$cB3.2420@nnrp1.uunet.ca...
> At your school, if they have a plumbing class, or a machine shop or
> something, maybe someone there can do the soldering for you. At any rate,
> assuming you cut the copper pipe with a tubing cutter, sometimes, if
you're
> real careful, if you run the tubing cutter around the female connections,
> you can cause the female part to tighten up enough on the male part to
make
> fair contact. If you used a hack saw to cut your pieces of pipe to length,
> you might want to use the hack saw to cut slots in the female parts, then
> use something to cause the female part to squeeze against the male parts,
> like a hose clamp if you can scrounge some up. At any rate, it would
> probably be a good idea to weatherproof your joints and upper ends with
> something so as to stop rain snow etc from getting inside or between the
> parts. Most important, have fun, and be creative! Try a couple of condoms
on
> the ends :).
>
> Terry VE1TRB
>
> "Benny Miller" <bennymiller@core.com> wrote in message
> news:v4lq3mqgkaq862@corp.supernews.com...
> > I am trying to find ideas for creating a 1/2" copper tube J-Pole that
does
> > not use solder. I have the tubing and the caps and the T & L
connectors.
> > Is there a way that I could put the whole thing together with out having
> to
> > solder any of the pieces together? I am a super poor college student
> > (living on loans) and i do not want to spend (nor do i have) the money
to
> > purchase a butane-type torch to solder the connections. I do have a
> little
> > hobby soldering iron (pen style not gun) that doesn't seem to generate
> > enough heat to get the solder flowing. Could I use aluminum foil around
> the
> > connections to make them tight and then just wrap electrical tape around
> the
> > connections? Any suggestions would be well used.
> > 73
> > Benny
> > KC8TRN
> >

> >
>

How about that. An X-Rated explanation. :>)

3353. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 02:05:22 UTC
From: Benny Miller <bennymiller@core.com>
Message-ID: <v4lvdbhaa8al92@corp.supernews.com>
Source record: 124742

My last statement in the original post must now be modified. I had
previously stated that any suggestions would be well used. Now, it should
read will be considered. I don't think my landlord would like the x-rated
version of the J-Pole. :)
Benny
KC8TRN

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:dVC2a.14488$S8.12992@fe03.atl2.webusenet.com...
> "Terry" <ve1trb@hotmail.com> wrote in message
> news:2aC2a.221$cB3.2420@nnrp1.uunet.ca...
> > At your school, if they have a plumbing class, or a machine shop or
> > something, maybe someone there can do the soldering for you. At any
rate,
> > assuming you cut the copper pipe with a tubing cutter, sometimes, if
> you're
> > real careful, if you run the tubing cutter around the female
connections,
> > you can cause the female part to tighten up enough on the male part to
> make
> > fair contact. If you used a hack saw to cut your pieces of pipe to
length,
> > you might want to use the hack saw to cut slots in the female parts,
then
> > use something to cause the female part to squeeze against the male
parts,
> > like a hose clamp if you can scrounge some up. At any rate, it would
> > probably be a good idea to weatherproof your joints and upper ends with
> > something so as to stop rain snow etc from getting inside or between the
> > parts. Most important, have fun, and be creative! Try a couple of
condoms
> on
> > the ends :).
> >
> > Terry VE1TRB
> >
> > "Benny Miller" <bennymiller@core.com> wrote in message
> > news:v4lq3mqgkaq862@corp.supernews.com...
> > > I am trying to find ideas for creating a 1/2" copper tube J-Pole that
> does
> > > not use solder. I have the tubing and the caps and the T & L
> connectors.
> > > Is there a way that I could put the whole thing together with out
having

> > to
> > > solder any of the pieces together? I am a super poor college student
> > > (living on loans) and i do not want to spend (nor do i have) the money
> to
> > > purchase a butane-type torch to solder the connections. I do have a
> > little
> > > hobby soldering iron (pen style not gun) that doesn't seem to generate
> > > enough heat to get the solder flowing. Could I use aluminum foil
around
> > the
> > > connections to make them tight and then just wrap electrical tape
around
> > the
> > > connections? Any suggestions would be well used.
> > > 73
> > > Benny
> > > KC8TRN
> > >
> > >
> >
>
> How about that. An X-Rated explanation. :>)
>
>
>

3354. Re: Balun 9:1

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 02:08:08 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <A%D2a.981$V63.275848309@news.inreach.com>
Source record: 124743

Carlos:

There are several ways to accomplish a 9:1 transformation. One can be seen at: http://www.hard-core-dx.com/nordicdx/antenna/feed/9_1balun.html

You didn't say what impedance you wanted to reach, your starting impedance, or the frequency range you need to cover, so this may not help.

Good luck,

Roger K6XQ

3355. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 02:21:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4B0144.2000609@ieee.org>
Source record: 124745

```
J. Harvey wrote:
> Waaay OT...
>
> "OC_CAM's Razor"
>>What was interesting was at the end of the program,
>>a blond native of Poland and a Native American were
>>proven to have had the same common genetic ancestor.
>
> Not at all... ...it is inevitable through trivial logic.
> http://www3.sympatico.ca/jeff.harvey/InevitableEve.htm

So why can't the inevitable be interesting?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

3356. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 02:23:40 UTC
From: David Cook <nospam.davepc2@oz.net>
Message-ID: <MkD2a.92134$HN5.339874@rwcrnsc51.ops.asp.att.net>
Source record: 124744

Is there a reason you want to build it with copper tube? I build my J-Poles from twinlead. Super cheap and you can hang it on the wall with a thumbtack. For outside use, I hang it with a piece of string from any convenient tree branch.

73,
-- Dave, WA0TTN

"Benny Miller" <bennymiller@core.com> wrote in message news:v4lq3mqgkaq862@corp.supernews.com...
> I am trying to find ideas for creating a 1/2" copper tube J-Pole that does
> not use solder. I have the tubing and the caps and the T & L connectors.
> Is there a way that I could put the whole thing together with out having to
> solder any of the pieces together? I am a super poor college student
> (living on loans) and i do not want to spend (nor do i have) the money to
> purchase a butane-type torch to solder the connections. I do have a little
> hobby soldering iron (pen style not gun) that doesn't seem to generate
> enough heat to get the solder flowing. Could I use aluminum foil around the
> connections to make them tight and then just wrap electrical tape around the
> connections? Any suggestions would be well used.
> 73
> Benny
> KC8TRN
>
>

3357. Re: Balun 9:1

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 02:24:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4B01D9.2090404@ieee.org>
Source record: 124746

CARLOS GOMES wrote:
> I need a help to build a 9:1 Balun .

Where are you getting an antenna with a 450 ohm feedpoint impedance?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3358. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 02:26:41 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4B0261.80701@ieee.org>
Source record: 124747

Benny Miller wrote:
> I am trying to find ideas for creating a 1/2" copper tube J-Pole that does
> not use solder. I have the tubing and the caps and the T & L connectors.
> Is there a way that I could put the whole thing together with out having to
> solder any of the pieces together? I am a super poor college student
> (living on loans) and i do not want to spend (nor do i have) the money to
> purchase a butane-type torch to solder the connections. I do have a little
> hobby soldering iron (pen style not gun) that doesn't seem to generate
> enough heat to get the solder flowing. Could I use aluminum foil around the
> connections to make them tight and then just wrap electrical tape around the
> connections? Any suggestions would be well used.

Get a technician in the EE Dept. to help you solder the thing.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3359. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 02:53:28 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <1FD2a.1050$%h4.956@fe01.atl2.webusenet.com>
Source record: 124748

David Cook wrote:
> Is there a reason you want to build it with copper tube? I build my
> J-Poles from twinlead. Super cheap and you can hang it on the wall
> with a thumbtack. For outside use, I hang it with a piece of string
> from any convenient tree branch.
>
> 73,
> -- Dave, WA0TTN
>

Or put it in a piece of PVC if you need to mount it on a mast. Cheap, easy,
and no tubing to solder...

73 de W6DKN

3360. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 02:58:51 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E4B09EB.6F485E50@bloomer.net>
Source record: 124756

Steal a propane torch or ask a neighbor. It won't take long and the
results will be much more gratifying (it will work versus NOT work)

Scott
N0EDV

Benny Miller wrote:
>
> I am trying to find ideas for creating a 1/2" copper tube J-Pole that does
> not use solder. I have the tubing and the caps and the T & L connectors.
> Is there a way that I could put the whole thing together with out having to
> solder any of the pieces together? I am a super poor college student
> (living on loans) and i do not want to spend (nor do i have) the money to
> purchase a butane-type torch to solder the connections. I do have a little
> hobby soldering iron (pen style not gun) that doesn't seem to generate
> enough heat to get the solder flowing. Could I use aluminum foil around the
> connections to make them tight and then just wrap electrical tape around the
> connections? Any suggestions would be well used.
> 73
> Benny
> KC8TRN

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

3361. Re: Balun 9:1

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:02:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2f1ra$6a0$1@venus.btinternet.com>
Source record: 124749

For what purpose do you wish to use the transformer?

There are two impedances involved, the high and the low impedance. They are
in the ratio 9-to-1.

Which impedance do you want to be balanced abount ground - the high
impedance or the low impedance? Or doesn't it matter?

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================

"CARLOS GOMES" <ct1hix@sapo.pt> wrote in message
news:3e4ad717$0$12378$a729d347@news.telepac.pt...
> I need a help to build a 9:1 Balun .
>
> Thanks !
>
> CT1HIX Gomes
>
>
>

3362. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:02:06 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2f1rd$6a0$3@venus.btinternet.com>
Source record: 124750

Talking about antenna costs passed on to taxpayers -

Way back in 1943/5 there was an airborne 3000 MHz, RAF submarine-search equipment which depended on two short lengths of flexible waveguide. The flexible sections was constructed of a fine wire mesh of brass? chicken wire embedded in a rubber compound.

Two synchronised rotating radar parabolas were located near the wing-tips. The flexible waveguide sections were located on the floor of the gangway along the main fuselage of a 20-ton flying boat and had to be stepped over by the crew on their way to the galley on the lower deck galley for a meal and a nap. The purpose of flexibilty was to allow for flapping about of the aircraft wings each of which supported two rolls-royce aero engines.

After a varying number of hours patrolling on Atlantic convoy-protection duties the brass mesh had the unfortunate habit of failing under under vibration fatigue stress. With a peak magnetron power of 50 Kwatt arcing would ensue between broken wires and the assembly would sometimes burst into flames.

Under such critical circumstances an emergency signal was transmitted from the Air Ministry, London, to world-wide air bases, instructing the highly technically trained ground radar maintenance staff to provide a bucket of damp sand convenient to the danger spot. Airborne radar operators/navigators, in their curtained little cabins, were also instructed to keep one eye on the radar ppi display, leave a chink in the curtains and keep the other eye, on the port side, on the waveguide junctions looking for a whisp of smoke.

The war continued its ferocious course.

Ever since then, the histories of WW2 have claimed the horrible Battle of the Atlantic (costing 120,00 lives of British merchant seamen whose families never received pensions because they were civilians, with many lives of German suicide-mission submarine crews) was won by Randall and Boots's 3000 MHz cavity magnetron pumping 50 kilowatts of peak pulse power, with a repetition frequency of 1000Hz, range 100 miles, through the above-mentioned flexible waveguide.

Statistics are always interesting to technical hobbyists, don't you think?

Casualties in the impending WW3 one-way massacre, of course, will be confined to 'friendly fire'. The other millions don't count.

========================
Regards from Reg, G4FGQ
For Free Radio Design Software

go to http://www.g4fgq.com
==========

3363. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:02:43 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9320C1BC176A9pookster@216.168.3.50>
Source record: 124751

Roy Lewallen <w7el@eznec.com> wrote in
news:v4l832660ltlea@corp.supernews.com:

> The difference between the currents (or half
> the difference) is often called "common mode"

Shouldn't that be "differential mode"?

--
Bill, W7TI

3364. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:07:52 UTC
From: David Cook <nospam.davepc2@oz.net>
Message-ID: <c_D2a.91659$be.68105@rwcrnsc53>
Source record: 124752

Yup, I do that too. I've heard it called a "walking stick". I also put an eyebolt in the top cap so I can haul it up with a rope. Really the best model - rugged and cheap.

-- Dave, WA0TTN

"W6DKN" <w6dkn-nospam-@qsl.net> wrote in message news:1FD2a.1050$%h4.956@fe01.atl2.webusenet.com...
> David Cook wrote:
> > Is there a reason you want to build it with copper tube? I build my
> > J-Poles from twinlead. Super cheap and you can hang it on the wall
> > with a thumbtack. For outside use, I hang it with a piece of string
> > from any convenient tree branch.
> >
> > 73,
> > -- Dave, WA0TTN
> >
>
> Or put it in a piece of PVC if you need to mount it on a mast. Cheap, easy,
> and no tubing to solder...
>
> 73 de W6DKN
>
>
>

3365. Re: Diplexer UHF/UHF

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:08:46 UTC
From: Gerry MacDonald <gerry.macdonald@globaltv.ca>
Message-ID: <2%D2a.21143$9K5.451545@news0.telusplanet.net>
Source record: 124753

Use a normal tv splitter in reverse.

make sure you have the filters installed on the antennas

"Ryan Clement" <s4012804@student.uq.edu.au> wrote in message
news:b29uharru1@bunyip.cc.uq.edu.au...
> If I used filters for each antenna how do I get the two signals into one
> cable? Would I still end up needing a diplexer?
>
> Thanks
>
> Ryan
> "Dale Parfitt" <par@parelectronics.com> wrote in message
> news:3E48788B.8605C6AB@parelectronics.com...
> >
> >
> > Ryan Clement wrote:
> >
> > > I want to receive television stations from two transmitters which are
in
> > > different directions. Both are transmitting UHF signals and I was
> hoping
> > > someone could explain how a diplexer works and possibly if anyone
knows
> how
> > > to build one could they please point me in the right direction.
> > >
> > > Thanks
> > > Ryan
> >
> > Hi Ryan,
> >
> > You have a number of choices. If the staions are 180 degrees apart- or
> close-
> > you can buy a 4 bay bow tie from Winegard and remove the reflector
screen
> > making it bidirectional- we have used this in hundreds of MATV systems
wth
> > great results. It is by far the simplest.
> >
> > The next approach is to place notch filters on each antenna that will
> reduce
> > the level of the unwanted channel. For example a station in the north
will
> be

> > received on an antenna facing west, but with a lot of ghosting and vice
> versa-
> > so each unwanted channel is notched. Notch filters are the filter of
> choice,
> > especially if the CH are close to each other (from a freq standpoint).
> > Diplexers for this application are probably nor feasible as the
transition
> > region from pass to reject is quite broad and would likely either
> attenuate the
> > desired signal or not provide enough attenuation to the unwanted signal.
> > Dale W4OP
> >
>
>

3366. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:10:44 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4B0CA5.C84C9E82@attbi.com>
Source record: 124754

No! The power radiated through the surface has to equal the power
radiated. We are calculating the gradient and divergence of the radiated
power. From an isotropic it's straight forward 'stretching the balloon'.
So we are interested in the power density at the surface in a 1 square
meter target.

The gradient of power density is inside the sphere.

DD

100 watts radiated requires that the sum of all power through the
surface equal 100 watts.

Jimnn7k@reno.rmci.net wrote:
>
> Dave, as a isotropic radiates in ALL directions, you are useing the wrong
> area calculation, believe should be 4/3 pi * radius raised to the THIRD
> power (4/3 pi * r ^3) , would it not?
>
> Jim nn7k
>
> "Dave Shrader" <david.shrader@attbi.com> wrote in message
> news:3E4AB36B.264E8E28@attbi.com...
> > Richard, please do the math for us poor math challenged engineers. I
> > don't get -22 dB!!
> >
> > +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
> > or 300 meters away.
> >
> > A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
> >
> > Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
> >
> > dB down = 10*log(17.7e-6/5) = -54.509 dB
> >
> > What have I done incorrectly??
> >
> > Deacon Dave, W1MCE
> > +++
> >
> >
> >
> >
> >
> > Richard Harrison wrote:

> > >
> > > Gene, W4SZ wrote:
> > > "The real question is 22 dB down from what?"
> > >
> > > We express the transmitter power output in dBw or dBm. An example is a
> > > klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> > > dBw, or + 37 dBm. The radiated power level in a square meter at a
> > > distance of one wavelength from the source is 22 dB less.
> > >
> > > Best regards, Richard Harrison, KB5WZI

3367. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:11:48 UTC
From: Gerry MacDonald <gerry.macdonald@globaltv.ca>
Message-ID: <U1E2a.21145$9K5.451158@news0.telusplanet.net>
Source record: 124755

Why half in copper get a piece of #10 copper wore and bene it to the right
length,
works fine

"Benny Miller" <bennymiller@core.com> wrote in message
news:v4lq3mqgkaq862@corp.supernews.com...
> I am trying to find ideas for creating a 1/2" copper tube J-Pole that does
> not use solder. I have the tubing and the caps and the T & L connectors.
> Is there a way that I could put the whole thing together with out having
to
> solder any of the pieces together? I am a super poor college student
> (living on loans) and i do not want to spend (nor do i have) the money to
> purchase a butane-type torch to solder the connections. I do have a
little
> hobby soldering iron (pen style not gun) that doesn't seem to generate
> enough heat to get the solder flowing. Could I use aluminum foil around
the
> connections to make them tight and then just wrap electrical tape around
the
> connections? Any suggestions would be well used.
> 73
> Benny
> KC8TRN
>
>

3368. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:22:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4m3t196cmuted@corp.supernews.com>
Source record: 124759

Bill, W7TI wrote:
> Roy Lewallen <w7el@eznec.com> wrote in
> news:v4l832660ltlea@corp.supernews.com:
>
>
>>The difference between the currents (or half
>>the difference) is often called "common mode"
>
> --
>
> Shouldn't that be "differential mode"?
>

Depends on how you define the directions of the currents.

Roy Lewallen, W7EL

3369. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:23:55 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <f3E2a.42059$r9.39406@fe10.atl2.webusenet.com>
Source record: 124757

Sorry about that. Just couldn't resist

--
73,
Chuck
KE4ETH
USA-NA
Remove the obvious from Email.

"Benny Miller" <bennymiller@core.com> wrote in message
news:v4lvdbhaa8al92@corp.supernews.com...
> My last statement in the original post must now be modified. I had
> previously stated that any suggestions would be well used. Now, it should
> read will be considered. I don't think my landlord would like the x-rated
> version of the J-Pole. :)
> Benny
> KC8TRN
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:dVC2a.14488$S8.12992@fe03.atl2.webusenet.com...
> > "Terry" <ve1trb@hotmail.com> wrote in message
> > news:2aC2a.221$cB3.2420@nnrp1.uunet.ca...
> > > At your school, if they have a plumbing class, or a machine shop or
> > > something, maybe someone there can do the soldering for you. At any
> rate,
> > > assuming you cut the copper pipe with a tubing cutter, sometimes, if
> > you're
> > > real careful, if you run the tubing cutter around the female
> connections,
> > > you can cause the female part to tighten up enough on the male part to
> > make
> > > fair contact. If you used a hack saw to cut your pieces of pipe to
> length,
> > > you might want to use the hack saw to cut slots in the female parts,
> then
> > > use something to cause the female part to squeeze against the male
> parts,
> > > like a hose clamp if you can scrounge some up. At any rate, it would
> > > probably be a good idea to weatherproof your joints and upper ends
with
> > > something so as to stop rain snow etc from getting inside or between
the
> > > parts. Most important, have fun, and be creative! Try a couple of
> condoms
> > on

> > > the ends :).
> > >
> > > Terry VE1TRB
> > >
> > > "Benny Miller" <bennymiller@core.com> wrote in message
> > > news:v4lq3mqgkaq862@corp.supernews.com...
> > > > I am trying to find ideas for creating a 1/2" copper tube J-Pole
that
> > does
> > > > not use solder. I have the tubing and the caps and the T & L
> > connectors.
> > > > Is there a way that I could put the whole thing together with out
> having
> > > to
> > > > solder any of the pieces together? I am a super poor college
student
> > > > (living on loans) and i do not want to spend (nor do i have) the
money
> > to
> > > > purchase a butane-type torch to solder the connections. I do have a
> > > little
> > > > hobby soldering iron (pen style not gun) that doesn't seem to
generate
> > > > enough heat to get the solder flowing. Could I use aluminum foil
> around
> > > the
> > > > connections to make them tight and then just wrap electrical tape
> around
> > > the
> > > > connections? Any suggestions would be well used.
> > > > 73
> > > > Benny
> > > > KC8TRN
> > > >
> > > >
> > >
> >
> > How about that. An X-Rated explanation. :>)
> >
> >
> >
>
>

3370. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:24:29 UTC
From: dplatt@radagast.org
Message-ID: <v4m3vdh9mqsn1b@corp.supernews.com>
Source record: 124760

"Benny Miller" <bennymiller@core.com> wrote in message
news:v4lvdbhaa8al92@corp.supernews.com...

>> > > parts. Most important, have fun, and be creative! Try a couple of
>> > > condoms on the ends :).

>> > How about that. An X-Rated explanation. :>)

> My last statement in the original post must now be modified. I had
> previously stated that any suggestions would be well used. Now, it should
> read will be considered. I don't think my landlord would like the x-rated
> version of the J-Pole. :)

I take it you don't live in a condominium?

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3371. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:24:57 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4B0FFA.6B407388@attbi.com>
Source record: 124761

Bob, read the original statement which I quote:

"The radiated power level in a square meter at a distance of one
wavelength from the source is 22 dB less."

He is not asking for the power received in an antenna at 1 wavelength.
The statement describes the power density in 1 square meter at 1
wavelength.

The original statement is a MIS-STATEMENT!!

He is not asking what the RECEIVED power level is!! He is speaking of
the power density in a square meter at one wavelength. The post
specified the effective area as 1 meter square and no antenna gain.

The area of a sphere is 4*Pi*R^2 which is Pi*D^2. I corrected that error
in a subsequent post.

My calculation is simply to show that the post as stated is incomplete
for the conclusions drawn.

Anyway, let's just let this end and acknowledge an error in terms.

Deacon Dave, W1MCE
+++

Bob Nielsen wrote:
>
> On Wed, 12 Feb 2003 20:50:00 GMT, Dave Shrader wrote:
> > Richard, please do the math for us poor math challenged engineers. I
> > don't get -22 dB!!
> >
> > +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
> > or 300 meters away.
> >
> > A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
> >
> > Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
> >
> > dB down = 10*log(17.7e-6/5) = -54.509 dB
> >
> > What have I done incorrectly??
> >
> > Deacon Dave, W1MCE
> > +++
> >
>

> Since we live in a three-dimensional world, you need to calculate the
> area of a sphere with a diameter D, rather than a circle. A= 4*pi*D^2.
> Therefore the area == 1,130,973 m^2 and Pd = 4.42e-6 watts/sq. meter.
>
> The power received by the second antenna is equal to the
> power density times the effective area. The effective area is equal to
>
> (wavelength^2)*G/(4*pi) = (300^2)*1/(4*pi) = 7163 and the received
> power would be equal to 4.42e-6x7163 = .032 watts
>
> .032/5 = .0064 = -22 dB
>
> 73, Bob N7XY
>
> >
> >
> >
> >
> > Richard Harrison wrote:
> >>
> >> Gene, W4SZ wrote:
> >> "The real question is 22 dB down from what?"
> >>
> >> We express the transmitter power output in dBw or dBm. An example is a
> >> klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> >> dBw, or + 37 dBm. The radiated power level in a square meter at a
> >> distance of one wavelength from the source is 22 dB less.
> >>
> >> Best regards, Richard Harrison, KB5WZI
>
> --
> Bob Nielsen, N7XY n7xy@n7xy.net
> Bainbridge Island, WA http://www.n7xy.net
> IOTA NA-065, USI WA-028S

3372. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:24:59 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <e4E2a.42104$r9.4907@fe10.atl2.webusenet.com>
Source record: 124758

Mine in a PVC tube. Been up for almost 10 years. Still works fine.

--
73,
Chuck
KE4ETH
USA-NA
Remove the obvious from Email.

"W6DKN" <w6dkn-nospam-@qsl.net> wrote in message
news:1FD2a.1050$%h4.956@fe01.atl2.webusenet.com...
> David Cook wrote:
> > Is there a reason you want to build it with copper tube? I build my
> > J-Poles from twinlead. Super cheap and you can hang it on the wall
> > with a thumbtack. For outside use, I hang it with a piece of string
> > from any convenient tree branch.
> >
> > 73,
> > -- Dave, WA0TTN
> >
>
> Or put it in a piece of PVC if you need to mount it on a mast. Cheap,
easy,
> and no tubing to solder...
>
> 73 de W6DKN
>
>
>

3373. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:45:26 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4m59ajepmhr18@corp.supernews.com>
Source record: 124762

Area of surface of a sphere: 4pi*r^2.
(I've seen surface of a circle and volume of a sphere.)
Radiated power/unit area integrated over the whole sphere is the total power radiated.
This is the normalization condition.
Now if I can jus' find me one of them isotropic radiators.

Meanwhile I got me some of that there Times Microwave Ultraflex for a bazooka ...
with an RF ammeter at one of the shorts.
The 100 foot piece I have is a quarter wave at 1.9943 MHz.
This is experimental physics. We take data.
H.
NQ5H

PS
Heaviside Equation, magnetic field of a moving point charge, his book was published 1912.
I believe Maxwell (esp) and Gibbs (see also thermodynamics) were a wee bit earlier.

"Dave Shrader" <david.shrader@attbi.com> wrote in message news:3E4B0CA5.C84C9E82@attbi.com...
> No! The power radiated through the surface has to equal the power
> radiated. We are calculating the gradient and divergence of the radiated
> power. From an isotropic it's straight forward 'stretching the balloon'.
> So we are interested in the power density at the surface in a 1 square
> meter target.
>
> The gradient of power density is inside the sphere.
>
> DD
>
> 100 watts radiated requires that the sum of all power through the
> surface equal 100 watts.
>
> Jimnn7k@reno.rmci.net wrote:
> >
> > Dave, as a isotropic radiates in ALL directions, you are useing the wrong
> > area calculation, believe should be 4/3 pi * radius raised to the THIRD
> > power (4/3 pi * r ^3) , would it not?
> >
> > Jim nn7k

> >
> > "Dave Shrader" <david.shrader@attbi.com> wrote in message
> > news:3E4AB36B.264E8E28@attbi.com...
> > > Richard, please do the math for us poor math challenged engineers. I
> > > don't get -22 dB!!
> > >
> > > +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1
wavelength
> > > or 300 meters away.
> > >
> > > A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
> > >
> > > Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
> > >
> > > dB down = 10*log(17.7e-6/5) = -54.509 dB
> > >
> > > What have I done incorrectly??
> > >
> > > Deacon Dave, W1MCE
> > > +++
> > >
> > >
> > >
> > >
> > >
> > > Richard Harrison wrote:
> > > >
> > > > Gene, W4SZ wrote:
> > > > "The real question is 22 dB down from what?"
> > > >
> > > > We express the transmitter power output in dBw or dBm. An example is
a
> > > > klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> > > > dBw, or + 37 dBm. The radiated power level in a square meter at a
> > > > distance of one wavelength from the source is 22 dB less.
> > > >
> > > > Best regards, Richard Harrison, KB5WZI

3374. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 03:53:15 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9320CA4D917D8pookster@216.168.3.50>
Source record: 124763

Roy Lewallen <w7el@eznec.com> wrote in
news:v4m3t196cmuted@corp.supernews.com:

> Depends on how you define the directions of the currents.
>
>

Ummmm... don't think so. If you have a difference between the two
conductors, you have differential mode by definition. It's quite
possible to have both common and differential currents on the same pair.

Talkin' AC here of course. Don't let that guy bring up DC again.

--
Bill, W7TI

3375. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 04:31:58 UTC
From: tdonaly@aol.com
Message-ID: <20030212233158.00967.00000264@mb-fh.aol.com>
Source record: 124764

Cecil wrote,
>
>J. Harvey wrote:
>> Waaay OT...
>>
>> "OC_CAM's Razor"
>>>What was interesting was at the end of the program,
>>>a blond native of Poland and a Native American were
>>>proven to have had the same common genetic ancestor.
>>
>> Not at all... ...it is inevitable through trivial logic.
>> http://www3.sympatico.ca/jeff.harvey/InevitableEve.htm
>
>So why can't the inevitable be interesting?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
It's only "the inevitable through trivial logic" that's uninteresting, Cecil.
Eve, herself, was probably a very interesting hominid. She
must have seemed awfully strange to the other hominids, though.
73,
Tom Donaly, KA6RUH

3376. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 04:39:16 UTC
From: tdonaly@aol.com
Message-ID: <20030212233916.00967.00000265@mb-fh.aol.com>
Source record: 124765

Deacon Dave wrote,
>
>Bob, read the original statement which I quote:
>
>"The radiated power level in a square meter at a distance of one
>wavelength from the source is 22 dB less."
>
>He is not asking for the power received in an antenna at 1 wavelength.
>The statement describes the power density in 1 square meter at 1
>wavelength.
>
>The original statement is a MIS-STATEMENT!!
>
>He is not asking what the RECEIVED power level is!! He is speaking of
>the power density in a square meter at one wavelength. The post
>specified the effective area as 1 meter square and no antenna gain.
>
>The area of a sphere is 4*Pi*R^2 which is Pi*D^2. I corrected that error
>in a subsequent post.
>
>My calculation is simply to show that the post as stated is incomplete
>for the conclusions drawn.
>
>Anyway, let's just let this end and acknowledge an error in terms.
>
>Deacon Dave, W1MCE
>+++
>

It takes a brave man to do mathematics in public.
73,
Tom Donaly, KA6RUH

3377. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 04:40:47 UTC
From: Ken Bessler <kg0wx@yahoo.com>
Message-ID: <jlF2a.24392$qY4.9862@news2.central.cox.net>
Source record: 124766

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20030212233158.00967.00000264@mb-fh.aol.com...
> Cecil wrote,
> >
> >J. Harvey wrote:
> >> Waaay OT...
> >>
> >> "OC_CAM's Razor"
> >>>What was interesting was at the end of the program,
> >>>a blond native of Poland and a Native American were
> >>>proven to have had the same common genetic ancestor.
> >>
> >> Not at all... ...it is inevitable through trivial logic.
> >> http://www3.sympatico.ca/jeff.harvey/InevitableEve.htm
> >
> >So why can't the inevitable be interesting?
> >--
> >cheers, CAM http://www.qsl.net/w5dxp
> >
> It's only "the inevitable through trivial logic" that's uninteresting,
Cecil.
> Eve, herself, was probably a very interesting hominid. She
> must have seemed awfully strange to the other hominids, though.
> 73,
> Tom Donaly, KA6RUH
>
>

And this has WHAT to do with amateur antennas?

Sheesh - get on topic, dickheads....

3378. Re: Balun 9:1

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 04:42:24 UTC
From: "George, W5YR" <w5yr@att.net>
Message-ID: <QmF2a.34132$rq4.2589370@bgtnsc05-news.ops.worldnet.att.net>
Source record: 124767

Gomes,

A balun is not a transformer - that is, it will not accept any load impedance and reduce it in the ratio of 9:1.

A balun is a *transmission line transformer* and instead of being composed of windings of a certain number of turns on a core like a conventional transformer, it is made from short sections of transmission lines having a specific characteristic impedance.

They must be designed for and used with specific input and output impedances or their behavior is unpredictable and usually undesirable.

As a simple example, a 4:1 current balun designed for 50 ohm and 200 ohm operation is made from two 50-ohm transmission line sections usually wound around a ferrite toroid core. The lines are connected in parallel at the 50-ohm input while the lines are connected in series at the 200-ohm output.

As long as the balun is presented with a 200 ohm resistive load, its input will be 50 ohms resistive, provided that the frequency is within the design range of the balun.

There are excellent references available on balun theory and construction. Look up authors such as Jerry Sevick, Roy Lewallen, and Walt Maxwell. Google will lead you to them.

Now that we have talked a little about baluns, the relevant question is "why" a 9:1 balun? If you have in mind connecting 450-ohm ladder line to the output and 50-ohm coax to the input, then that will be successful ONLY if the input impedance of the 450-ohm line is 450 ohms resistive at a frequency within the design limits of the balun. That requires that the line be terminated in a 450 ohm resistive load.

If, on the other hand, you have in mind feeding a single antenna with ladderline and using a tuner to enable operation on different bands, then that approach is doomed since it is highly unlikely that the 450-ohm line will ever present the proper input impedance.

In that situation, one uses a 1:1 current balun and lets the required antenna tuner at the other end of the coax take care of the impedance transformation and reactance cancelling required to obtain a 50 ohm resistive load for the transmitter.

Sorry to be so wordy in a response to your short question, but this is a highly misunderstood topic and questions such as yours frequently arise from other than an appreciation of what a balun is and what is can and cannot do.

Sorry if you feel that I am talking down to you - that is not my intention -
but helping you is . . .

73/72, George
Amateur Radio W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13QE
"In the 57th year and it just keeps getting better!"

"CARLOS GOMES" <ct1hix@sapo.pt> wrote in message
news:3e4ad717$0$12378$a729d347@news.telepac.pt...
> I need a help to build a 9:1 Balun .
>
> Thanks !
>
> CT1HIX Gomes
>
>
>

3379. Re: Wire dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 04:43:10 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4B225E.CD6C1BB2@cwis.net>
Source record: 124768

Tom,
That's it. Not much to it, huh?
'Doc

3380. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 04:45:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4m8ocs14pisa8@corp.supernews.com>
Source record: 124669

Ok.

Let I1 be defined as the current flowing upward in conductor 1.
Let I2 be defined as the current flowing upward in conductor 2.

Then the common mode current is
(I1 + I2) / 2
And the differential mode current is
(I1 - I2) / 2

Now,

Let I1 be defined as the current flowing upward in conductor 1.
Let I2 be defined as the current flowing downward in conductor 2.

Then the common mode current, by the most common convention, is
(I1 - I2) / 2
And the differential mode current is
(I1 + I2) / 2

Take your pick.

(The division by two is sometimes omitted.)

Roy Lewallen, W7EL

Bill, W7TI wrote:
> Roy Lewallen <w7el@eznec.com> wrote in
> news:v4m3t196cmuted@corp.supernews.com:
>
>
>>Depends on how you define the directions of the currents.
>>
>>
>
> ----------
>
> Ummmm... don't think so. If you have a difference between the two
> conductors, you have differential mode by definition. It's quite
> possible to have both common and differential currents on the same pair.
>
> Talkin' AC here of course. Don't let that guy bring up DC again.
>

3381. Re: Wire dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 04:59:22 UTC
From: Tom DeYoung <tdeyoung@n0spam.mn.rr.com>
Message-ID: <KCF2a.111162$lb.2393471@twister.rdc-kc.rr.com>
Source record: 124670

God I love this hobby

grin

TDD

"'Doc" <w5lz@cwis.net> wrote in message news:3E4B225E.CD6C1BB2@cwis.net...
>
>
> Tom,
> That's it. Not much to it, huh?
> 'Doc

3382. Re: G-line ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 05:08:09 UTC
From: dplatt@radagast.org
Message-ID: <v4ma1p5f7v2d03@corp.supernews.com>
Source record: 124671

In article <v4lqdgef6lgb1d@corp.supernews.com>,
Henry Kolesnik <wd5jfr@oklahoma.net> wrote:

>When I was in high school, mid 1950s, I kind of recall a single insulated
>wire feed to a residence from a hilltop antenna. It was extemely low loss
>but couldn't turn corners. I've done a little searching but have not found
>a good explantion on how G-line works and doesn't. Also would like to know
>why you don't see much about it today.

Coincidences are odd! I received a copy of the ITT "Reference data
for radio engineers" today, by mistake (I'd bought a copy of Terman's
1955 text on eBay, and the seller accidentally shipped the wrong "4th
edition" hardback), was glancing through it a few minutes ago, and
came across a description of just this sort of arrangement (page 604).

The book describes this as a surface-wave transmission line, normally
using a thick dielectric (total diameter is often 3 or more times the
diameter of the single conductor). "A mode of propagation that is
practically non-radiating is excited on the line by means of a conical
horn at each end... mouth of the horn is roughly 1/4 to 1/2 wavelength
in diameter. Losses are about half those of a two-wire line, but the
surface-wave line has a practical lower limit of about 50 megacycles.
The losses in the two launchers combined vary from less than .5 dB to
a little more than 1.0 dB, according to their design."

A reference is given to an article "Designing surface-wave
transmission lines" by Georg Goubau in Electronics vol. 27, April
1954. I wonder whether Goubau is the "G" in "G-line"?

Fascinating! I'd never heard of this transmission mode, and then it
crops up twice in one day, in two completely different contexts....
hey, who taught that mockingbird outside my window to sing the
"Twilight Zone" theme?

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3383. Re: Wire dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 05:14:53 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4mah0kf55a8e6@corp.supernews.com>
Source record: 124672

BEATS THE HELL OUT OF RUNNING NORTH KOREA
nity nite

I met Bush
I routinely drop coyotes at 500yards.
4hjfjfjfjjfjfjjjjjjjj\\\\
swine11111

"Tom DeYoung" <tdeyoung@n0spam.mn.rr.com> wrote in message
news:KCF2a.111162$Ib.2393471@twister.rdc-kc.rr.com...
> God I love this hobby
>
> *grin*
>
> TDD
>
> "'Doc" <w5lz@cwis.net> wrote in message news:3E4B225E.CD6C1BB2@cwis.net...
> >
> >
> > Tom,
> > That's it. Not much to it, huh?
> > 'Doc
>
>

3384. Re: N-jack assembly?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 05:33:34 UTC
From: cprstn54zz@att.net
Message-ID: <3e4b2af7.167307515@news-server.optonline.net>
Source record: 124673

On Wed, 12 Feb 2003 14:25:00 -0800, <Jimnn7k@reno.rmci.net> wrote:

>Ken, are you sure that you have the RIGHT N connector for your coax
>impedence?

No, since it was shipped to me in error instead of an in-line SO-239 a
few years ago and now I finally have a use for it having bought a
small dummy load on eBay with an N-male connector.

It has the extra 1/8" thick washer that has to make the sandwich with
the cupped bushing.

I got it to work by shortening the center conductor protrusion,
including insulation, down to around 3/16". I put some solder into
the center receptacle, some flux on the center conductor, heated the
receptacle and pushed the center conductor into the melted solder as
far as it would go. Then I put a 1/8" length of shrink wrap on the
center business, assembled and tightened. This time, no shorting.

They say they are called N connectors because there are N ways of
assembling them. I am still not satisfied that I found the right way
for this one, but I found a way that works. It doesn't make sense to
need that 1/8" thick washer in front of the coax shielding when they
could have shaped the body hole so it was 1/8" less deep -- unless it
keeps things neater during assembly.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3385. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 05:41:13 UTC
From: KC7ZRU - Tate <73kc7zru73@arrl.net>
Message-ID: <3E4B2FF8.D0C08047@arrl.net>
Source record: 124674

You going to a college WITHOUT a ham club??

Get one going, gather in some of the faculty and staff that are hams -
gain access to elmers and tools.

Heck, forget the college based club - got *any* local ham community of
any kind?

Do a presentation at a meeting - have a couple half dozen of these
things built up.

Sounds like a great opportunity to me.

73

Benny Miller wrote:
>

> I am a super poor college student
> (living on loans) and i do not want to spend (nor do i have) the money to
> purchase a butane-type torch to solder the connections.

--
"The Dungeon" online at http://go.to/kc7zru
Casper, WY | CARC Repeater
DN62tt | 146.940-
http://www.trib.com/~carc

3386. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 06:27:55 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9320E4864BF2pookster@216.168.3.50>
Source record: 124675

Roy Lewallen <w7el@eznec.com> wrote in news:v4m8ocs14pisa8
@corp.supernews.com:

> Take your pick.
>

The two pairs of formulas are essentially the same, since in the lower ones you have specified that current in one wire is reversed and the + sign changed to -. No argument there.

But you haven't answered my original question. You said "The difference between the currents (or half the difference) is often called "common mode". Grammatically this doesn't make sense. The difference between the currents is a difference, not a mode.

Typo?

--
Bill, W7TI

3387. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 06:55:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v4mgbd3rg6dpf9@corp.supernews.com>
Source record: 124676

Bill, W7TI wrote:
> Roy Lewallen <w7el@eznec.com> wrote in news:v4m8ocs14pisa8
> @corp.supernews.com:
>
>
>>Take your pick.
>>
>
> ----------
>
> The two pairs of formulas are essentially the same, since in the lower
> ones you have specified that current in one wire is reversed and the +
> sign changed to -. No argument there.
>
> But you haven't answered my original question. You said "The difference
> between the currents (or half the difference) is often called "common
> mode". Grammatically this doesn't make sense. The difference between
> the currents is a difference, not a mode.
>
> Typo?
>

Here's what I wrote:

"However, there's no guarantee that the currents in the two conductors
will be equal and opposite. The difference between the currents (or half
the difference) is often called "common mode", "even mode", or "antenna"
current. . ."

In my last posting, I wrote:

"Now,

Let I1 be defined as the current flowing upward in conductor 1.
Let I2 be defined as the current flowing downward in conductor 2.

Then the common mode current, by the most common convention, is
(I1 - I2) / 2"

The quantity (I1 - I2) is properly called a "difference" between the
currents".

Your original question was whether I meant "differential" when I meant
"common mode". The answer is, no, I didn't.

If it doesn't make sense to you to call the difference between two
currents "common mode", then all you have to do is always define both

currents as positive in the same direction, and it'll always make sense.
Easy.

Roy Lewallen, W7EL

3388. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 07:07:40 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9320EB43EDC29pookster@216.168.3.50>
Source record: 124677

Roy Lewallen <w7el@eznec.com> wrote in
news:v4mgbd3rg6dpf9@corp.supernews.com:

> If it doesn't make sense to you to call the difference between two
> currents "common mode", then all you have to do is always define both
> currents as positive in the same direction, and it'll always make
> sense. Easy.

Imagine a twisted pair phone line running from your house out to the utility pole and by your antenna. The voice currents carrying the phone conversation are differential mode. The RF picked up by the twisted pair (identical on both conductors as to amplitude and polarity) is common mode.

To define the differential currents as "positive in the same direction" is nonsense. That's what the common mode currents are.

--
Bill, W7TI

3389. Re: Wire dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 07:53:15 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302122353.7d7b5075@posting.google.com>
Source record: 124678

"Tom DeYoung" <tdeyoung@n0spam.mn.rr.com> wrote in message
news:<GQC2a.99716$Gm2.2677322@twister.rdc-kc.rr.com>...
> I'm gonna play stupid here-
>
> I'm just now getting on HF for the first time in nearly ten years of being
> licensed.
>
> I assume this means that I can solder the wire directly to each lead on the
> 400 (or is it 300 that's used) ohm ladder line, and connect the other end of
> the ladder line onto the "balanced wire" posts on the tuner?

I'd use some kind of small mounting block to hold everthing down at
the feedpoint, and take the strain off the ladder line. In general,
ladder line is any open wire feedline with air gaps between the two
wires. The width of the wires apart, determine the impedance. The
wider apart, the higher the impedance.
The brown "ladder line" that you see with the cut out gaps is rated as
450 ohm usually, but can very in practice. Doesn't matter.. 300 ohm
line is the TV twinlead you see. As it has no gaps, I consider it twin
lead instead of ladder line, but it works the same. The twinlead has
more loss than the 450 ladder line in general. The ladder line is much
better in rain than twinlead. Probably 75% of the hams that run ladder
line use the stock 450 ohm brown ladder line. My backup attic 40 m
dipole is fed with 300 ohm line though. Smaller hole to drill in the
ceiling...Also the twin lead is slightly less ugly in my case...It
runs from the ceiling, along the wall, straight down to my rigs. I use
it when I'm too scared to use my outdoor antennas due to lightning. I
also have a 2m GP up there. Even those antennas are risky, but much
less so from a direct strike point of view. My outdoor masts
"lightning rods for all practical purposes" will protect the house.
Or should anyway...I could still take a heck of a surge if it hit the
mast, just from being so close. I usually unhook totally when it gets
nasty. MK

3390. Re: Wire dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 10:30:23 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0302130230.6605c2b0@posting.google.com>
Source record: 124679

"Tom DeYoung" <tdeyoung@n0spam.mn.rr.com> wrote in message
news:<GQC2a.99716$Gm2.2677322@twister.rdc-kc.rr.com>...
> ...
> I assume this means that I can solder the wire directly to each lead on the
> 400 (or is it 300 that's used) ohm ladder line,...

Put an insulator to this point, otherwise the ladder line may be torn
into two separate wires :-(

73 de Ivan OK1SIP

3391. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 11:15:26 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E4B7E4E.1FC10B4E@bloomer.net>
Source record: 124680

Now THAT'S thinking!! A demo on building a J-Pole!! Just have a club member bring a propane torch and you've got it made!!! That sounds like the best idea in answer to you're post! Good luck with the project? By the way, what college? We're just starting a club at ours (U of Wisconsin Stout)...

Scott
N0EDV

KC7ZRU - Tate wrote:
>
> You going to a college WITHOUT a ham club??
>
> Get one going, gather in some of the faculty and staff that are hams -
> gain access to elmers and tools.
>
> Heck, forget the college based club - got *any* local ham community of
> any kind?
>
> Do a presentation at a meeting - have a couple half dozen of these
> things built up.
>
> Sounds like a great opportunity to me.
>
> 73
>
> Benny Miller wrote:
> >
>
> > I am a super poor college student
> > (living on loans) and i do not want to spend (nor do i have) the money to
> > purchase a butane-type torch to solder the connections.
>
> --
> "The Dungeon" online at http://go.to/kc7zru
> Casper, WY | CARC Repeater
> DN62tt | 146.940-
> http://www.trib.com/~carc

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4

Gotta Fly or Gonna Die!

3392. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 11:32:02 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2fvni$6rm$1@venus.btinternet.com>
Source record: 124682

Thanks - I'll be using a low SWR monoband dipole and no tuner.

D

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v4ktbnoi4ufe06@corp.supernews.com...
> Dean
> Well-shielded coax contains the electric fields inside the dielectric
> between the conductors
> and the magnetic fields perfectly cancel since the two conductors are
> coaxial.
> (Assuming equal and opposite currents! If you have a reactive load at the
> antenna, you can get the coax to radiate.
> A balun pins the inner conductor and shield currents together at the feed
> point, since it effectively shorts them with the few inches of wire in the
> balun primary, minimizing feedline radiation.)
> Good quality, matched coax interacts very little with it's surroundings.
> Do you have a lot of metal in the attic? In the 50's, before low loss
coax,
> folks used 300 ohm twin lead for TV antennas. The typical standoff
insulator
> held the twin lead about 4 inches from the metal antenna mast. It was
> twisted 1/2 half turn every foot or so.
> The ladder line you are using is, I assume, 2 or 3 times as wide as TV
twin
> lead, so if you can keep a foot or so away from conductors and mount it
> securely with some twists, it just might work fine.
> You didn't say if you were going to use a resonant antenna or a tuner and
> subsequent high SWR.
> For low SWR and HF coax will work fine.
> For high SWR and or higher frequencies the ladder line loss is much
better.
> Most of all, have fun with antennas!
> H.
> NQ5H
>
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> news:b2dqsj$j1l$1@knossos.btinternet.com...
> > So does coax interfere less with it's close surroundings?
> >
> > In my attic, which will have close surroundings to the feeder and I
can't
> > really avoid it, do you think I'm better off feeding coax to a balun at
> the
> > dipole centre, or having the balun at the radio end and running ladder

> line
> > to the dipole?
> >
> > Thanks for the 2 cents,
> >
> > D
> >
> > "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> > news:v4kjt31c6tcm36@corp.supernews.com...
> > > If you move far enough away from open wire line such that the distance
> > from
> > > the line is large compared to the conductor spacing, and the currents
in
> > the
> > > two wires are equal and opposite, the electromagnetic fields from the
> two
> > > conductors cancel. At "infinity" they exactly cancel. Up close open
wire
> > > feeder will interact with it's environment, therefore lead dress and
> > > mechanical stability are important with ladder line. The advantage of
> > ladder
> > > line over coax is it has much less loss, especially when the SWR goes
> up.
> > > Just my 2 cents
> > > H.
> > > NQ5H
> > >
> > > "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> > > news:b2dhimcpi1@sparta.btinternet.com...
> > > > Can someone perhaps help me understand something?
> > > >
> > > > I don't quite see how open wire feeder does not actually radiate. I
> can
> > > only
> > > > guess it's something to do with the fact that the cables are run in
> > > parallel
> > > > and show a given impedance, but I'd appreciate the text book answer.
> > > >
> > > > Thanks,
> > > >
> > > > Dean
> > > >
> > > >
> > >
> > >
> > >
> >
> >
>
>

3393. Re: G-line ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 11:32:51 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2fvovbud1@slb6.atl.mindspring.net>
Source record: 124681

Henry:

I remember G-line as well. If my memory is correct, it appeared on the scene back
in the 1950's and incurred a brief period of interest/notoriety and then dissappeared
from the scene apparantly from lack of applications.

Of course there is no reason why a single conductor cannot act as a transmission
line, but of course it will radiate and thus lose power, that is in fact what antenna
elements are, i.e. single wire [radiating] transmission lines.

The object of the G-line technology was to attempt to mitigate the radiation of the
single wire transmission line.

Apparently the G-line operates with the waves travelling within the dielectric,
as in other "ducting" phenomena, wherein the waves are confined within the
dielectric layer which has a substantially different dielectric constant from free
space/air and hence creates suitable refraction properties at the interface between
the dielectric and the surrounding free space/air outside the single line conductor.
This is very similar to the operation of fiber optic cables with light wavelengths.
The single line conductor of G-line acts as a launcher for the wave and as a
"support" for the dielectric.

I am not sure that I ever saw a "mode analysis" of the transmission mode,
of G-line produced back then, but I believe that the propagation mode would
depend strongly upon the ratio of the dielectric diameter in relation to the
wavelength of operation, and since it is a cylindrical geometry which usually
encourages "weird" modes, one thing I am sure of is that it is definitely *not*
TEM mode!

Clearly the composition of the dielectric may have a marked effect on the
transmission loss of G-line.

I still don't see any "great" applications for G-line. Do you?

--
Peter K1PO
Indialantic By-the-Sea, FL.

"Dave Platt" <dplatt@radagast.org> wrote in message
news:v4ma1p5f7v2d03@corp.supernews.com...
> In article <v4lqdgef6lgb1d@corp.supernews.com>,
> Henry Kolesnik <wd5jfr@oklahoma.net> wrote:
>
> >When I was in high school, mid 1950s, I kind of recall a single
insulated
> >wire feed to a residence from a hilltop antenna. It was extemely low
loss
> >but couldn't turn corners. I've done a little searching but have not
found
> >a good explantion on how G-line works and doesn't. Also would like to
know
> >why you don't see much about it today.
>
> Coincidences are odd! I received a copy of the ITT "Reference data
> for radio engineers" today, by mistake (I'd bought a copy of Terman's
> 1955 text on eBay, and the seller accidentally shipped the wrong "4th
> edition" hardback), was glancing through it a few minutes ago, and
> came across a description of just this sort of arrangement (page 604).
>
> The book describes this as a surface-wave transmission line, normally
> using a thick dielectric (total diameter is often 3 or more times the
> diameter of the single conductor). "A mode of propagation that is
> practically non-radiating is excited on the line by means of a conical
> horn at each end... mouth of the horn is roughly 1/4 to 1/2 wavelength
> in diameter. Losses are about half those of a two-wire line, but the
> surface-wave line has a practical lower limit of about 50 megacycles.
> The losses in the two launchers combined vary from less than .5 dB to
> a little more than 1.0 dB, according to their design."
>
> A reference is given to an article "Designing surface-wave
> transmission lines" by Georg Goubau in Electronics vol. 27, April
> 1954. I wonder whether Goubau is the "G" in "G-line"?
>
> Fascinating! I'd never heard of this transmission mode, and then it
> crops up twice in one day, in two completely different contexts....
> hey, who taught that mockingbird outside my window to sing the
> "Twilight Zone" theme?
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

3394. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 11:39:22 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2g055$t5t$1@slb6.atl.mindspring.net>
Source record: 124683

Hi Yuri:

[snip]
> Warum nicht?
> Not one of those "no fat, no cholesterol"?
>
> Yuri

[snip]

No fat, no cholesterol, no calories, no Atkins... *only* wine, women and
song!

The wine and song are easy to get, the women... well... ;-)

--
Peter K1PO
Indialantic By-the-Sea, FL.

3395. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 11:39:25 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2g05d$7dq$1@venus.btinternet.com>
Source record: 124684

Thanks for the replies. Seems I was pretty much right in my thoughts anyway - the fact that the two cables are run in parallel means that the opposite phases of each side of the balanced line cancels out the radiation.

One thing that still troubles my mind a little - I think of this cancelling effect as "lossy".

D

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message news:b2dhimcpi1@sparta.btinternet.com...
> Can someone perhaps help me understand something?
>
> I don't quite see how open wire feeder does not actually radiate. I can only
> guess it's something to do with the fact that the cables are run in parallel
> and show a given impedance, but I'd appreciate the text book answer.
>
> Thanks,
>
> Dean
>
>

3396. Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 12:18:57 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2g2fg$h31$1@sparta.btinternet.com>
Source record: 124685

You may remember I posted last week about using a mobile antenna as a stealth antenna with some form of home-brew ground plane.

I have since seen antenna's on the market (unfortunately I just missed one on ebay) that seem to use a copper tube at the base as a groundplane. This is better for me because I am trying to avoid using radials (as you may remember).

Is this easy to do? What would be ideal for me is to use a mobile gain antenna (probably 5/8 over 5/8 centre loaded) and use quarter wavelength of copper tube (painted black) underneath as the groundplane.

Likely to work? Anything I should know or consider?

Many thanks again,

Dean
M3DPE

3397. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 12:34:48 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <MwN2a.23331$S8.19251@fe03.atl2.webusenet.com>
Source record: 124689

Na, I live in the country on about 2 acres. Bu Ido use a 2-Meter J-Pole in a pvc pipe at about 40 feet. On a good day I can hit a repeater about 50 miles from me using the HT with 5-7 watts..

--
73,
Chuck
KE4ETH
USA-NA
Remove the obvious from Email.

"Dave Platt" <dplatt@radagast.org> wrote in message
news:v4m3vdh9mqsn1b@corp.supernews.com...
> "Benny Miller" <bennymiller@core.com> wrote in message
> news:v4lvdbhaa8al92@corp.supernews.com...
>
> >> > > parts. Most important, have fun, and be creative! Try a couple of
> >> > > condoms on the ends :).
>
> >> > How about that. An X-Rated explanation. :>)
>
> > My last statement in the original post must now be modified. I had
> > previously stated that any suggestions would be well used. Now, it
should
> > read will be considered. I don't think my landlord would like the
x-rated
> > version of the J-Pole. :)
>
> I take it you don't live in a condominium?
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

3398. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 12:38:30 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <blM2a.2610$3g1.366218@news20.bellglobal.com>
Source record: 124686

Apologies for the off-topic, but application of trivial logic is applicable
to many fields.

"OC_CAM's Razor" applied the logic of meaning:
>So why can't the inevitable be interesting?

I supposed you're right - it can be. :-)

"Tdonaly" inexplicably chimed in:
> Eve, herself, was probably a very interesting hominid.
> She must have seemed awfully strange to the other
> hominids, though.

Huh ? Eve was indistinguishable from her compatriots. In a few thousand
years, it might turn out that you are Adam (assuming that you've had at
least one son, etc.).

Obviously, you need The Cure for 'Eve Amazement":
http://www3.sympatico.ca/jeff.harvey/InevitableEve.htm

"Ken Bessler" threw pebbles from his glass posting:
> And this has WHAT to do with amateur antennas?
> Sheesh - get on topic, dickheads....

In a minute, in a minute... remain calm, it's not the end of the world.
Don't forget - it starts with 'rec.' - it's all supposed to be fun.

3399. Re: G-line ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 13:10:14 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <tILNbRD2k5S+EA1B@ifwtech.co.uk>
Source record: 124690

Peter O. Brackett wrote:
>
>I am not sure that I ever saw a "mode analysis" of the transmission
>mode, of G-line produced back then, but I believe that the propagation
>mode would depend strongly upon the ratio of the dielectric diameter in
>relation to the wavelength of operation, and since it is a cylindrical
>geometry which usually encourages "weird" modes, one thing I am sure of
>is that it is definitely
>*not*
>TEM mode!
>
It's usually described (in a hand-waving way) as a 'fringing' field.
That mode of propagation also makes G-line very sensitive to
disturbances. Even dielectric supports can cause problems. Experimenters
found that it's really only suitable for straight-line runs - the
propagating energy finds it difficult to take a curve, so it 'falls off
the line' and radiates instead.

Then there's the small matter that G-line has an alternative mode, as an
HF receiving antenna!

>I still don't see any "great" applications for G-line. Do you?
>
Not really. Amateurs experimented with it for microwave use (I even
considered it for a 1.3GHz dish at the far end of the garden) but the
availability of cheap surplus hardline ended that interest.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3400. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 13:26:49 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932137689A04Fpookster@216.168.3.50>
Source record: 124687

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in news:blM2a.2610
$3g1.366218@news20.bellglobal.com:

> Obviously, you need The Cure for 'Eve Amazement":
> http://www3.sympatico.ca/jeff.harvey/InevitableEve.htm
>

Interesting hypothesis with one fatal flaw. You make an execellent
argument for the continuous matrilineal line - no argument there. The flaw
is that you title the lady at the beginning "The Mother of All Humanity".
A more correct title would be "The Mother of an Unbroken Line of
Daughters". There were *plenty* of other females who were mothers of
humanity. Mitochondrial DNA is not the exclusively defining factor for
parenthood.

I see why Scientific American and Discovery rejected your hypothesis.

I wonder too, why so many copyrights? Insecurity?

--
Bill, W7TI

3401. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 13:44:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4BA136.9030405@ieee.org>
Source record: 124688

Ken Bessler wrote:
> And this has WHAT to do with amateur antennas?

It proves that the inevitable can be interesting?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3402. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 14:20:03 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4nafaodc0tq3c@corp.supernews.com>
Source record: 124691

No R.
No loss .
Just a way of thinking.
Build that resonant dipole and run that coax and GET ON THE AIR!!
;^)
H.
NQ5H

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:b2g05d$7dq$1@venus.btinternet.com...
> Thanks for the replies. Seems I was pretty much right in my thoughts
> anyway - the fact that the two cables are run in parallel means that the
> opposite phases of each side of the balanced line cancels out the
radiation.
>
> One thing that still troubles my mind a little - I think of this
cancelling
> effect as "lossy".
>
> D
>
snip

3403. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 14:21:49 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4naikquuk759a@corp.supernews.com>
Source record: 124692

Try to make it resonant and match the impedances, it will radiate more
efficiently.
Above all, get on the air!!
H.
NQ5H

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:b2g2fg$h31$1@sparta.btinternet.com...
> You may remember I posted last week about using a mobile antenna as a
> stealth antenna with some form of home-brew ground plane.
>
> I have since seen antenna's on the market (unfortunately I just missed one
> on ebay) that seem to use a copper tube at the base as a groundplane. This
> is better for me because I am trying to avoid using radials (as you may
> remember).
>
> Is this easy to do? What would be ideal for me is to use a mobile gain
> antenna (probably 5/8 over 5/8 centre loaded) and use quarter wavelength
of
> copper tube (painted black) underneath as the groundplane.
>
> Likely to work? Anything I should know or consider?
>
> Many thanks again,
>
> Dean
> M3DPE
>
>

3404. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 14:32:39 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2gaa7$l71$1@venus.btinternet.com>
Source record: 124693

Sorry - I can't see how that relates to my question?!

Dean

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v4naikquuk759a@corp.supernews.com...
> Try to make it resonant and match the impedances, it will radiate more
> efficiently.
> Above all, get on the air!!
> H.
> NQ5H
>
>
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> news:b2g2fg$h31$1@sparta.btinternet.com...
> > You may remember I posted last week about using a mobile antenna as a
> > stealth antenna with some form of home-brew ground plane.
> >
> > I have since seen antenna's on the market (unfortunately I just missed
one
> > on ebay) that seem to use a copper tube at the base as a groundplane.
This
> > is better for me because I am trying to avoid using radials (as you may
> > remember).
> >
> > Is this easy to do? What would be ideal for me is to use a mobile gain
> > antenna (probably 5/8 over 5/8 centre loaded) and use quarter wavelength
> of
> > copper tube (painted black) underneath as the groundplane.
> >
> > Likely to work? Anything I should know or consider?
> >
> > Many thanks again,
> >
> > Dean
> > M3DPE
> >
> >
>
>

3405. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 14:45:45 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4nbvga5gk6ibe@corp.supernews.com>
Source record: 124694

```
Your question was:
"Likely to work? Anything I should know or consider?"
The "Yes" to the first question was implicit.
Now go get in a QSO!
;^)
H
"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:b2gaa7$l71$1@venus.btinternet.com...
> Sorry - I can't see how that relates to my question?!
>
> Dean
>
> "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> news:v4naikquuk759a@corp.supernews.com...
> > Try to make it resonant and match the impedances, it will radiate more
> > efficiently.
> > Above all, get on the air!!
> > H.
> > NQ5H
> >
> >
> > "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> > news:b2g2fg$h31$1@sparta.btinternet.com...
> > > You may remember I posted last week about using a mobile antenna as a
> > > stealth antenna with some form of home-brew ground plane.
> > >
> > > I have since seen antenna's on the market (unfortunately I just missed
> one
> > > on ebay) that seem to use a copper tube at the base as a groundplane.
> This
> > > is better for me because I am trying to avoid using radials (as you
may
> > > remember).
> > >
> > > Is this easy to do? What would be ideal for me is to use a mobile gain
> > > antenna (probably 5/8 over 5/8 centre loaded) and use quarter
wavelength
> > of
> > > copper tube (painted black) underneath as the groundplane.
> > >
> > > Likely to work? Anything I should know or consider?
> > >
> > > Many thanks again,
> > >
```

> > > Dean
> > > M3DPE
> > >
> > >
> >
> >
>
>

3406. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 15:14:42 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <CDO2a.16132$ji.1186365@twister.southeast.rr.com>
Source record: 124695

Don't u mean fonetics?

Alan

--
Windsurfing Club: http://www.ibscc.org

"'Doc" <w5lz@cwis.net> wrote in message news:3E4AD8DF.534F7F6F@cwis.net...
>
>
> Alan,
> By all means we can't leave the Phoenicians out!
> After they migrated to California, they started the
> phonetic's method of reading...
> 'Doc

3407. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 15:31:59 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2gdpfjgu1@helle.btinternet.com>
Source record: 124696

OK, great - thanks.

So, you're saying that the length of the copper tube needs to be adjusted to match the SWR/impedance? In which case, maybe I need an antenna analyser, or is there a ball-park way of doing it? I was thinking of a quarter wavelength of tube, adjusted for velocity factor.

I don't understand the QSO ref. though - I've been on air for six months or so now and have had many of them on many different bands!

I want to build this antenna to get a little gain for a 70cms internet link (currently have slim-jim on 70cms tucked under the eves) without upsetting the neighbours too much (I live in conservation area).

73 de Dean
M3DPE

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v4nbvga5gk6ibe@corp.supernews.com...
> Your question was:
> "Likely to work? Anything I should know or consider?"
> The "Yes" to the first question was implicit.
> Now go get in a QSO!
> ;^)
> H
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> news:b2gaa7$l71$1@venus.btinternet.com...
> > Sorry - I can't see how that relates to my question?!
> >
> > Dean
> >
> > "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> > news:v4naikquuk759a@corp.supernews.com...
> > > Try to make it resonant and match the impedances, it will radiate more
> > > efficiently.
> > > Above all, get on the air!!
> > > H.
> > > NQ5H
> > >
> > >
> > > "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> > > news:b2g2fg$h31$1@sparta.btinternet.com...
> > > > You may remember I posted last week about using a mobile antenna as
a
> > > > stealth antenna with some form of home-brew ground plane.
> > > >

> > > > I have since seen antenna's on the market (unfortunately I just
missed
> > one
> > > > > on ebay) that seem to use a copper tube at the base as a
groundplane.
> > This
> > > > > is better for me because I am trying to avoid using radials (as you
> may
> > > > > remember).
> > > > >
> > > > > Is this easy to do? What would be ideal for me is to use a mobile
gain
> > > > > antenna (probably 5/8 over 5/8 centre loaded) and use quarter
> wavelength
> > > of
> > > > > copper tube (painted black) underneath as the groundplane.
> > > > >
> > > > > Likely to work? Anything I should know or consider?
> > > > >
> > > > > Many thanks again,
> > > > >
> > > > > Dean
> > > > > M3DPE
> > > > >
> > > > >
> > > >
> > > >
> > >
> > >
> >
> >
>
>

3408. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 15:53:45 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4nfv1oeu50d3@corp.supernews.com>
Source record: 124697

The "QSO ref" was just a smile couched in a few words.
The "easy way" is to listen to your receiver for peak noise while sweeping the frequency back and forth or just minimize SWR. A field strength meter is cheap and the fundamental bottom line measurement. An impedance bridge, however, is absolutely priceless. These modern ones are amazing! My mobile rig is an ICOM 706MKIIG with about a foot of RG8X to the matching network. The antenna is a Hustler, low power resonator, on a ball mount drilled into the side of my truck. Two-inch copper strap ties it all together. I tuned it to resonance on 20 meters using my MFJ analyzer. R=26 ohms or so. The 50 ohm source is matched to the 26 ohm load with a toroidal autoformer (a so-called unun). This configuration resulted in the greatest field strength when compared to other approaches; I used no-tuner-at-all (2nd best), a pi network (3rd best), both ICOM auto tuners, and various antennas and field strength meters.
Have fun.
H.
NQ5H

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:b2gdpfjgu1@helle.btinternet.com...
> OK, great - thanks.
>
> So, you're saying that the length of the copper tube needs to be adjusted
to
> match the SWR/impedance? In which case, maybe I need an antenna analyser,
or
> is there a ball-park way of doing it? I was thinking of a quarter
wavelength
> of tube, adjusted for velocity factor.
>
> I don't understand the QSO ref. though - I've been on air for six months
or
> so now and have had many of them on many different bands!
>
> I want to build this antenna to get a little gain for a 70cms internet
link
> (currently have slim-jim on 70cms tucked under the eves) without upsetting
> the neighbours too much (I live in conservation area).
>
> 73 de Dean
> M3DPE
>
>
> "H. Adam Stevens" <solo@totalaccess.net> wrote in message

> news:v4nbvga5gk6ibe@corp.supernews.com...
> > Your question was:
> > "Likely to work? Anything I should know or consider?"
> > The "Yes" to the first question was implicit.
> > Now go get in a QSO!
> > ;^)
> > H
> > "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> > news:b2gaa7$l71$1@venus.btinternet.com...
> > > Sorry - I can't see how that relates to my question?!
> > >
> > > Dean
> > >
> > > "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> > > news:v4naikquuk759a@corp.supernews.com...
> > > > Try to make it resonant and match the impedances, it will radiate
more
> > > > efficiently.
> > > > Above all, get on the air!!
> > > > H.
> > > > NQ5H
> > > >
> > > >
> > > > "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> > > > news:b2g2fg$h31$1@sparta.btinternet.com...
> > > > > You may remember I posted last week about using a mobile antenna
as
> a
> > > > > stealth antenna with some form of home-brew ground plane.
> > > > >
> > > > > I have since seen antenna's on the market (unfortunately I just
> missed
> > > one
> > > > > on ebay) that seem to use a copper tube at the base as a
> groundplane.
> > > This
> > > > > is better for me because I am trying to avoid using radials (as
you
> > may
> > > > > remember).
> > > > >
> > > > > Is this easy to do? What would be ideal for me is to use a mobile
> gain
> > > > > antenna (probably 5/8 over 5/8 centre loaded) and use quarter
> > wavelength
> > > > of
> > > > > copper tube (painted black) underneath as the groundplane.
> > > > >
> > > > > Likely to work? Anything I should know or consider?
> > > > >

> > > > > Many thanks again,
> > > > >
> > > > > Dean
> > > > > M3DPE
> > > > >
> > > > >
> > > >
> > > >
> > >
> > >
> >
> >
>
>

3409. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 16:05:17 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ngkjsso6ure3@corp.supernews.com>
Source record: 124699

hmmmmm
maybe gm was a precursor to microsoft?
bwahahahahaha!

"Paulo E. P. Marcondes" <marcondes@netscape.net> wrote in message
news:3E4BCE9E.6080702@netscape.net...
>
> H. Adam Stevens wrote:
> (snip)
>
> > Dies in remote places for no discernable reason.
>
>
> Does it runs Windows?
>

3410. Symmetricom 3100 antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 16:08:24 UTC
From: Christophe Huygens <Christophe.Huygens@cs.kuleuven.ac.be>
Message-ID: <3E4BC2F8.3040706@cs.kuleuven.ac.be>
Source record: 124700
Cross-posted to: rec.radio.amateur.antenna,sci.geo.satellite-nav

Hi

Can anybody tell me what the "IF antenna" of this systems does?
I suspect it contains the antenna + GPS receiver, but in what
format is the data transported over the cable? Is it downconverted
RF or decoded and remodulated data? Any hint appreciated.

Thanks,
Christophe Huygens

3411. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 16:08:47 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2gfuf$58v$1@sparta.btinternet.com>
Source record: 124701

Does "impedance bridge" = "antenna analyser" or is it something else?

I'd like to play around more with antenna's - I'm interested and hence my posts on here. But I'm really learning from the ground(plane?!) up.

Have ordered a copy of the ARRL antenna handbook though.....

D

"H. Adam Stevens" <solo@totalaccess.net> wrote in message news:v4nfv1oeu50d3@corp.supernews.com...
> The "QSO ref" was just a smile couched in a few words.
> The "easy way" is to listen to your receiver for peak noise while sweeping
> the frequency back and forth or just minimize SWR. A field strength meter is
> cheap and the fundamental bottom line measurement. An impedance bridge,
> however, is absolutely priceless. These modern ones are amazing! My mobile
> rig is an ICOM 706MKIIG with about a foot of RG8X to the matching network.
> The antenna is a Hustler, low power resonator, on a ball mount drilled into
> the side of my truck. Two-inch copper strap ties it all together. I tuned it
> to resonance on 20 meters using my MFJ analyzer. R=26 ohms or so. The 50 ohm
> source is matched to the 26 ohm load with a toroidal autoformer (a so-called
> unun). This configuration resulted in the greatest field strength when
> compared to other approaches; I used no-tuner-at-all (2nd best), a pi
> network (3rd best), both ICOM auto tuners, and various antennas and field
> strength meters.
> Have fun.
> H.
> NQ5H
>
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> news:b2gdpfjgu1@helle.btinternet.com...
> > OK, great - thanks.
> >
> > So, you're saying that the length of the copper tube needs to be adjusted
> to
> > match the SWR/impedance? In which case, maybe I need an antenna analyser,
> or

> > is there a ball-park way of doing it? I was thinking of a quarter
> wavelength
> > of tube, adjusted for velocity factor.
> >
> > I don't understand the QSO ref. though - I've been on air for six months
> or
> > so now and have had many of them on many different bands!
> >
> > I want to build this antenna to get a little gain for a 70cms internet
> link
> > (currently have slim-jim on 70cms tucked under the eves) without
upsetting
> > the neighbours too much (I live in conservation area).
> >
> > 73 de Dean
> > M3DPE
> >
> >
> > "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> > news:v4nbvga5gk6ibe@corp.supernews.com...
> > > Your question was:
> > > "Likely to work? Anything I should know or consider?"
> > > The "Yes" to the first question was implicit.
> > > Now go get in a QSO!
> > > ;^)
> > > H
> > > "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> > > news:b2gaa7$l71$1@venus.btinternet.com...
> > > > Sorry - I can't see how that relates to my question?!
> > > >
> > > > Dean
> > > >
> > > > "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> > > > news:v4naikquuk759a@corp.supernews.com...
> > > > > Try to make it resonant and match the impedances, it will radiate
> more
> > > > > efficiently.
> > > > > Above all, get on the air!!
> > > > > H.
> > > > > NQ5H
> > > > >
> > > > >
> > > > > "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> > > > > news:b2g2fg$h31$1@sparta.btinternet.com...
> > > > > > You may remember I posted last week about using a mobile antenna
> as
> > a
> > > > > > stealth antenna with some form of home-brew ground plane.
> > > > > >
> > > > > > I have since seen antenna's on the market (unfortunately I just

> > missed
> > > > one
> > > > > > on ebay) that seem to use a copper tube at the base as a
> > groundplane.
> > > > This
> > > > > > is better for me because I am trying to avoid using radials (as
> you
> > > may
> > > > > > remember).
> > > > > >
> > > > > > Is this easy to do? What would be ideal for me is to use a
mobile
> > gain
> > > > > > antenna (probably 5/8 over 5/8 centre loaded) and use quarter
> > > wavelength
> > > > > of
> > > > > > copper tube (painted black) underneath as the groundplane.
> > > > > >
> > > > > > Likely to work? Anything I should know or consider?
> > > > > >
> > > > > > Many thanks again,
> > > > > >
> > > > > > Dean
> > > > > > M3DPE
> > > > > >
> > > > > >
> > > > >
> > > > >
> > > >
> > > >
> > >
> > >
> >
> >
>
>

3412. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 16:10:51 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4ngv4peln7nd8@corp.supernews.com>
Source record: 124702

yes
:-)
"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:b2gfuf$58v$1@sparta.btinternet.com...
> Does "impedance bridge" = "antenna analyser"
deletia

3413. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 16:32:38 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2ghb6$o9c$1@helle.btinternet.com>
Source record: 124703

Did you wind your own unun xformer? Am I likely to find a lot of this info
in the ARRL handbook?

Thanks.
"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v4ngv4peln7nd8@corp.supernews.com...
> yes
> :-)
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> news:b2gfuf$58v$1@sparta.btinternet.com...
> > Does "impedance bridge" = "antenna analyser"
> deletia
>
>

3414. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 16:55:37 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v4njd3j0jlqsbd@corp.supernews.com>
Source record: 124704

Ian is right. I agree about reading Rohn material.
However, I am surprised not to find mention of the "Bible" on the subject. You should read the standard that will be used by any P.E. who designs your system: TIA/EIA 22F (1996). It is called: "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures." Version G is poised for release, but F will be used for a while.
A fascinating story of the progress in understanding tall structures in the presence of wind is found in reading the succession of EIA-222 standards that have been produced over the years.
BOCA (a national building code) also might be consulted. For sure, you wish to find out what the local building code says about wind and structures.
Do tell the group what you end up doing. You have an interesting project at hand. Be thankful you do not need to design for ice! 73
Mac (and P.E.)

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message

>
> They would also tell you to buy the Rohn catalog, and do what it says.
>
> --
> 73 from Ian G3SEK

3415. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 16:56:32 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4njkno8h6nu7e@corp.supernews.com>
Source record: 124705

yes and yes
Lots of good data in the Handbook
My toroid core is scavenged from a Cushcraft R7.
Then I wound (gets up, goes outside and looks in truck, counts turns) 10 turns of insulated #10 solid copper wire and connected to the coax. The coax shield is connected to the copper strap. About two turns from the coax center conductor is a short wire to the antenna. I tried a number of spots untill it was as near perfect as I could tell.
This tap is where the 26 ohm resonant antenna looked like a 50 ohm resonant antenna to my analyzer.
No other configuration I tried produces as much field strength on 40 or 20 meters.
H.
NQ5H

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message news:b2ghb6$o9c$1@helle.btinternet.com...
> Did you wind your own unun xformer? Am I likely to find a lot of this info
> in the ARRL handbook?
>
> Thanks.
> "H. Adam Stevens" <solo@totalaccess.net> wrote in message
> news:v4ngv4peln7nd8@corp.supernews.com...
> > yes
> > :-)
> > "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> > news:b2gfuf$58v$1@sparta.btinternet.com...
> > > Does "impedance bridge" = "antenna analyser"
> > deletia
> >
> >
>
>

3416. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 16:58:06 UTC
From: "Paulo E. P. Marcondes" <marcondes@netscape.net>
Message-ID: <3E4BCE9E.6080702@netscape.net>
Source record: 124698

H. Adam Stevens wrote:
(snip)

> Dies in remote places for no discernable reason.

Does it runs Windows?

3417. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 17:09:04 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4BD130.EF0CD30D@cwis.net>
Source record: 124706

Alan wrote:
>
> Don't u mean fonetics?
>

No, I think they were from Fondulac, Wi.
'Doc

3418. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 17:33:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <heln4vkjjkq9kjbk14qdus4h9flkf9dmin@4ax.com>
Source record: 124707

On Thu, 13 Feb 2003 03:24:57 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>Bob, read the original statement which I quote:
>
>"The radiated power level in a square meter at a distance of one
>wavelength from the source is 22 dB less."
>
>He is not asking for the power received in an antenna at 1 wavelength.
>The statement describes the power density in 1 square meter at 1
>wavelength.
>
>The original statement is a MIS-STATEMENT!!
>

Hi OM,

In fact it is not Richard's original statement. You are correct that
you responded to an error, but this is an uncharitable observation and
to call it the original shows very little attention to the conduct of
the thread.

Richard has used this metric often, and has always explained its
context to readers here:
>>
>>Long ago, I solved an equation for radiation field attenuation versus
>>distance for a distance of one wavelength. To my satisfaction the answer
>>came out exactly 22 dB. It was so many years ago, I don`t even remember
>>the derivation, but since it worked so well, I`ve had no reason to
>>question.
>>
>>You can find the same thing in print in Pete Saveskie`s book, "Radio
>>Propagation Handbook" on page 326:
>>"The loss between two isotropic antennae separated by one wavelength is
>>22 dB, thereafter increasing by 6.0 dB for each doubling of the
>>inter-antenna distance."

To then observe his error and act in complete ignorance of this
earlier statement....

>
>My calculation is simply to show that the post as stated is incomplete
>for the conclusions drawn.
>
draws very little water.

73's
Richard Clark, KB7QHC

3419. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 17:46:44 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <tmmn4vgcm8dg4fvqv2o36avd214iosj59v@4ax.com>
Source record: 124708

On Thu, 13 Feb 2003 03:02:06 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>
>Casualties in the impending WW3 one-way massacre, of course, will be
>confined to 'friendly fire'. The other millions don't count.

Forgot how to march?

3420. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 18:06:44 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4BDE9B.2D15E1C0@attbi.com>
Source record: 124709

I stand corrected.

DD, W1MCE

Richard Clark wrote:
>
> On Thu, 13 Feb 2003 03:24:57 GMT, Dave Shrader
> <david.shrader@attbi.com> wrote:
>
> >Bob, read the original statement which I quote:
> >
> >"The radiated power level in a square meter at a distance of one
> >wavelength from the source is 22 dB less."
> >
> >He is not asking for the power received in an antenna at 1 wavelength.
> >The statement describes the power density in 1 square meter at 1
> >wavelength.
> >
> >The original statement is a MIS-STATEMENT!!
> >
>
> Hi OM,
>
> In fact it is not Richard's original statement. You are correct that
> you responded to an error, but this is an uncharitable observation and
> to call it the original shows very little attention to the conduct of
> the thread.
>
> Richard has used this metric often, and has always explained its
> context to readers here:
> >>
> >>Long ago, I solved an equation for radiation field attenuation versus
> >>distance for a distance of one wavelength. To my satisfaction the answer
> >>came out exactly 22 dB. It was so many years ago, I don`t even remember
> >>the derivation, but since it worked so well, I`ve had no reason to
> >>question.
> >>
> >>You can find the same thing in print in Pete Saveskie`s book, "Radio
> >>Propagation Handbook" on page 326:
> >>"The loss between two isotropic antennae separated by one wavelength is
> >>22 dB, thereafter increasing by 6.0 dB for each doubling of the
> >>inter-antenna distance."
>
> To then observe his error and act in complete ignorance of this
> earlier statement....

>
> >
> >My calculation is simply to show that the post as stated is incomplete
> >for the conclusions drawn.
> >
> draws very little water.
>
> 73's
> Richard Clark, KB7QHC

3421. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 18:46:56 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <b2gp70stg0@216.39.144.81>
Source record: 124710

Sorry Dave, I was confusing what you quoted with an earlier post which
(correctly) gave the 22 dB figure in relation to isotropic antennas
separated by one wavelength. There is, of course, a considerable
difference (38.6 dB) between one square meter and 7163 square meters.

Unfortunately my news reader deletes articles which I have already
read, so it is easy to lose the sense of the thread at times.

Mea culpa.

73,
Bob, N7XY

On Thu, 13 Feb 2003 03:24:57 GMT, Dave Shrader wrote:
> Bob, read the original statement which I quote:
>
> "The radiated power level in a square meter at a distance of one
> wavelength from the source is 22 dB less."
>
> He is not asking for the power received in an antenna at 1 wavelength.
> The statement describes the power density in 1 square meter at 1
> wavelength.
>
> The original statement is a MIS-STATEMENT!!
>
> He is not asking what the RECEIVED power level is!! He is speaking of
> the power density in a square meter at one wavelength. The post
> specified the effective area as 1 meter square and no antenna gain.
>
> The area of a sphere is 4*Pi*R^2 which is Pi*D^2. I corrected that error
> in a subsequent post.
>
> My calculation is simply to show that the post as stated is incomplete
> for the conclusions drawn.
>
> Anyway, let's just let this end and acknowledge an error in terms.
>
> Deacon Dave, W1MCE
> +++
>
>
> Bob Nielsen wrote:
>>
>> On Wed, 12 Feb 2003 20:50:00 GMT, Dave Shrader wrote:
>> > Richard, please do the math for us poor math challenged engineers. I

>> > don't get -22 dB!!
>> >
>> > +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
>> > or 300 meters away.
>> >
>> > A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
>> >
>> > Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
>> >
>> > dB down = 10*log(17.7e-6/5) = -54.509 dB
>> >
>> > What have I done incorrectly??
>> >
>> > Deacon Dave, W1MCE
>> > +++
>> >
>>
>> Since we live in a three-dimensional world, you need to calculate the
>> area of a sphere with a diameter D, rather than a circle. A= 4*pi*D^2.
>> Therefore the area == 1,130,973 m^2 and Pd = 4.42e-6 watts/sq. meter.
>>
>> The power received by the second antenna is equal to the
>> power density times the effective area. The effective area is equal to
>>
>> (wavelength^2)*G/(4*pi) = (300^2)*1/(4*pi) = 7163 and the received
>> power would be equal to 4.42e-6x7163 = .032 watts
>>
>> .032/5 = .0064 = -22 dB
>>
>> 73, Bob N7XY
>>
>> >
>> >
>> >
>> >
>> > Richard Harrison wrote:
>> >>
>> >> Gene, W4SZ wrote:
>> >> "The real question is 22 dB down from what?"
>> >>
>> >> We express the transmitter power output in dBw or dBm. An example is a
>> >> klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
>> >> dBw, or + 37 dBm. The radiated power level in a square meter at a
>> >> distance of one wavelength from the source is 22 dB less.
>> >>
>> >> Best regards, Richard Harrison, KB5WZI
>>
>> --
>> Bob Nielsen, N7XY n7xy@n7xy.net
>> Bainbridge Island, WA http://www.n7xy.net

>> IOTA NA-065, USI WA-028S

3422. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 19:11:57 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E4BEDFD.7BDC098F@uci.edu>
Source record: 124712

Dave Shrader wrote:
>
> Nope. It's correct. [17.7E-6 watts/square meter]* 1 square meter =
> 17.7E-6 watts]. I divided Watts by watts!!

Eessh, Dave. You still don't have it right. But I stand corrected -
you took the log of inverse meters squared. In order to take the log of
a ratio, you have to have the same units on top and bottom. i.e. watts
per square meter over watts per square meter. The units must cancel.
All of them. Otherwise, the dB number is meaningless - it's not a gain
or a loss.

Might help to get the formula right for the area of a sphere too while
you're at it. ;-)

73, Jim AC6XG

3423. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 19:16:40 UTC
From: richardharrison@webtv.net
Message-ID: <2001-3E4BEF18-172@storefull-2313.public.lawson.webtv.net>
Source record: 124711

Richard Clark wrote:
"Richard has used this metric often---."

I`ve used it because it works reasonably well though its origins are forgotten. Some day when I`m idle or when I run across the source, I`ll noodle out the logic of the formula.

Geometry sure doesn`t care about wavelength. For a given energy bubble radius, a given energy source at its center produces a given power (energy) flow through a unit area (which ia the same as a volume one unit thick) in the sphere. Energy per unit area times the total number of unit areas in the sphere must equal the total energy (power) being radiated.

Area for a sphere is 4(pi)r(squared), or if you prefer, (pi)(D squared).

At a distance r from the source, divide the radiated power by the area of a sphere of that radius, and you get the power per unit area.

Best regards, Richard Harrison, KB5WZI

3424. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 20:47:51 UTC
From: Benny Miller <bennymiller@core.com>
Message-ID: <v4o15v1e4eui88@corp.supernews.com>
Source record: 124714

Actually, I am doing my student teaching. while going to school. I do
believe a Freshman just started a club this year but I am not sure how the
process went. I talked to the shop teacher at the Junior High i work at and
he said that if I brought the pieces in, he would show my how to do my own
soldering so next time i wanted to build one, i could do it. Probably
sometime next week the pole should be up and active.
Ben
KC8TRN
"Scott" <acepilot@bloomer.net> wrote in message
news:3E4B7E4E.1FC10B4E@bloomer.net...
> Now THAT'S thinking!! A demo on building a J-Pole!! Just have a club
> member bring a propane torch and you've got it made!!! That sounds like
> the best idea in answer to you're post! Good luck with the project? By
> the way, what college? We're just starting a club at ours (U of
> Wisconsin Stout)...
>
> Scott
> N0EDV
>
>
> KC7ZRU - Tate wrote:
> >
> > You going to a college WITHOUT a ham club??
> >
> > Get one going, gather in some of the faculty and staff that are hams -
> > gain access to elmers and tools.
> >
> > Heck, forget the college based club - got *any* local ham community of
> > any kind?
> >
> > Do a presentation at a meeting - have a couple half dozen of these
> > things built up.
> >
> > Sounds like a great opportunity to me.
> >
> > 73
> >
> > Benny Miller wrote:
> > >
> >
> > > I am a super poor college student
> > > (living on loans) and i do not want to spend (nor do i have) the money
to
> > > purchase a butane-type torch to solder the connections.

> >
> > --
> > "The Dungeon" online at http://go.to/kc7zru
> > Casper, WY | CARC Repeater
> > DN62tt | 146.940-
> > http://www.trib.com/~carc
>
> --
>
> Scott
> http://corbenflyer.tripod.com
> http://groups.yahoo.com/group/ParasolAirplanes
> Building RV-4
> Gotta Fly or Gonna Die!

3425. Re: competition

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 21:07:45 UTC
From: "Paulo E. P. Marcondes" <marcondes@netscape.net>
Message-ID: <3E4C0921.2050106@netscape.net>
Source record: 124713

H. Adam Stevens wrote:
> hmmmmm
> maybe gm was a precursor to microsoft?
> bwahahahahaha!

Anyway, at least their cars do run in any kind of road. And the road doesn't need to use any proprietary paint colors or asphalt.

3426. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 21:16:10 UTC
From: Terry <ve1trb@hotmail.com>
Message-ID: <CWT2a.535$cB3.5639@nnrp1.uunet.ca>
Source record: 124715

See..... You're having fun just getting ideas from folks just like you. Isn't ham radio great? If you simply bend the pipe, it can be looked at as being a little kinky too :) Hope I didn't offend anyone on my last post, if so... sorry.

Terry VE1TRB

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message news:MwN2a.23331$S8.19251@fe03.atl2.webusenet.com...
> Na, I live in the country on about 2 acres. Bu Ido use a 2-Meter J-Pole in a
> pvc pipe at about 40 feet. On a good day I can hit a repeater about 50 miles
> from me using the HT with 5-7 watts..
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
> Remove the obvious from Email.
>
>
>
> "Dave Platt" <dplatt@radagast.org> wrote in message
> news:v4m3vdh9mqsn1b@corp.supernews.com...
> > "Benny Miller" <bennymiller@core.com> wrote in message
> > news:v4lvdbhaa8al92@corp.supernews.com...
> >
> > >> > > parts. Most important, have fun, and be creative! Try a couple of
> > >> > > condoms on the ends :).
> >
> > >> > How about that. An X-Rated explanation. :>)
> >
> > > > My last statement in the original post must now be modified. I had
> > > > previously stated that any suggestions would be well used. Now, it
> should
> > > > read will be considered. I don't think my landlord would like the
> x-rated
> > > > version of the J-Pole. :)
> >
> > > I take it you don't live in a condominium?
> >
> > > --
> > > Dave Platt <dplatt@radagast.org> AE6EO

> > Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> > I do _not_ wish to receive unsolicited commercial email, and I will
> > boycott any company which has the gall to send me such ads!
>
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/2003

3427. Re: Symmetricom 3100 antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 21:43:40 UTC
From: davem@cs.ubc.ca
Message-ID: <b2h3ic$h48$2@mughi.cs.ubc.ca>
Source record: 124716
Cross-posted to: rec.radio.amateur.antenna,sci.geo.satellite-nav

Christophe Huygens <Christophe.Huygens@cs.kuleuven.ac.be> writes:

>Can anybody tell me what the "IF antenna" of this systems does?
>I suspect it contains the antenna + GPS receiver, but in what
>format is the data transported over the cable? Is it downconverted
>RF or decoded and remodulated data? Any hint appreciated.

Just from the name, I'd guess that the antenna downconverts GPS RF to a lower IF frequency for the cable. Depending on the IF frequency, it should have much lower loss per unit distance than the original RF frequency.

Dave

3428. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 21:46:37 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-1302031346370001@bni030qny8kc.bc.hsia.telus.net>
Source record: 124717

Where does the 22 db in the first wavelength figure come from?

Try this:

10 log (16*Pi^2) = 21.984...

(The explanation for the 16*Pi^2 business is left as an exercise for the reader. Hint: Think about areas of spherical surfaces.)

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

3429. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 21:47:31 UTC
From: richardharrison@webtv.net
Message-ID: <18062-3E4C1273-212@storefull-2318.public.lawson.webtv.net>
Source record: 124718

Art, KB9MZ wrote:
"---if you draw a typical antenna circuit the components shown are capacitance, inductance and resistance. there is no reference directly to wavelength."

True, but the implication is clear. At some frequency, the capacitance and inductance in the circuit must offset each other. At this frequency, the circuit is totally resistive. At this frequency, it produces maximum voltage drop if the components are connected in parallel. If the components are connected in series, as they are in a standing-wave antenna such as a 1/2-wave dipole or 1/4-wave whip, maximum current is allowed. The relation to wavelength is clear.

Frequency times wavelength equals the velocity of propagation, or "c" in free-space. In an antenna conductor the velocity is a little less than the free-space value. This equation can be solved for wavelength which equals velocity divided by frequency.

It is silly to argue that an arrangement of terms in an equation does or does not define something. Like beauty, that might be in the eye of the beholder.

Best regards, Richard Harrison, KB5WZI

3430. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 22:43:35 UTC
From: richardharrison@webtv.net
Message-ID: <18062-3E4C1F97-218@storefull-2318.public.lawson.webtv.net>
Source record: 124570

Reg wrote:
"Casualties in the impending WW3 one-way masacre, of course, will be confined to "friendly fire".

Let`s all hope so. And, let`s also hope it`s neither WW3 nor a killer of millions.

A police action is long overdue to enforce world order on a disorderly country weak enough to prevail upon.

The radar aboard my WW2 ship didn`t arc. It only helped us see for navigation. The lookouts would unfortunately sometimes sleep when we were in convoy. We were all dead tired when underway from almost round-the-clock duty. Dawn and dusk general quarters plus all other duties.

Upon awakening, a lookout would shout through the voice-tube in a panic to the radar operator: "How close are we to that damn ship ahead?" The operator would stick his head out a port hole then scream back through the tube his best estimate to the officer who asked. Sea return made close radar indications impossible, but the operator was duty-bound to respond.

More exciting was our dropping of depth charges. We were a flat-bottomed landing ship with a flank speed of 14 knots. Whats more, we had no catapult. We had to just let the depth charges roll off a launch rack. It was always a toss-up. Would we sink ourselves or the sub?
It was thrilling.

Best regards, Richard Harrison, KB5WZI

3431. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 23:02:12 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302131502.42735b17@posting.google.com>
Source record: 124569

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:<b2g2fg$h31$1@sparta.btinternet.com>...
> You may remember I posted last week about using a mobile antenna as a
> stealth antenna with some form of home-brew ground plane.
>
> I have since seen antenna's on the market (unfortunately I just missed one
> on ebay) that seem to use a copper tube at the base as a groundplane. This
> is better for me because I am trying to avoid using radials (as you may
> remember).

Is that a one turn loop at right angles to the radiator? If so, it's
probably a gamma loop type setup that is feeding a 1/2 wave whip. It's
not a ground plane as the 1/2 wave doesn't require one. It's an
impedance matching device to match the low Z coax to the high Z
feedpoint of the base fed 1/2 wave whip.

>
> Is this easy to do? What would be ideal for me is to use a mobile gain
> antenna (probably 5/8 over 5/8 centre loaded) and use quarter wavelength of
> copper tube (painted black) underneath as the groundplane.

That antenna would be a complete antenna in itself, and needs no
ground plane. Think an extended double zepp vertically. You can reduce
common mode currents on the shield of the coax feedline by adding
decoupling radials though. But they are doing a different job than the
radials that would make up a ground plane for an elevated vertical
like a 1/4 wave ground plane.
>
> Likely to work?

yes.

Anything I should know or consider?

Look at examples for common dual 5/8 collinear antennas. IE: Isopole,
ringo ranger 2, etc. On 70 cm, good decoupling of the feedline will be
critical if you want to actually realize gain over a 1/4 wave GP.
Myself, I'd probably build a small 3-4 element yagi. Would be quite
small. Would eat most any vertical for lunch performance wise. But you
would have to point it...MK

3432. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 23:30:02 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <rs9o4v4cfdnihg6ulhglccsgo4kfgo4miv@4ax.com>
Source record: 124571

On Thu, 13 Feb 2003 11:55:37 -0500, "J. McLaughlin"
<JCM@Power-Net.Net> wrote:

> Ian is right. I agree about reading Rohn material.

Here they require anything over 80 feet be engineered. Mine is
essentially 100 feet with the wind loads mounted 2 (8 sq ft), 15 (6 sq
ft) and 30 feet (4 sq ft) above the top of the tower. That 4 sq ft
at 30 feet is the biggie.

When I went in to get the permit, I took the ROHN catalog, showed them
what ROHN required, and where I planned on deviating. They signed the
permit on the spot.

Afterwards the inspector only came out once to check when I was
installing the guy anchors. He took one look at the holes in the
ground, the concrete forms and the foot of crushed rock in the bottom
and went away happy.

"So far" the system has withstood 70 MPH winds and moderate ice.
Theoretically the antennas should come down before the supporting
structure has a problem.

They didn't care about the mast and antennas except for the wind
rating. They didn't even care if the antennas failed as they would
fall beside the tower.

YMMV depending on specific inspectors and how they interpret the
"engineering requirement" in the zoning.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S/N CD-2)
> However, I am surprised not to find mention of the "Bible" on the
>subject. You should read the standard that will be used by any P.E. who
>designs your system: TIA/EIA 22F (1996). It is called: "Structural
>Standards for Steel Antenna Towers and Antenna Supporting Structures."
>Version G is poised for release, but F will be used for a while.
> A fascinating story of the progress in understanding tall structures
>in the presence of wind is found in reading the succession of EIA-222
>standards that have been produced over the years.
> BOCA (a national building code) also might be consulted. For sure,
>you wish to find out what the local building code says about wind and
>structures.
> Do tell the group what you end up doing. You have an interesting
>project at hand. Be thankful you do not need to design for ice! 73
>Mac (and P.E.)

3433. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 23:45:11 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2ham3$6pu$1@slb9.atl.mindspring.net>
Source record: 124572

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:v4njd3j0jlqsbd@corp.supernews.com...
> Ian is right. I agree about reading Rohn material.
> However, I am surprised not to find mention of the "Bible" on the
> subject. You should read the standard that will be used by any P.E. who
> designs your system: TIA/EIA 22F (1996). It is called: "Structural
> Standards for Steel Antenna Towers and Antenna Supporting Structures."
> Version G is poised for release, but F will be used for a while.
> A fascinating story of the progress in understanding tall structures
> in the presence of wind is found in reading the succession of EIA-222
> standards that have been produced over the years.
> BOCA (a national building code) also might be consulted. For sure,
> you wish to find out what the local building code says about wind and
> structures.
> Do tell the group what you end up doing. You have an interesting
> project at hand. Be thankful you do not need to design for ice! 73
> Mac (and P.E.)
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>
> "Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
>
> >
> > They would also tell you to buy the Rohn catalog, and do what it says.
> >
> > --
> > 73 from Ian G3SEK
>

3434. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 23:46:02 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2hanm$81r$1@slb6.atl.mindspring.net>
Source record: 124573

Mac:

Thanks for those inputs. I'll post my progress from time to time.

--
Peter K1PO
Indialantic By-the-Sea, FL.

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:v4njd3j0jlqsbd@corp.supernews.com...
> Ian is right. I agree about reading Rohn material.
> However, I am surprised not to find mention of the "Bible" on the
> subject. You should read the standard that will be used by any P.E. who
> designs your system: TIA/EIA 22F (1996). It is called: "Structural
> Standards for Steel Antenna Towers and Antenna Supporting Structures."
> Version G is poised for release, but F will be used for a while.
> A fascinating story of the progress in understanding tall structures
> in the presence of wind is found in reading the succession of EIA-222
> standards that have been produced over the years.
> BOCA (a national building code) also might be consulted. For sure,
> you wish to find out what the local building code says about wind and
> structures.
> Do tell the group what you end up doing. You have an interesting
> project at hand. Be thankful you do not need to design for ice! 73
> Mac (and P.E.)
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>
> "Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
>
> >
> > They would also tell you to buy the Rohn catalog, and do what it says.
> >
> > --
> > 73 from Ian G3SEK
>

3435. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 23:53:04 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3e4c3029$1@news.netacc.net>
Source record: 124574

> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:<b2g2fg$h31$1@sparta.btinternet.com>...
> > You may remember I posted last week about using a mobile antenna as a
> > stealth antenna with some form of home-brew ground plane.
> >
> > I have since seen antenna's on the market (unfortunately I just missed
one
> > on ebay) that seem to use a copper tube at the base as a groundplane.
This
> > is better for me because I am trying to avoid using radials (as you
may
> > remember).
>

My friend installs "Invisible Fences" to contain dogs. He lent my his nifty tool for burying the wire. Was able to put in radials in the back yard of the apartment complex with no problem. Not a trace left when the job was done. The vertical has never worked better.

Steve

3436. CDR Model HAM-M Series 2 Rotor Box on ebay:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-13 23:55:11 UTC
From: randylands@aol.com
Message-ID: <20030213185511.04928.00000393@mb-ce.aol.com>
Source record: 124575

More stuff listed also:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4672&item=3007999362

3437. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 00:01:52 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2hbld$l5d$1@slb6.atl.mindspring.net>
Source record: 124576

Roger:

Thanks for those inputs.

My location here on the Florida barrier island is about 400 - 500 feet
from the Atlantic Ocean beach about 20 miles South of Cape
Canaveral, FL. As ya'll know, the probablility at this location is that
from time to time we will get really big windstorms.

The long term windstorm "strategy" for residents on the barrier island
is to "button up" homes and evacuate to the mainland in the event of a
windstorm approach.

I'd like to be able to "button up" my tower and antennas quickly before I
leave the island. At that time of "buttoning up" there might already be
quite
a substantial wind already blowing, say 30 - 40 mph.

My plan is to try to arrange a tower setup so that I can take it all down
quickly during those incipient winds, at least into a lower or ground
staked configuration that can then potentially withstand 110 - 140 mph,
and to be able to do this all by myself whenever an island evacuation is
called for by the authorities. [by quickly I mean tower and antenna
takedown in an hour or so]

My questions are:

Is this right? Does this make sense? Is it feasible?

--
Peter K1PO
Indialantic By-the-Sea, FL.

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:rs9o4v4cfdnihg6ulhglccsgo4kfgo4miv@4ax.com...
> On Thu, 13 Feb 2003 11:55:37 -0500, "J. McLaughlin"
> <JCM@Power-Net.Net> wrote:
>
> > Ian is right. I agree about reading Rohn material.
>
> Here they require anything over 80 feet be engineered. Mine is
> essentially 100 feet with the wind loads mounted 2 (8 sq ft), 15 (6 sq
> ft) and 30 feet (4 sq ft) above the top of the tower. That 4 sq ft
> at 30 feet is the biggie.
>
> When I went in to get the permit, I took the ROHN catalog, showed them
> what ROHN required, and where I planned on deviating. They signed the

> permit on the spot.
>
> Afterwards the inspector only came out once to check when I was
> installing the guy anchors. He took one look at the holes in the
> ground, the concrete forms and the foot of crushed rock in the bottom
> and went away happy.
>
> "So far" the system has withstood 70 MPH winds and moderate ice.
> Theoretically the antennas should come down before the supporting
> structure has a problem.
>
> They didn't care about the mast and antennas except for the wind
> rating. They didn't even care if the antennas failed as they would
> fall beside the tower.
>
> YMMV depending on specific inspectors and how they interpret the
> "engineering requirement" in the zoning.
>
> Roger Halstead (K8RI EN73 & ARRL Life Member)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S/# CD-2)
> > However, I am surprised not to find mention of the "Bible" on the
> >subject. You should read the standard that will be used by any P.E. who
> >designs your system: TIA/EIA 22F (1996). It is called: "Structural
> >Standards for Steel Antenna Towers and Antenna Supporting Structures."
> >Version G is poised for release, but F will be used for a while.
> > A fascinating story of the progress in understanding tall structures
> >in the presence of wind is found in reading the succession of EIA-222
> >standards that have been produced over the years.
> > BOCA (a national building code) also might be consulted. For sure,
> >you wish to find out what the local building code says about wind and
> >structures.
> > Do tell the group what you end up doing. You have an interesting
> >project at hand. Be thankful you do not need to design for ice! 73
> >Mac (and P.E.)
>

3438. Re: G-line ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 00:33:37 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <WHW2a.110$0q5.37@fe01.atl2.webusenet.com>
Source record: 124577

Was described in 73 magazine, think while K5JKX was editor (long time before it became a "dumbed down" publication, and this actually before "ham radio" magazine appeared (JKX also was the original editor of that, as I remembe-- got rid of my collection many years ago, and think the "G" stood for " Gaubout " or something close to that. c'ant remember the impedence of this , but, remember that: 1) Took a "launcher" (metal plate , 1/4 wavelength in diameter , for the minimum frequency, at BOTH ends (could also be conical , it the radius cryteria was met). and , 2) acted much like a LONG WIRE ANTENNA, I.E. the longer it was, the better it worked (obviously, for long wavelengths in this kind of "ANTENNA" (which is really a feedline) this has to be tighter than a banjo string, as it doesn't like turns (heck, even slight bends warps the radiation pattern to the "Recieveing launcher" at the far end)! But, if you can find an early listing of 73 magazines, this the info you seek. as info, jim nn7k

AB4BC sent:
> Henry:
>
> I remember G-line as well. If my memory is correct, it appeared on the
> scene back
> in the 1950's and incurred a brief period of interest/notoriety and then
> dissappeared
> from the scene apparantly from lack of applications.
>
> Of course there is no reason why a single conductor cannot act as a
> transmission
> line, but of course it will radiate and thus lose power, that is in fact
> what antenna
> elements are, i.e. single wire [radiating] transmission lines.
>
> The object of the G-line technology was to attempt to mitigate the
radiation
> of the
> single wire transmission line.
>
> Apparently the G-line operates with the waves travelling within the
> dielectric,
> as in other "ducting" phenomena, wherein the waves are confined within the
> dielectric layer which has a substantially different dielectric constant
> from free
> space/air and hence creates suitable refraction properties at the
interface
> between
> the dielectric and the surrounding free space/air outside the single line

> conductor.
> This is very similar to the operation of fiber optic cables with light
> wavelengths.
> The single line conductor of G-line acts as a launcher for the wave and as
a
> "support" for the dielectric.
>
> I am not sure that I ever saw a "mode analysis" of the transmission mode,
> of G-line produced back then, but I believe that the propagation mode
would
> depend strongly upon the ratio of the dielectric diameter in relation to
the
> wavelength of operation, and since it is a cylindrical geometry which
> usually
> encourages "weird" modes, one thing I am sure of is that it is definitely
> *not*
> TEM mode!
>
> Clearly the composition of the dielectric may have a marked effect on the
> transmission loss of G-line.
>
> I still don't see any "great" applications for G-line. Do you?
>
> --
> Peter K1PO
> Indialantic By-the-Sea, FL.
>
>
> "Dave Platt" <dplatt@radagast.org> wrote in message
> news:v4ma1p5f7v2d03@corp.supernews.com...
> > In article <v4lqdgef6lgb1d@corp.supernews.com>,
> > Henry Kolesnik <wd5jfr@oklahoma.net> wrote:
> >
> > >When I was in high school, mid 1950s, I kind of recall a single
> insulated
> > >wire feed to a residence from a hilltop antenna. It was extemely low
> loss
> > >but couldn't turn corners. I've done a little searching but have not
> found
> > >a good explantion on how G-line works and doesn't. Also would like to
> know
> > >why you don't see much about it today.
> >
> > Coincidences are odd! I received a copy of the ITT "Reference data
> > for radio engineers" today, by mistake (I'd bought a copy of Terman's
> > 1955 text on eBay, and the seller accidentally shipped the wrong "4th
> > edition" hardback), was glancing through it a few minutes ago, and
> > came across a description of just this sort of arrangement (page 604).
> >
> > The book describes this as a surface-wave transmission line, normally

> > using a thick dielectric (total diameter is often 3 or more times the
> > diameter of the single conductor). "A mode of propagation that is
> > practically non-radiating is excited on the line by means of a conical
> > horn at each end... mouth of the horn is roughly 1/4 to 1/2 wavelength
> > in diameter. Losses are about half those of a two-wire line, but the
> > surface-wave line has a practical lower limit of about 50 megacycles.
> > The losses in the two launchers combined vary from less than .5 dB to
> > a little more than 1.0 dB, according to their design."
> >
> > A reference is given to an article "Designing surface-wave
> > transmission lines" by Georg Goubau in Electronics vol. 27, April
> > 1954. I wonder whether Goubau is the "G" in "G-line"?
> >
> > Fascinating! I'd never heard of this transmission mode, and then it
> > crops up twice in one day, in two completely different contexts....
> > hey, who taught that mockingbird outside my window to sing the
> > "Twilight Zone" theme?
> >
> > --
> > Dave Platt <dplatt@radagast.org> AE6EO
> > Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> > I do _not_ wish to receive unsolicited commercial email, and I will
> > boycott any company which has the gall to send me such ads!
>
>

3439. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 00:52:30 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <zZW2a.119$0q5.14@fe01.atl2.webusenet.com>
Source record: 124578

Ben- try your school library for the most recent edition ot "WORLD RADIO MAGAZINE, (3/03), and check out Pgs 6, 7, and 8-- describes a j-pole made from twinlead (tho it talks 450 ohm, 300 ohm could be made to work) and can be supported with a thumb tack (rather than CU tubing, and work just as well)! actually, a 5/8 wave would have a pattern closer to the ground, and can be made of wire, but you will have to wind a coil to match it to your antenna impedence (50 ohm), which can be a pain. jim nn7k

nn7k@reno.rmci.net

"Benny Miller" <bennymiller@core.com> wrote in message
news:v4o15v1e4eui88@corp.supernews.com...
> Actually, I am doing my student teaching. while going to school. I do
> believe a Freshman just started a club this year but I am not sure how the
> process went. I talked to the shop teacher at the Junior High i work at
and
> he said that if I brought the pieces in, he would show my how to do my own
> soldering so next time i wanted to build one, i could do it. Probably
> sometime next week the pole should be up and active.
> Ben
> KC8TRN
> "Scott" <acepilot@bloomer.net> wrote in message
> news:3E4B7E4E.1FC10B4E@bloomer.net...
> > Now THAT'S thinking!! A demo on building a J-Pole!! Just have a club
> > member bring a propane torch and you've got it made!!! That sounds like
> > the best idea in answer to you're post! Good luck with the project? By
> > the way, what college? We're just starting a club at ours (U of
> > Wisconsin Stout)...
> >
> > Scott
> > N0EDV
> >
> >
> > KC7ZRU - Tate wrote:
> > >
> > > You going to a college WITHOUT a ham club??
> > >
> > > Get one going, gather in some of the faculty and staff that are hams -
> > > gain access to elmers and tools.
> > >
> > > Heck, forget the college based club - got *any* local ham community of
> > > any kind?
> > >
> > > Do a presentation at a meeting - have a couple half dozen of these
> > > things built up.

> > >
> > > Sounds like a great opportunity to me.
> > >
> > > 73
> > >
> > > Benny Miller wrote:
> > > >
> > >
> > > > I am a super poor college student
> > > > (living on loans) and i do not want to spend (nor do i have) the
money
> to
> > > > purchase a butane-type torch to solder the connections.
> > >
> > > --
> > > "The Dungeon" online at http://go.to/kc7zru
> > > Casper, WY | CARC Repeater
> > > DN62tt | 146.940-
> > > http://www.trib.com/~carc
> >
> > --
> >
> > Scott
> > http://corbenflyer.tripod.com
> > http://groups.yahoo.com/group/ParasolAirplanes
> > Building RV-4
> > Gotta Fly or Gonna Die!
>
>

3440. Re: N-jack assembly?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 01:02:25 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <W6X2a.123$0q5.65@fe01.atl2.webusenet.com>
Source record: 124579

actually, its not for that, it is to keep a CONSTANT IMPEDENCE from the coax, thru the connector, to thru the NEXT connector, and back to coax, again. but, this doesnt matter much below 144 mHZ (at uhf and microwave, can become an impedence change transformer)! congrats, on getting it to work for you. (and, btw, this is WHY "UHF " connectors not used at UHF/MICROWAVE frequencies)! Jim

\
"Ken" <cprstn54zz@att.net> wrote in message
news:3e4b2af7.167307515@news-server.optonline.net...
> On Wed, 12 Feb 2003 14:25:00 -0800, <Jimnn7k@reno.rmci.net> wrote:
>
> >Ken, are you sure that you have the RIGHT N connector for your coax
> >impedence?
>
> No, since it was shipped to me in error instead of an in-line SO-239 a
> few years ago and now I finally have a use for it having bought a
> small dummy load on eBay with an N-male connector.
>
> It has the extra 1/8" thick washer that has to make the sandwich with
> the cupped bushing.
>
> I got it to work by shortening the center conductor protrusion,
> including insulation, down to around 3/16". I put some solder into
> the center receptacle, some flux on the center conductor, heated the
> receptacle and pushed the center conductor into the melted solder as
> far as it would go. Then I put a 1/8" length of shrink wrap on the
> center business, assembled and tightened. This time, no shorting.
>
> They say they are called N connectors because there are N ways of
> assembling them. I am still not satisfied that I found the right way
> for this one, but I found a way that works. It doesn't make sense to
> need that 1/8" thick washer in front of the coax shielding when they
> could have shaped the body hole so it was 1/8" less deep -- unless it
> keeps things neater during assembly.
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

3441. Re: Your opinion

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 01:05:10 UTC
From: Jackie <buzzygirl@REMOVETHIS.attbi.com>
Message-ID: <9hX2a.103571$Ec4.86751@rwcrnsc52.ops.asp.att.net>
Source record: 124580

"on4ja" <wbac3361@wanadoo.be> wrote in message
news:b259kc$137q1$1@sinclair.be.wanadoo.com...
> I'd like to know your opinion about GAP antennas
> EAGLE DX and TITAN DX

Hi Emil,

I have not used either of these antennas, but have given some thought to purchasing one (among others). If you want to read many reviews of these antennas by people who've used them, check out the "Product Reviews" section on www.eham.net. There are many reviews on all sorts of antennas and other amateur radio equipment. Reviews of HF verticals can be found here, listed by manufacturer: http://www.eham.net/reviews/products/13.

Good luck,

Jackie KC0ODY

3442. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 01:16:04 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <EjX2a.130$0q5.63@fe01.atl2.webusenet.com>
Source record: 124581

So , what you say, is, that a ISOTROPIC has DIRECTIONAL PROPRERTIES, and DOESN'T radiate equally in ALL directions? Please explain (admittedly am poor at math, but this doesn't make sense to me), tho the Reciprical (the area that the RECEIVING surface, admittedly would have a surface that is illuminated by the signal) Jim

Dave sent:> No! The power radiated through the surface has to equal the power
> radiated. We are calculating the gradient and divergence of the radiated
> power. From an isotropic it's straight forward 'stretching the balloon'.
> So we are interested in the power density at the surface in a 1 square
> meter target.
>
> The gradient of power density is inside the sphere.
>
> DD
>
> 100 watts radiated requires that the sum of all power through the
> surface equal 100 watts.
>
> Jimnn7k@reno.rmci.net wrote:
> >
> > Dave, as a isotropic radiates in ALL directions, you are useing the wrong
> > area calculation, believe should be 4/3 pi * radius raised to the THIRD
> > power (4/3 pi * r ^3) , would it not?
> >
> > Jim nn7k
> >
> > "Dave Shrader" <david.shrader@attbi.com> wrote in message
> > news:3E4AB36B.264E8E28@attbi.com...
> > > Richard, please do the math for us poor math challenged engineers. I
> > > don't get -22 dB!!
> > >
> > > +37 dBm = 5 watts, 300 meter wavelength, 1 square meter at 1 wavelength
> > > or 300 meters away.
> > >
> > > A = Pi*D^2 = 3.14*300^2 = 282300 m^2 = area of surface
> > >
> > > Pd = +5 watts/A = 5/282300 = 17.7e-6 watts/square meter
> > >
> > > dB down = 10*log(17.7e-6/5) = -54.509 dB

> > >
> > > What have I done incorrectly??
> > >
> > > Deacon Dave, W1MCE
> > > +++
> > >
> > >
> > >
> > >
> > >
> > > Richard Harrison wrote:
> > > >
> > > > Gene, W4SZ wrote:
> > > > "The real question is 22 dB down from what?"
> > > >
> > > > We express the transmitter power output in dBw or dBm. An example is
a
> > > > klystron output of 100 mw or +20 dBm. 5 watts can be expressed as +7
> > > > dBw, or + 37 dBm. The radiated power level in a square meter at a
> > > > distance of one wavelength from the source is 22 dB less.
> > > >
> > > > Best regards, Richard Harrison, KB5WZI

3443. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 01:20:23 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <HnX2a.133$0q5.51@fe01.atl2.webusenet.com>
Source record: 124582

```
oh, by the 4/3 PI * r ^3, as I remember, is volume of a sphere think this
correct- jim
```

3444. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 01:46:47 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v4oih04jr0t2e4@corp.supernews.com>
Source record: 124583

Dear Peter:
Great! We all look forward to learning from your learning.
I did a search and it appears that 222F is still current. The 222G standard will have three major sections. One includes amateur antenna structures and one section is about structures that must not come down.
I did not find a site where you might read the pertinent sections of 222F. You might have better luck.
I apologize for forgetting to include my call sign. It is disappointing when people do not include same.
Your proposed scheme sounds quite feasible. Its obvious tradeoffs include that you need to be present when a warning is received and the limited heights that are available with that type of tower. Roy has appropriately reminded us that all antenna systems are compromises. That is one of the aspects that makes their design so interesting.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message news:b2hanm$81r$1@slb6.atl.mindspring.net...
> Mac:
>
> Thanks for those inputs. I'll post my progress from time to time.
>
> --
> Peter K1PO
> Indialantic By-the-Sea, FL.
>

3445. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 02:01:43 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4C4DF8.2644BBF5@attbi.com>
Source record: 124584

What I was attempting to say is that all points on the surface of radiation for an isotropic antenna must have the SAME power density, Poynting Vector, and that the surface integral of the power density must equal the total radiated power.

There was one post suggesting the formula for the surface of a sphere which actually gave the volume of the sphere and would have required defining the variation in the power density as a function of volume. I ignored this post because I was focused on the surface parameters.

Due to a computer crash, KLEZ and an attack against McAffee, I had to send my computer out for 'cleaning' and then had to rebuild much software and I did not have access to the original post. This was called to my attention this morning [Feb 13].

I was responding to wording in the middle of the thread that I understood to be the magnitude of the Poynting vector, watts per square meter, ignoring the gain of the receiving antenna. The presence of the receiving antenna was missing from my set of files on this post.

My first question had a math error which was shortly corrected. [I used radius instead of diameter].

Then it was called to my attention that the stated post was not calculating the magnitude of the Poynting Vector but the received amplitude in a second antenna. or, the product of the Poynting vector times the effective aperture.

Bottom line: Apples and Oranges.

I posted a note that I stood corrected.

Deacon Dave, W1MCE

PS: To be absolutely correct, in a physics and math sense, an Isotropic antenna does have directional properties. In the far field it has the same Poynting Vector for any set of r. theta and phi. Restated, the power density at any point on the surface is the same as all points on the same surface. It radiates OUTWARD from the source.

+++

Jimnn7k@reno.rmci.net wrote:
>
> So , what you say, is, that a ISOTROPIC has DIRECTIONAL PROPRERTIES, and
> DOESN'T radiate equally in ALL directions? Please explain (admittedly am
> poor at math, but this doesn't make sense to me), tho the Reciprical (the
> area that the RECEIVING surface, admittedly would have a surface that is

> illuminated by the signal) Jim
>
> Dave sent:> No! The power radiated through the surface has to equal the
> power
> > radiated. We are calculating the gradient and divergence of the radiated
> > power. From an isotropic it's straight forward 'stretching the balloon'.
> > So we are interested in the power density at the surface in a 1 square
> > meter target.

SNIP

In the post below, 4/3*pi*r^3 is the volume of the sphere not it's
surface area.

> > Jimnn7k@reno.rmci.net wrote:
> > >
> > > Dave, as a isotropic radiates in ALL directions, you are useing the
> wrong
> > > area calculation, believe should be 4/3 pi * radius raised to the
> THIRD
> > > power (4/3 pi * r ^3) , would it not?
> > >
> > > Jim nn7k

3446. Re: Base 2M/70CM Antenna Recommendations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 02:02:19 UTC
From: Ed Senior <eseniors@earthlink.net>
Message-ID: <L6Y2a.184$YU4.18400@newsread1.prod.itd.earthlink.net>
Source record: 124585

Hi Joe -

If you think you need a "gain" omni, then I would go with Diamond,
per one of your other replies.

But if you want to spend less, and get a Made-In-The-USA antenna
that will handle power and last a lifetime, here it is:

http://www.arrowantennas.com/j-pole.html

"Joe Guthart" <jguthart@attbi.com> wrote in message
news:tfY1a.59710$SD6.3821@sccrnsc03...
> Looking for advise on the above. Type of antenna and best place on the
web
> to purchase. Thanks to all who reply.
>
>

3447. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 03:35:24 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302131935.293374b8@posting.google.com>
Source record: 124586

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18062-3E4C1273-212@storefull-2318.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "---if you draw a typical antenna circuit the components shown are
> capacitance, inductance and resistance. there is no reference directly
> to wavelength."
>
> True, but the implication is clear. At some frequency, the capacitance
> and inductance in the circuit must offset each other. At this frequency,
> the circuit is totally resistive. At this frequency, it produces maximum
> voltage drop if the components are connected in parallel. If the
> components are connected in series, as they are in a standing-wave
> antenna such as a 1/2-wave dipole or 1/4-wave whip, maximum current is
> allowed. The relation to wavelength is clear.
>
> Frequency times wavelength equals the velocity of propagation, or "c" in
> free-space. In an antenna conductor the velocity is a little less than
> the free-space value. This equation can be solved for wavelength which
> equals velocity divided by frequency.
>
> It is silly to argue that an arrangement of terms in an equation does or
> does not define something. Like beauty, that might be in the eye of the
> beholder.
>
> Best regards, Richard Harrison, KB5WZI

Richard,
I do not wish for the demise of the term 'wavelength'.I am looking
for something that shows that when energy is put into a radiator, what
is it that 'such and such' by virtue of 'such and such' MUST be such a
length or a combination of a fraction of a wavelength times a figure
that denotes the radiator area. To state it another way, I do not see
why a radiator cannot be a random length in terms of an equation as
long as optimum radiation is met, thus I look for a specific equation
that relates to radiation surface/density
and radiator length that states it CANNOT be a random length.
I would point out that a small loop can be termed a random length and
not a specific 1/4, 1/2, 1 wavelength e.t.c. and theroreticaly it can
be made an optimum radiator.
Hopefully this explanation clarifies what I am searching for
Regards
Art

3448. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 03:35:24 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302131935.8d5327c@posting.google.com>
Source record: 124587

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18062-3E4C1273-212@storefull-2318.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "---if you draw a typical antenna circuit the components shown are
> capacitance, inductance and resistance. there is no reference directly
> to wavelength."
>
> True, but the implication is clear. At some frequency, the capacitance
> and inductance in the circuit must offset each other. At this frequency,
> the circuit is totally resistive. At this frequency, it produces maximum
> voltage drop if the components are connected in parallel. If the
> components are connected in series, as they are in a standing-wave
> antenna such as a 1/2-wave dipole or 1/4-wave whip, maximum current is
> allowed. The relation to wavelength is clear.
>
> Frequency times wavelength equals the velocity of propagation, or "c" in
> free-space. In an antenna conductor the velocity is a little less than
> the free-space value. This equation can be solved for wavelength which
> equals velocity divided by frequency.
>
> It is silly to argue that an arrangement of terms in an equation does or
> does not define something. Like beauty, that might be in the eye of the
> beholder.
>
> Best regards, Richard Harrison, KB5WZI

Richard,
I do not wish for the demise of the term 'wavelength'.I am looking
for something that shows that when energy is put into a radiator, what
is it that 'such and such' by virtue of 'such and such' MUST be such a
length or a combination of a fraction of a wavelength times a figure
that denotes the radiator area. To state it another way, I do not see
why a radiator cannot be a random length in terms of an equation as
long as optimum radiation is met, thus I look for a specific equation
that relates to radiation surface/density
and radiator length that states it CANNOT be a random length.
I would point out that a small loop can be termed a random length and
not a specific 1/4, 1/2, 1 wavelength e.t.c. and theroreticaly it can
be made an optimum radiator.
Hopefully this explanation clarifies what I am searching for
Regards
Art

3449. 10 meter Sturba Curtain ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 03:46:15 UTC
From: "RoyaltyFreePhotos.com" <rfpexxec@NOSPAMyahoo.com>
Message-ID: <3E4C6687.E12EE170@NOSPAMyahoo.com>
Source record: 124588
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

I am looking for plans for a 10 meter Sturba curtain.

Any ideas where I can look?

73s

Bill

- - -
Check out our NEW collection of European Glamour Photos.

http://RoyaltyFreePhotos.com

- - -

3450. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 04:18:14 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <76_2a.3982$606.989313@news20.bellglobal.com>
Source record: 124589

Waaaaaaaaaaaaaay O/T...

"Bill, W7TI"
> Interesting hypothesis with one fatal flaw.
> The flaw is that you title the lady at the
> beginning "The Mother of All Humanity".
> A more correct title would be "The Mother
> of an Unbroken Line of Daughters". There
> were *plenty* of other females who were
> mothers of humanity.

That's not a flaw - that's actually one of the *main points* <sigh...>. You might need to have followed all of the breathless popular-science press hoop-la (circa 1995) about The Eve Hypothesis to understand the purpose (nuking the hoop-la) and impact (contributing successfully* to nuking the hoop-la) of this article.

* www.google.com/search?q=%22inevitable+eve%22+harvey

BTW - The article presently comes up at #8 on a Google search on the keywords: Eve Hypothesis. It had peaked at #1 (!!!) for a while on several combinations of keywords related to the same topic.

> Mitochondrial DNA is not the exclusively defining
> factor for parenthood.

But it is an important marker for *mother*hood.

> I see why Scientific American and Discovery
> rejected your hypothesis.

The article was rejected (by those magazines, for their own reasons) - the hypothesis is doing just fine. It has 'clarified the thoughts' of untold tens (hundreds?) of thousands of people researching The Eve Hypothesis.

> I wonder too, why so many copyrights?
> Insecurity?

One year mentioned for each update from the original article that *was* published (in the Mensa Canada journal MC). I suppose I should reformat it now to read 1995-2002 (similar to what is seen when booting MS Windows). Sorry if it gives the wrong impression - I didn't intend to overemphasize the standard and usual copyright. (Not insecure at all.)

Have a nice day.

3451. Re: 10 meter Sturba Curtain ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 04:25:58 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <47ro4vkn1joerbosvo02jvbtgknoomgs5k@4ax.com>
Source record: 124590
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

On Thu, 13 Feb 2003 20:46:15 -0700, "RoyaltyFreePhotos.com"
<rfpexxec@NOSPAMyahoo.com> wrote:

>I am looking for plans for a 10 meter Sturba curtain.
>
>Any ideas where I can look?
>
>73s
>
>Bill

Ok, that's STERBA curtain. It was invented by Frank(?) Sterba back in the late 20's or early 30's at, where else, Bell Labs. It was used for many years to carry Bell's overseas HF radio circuits. Now for your question. Do a web search for "sterba curtain". I recommend w4rnl's web site at www.cebik.com. It contains a wealth of factual and practical information. There is a cogent explanation and diagram at http://www.cebik.com/amod/amod8.html on w4rnl's web site. Mind you, they can get really large on frquencies below 28 MHz and they can be enlarged by adding more dipole bays to the end. The gain goes up as the array gets longer. Of course, the 3 db radiation angle gets narrower as well. Oh, yes, as a side effect, since the wires are continuous, you can run DC through them to keep the ice off. That's not subject to a patent that's goning to get me in trouble, is it?

Russ - kf4wxd

3452. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 05:26:33 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9321DA1FCA32Apookster@216.168.3.50>
Source record: 124591

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in news:76_
2a.3982$606.989313@news20.bellglobal.com:

> The flaw is that you title the lady at the
>> beginning "The Mother of All Humanity".
>> A more correct title would be "The Mother
>> of an Unbroken Line of Daughters". There
>> were *plenty* of other females who were
>> mothers of humanity.
>
> That's not a flaw - that's actually one of the *main points*

Who was Eve's mother?

--
Bill, W7TI

3453. Re: 10 meter Sturba Curtain ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 05:26:52 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4C7E1C.8212CF61@cwis.net>
Source record: 124592
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Russ wrote:
> That's
> not subject to a patent that's goning to get me in trouble, is it?
>

Not unless you run fractal current through the wire for
heating purposes...
'Doc

3454. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 05:59:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2j1p4v47i1otm3g9lss7ukl166kfmn446l@4ax.com>
Source record: 124593

On Fri, 14 Feb 2003 05:26:33 -0000, "Bill, W7TI" <jamspam@upyours.now>
wrote:

>"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in news:76_
>2a.3982$606.989313@news20.bellglobal.com:
>
>> The flaw is that you title the lady at the
>>> beginning "The Mother of All Humanity".
>>> A more correct title would be "The Mother
>>> of an Unbroken Line of Daughters". There
>>> were *plenty* of other females who were
>>> mothers of humanity.
>>
>> That's not a flaw - that's actually one of the *main points*
>____
>
>Who was Eve's mother?

Hi Bill,

Well it seems Jeff's article offers you two choices:
1.) Consult Genesis
b.) keep flipping that coin with the rest.

73's
Richard Clark, KB7QHC

3455. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 06:26:20 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9321E44332F22pookster@216.168.3.50>
Source record: 124594

Richard Clark <kb7qhc@attbi.com> wrote in
news:2j1p4v47i1otm3g9lss7ukl166kfmn446l@4ax.com:

> Hi Bill,
>
> Well it seems Jeff's article offers you two choices:
> 1.) Consult Genesis
> b.) keep flipping that coin with the rest.
>
>

I like that numbering system. Your idea?

--
Bill, W7TI

3456. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 07:04:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qe5p4v8vudvb33bd0bjlvibf1rt2lo01uh@4ax.com>
Source record: 124595

On Fri, 14 Feb 2003 06:26:20 -0000, "Bill, W7TI" <jamspam@upyours.now>
wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in
>news:2j1p4v47i1otm3g9lss7ukl166kfmn446l@4ax.com:
>
>> Hi Bill,
>>
>> Well it seems Jeff's article offers you two choices:
>> 1.) Consult Genesis
>> b.) keep flipping that coin with the rest.
>>
>>
>>____
>
>I like that numbering system. Your idea?

a coupla fellas by the name of click 'n' clack

73's
Richard Clark, KB7QHC

3457. FS-Andrew LDF4-50A Coax with Connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 09:46:11 UTC
From: Steve Floyd <w4yhd@earthlink.net>
Message-ID: <DV23a.974$_c6.79054@newsread2.prod.itd.earthlink.net>
Source record: 124596

I have two 90 ft. lengths of Andrew LDF4-50A coax with Andrew Type-N male connectors installed on each end. Excellent condition! $90.00 each assembly. Also have an Andrew L44Z splice connector to professionally join these two sections into one length, $25.00.

Contact w4yhd@arrl.net

3458. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 11:42:01 UTC
From: k3bu@aol.com
Message-ID: <20030214064201.10126.00001495@mb-md.aol.com>
Source record: 124597

Hi Peter,
now that you desribed what you want, I would go for the following configuration.
Get the heaviest crankup, foldover tower 50 ~ 60 ft. (Aluminum to resist corrosion?)
Use my dual polarization design antennas. This will give you range of angles for DX and local with low height antennas and you will take advantage of proximity of sea water "ground".
When storm is forecast you crank down the tower, fold it over and anchor with cables. In extreme cases you can dissassemble antennas too quickly. (Bunch of hose clamps, electric screwdriver).
You should be able to survive mother of all hurricanes. Most likely the house would be gone before antennas.

Yuri, K3BU

>
>I'd like to be able to "button up" my tower and antennas quickly before I
>leave the island. At that time of "buttoning up" there might already be
>quite
>a substantial wind already blowing, say 30 - 40 mph.
>
>My plan is to try to arrange a tower setup so that I can take it all down
>quickly during those incipient winds, at least into a lower or ground
>staked configuration that can then potentially withstand 110 - 140 mph,
>and to be able to do this all by myself whenever an island evacuation is
>called for by the authorities. [by quickly I mean tower and antenna
>takedown in an hour or so]
>
>My questions are:
>
>Is this right? Does this make sense? Is it feasible?
>
>--
>Peter K1PO
>Indialantic By-the-Sea, FL.

3459. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 12:31:19 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <P_OdnR7I0dMIfNGjXTWcpw@crocker.com>
Source record: 124598

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0302131935.8d5327c@posting.google.com...
> richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18062-3E4C1273-212@storefull-2318.public.lawson.webtv.net>...
> > Art, KB9MZ wrote:
> > "---if you draw a typical antenna circuit the components shown are
> > capacitance, inductance and resistance. there is no reference directly
> > to wavelength."
> >
> > True, but the implication is clear. At some frequency, the capacitance
> > and inductance in the circuit must offset each other. At this frequency,
> > the circuit is totally resistive. At this frequency, it produces maximum
> > voltage drop if the components are connected in parallel. If the
> > components are connected in series, as they are in a standing-wave
> > antenna such as a 1/2-wave dipole or 1/4-wave whip, maximum current is
> > allowed. The relation to wavelength is clear.
> >
> > Frequency times wavelength equals the velocity of propagation, or "c" in
> > free-space. In an antenna conductor the velocity is a little less than
> > the free-space value. This equation can be solved for wavelength which
> > equals velocity divided by frequency.
> >
> > It is silly to argue that an arrangement of terms in an equation does or
> > does not define something. Like beauty, that might be in the eye of the
> > beholder.
> >
> > Best regards, Richard Harrison, KB5WZI
>
> Richard,
> I do not wish for the demise of the term 'wavelength'.I am looking
> for something that shows that when energy is put into a radiator, what
> is it that 'such and such' by virtue of 'such and such' MUST be such a
> length or a combination of a fraction of a wavelength times a figure
> that denotes the radiator area. To state it another way, I do not see
> why a radiator cannot be a random length in terms of an equation as
> long as optimum radiation is met, thus I look for a specific equation
> that relates to radiation surface/density
> and radiator length that states it CANNOT be a random length.
> I would point out that a small loop can be termed a random length and
> not a specific 1/4, 1/2, 1 wavelength e.t.c. and theroreticaly it can
> be made an optimum radiator.
> Hopefully this explanation clarifies what I am searching for
> Regards
> Art

that is part of what my earlier posts were about. the radiation from any conductor can be considered to be from a series of points along the conductor. summing the contribution to the far field from all those points on a large sphere results in the pattern from the antenna. summing all those points on the large sphere around the antenna gives the total power that is radiated which can be related to the efficiency of the antenna.... any power going into the antenna is either radiated or lost as heat.

the contribution to the pattern from each point is a very simple equation relating field strength to current. the current along the length of the conductor can be calculated from source current and the interaction with the rest of the antenna elements... so what it basically comes down to are basically 3 important features, how much current, to how many points, and how they add up in different directions.

a naturally resonant antenna like a 1/2 wave dipole has some nice features that we use to make simple, well performing, antennas. being resonant the feedpoint impedance is something that is easy to push current into. the current distribution on the antenna is relatively easy to calculate, and when the elements are on a straight line the contributions all add up nicely perpendicular to the wire and cancel each other out off the ends, giving a useful pattern.

a physically small antenna is challenged all 3 ways. the feed point impedance is hard to get current into without incurring losses in the feedline and matching network. the current in the antenna elements is high so resistive losses in the antenna itself are worse. because the elements are short the pattern generated is not as good (if you consider higher fields perpendicular to the wire good). there are ways around some of these, but they all require special considerations usually resulting in compromises in features like bandwidth or special construction techniques like fat silver plated conductors to handle high currents or vaccuum capacitors to handle the high voltages.

it is interesting to consider the yagi-uda array and compare it to a simple 1/2 wave dipole in light of these 3 factors. the genius of this type of antenna is that the parasitic elements add more current elements to the calculation by collecting induced currents from the rest of the antenna elements, and then they are positioned so that the currents in those elements add to the pattern in the desired direction or subtract from the others in the other direction. that you can simultaneously control the current magnitude, phase, and physical location to generate the desired pattern by moving the elements relative to each other and changing their lengths was an amazing revelation.

3460. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 13:03:11 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <hO53a.32628$ns3.835030@news20.bellglobal.com>
Source record: 124599

Waaaaaaaaay O/T...

"Bill, W7TI"
> Who was Eve's mother?

Obviously -> Eve (n-1).

<How can I put this gently ?> Did you read the article ?

Cut-and-paste from the article:

"Finally, it will become obvious that the 'Eve' designation
(from the viewpoint of an unbroken maternal lineage,
i.e. the mother of all humanity) is a dynamic attribute
which will not remain permanently attached to any one
particular female in prehistory."

Your point is (again...) in violent agreement with the article.

www3.sympatico.ca/jeff.harvey/InevitableEve.htm

3461. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 13:27:40 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9322378DB7968pookster@216.168.3.50>
Source record: 124600

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in
news:hO53a.32628$ns3.835030@news20.bellglobal.com:

> Obviously -> Eve (n-1).
>
> <How can I put this gently ?> Did you read the article ?
>
> Cut-and-paste from the article:
>
> "Finally, it will become obvious that the 'Eve' designation
> (from the viewpoint of an unbroken maternal lineage,
> i.e. the mother of all humanity) is a dynamic attribute
> which will not remain permanently attached to any one
> particular female in prehistory."
>
> Your point is (again...) in violent agreement with the article.
>

I understand now. "Eve" is nothing more than a female who had an unbroken line of daughters. Not an individual, just a concept. I am disappointed.

I was looking for some profound finding in your article and instead it contains just mundane blather. You suckered me in with your "Eve is the mother of all humanity" nonsense. You led me to believe you were talking about a single female. Now that I see that "Eve" is just a concept, I understand why Scientific American and Discovery magazine rejected your articles.

Talk about making a mountain out of a molehill.

I'll read one more reply if you care to send one and then it's plonk for you. I have more fun ways to waste my time.

--
Bill, W7TI

3462. Re: 10 meter Sturba Curtain ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 14:24:53 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4CFC27.350416A5@attbi.com>
Source record: 124602
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

ARRL Antenna Book, 18th edition, Chapter 8, pages 41-42

Deacon Dave, W1MCE
+++

"RoyaltyFreePhotos.com" wrote:
>
> I am looking for plans for a 10 meter Sturba curtain.
>
> Any ideas where I can look?
>
> 73s
>
> Bill
>
> - - -
> Check out our NEW collection of European Glamour Photos.
>
> http://RoyaltyFreePhotos.com
>
> - - -

3463. MP-1 ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 14:25:05 UTC
From: heymoe1@ameritech.net
Message-ID: <mlrp4vc0k098ph8fvf731rdaimpupkkqt3@4ax.com>
Source record: 124601

Hi,

Can anyone give me information/personal experiences with the
Superantenna MP-1 vertical?

Also, how tall is it, physically?

Mike

WB9YJT

3464. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 15:12:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4D0762.3030303@ieee.org>
Source record: 124603

Bill, W7TI wrote:
> I understand now. "Eve" is nothing more than a female who had an
> unbroken line of daughters. Not an individual, just a concept. I am
> disappointed.

What's interesting for the people who are the progeny of a
small group of individuals who made it out of Africa hundreds
of thousands of years ago: Those of us of European, Asian, and
Native American stock are descendants of that one individual female
who had an unbroken line of daughters after leaving Africa.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3465. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 15:19:55 UTC
From: richardharrison@webtv.net
Message-ID: <2126-3E4D091B-12@storefull-2315.public.lawson.webtv.net>
Source record: 124604

Reg wrote:
"The war continued its ferocious course."

The war was decided on December 7, 1941 when Japan attacked the U.S.A. Japan completely underestimated U.S. productivity, size, and determination. We were pacificist. Already we had ignored Japanese sinking of a U.S. Gunboat in China and German sinking of an American warship in the Atlantic with loss of more than 100 U.S. sailors. But, Pearl Harbor could not be ignored.

Hitler assured European liberation by following the Jap attack on Pearl Harbor with a German declaration of war on the U.S.A. What a dummy! His Russian invasion was not too smart either, at least not while consolidating gains in the rest of Europe. Hitler obviously did not understand the might of the U.S. production machine. The Ford plant in Detroit mass produced B-24 bombers as if they were Ford automobiles. The rest of U.S. war production matched Ford. Hitler was committing suicide.

Britian`s magnetron was a powerful tool in the war and it was soon copied by friend and foe. Our spare was kept locked in the ship`s safe.

The U.S. proximity fuse was a telling aerial artillery edge over the enemies` during WW2. Some students of war call it decisive.

But the trump card was the atom bomb, and the giant high-flying aircraft to deliver it. When in Guam and Saipan, we used to count the B-29`s leaving for Japan in the morning and returning from their conventional bomb runs on Japan in the evening. They all came back. They were untouchable.

We didn`t like the Bolsheviks and Marxists any more than did Hitler, but we were still pacificist. Before we were mustered out of the service, many of us thought we should have continued the war against the Bolsheviks so we wouldn`t have to be recalled to do it later. Also, we didn`t know what an atom bomb was, but it clearly was the ultimate weapon. That is, there was no effective defense against it. We could take charge without ever being in harm`s way. In fact, all we probably would need to do is inquire if the Soviets would like to make Moscow into another Hiroshima or Nagasaki. But we didn`t. We neither threatened nor used the atom bomb after WW2. We did continue nuclear development and delivery system improvement. Today, we have Iraquis who are very slow learners indeed. We don`t need to nuke them, but we could. We damned near burned down Japan before nuking them. They didn`t know when to surrender.

Best regards, Richard Harrison, KB5WZI

3466. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 16:03:26 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <ir83a.52570$zF6.3507731@bgtnsc04-news.ops.worldnet.att.net>
Source record: 124605

I think you two (Elwood and Stevens) were just talking
past each other in this series of rapid-fire exchanges.

It sounds to me like Dean Elwood is looking for a
stealth VHF/UHF antenna that can be permanently
mounted on top of a house, not a mobile HF antenna
for his auto.

Dean, have a look at the VHF/UHF antennas at:

http://www.ventenna.com/

Their product looks like a somewhat longish vent
pipe (and is mounted atop one).

As far as tuning a VHF/UHF antenna for lowest
SWR, an antenna analyzer is best, but reasonable
results can be had with a low-cost SWR meter and
an HT for an RF source.

Jim, K7JEB

3467. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 16:29:20 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9322565AA6AE6pookster@216.168.3.50>
Source record: 124606

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in news:3E4D0762.3030303
@ieee.org:

> Native American stock are descendants of that one individual female
> who had an unbroken line of daughters after leaving Africa.
>

So there's two of you that believe this stuff.

Ok, convince me (.wav file of mind opening).

How are you sure that the "one individual female" didn't have sisters,
that the sisters didn't have female children, etc, etc.

I know every female alive today had a mother, that mother had a mother,
etc, etc, forever. I just don't see how all those lines had to converge
in a single female eons ago. I can visualize many, many separate lines
going back into the far distant past until our species becomes
unrecognizable.

So tell me why not.

--
Bill, W7TI

3468. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 16:41:08 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9322585B43E1Cpookster@216.168.3.50>
Source record: 124607

richardharrison@webtv.net (Richard Harrison) wrote in news:2126-3E4D091B-12@storefull-2315.public.lawson.webtv.net:

> In fact, all we probably
> would need to do is inquire if the Soviets would like to make Moscow
> into another Hiroshima or Nagasaki. But we didn`t.

And it wouldn't have been successful anyway, as any terrorist will tell you. Terrorism (with a capital "T") was developed as a counter to overwhelming military force. The point being, if we had nuked Moscow, we'd be fighting the Russkie terrorists today along with the Camel Jockeys.

The way we actually did beat our friends the Russkies was much better. Nobody got hurt and we won anyway. Put the nukes away and use your brains instead. History has some powerful lessons to teach us if we will only listen.

And what was that about the B-29s "all returning" and being "untouchable"? Bovine feces.

--
Bill, W7TI

3469. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 16:57:48 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E4D2071.EE349848@att.net>
Source record: 124608

Bill,

You don't seem to understand how this works.

It is only necessary to include the assumed conclusion as part of the
proof, and the result becomes fully apparent.

Happens a lot in RRAA. 8-)

73,
Gene
W4SZ

"Bill, W7TI" wrote:
>
> OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in news:3E4D0762.3030303
> @ieee.org:
>
> > Native American stock are descendants of that one individual female
> > who had an unbroken line of daughters after leaving Africa.
> >
>
> ----------
>
> So there's two of you that believe this stuff.
>
> Ok, convince me (.wav file of mind opening).
>
> How are you sure that the "one individual female" didn't have sisters,
> that the sisters didn't have female children, etc, etc.
>
> I know every female alive today had a mother, that mother had a mother,
> etc, etc, forever. I just don't see how all those lines had to converge
> in a single female eons ago. I can visualize many, many separate lines
> going back into the far distant past until our species becomes
> unrecognizable.
>
> So tell me why not.
>
> --
> Bill, W7TI

3470. Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 17:26:32 UTC
From: ebrown2841@aol.com
Message-ID: <20030214122632.02960.00000523@mb-mn.aol.com>
Source record: 124609

I would like to receive comments from those of you who have had personal experience with the magnetic loop antenna. I am now living on a small lot and am using a mobile screwdriver antenna with radials (High Sierra) at the present but am intrigued with the loop and have been toying with the idea of buying the MFJ-1786 which covers 10-30 MHz. I'm wondering if it would be worth the investment, both financially and performance wise. Thanks.

Emory Brown, KD2DN/4
EBrown2841@aol.com

3471. Re: Mobile antenna as base antenna SLEEVE DIPOLE

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 17:41:03 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <b2j9nf$8hs$1@news1.tribune.com>
Source record: 124611

If you are trying to do VHF See August 2001 QST Page 68, or this reference

http://user.mc.net/~jdewey/sleeve_dipole/

The Sleeve is 1/4 wave adjusted for diamater.

John

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:b2g2fg$h31$1@sparta.btinternet.com...
> You may remember I posted last week about using a mobile antenna as a
> stealth antenna with some form of home-brew ground plane.
>
> I have since seen antenna's on the market (unfortunately I just missed one
> on ebay) that seem to use a copper tube at the base as a groundplane. This
> is better for me because I am trying to avoid using radials (as you may
> remember).
>
> Is this easy to do? What would be ideal for me is to use a mobile gain
> antenna (probably 5/8 over 5/8 centre loaded) and use quarter wavelength
of
> copper tube (painted black) underneath as the groundplane.
>
> Likely to work? Anything I should know or consider?
>
> Many thanks again,
>
> Dean
> M3DPE
>
>

3472. Re: 500 Watts on HF: Asking for trouble?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 17:47:31 UTC
From: ebrown2841@aol.com
Message-ID: <20030214124731.02960.00000524@mb-mn.aol.com>
Source record: 124610

I think that it depends upon how close your neighbors are. I recently moved to a smaller piece of property in a close development where I've been forced to use a vertical antenna. I'm also using the Kenwood TS-50S mobile with a power supply. The radio offers three output settings of 10, 50 and 100 watts. 100 watts gets into the tv sets of non cable users and also into their cordless phones and of course does a number in my house by setting off my outdoor security lights and causing my cordless phone to ring each time that I key up. 10 watts seems to bring peacefull coexistance and I seem to have a " pipeline " connection between Florida and Jersey with regular 5/9 reports when the propagation is favorable. I've also worked Europe with low power.

I'm most active of 15 meters but I uspect (without certain proof) that I could get away with using higher power on 20, 40 and 75. I think that with a 500 watt output, if you live close to your neighbors, you will create a lot of hostility in a very short length of time, especially on 10-15 meters. Good Luck

Emory, KD2DN/4

3473. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 17:55:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bo8q4vou4af997irj8vrm1op8746trctdv@4ax.com>
Source record: 124612

On Fri, 14 Feb 2003 09:19:55 -0600 (CST), richardharrison@webtv.net (Richard Harrison) wrote:

> Today, we have Iraquis who are very
>slow learners indeed. We don`t need to nuke them, but we could. We
>damned near burned down Japan before nuking them. They didn`t know when
>to surrender.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

All too true. But this has been true for a very long time and in both cases it has devolved to a single personality. That personality is found in either Saddam or Hirohito (there were a cast of personalities back then, unlike now, these two merely extend your metaphor).

Hirohito was a spoiled naif. There are no apologies to be made, but he didn't go looking for trouble. His generals (modern day samurai) were just a breath away from junta and they had this plan. The only thing that kept him alive (and was extremely useful to those same generals) was his status of living god. At war's end, MacArthur dealt himself a new hand and picked up that joker right away. For several years after, MacArthur prepared this god's text for sermons. Japan segued from totalitarianism to democracy (such as it is) in a generation.

We can look to Afghanistan as an indication of our capability to repeat MacArthur's success, and as an indicator of troubles to come in a "pacified" Iraq.

And then we come to Saddam. Since the deadly missile attack against an American Warship by Iraq (ignored by Bush I as an "accident"), we could have fought WWII three times by now and nuked Hirohito with 6 big ones. Is anyone behind the front lines really trying all that hard to get Saddam with even a tenth of the vigor expended on Hirohito? How hard are they at work on one scraggy bearded individual named Osama? Seems they can find his tapes, but they always miss the recording session.

30 Sailors, 300 Marines, 3000 Civilians; and for 20 years of the best efforts from the beltway, all we have is Afghanistan, Grenada, and Kuwait to show for it.

Iraqis don't describe the full population of slow learners

73's
Richard Clark, KB7QHC

3474. Ribbon Cable

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 18:52:25 UTC
From: Michael Farragher <michaelfarragher@#####eircom.net>
Message-ID: <7_a3a.9651$V6.13088@news.indigo.ie>
Source record: 124613

Hi,

How thick is ribbon lead in wire used on some antennas ?

Eavesdropper Model T

Would there be a problem putting it though a window, could the window be closed ?

In general what would be the size of cables to external antennas miin to max.

Michael

3475. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 19:05:38 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2jem2$st0$1@sparta.btinternet.com>
Source record: 124614

> Is that a one turn loop at right angles to the radiator? If so, it's
> probably a gamma loop type setup that is feeding a 1/2 wave whip. It's
> not a ground plane as the 1/2 wave doesn't require one. It's an
> impedance matching device to match the low Z coax to the high Z
> feedpoint of the base fed 1/2 wave whip.

No, it's not a gamma match. Think of a fibreglass vertical with no ground
radials. Then imagine that 1 foot of the bottom section is actually copper
pipe and connected to ground. That's what this was. So the copper pipe was
actually the ground plane, and the antenna was a straight vertical tube.

> >
> > Is this easy to do? What would be ideal for me is to use a mobile gain
> > antenna (probably 5/8 over 5/8 centre loaded) and use quarter wavelength
of
> > copper tube (painted black) underneath as the groundplane.
>
> That antenna would be a complete antenna in itself, and needs no
> ground plane. Think an extended double zepp vertically. You can reduce
> common mode currents on the shield of the coax feedline by adding
> decoupling radials though. But they are doing a different job than the
> radials that would make up a ground plane for an elevated vertical
> like a 1/4 wave ground plane.
> >
> > Likely to work?
>
> yes.
>
> Anything I should know or consider?
>
> Look at examples for common dual 5/8 collinear antennas. IE: Isopole,
> ringo ranger 2, etc. On 70 cm, good decoupling of the feedline will be
> critical if you want to actually realize gain over a 1/4 wave GP.

Where do I find designs for these on the net?

> Myself, I'd probably build a small 3-4 element yagi. Would be quite
> small. Would eat most any vertical for lunch performance wise. But you
> would have to point it

Sure, not practical for what I want to do.

...MK

3476. Re: Open wire feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 19:05:38 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2jem2$st0$2@sparta.btinternet.com>
Source record: 124615

> No R.

No reactance? No resistance?! No "reason to live"? No R.'s Ark?!!!

Is this a riddle?

> No loss .

OK. I think of cancellation as two signals cancelling each other out, so, no radiation, but loss because one half the signal is being used to cancel the other half out from radiating..... where am I going wrong?

> Just a way of thinking.

I like that.

> Build that resonant dipole and run that coax and GET ON THE AIR!!

Been there, done that.

Just curious and looking to experiment.....

;-)

> H.
> NQ5H

D.
M3DPE

>
>
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
> news:b2g05d$7dq$1@venus.btinternet.com...
> > Thanks for the replies. Seems I was pretty much right in my thoughts
> > anyway - the fact that the two cables are run in parallel means that the
> > opposite phases of each side of the balanced line cancels out the
> radiation.
> >
> > One thing that still troubles my mind a little - I think of this
> cancelling
> > effect as "lossy".
> >
> > D
> >
> snip
>
>

3477. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 19:12:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4D3FA6.7010005@ieee.org>
Source record: 124616

Bill, W7TI wrote:
> So there's two of you that believe this stuff.
>
> Ok, convince me (.wav file of mind opening).
>
> How are you sure that the "one individual female" didn't have sisters,
> that the sisters didn't have female children, etc, etc.
>
> I know every female alive today had a mother, that mother had a mother,
> etc, etc, forever. I just don't see how all those lines had to converge
> in a single female eons ago. I can visualize many, many separate lines
> going back into the far distant past until our species becomes
> unrecognizable.
>
> So tell me why not.

Look up mitochondrial DNA. Every Homo sapien outside of Africa
carries that DNA in common indicating a common ancestor. Maybe
you need to order the video tape from The Discovery Channel or
whichever channel it was. I think it was called, "The Search for
Eve".
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3478. Re: Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 20:13:58 UTC
From: ts850_guy <ve3tmt@rac.ca>
Message-ID: <f5c3a.588$bU6.83891@news20.bellglobal.com>
Source record: 124617

"EBrown2841" <ebrown2841@aol.com> wrote in message
news:20030214122632.02960.00000523@mb-mn.aol.com...
> I would like to receive comments from those of you who have had personal
> experience with the magnetic loop antenna. I am now living on a small lot
and
> am using a mobile screwdriver antenna with radials (High Sierra) at the
> present but am intrigued with the loop and have been toying with the idea
of
> buying the MFJ-1786 which covers 10-30 MHz. I'm wondering if it would be
worth
> the investment, both financially and performance wise. Thanks.
>
> Emory Brown, KD2DN/4
> EBrown2841@aol.com

If you like to QSY a lot, you will be disappointed. Frequency excursions of even a few kilohertz require retuning of the antenna. However, the efficiency of the antenna is very good and they don't require a ground system. If you can find a cheap vacuum variable you can build your own loop and save hundreds of $$. I built two or three and I was making 40m contacts out to 500 miles with the thing sitting in my basement.

3479. Re: specific request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 20:34:10 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <Rhc3a.2060$0q5.528@fe01.atl2.webusenet.com>
Source record: 124618

sorry, my screw-up , NOT VOLUME, but AREA of a sphere is the needed
demension . been too long since had to find those formulae--Jim
nn7k@reno.rmci.net

<Jimnn7k@reno.rmci.net> wrote in message
news:HnX2a.133$0q5.51@fe01.atl2.webusenet.com...
> oh, by the 4/3 PI * r ^3, as I remember, is volume of a sphere think this
> correct- jim WRONG FORMULA--jim
>
>
>

3480. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 21:24:47 UTC
From: richardharrison@webtv.net
Message-ID: <2126-3E4D5E9F-46@storefull-2315.public.lawson.webtv.net>
Source record: 124519

Bill, W7TI wrote:
"And what was that about the B-29s all returning and being untouchable?"

I didn`t spend the war at Saipan, Guam, and Tinian, though I saw them aplenty. All the days we observed, everybody got back safely. The B-29 flew higher and faster than most fighter planes and that made it hard to bring down.

However, Saburo Sakai, a one-eyed Jap pilot is credited with bringing down the last B-29 lost in WW2.

Not only was the B-29 an awesome performer in speed and ceiling, the first A-Bombs weighed 10,000 pounds. The plane gave a little hop when the bomb was released.

My ship carried first occupiers into a place on Honshu and we got to wander through Nagasaki on a trip to a steel mill there. We needed to replace missing shell plate. The distruction was awesome. Steel safes seemed to be about the only survivors.

Best regards, Richard Harrison, KB5WZI

3481. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 22:20:07 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4qqvankl93cac@corp.supernews.com>
Source record: 124520

Thanks.
Those of us who have not seen Nagasaki or Hiroshima need to be told.
Some people think of actually using those things again.
H.
NQ5H
"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:2126-3E4D5E9F-46@storefull-2315.public.lawson.webtv.net...
> Bill, W7TI wrote:
> "And what was that about the B-29s all returning and being untouchable?"
>
> I didn`t spend the war at Saipan, Guam, and Tinian, though I saw them
> aplenty. All the days we observed, everybody got back safely. The B-29
> flew higher and faster than most fighter planes and that made it hard to
> bring down.
>
> However, Saburo Sakai, a one-eyed Jap pilot is credited with bringing
> down the last B-29 lost in WW2.
>
> Not only was the B-29 an awesome performer in speed and ceiling, the
> first A-Bombs weighed 10,000 pounds. The plane gave a little hop when
> the bomb was released.
>
> My ship carried first occupiers into a place on Honshu and we got to
> wander through Nagasaki on a trip to a steel mill there. We needed to
> replace missing shell plate. The distruction was awesome. Steel safes
> seemed to be about the only survivors.
>
> Best regards, Richard Harrison, KB5WZI
>

3482. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 22:28:59 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2jqj6lsk1@slb3.atl.mindspring.net>
Source record: 124521

Yuri:

[snip]
"> Get the heaviest crankup, foldover tower 50 ~ 60 ft. (Aluminum to resist
> corrosion?)
[snip]

That was my current plan, aluminum 50 foot crank up. Everything corrodes
rapidly over here on the island and so aluminum seems the best choice.

[snip]
> Use my dual polarization design antennas. This will give you range of
angles
> for DX and local with low height antennas and you will take advantage of
> proximity of sea water "ground".
[snip]

I have the ocean on one side and the lagoon [partial salt water] on the
other
side. The ocean is 3000 miles wide and the lagoon about 2 miles wide
so I've got a good reflection ground at several wavelengths away from the
antenna in most directions.

What is the best reference source for your dual polarization antennas?

[snip]
> When storm is forecast you crank down the tower, fold it over and anchor
with
> cables. In extreme cases you can dissassemble antennas too quickly. (Bunch
of
> hose clamps, electric screwdriver).
> You should be able to survive mother of all hurricanes. Most likely the
house
> would be gone before antennas.
[snip]

Your thinking parallels my own. Thanks for the input.

Best,

--
Peter K1PO
Indialantic By-the-Sea, FL.

3483. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 22:37:02 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302141437.2e085fce@posting.google.com>
Source record: 124522

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:<b2jem2$st0$1@sparta.btinternet.com>...

>
> No, it's not a gamma match. Think of a fibreglass vertical with no ground
> radials. Then imagine that 1 foot of the bottom section is actually copper
> pipe and connected to ground. That's what this was. So the copper pipe was
> actually the ground plane, and the antenna was a straight vertical tube.

I'd have to see that. Not sure what they are doing, but 1 ft of copper
pipe won't act as much of a ground plane. About all I can see it doing
is making a connection with ground.
>

>
> Where do I find designs for these on the net?

Cushcraft has the pdf files for the ringo ranger 2's. Others also. You
would need to do a search for the others. The isopole is not made
anymore, but there may be some info floating around on it.

MK

3484. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 22:56:18 UTC
From: Harold Burton <hwburton@cableone.net>
Message-ID: <v4qt087kthjq31@corp.supernews.com>
Source record: 124523

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v4qqvankl93cac@corp.supernews.com...
> Thanks.
> Those of us who have not seen Nagasaki or Hiroshima need to be told.
> Some people think of actually using those things again.
> H.
> NQ5H

I was stationed in Japan in the early '50s.
I did'nt talk much politics with the locals
but a small group asked me one day what I thought of the Nagasaki/ Hiroshima
bombing. I told them that, had I been president at the time, they'd have
got more of them, and sooner. That groups nickname
for me after that was "Genshi Bakudan", which I was told meant atom bomb.

3485. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 23:16:41 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E4D78D9.7ED070C0@uci.edu>
Source record: 124527

Mark Keith wrote:
>
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:<b2jem2$st0$1@sparta.btinternet.com>...
>
> >
> > No, it's not a gamma match. Think of a fibreglass vertical with no ground
> > radials. Then imagine that 1 foot of the bottom section is actually copper
> > pipe and connected to ground. That's what this was. So the copper pipe was
> > actually the ground plane, and the antenna was a straight vertical tube.
>
> I'd have to see that. Not sure what they are doing, but 1 ft of copper
> pipe won't act as much of a ground plane. About all I can see it doing
> is making a connection with ground.

Sounds like it's just a really short mast. :-)

73 ac6xg

3486. SWAP: ATB-34 (Cushcraft) for 6 Mtr Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 23:17:17 UTC
From: Richard Solomon <w1ksz@earthlink.net>
Message-ID: <t4uq4vc306rsrp66d7o8vc90g0jdo3k5fv@4ax.com>
Source record: 124525

I have a Cushcraft ATB-34 Tri-Bander sitting on the deck.
I'll swap it even for a 6 Meter Beam, 4 - 6 el.
Local deal wanted, I am in Lexington, MA.

73, Dick, W1KSZ

3487. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 23:19:12 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E4D7971.5D8D6239@silverstar.com>
Source record: 124524

Some Disabled Vet Post/AmVet Post/American Legion Post hams make J-poles from aluminum stock but last I bought was 25$ in '91. You HAVe to spend money on propane torch and gas as well as solder and brush to clean copper. Soldering irons unless 100 W or more can't put enough heat onto a joint to get solder to flow properly. And DON'T even try Radio Shack's Match Solder. Do a web search for J-poles made from copper pipe, ladder line and solid aluminum.

3488. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-14 23:21:32 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E4D79FE.F7C341DF@silverstar.com>
Source record: 124526

Put a quarter wave mag mount on your reefer. That will do fine for repeaters within 20-50 miles with 5-watts unless you're buried in high rise buildings.

3489. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 00:10:39 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <0Af3a.5652$606.1099949@news20.bellglobal.com>
Source record: 124528

Waaaaaaay OT.

'Bill, W7TI'
> I understand now. "Eve" is nothing more than
> a female who had an unbroken line of daughters.
> Not an individual, just a concept.

A series of individuals (*real* individuals). Inevitably a lineage
(obviously). Inexorably driven to being a *single* lineage (due to MLER).

> I am disappointed. I was looking for some
> profound finding in your article and instead
> it contains just mundane blather.

Bill, why so ornery ?

> You suckered me in with your "Eve is the mother
> of all humanity" nonsense. You led me to believe
> you were talking about a single female. Now that
> I see that "Eve" is just a concept...

You've failed to understand the context of that quote (it is part of the
set-up to the article). If you had followed the Eve Hypothesis topic since
the mid-1990s (which you obviously haven't), then you would know that that
phrase ("mother of all humanity") isn't mine. That phrase is basically a
fair paraphrased summation of the rather-breathless popular science press
coverage of the Eve Hypothesis. My article goes on to demonstrate the
inevitability of the whole thing and that there are (of course) an endless
series of Eves. I thought that the article was fairly transparent.

> Talk about making a mountain out of a molehill.

The *entire purpose* of the article is to do just the opposite - point out
that the Eve Hypothesis 'mountain' is actually just a 'molehill'.

Have a nice weekend.

3490. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 00:13:30 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <HCf3a.5657$606.1100456@news20.bellglobal.com>
Source record: 124529

"OC_CAM's Razor"
> What's interesting for the people who are the
> progeny of a *small group of individuals*...

Not necessary. You haven't yet got it.

3491. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 00:16:03 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <4Ff3a.5661$606.1101035@news20.bellglobal.com>
Source record: 124530

"Bill, W7TI"
> I just don't see how all those lines had to converge
> in a single female eons ago.

MLER. Maternal Lineage Extinction Ratio. Inexorable mathematics.

Ref: www3.sympatico.ca/jeff.harvey/InevitableEve.htm

3492. receive antenna spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 01:26:13 UTC
From: "Larry D. Clark" <buddycl@swbell.net>
Message-ID: <VGg3a.106$Dy5.70575120@newssvr12.news.prodigy.com>
Source record: 124531

i'm running an icom 756-pro i want to experiment
with using a separate receive antenna(via ant 1 and 1/r button)
in conjunction with a shunt fed tower on 160m.
any sage words of wisdom on the minimum
separation between them when running around 750watts?

larry
kd5foy

3493. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 02:14:59 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302141814.219b05b2@posting.google.com>
Source record: 124532

David I must agree with you. I had also always thought that way
but I thought it would be prudent to at least air the question
in case I had missed a reference or something.
We have a varied cross section of expertise here on this thread
and not one was able to provide an equation or reference that
states otherwise.
So thank you David and others who provided insights to this
matter, I can now rest assured that there is now no real
barrier or scientific fact that would suggest that the use of
random length could not be as completely successful as any other
radiator
Best regards
Art
Richard, I could not find the quote you pointed out with the word
"wavelength" it would appear that wavelength has been removed from
subsequent editions by Terman

p"David Robbins" <k1ttt@arrl.net> wrote in message
news:<P_OdnR7I0dMIfNGjXTWcpw@crocker.com>...
> "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> news:85ed38d.0302131935.8d5327c@posting.google.com...
> > richardharrison@webtv.net (Richard Harrison) wrote in message
> news:<18062-3E4C1273-212@storefull-2318.public.lawson.webtv.net>...
> > > Art, KB9MZ wrote:
> > > "---if you draw a typical antenna circuit the components shown are
> > > capacitance, inductance and resistance. there is no reference directly
> > > to wavelength."
> > >
> > > True, but the implication is clear. At some frequency, the capacitance
> > > and inductance in the circuit must offset each other. At this frequency,
> > > the circuit is totally resistive. At this frequency, it produces maximum
> > > voltage drop if the components are connected in parallel. If the
> > > components are connected in series, as they are in a standing-wave
> > > antenna such as a 1/2-wave dipole or 1/4-wave whip, maximum current is
> > > allowed. The relation to wavelength is clear.
> > >
> > > Frequency times wavelength equals the velocity of propagation, or "c" in
> > > free-space. In an antenna conductor the velocity is a little less than
> > > the free-space value. This equation can be solved for wavelength which
> > > equals velocity divided by frequency.
> > >
> > > It is silly to argue that an arrangement of terms in an equation does or
> > > does not define something. Like beauty, that might be in the eye of the
> > > beholder.

> > >
> > > Best regards, Richard Harrison, KB5WZI
> >
> > Richard,
> > I do not wish for the demise of the term 'wavelength'.I am looking
> > for something that shows that when energy is put into a radiator, what
> > is it that 'such and such' by virtue of 'such and such' MUST be such a
> > length or a combination of a fraction of a wavelength times a figure
> > that denotes the radiator area. To state it another way, I do not see
> > why a radiator cannot be a random length in terms of an equation as
> > long as optimum radiation is met, thus I look for a specific equation
> > that relates to radiation surface/density
> > and radiator length that states it CANNOT be a random length.
> > I would point out that a small loop can be termed a random length and
> > not a specific 1/4, 1/2, 1 wavelength e.t.c. and theroreticaly it can
> > be made an optimum radiator.
> > Hopefully this explanation clarifies what I am searching for
> > Regards
> > Art
>
> that is part of what my earlier posts were about. the radiation from any
> conductor can be considered to be from a series of points along the
> conductor. summing the contribution to the far field from all those points
> on a large sphere results in the pattern from the antenna. summing all
> those points on the large sphere around the antenna gives the total power
> that is radiated which can be related to the efficiency of the antenna....
> any power going into the antenna is either radiated or lost as heat.
>
> the contribution to the pattern from each point is a very simple equation
> relating field strength to current. the current along the length of the
> conductor can be calculated from source current and the interaction with the
> rest of the antenna elements... so what it basically comes down to are
> basically 3 important features, how much current, to how many points, and
> how they add up in different directions.
>
> a naturally resonant antenna like a 1/2 wave dipole has some nice features
> that we use to make simple, well performing, antennas. being resonant the
> feedpoint impedance is something that is easy to push current into. the
> current distribution on the antenna is relatively easy to calculate, and
> when the elements are on a straight line the contributions all add up nicely
> perpendicular to the wire and cancel each other out off the ends, giving a
> useful pattern.
>
> a physically small antenna is challenged all 3 ways. the feed point
> impedance is hard to get current into without incurring losses in the
> feedline and matching network. the current in the antenna elements is high
> so resistive losses in the antenna itself are worse. because the elements
> are short the pattern generated is not as good (if you consider higher
> fields perpendicular to the wire good). there are ways around some of
> these, but they all require special considerations usually resulting in

> compromises in features like bandwidth or special construction techniques
> like fat silver plated conductors to handle high currents or vaccuum
> capacitors to handle the high voltages.
>
> it is interesting to consider the yagi-uda array and compare it to a simple
> 1/2 wave dipole in light of these 3 factors. the genius of this type of
> antenna is that the parasitic elements add more current elements to the
> calculation by collecting induced currents from the rest of the antenna
> elements, and then they are positioned so that the currents in those
> elements add to the pattern in the desired direction or subtract from the
> others in the other direction. that you can simultaneously control the
> current magnitude, phase, and physical location to generate the desired
> pattern by moving the elements relative to each other and changing their
> lengths was an amazing revelation.

3494. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 02:45:29 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9322BED0F61E0pookster@216.168.3.50>
Source record: 124533

Gene Fuller <W4SZzzzzz@att.net> wrote in news:3E4D2071.EE349848@att.net:

> It is only necessary to include the assumed conclusion as part of the
> proof, and the result becomes fully apparent.
>

Something that finally makes sense. Thank you.

--
Bill, W7TI

3495. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 02:50:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4DAAFF.5030608@ieee.org>
Source record: 124534

J. Harvey wrote:
> "OC_CAM's Razor"
>>What's interesting for the people who are the
>>progeny of a *small group of individuals*...
>
> Not necessary. You haven't yet got it.

I got the TV show. That's all I need to get.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3496. Beam v. Vertical: Which causes more interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 03:03:15 UTC
From: fch <na@hle.com>
Message-ID: <3E4DADF3.AB68BC25@hle.com>
Source record: 124535

Anyone have a beam up around 25 ft
and a ground mounted vertical?

Is the beam a lot less likely to cause interference
to household devices (and neighbors) than the
ground mounted vertical?

Especially at about 400 w?

3497. Beam v. Vertical: Which causes more interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 03:05:38 UTC
From: fch <na@hle.com>
Message-ID: <3E4DAE81.B68E9495@hle.com>
Source record: 124538

Anyone have a beam up around 25 ft
and a ground mounted vertical?

Is the beam a lot less likely to cause interference
to household devices (and neighbors) than the
ground mounted vertical?

Especially at about 400 w?

If so, is it because the power is up high?

3498. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 03:24:21 UTC
From: Zoran Brlecic <...WA7AA...@get.lost>
Message-ID: <3E4DB2CB.5060004@get.lost>
Source record: 124536

Harold Burton wrote:

>>Those of us who have not seen Nagasaki or Hiroshima need to be told.
>>Some people think of actually using those things again.
>>H.
>>NQ5H
>
>
> I was stationed in Japan in the early '50s.
> I did'nt talk much politics with the locals
> but a small group asked me one day what I thought of the Nagasaki/ Hiroshima
> bombing. I told them that, had I been president at the time, they'd have
> got more of them, and sooner. That groups nickname
> for me after that was "Genshi Bakudan", which I was told meant atom bomb.
>
>

Yeah, it's amazing how enthusiastic some people are about using nuclear
weapons when they know it won't be them scraping their children's burnt
remains from the bricks that used to be their city.

But, hey, God's on our side and he doesn't frown on little genocide here
and there...

WA7AA

--

Anti-spam measure: look me up on qrz.com if you need to reply directly

3499. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 03:24:35 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9322C572294C9pookster@216.168.3.50>
Source record: 124537

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in
news:4Ff3a.5661$606.1101035@news20.bellglobal.com:

>
> MLER. Maternal Lineage Extinction Ratio. Inexorable mathematics.
>
> Ref: www3.sympatico.ca/jeff.harvey/InevitableEve.htm
>

Huh-uh J. You mention the average of one family in four that has only sons and therefore reduces the number of unbroken matilineal lineages by aprox 25% each generation. You fail to mention the other one family in four that has only daughters and thereby increases the number by that same 25%. Net result = same number of lineages, generation after generation.

My hypothesis, based on many, many seconds of research, is that mitochondrial DNA is the same now as it has always been, back to the beginning of the race. All women have it, all their mothers had it, all their mothers had it, etc, etc, until you get tired of going back, at which time ALL FEMALES STILL HAD IT.

In fact, if *all* today's women DIDN'T have it, that alone would disprove the "Eve Hypothesis'. How could those women have gotten non-Eve mtDNA except from a non-Eve?

--
Bill, W7TI

3500. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 03:54:08 UTC
From: Quahog <quahog@localnet.com>
Message-ID: <v4ref04jq2bs5d@corp.supernews.com>
Source record: 124539

Zoran Brlecic <...WA7AA...@get.lost> wrote in
news:3E4DB2CB.5060004@get.lost:

> Harold Burton wrote:
>
>>>Those of us who have not seen Nagasaki or Hiroshima need to be told.
>>>Some people think of actually using those things again.
>>>H.
>>>NQ5H
> Yeah, it's amazing how enthusiastic some people are about using
> nuclear weapons when they know it won't be them scraping their
> children's burnt remains from the bricks that used to be their city.
>
> But, hey, God's on our side and he doesn't frown on little genocide
> here and there...
>
>
> WA7AA
>

My Dad was stationed on Guam in 1945. Had Truman not had the cojones to
drop the Big One, he would have been yanked out of the kitchens and handed
a rifle to be part of the invasion of the home islands. I may be here
because of the bomb. Thank God for Truman, even if he was a democrat...

KB1GEJ

3501. 40/15 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 04:01:01 UTC
From: ann7how@aol.com
Message-ID: <20030214230101.16140.00001294@mb-mo.aol.com>
Source record: 124540

I have found that fundamental and 3rd harmonic horizontal HFantennas work just fine if one is willing to accept the pattern on the 3rd harmonic. I have never tried a vertical. Has anybody had any experience with one? Anybody had experience with 2m/0.7m vertical? Hal, W9UYA

3502. Re: Beam v. Vertical: Which causes more interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 04:19:39 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4rg1gp2o0b078@corp.supernews.com>
Source record: 124541

YES
"fch" <na@hle.com> wrote in message news:3E4DADF3.AB68BC25@hle.com...
> Anyone have a beam up around 25 ft
> and a ground mounted vertical?
>
> Is the beam a lot less likely to cause interference
> to household devices (and neighbors) than the
> ground mounted vertical?
>
> Especially at about 400 w?
>

3503. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 04:21:51 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <wfj3a.33886$Ww1.931896@news20.bellglobal.com>
Source record: 124542

"Bill, W7TI"
> Huh-uh... <illogical parts snipped>

Not even close Bill, not even close.

Have a nice weekend.

3504. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 04:28:28 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Ilj3a.33896$Ww1.932949@news20.bellglobal.com>
Source record: 124544

"OC_CAM's Razor"
> I got the TV show. That's all I need to get.

Wow, takes a brave man to make that admission in public.

Cheers.

3505. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 04:29:38 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4rgk4922c4e86@corp.supernews.com>
Source record: 124543

I was wondering when a fellow I-Exist-Because-of-The-Bomb would emerge.
Afterwards: My dad directed the artillery fire at the Punch Bowl in Korea.
We didn't finish the job. Now we pay. Truman's balls ran out.
And Bush can't even PRONOUNCE nuclear.
NQ5H

"Quahog" <quahog@localnet.com> wrote in message
news:v4ref04jq2bs5d@corp.supernews.com...
snip> My Dad was stationed on Guam in 1945. Had Truman not had the cojones
to
> drop the Big One, he would have been yanked out of the kitchens and handed
> a rifle to be part of the invasion of the home islands. I may be here
> because of the bomb. Thank God for Truman, even if he was a democrat...
>
> KB1GEJ

3506. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 04:46:35 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9322D3597D00Dpookster@216.168.3.50>
Source record: 124545

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in
news:wfj3a.33886$Ww1.931896@news20.bellglobal.com:

> Not even close Bill, not even close.
>

You could not have written a more powerful admission that I was right.

And thank you, I will indeed have a nice weekend.

Sorry that you'll be busy deleting your website, revamping theories,
withdrawing articles, etc.

--
Bill, W7TI

3507. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 04:51:31 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4DC753.1090502@ieee.org>
Source record: 124546

J. Harvey wrote:
> "OC_CAM's Razor"
>>I got the TV show. That's all I need to get.
>
> Wow, takes a brave man to make that admission in public.

Needs vary. I've already got all I needed to get.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3508. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 07:43:32 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302142343.24327838@posting.google.com>
Source record: 124547

Quahog <quahog@localnet.com> wrote in message news:<v4ref04jq2bs5d@corp.supernews.com>...
> Zoran Brlecic <...WA7AA...@get.lost> wrote in
> news:3E4DB2CB.5060004@get.lost:
>
> > Harold Burton wrote:
> >
> >>>Those of us who have not seen Nagasaki or Hiroshima need to be told.
> >>>Some people think of actually using those things again.
> >>>H.
> >>>NQ5H
> > Yeah, it's amazing how enthusiastic some people are about using
> > nuclear weapons when they know it won't be them scraping their
> > children's burnt remains from the bricks that used to be their city.
> >
> > But, hey, God's on our side and he doesn't frown on little genocide
> > here and there...
> >
> >
> > WA7AA
> >
>
> My Dad was stationed on Guam in 1945. Had Truman not had the cojones to
> drop the Big One, he would have been yanked out of the kitchens and handed
> a rifle to be part of the invasion of the home islands. I may be here
> because of the bomb. Thank God for Truman, even if he was a democrat...
>
> KB1GEJ

There is really no doubt dropping the bomb quickened the end of the
war. But is isn't a pretty sight to see. But, on the other hand, they
started the whole mess with Pearl Harbor. My grandfather was on the
USS Canotia in the pacific in 44-45.
http://www.multied.com/Navy/Tender/Canotia.html
They were in Guam at one time. They went to quite a few islands out in
that area. Hawaii, Eniwetok , Iwo Jima, Carolinas, Solomon, etc...I've
got a few postcards that he sent at certain times. One was from Hawaii
in Nov 44. I was just looking at them to make sure I had the ship name
right.
My dad was only 10 years old at that time. "1944" . He was in the
Marine Corps when I was born in 1956. MK

3509. Re: Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 10:09:00 UTC
From: Maarten Hagg <maartenmiriam@hetnet.nl>
Message-ID: <b2l3lm$a7a$1@reader11.wxs.nl>
Source record: 124548

Hi Emory,

Maybe this is something?

http://home.hetnet.nl/~maartenmiriam/index.html

Active loop antenna for receiving only. (diameter about 1 meter)

Bandwith 10kHz - 30MHz. (5kHz - 80Mhz with some less specs)
IM2 - 108 dBc
IM3 - 148 dBc
IP2 + 90 dBm
IP3 + 50 dBm
1dB comp point > +25dBm
Noise floor @ bandwith 2.2kHz (SSB) about 500nV or -110dBm.

Price ~ Euro 249,-

With Regards, Maarten

"EBrown2841" <ebrown2841@aol.com> wrote in message
news:20030214122632.02960.00000523@mb-mn.aol.com...
> I would like to receive comments from those of you who have had personal
> experience with the magnetic loop antenna. I am now living on a small lot
and
> am using a mobile screwdriver antenna with radials (High Sierra) at the
> present but am intrigued with the loop and have been toying with the idea
of
> buying the MFJ-1786 which covers 10-30 MHz. I'm wondering if it would be
worth
> the investment, both financially and performance wise. Thanks.
>
> Emory Brown, KD2DN/4
> EBrown2841@aol.com

3510. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 10:48:58 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2l5uq$q0k$1@helle.btinternet.com>
Source record: 124550

>
> Sounds like it's just a really short mast. :-)

LOL.

I do wonder sometimes - very few people really understand anything about antennas (myself included) and that's something I'm sure a lot of manufacturers take advantage of.

You may well be right. No such thing as a free lunch eh?!

>
> 73 ac6xg

73 M3DPE

3511. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 10:48:58 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2l5uq$q0k$2@helle.btinternet.com>
Source record: 124551

Thanks - you have it in a nutshell.

And the reasons why:-

1. Mobiles are thinner and less conspicuous.

2. They have no ground radials making them even less conspicuous.

I am in the top flat with access to the roof. I have plenty of height and want to take advantage of it. I currently have a j-pole which gets me all the repeaters within about 25 miles and good local range comms within about 15 miles, but I want to get into some of the action which I'm just out of range from. I want to use the height I have.

Perfect antenna would be a very discrete 5/8 over 5/8 collinear. The mobiles ones are perfect. Ideally, I would mount this right on top of the roof and put a home-made ground plane just under the roof, using the interior roof line of the attic.

D

"K7JEB" <k7jeb@arrl.no_spam.net> wrote in message
news:ir83a.52570$zF6.3507731@bgtnsc04-news.ops.worldnet.att.net...
> I think you two (Elwood and Stevens) were just talking
> past each other in this series of rapid-fire exchanges.
>
> It sounds to me like Dean Elwood is looking for a
> stealth VHF/UHF antenna that can be permanently
> mounted on top of a house, not a mobile HF antenna
> for his auto.
>
> Dean, have a look at the VHF/UHF antennas at:
>
> http://www.ventenna.com/
>
> Their product looks like a somewhat longish vent
> pipe (and is mounted atop one).
>
> As far as tuning a VHF/UHF antenna for lowest
> SWR, an antenna analyzer is best, but reasonable
> results can be had with a low-cost SWR meter and
> an HT for an RF source.
>
> Jim, K7JEB
>
>

>

3512. Re: Mobile antenna as base antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 10:48:59 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2l5uq$q0k$3@helle.btinternet.com>
Source record: 124549

That will not be any better than my slim-jim (both unity gain).

Out of interest though, what is a reefer?!!

"Dean Arthur" <dearthur@silverstar.com> wrote in message
news:3E4D79FE.F7C341DF@silverstar.com...
> Put a quarter wave mag mount on your reefer. That will do fine for
> repeaters within 20-50 miles with 5-watts unless you're buried in high
> rise buildings.
>

3513. Re: Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 11:22:08 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <te8s4vg7691kn9ol4nik83rnkise7dpscj@4ax.com>
Source record: 124552

On 14 Feb 2003 17:26:32 GMT, ebrown2841@aol.com (EBrown2841) wrote:

>I would like to receive comments from those of you who have had personal
>experience with the magnetic loop antenna. I am now living on a small lot and
>am using a mobile screwdriver antenna with radials (High Sierra) at the
>present but am intrigued with the loop and have been toying with the idea of
>buying the MFJ-1786 which covers 10-30 MHz. I'm wondering if it would be worth
>the investment, both financially and performance wise. Thanks.
>
>Emory Brown, KD2DN/4
>EBrown2841@aol.com

Hi Emory,

I've use small transmitting loops here many times and while they won't
beat out a good dipole they do quite well for such a small antenna.
If you can find or build the Cap. You can save alot of money .. I've
built two of them and they worked great.. Band width is very small a
few KHZ at a time but constanly tuneable over 10:1 frequecy range.

They work good as Quiet RX Antennas.

For DX your Vertical will have a little edge I would think.

You can find out all you want by doing a GOOGLE Search for Magnetic
Loop antennas , or Small Transmitting Loops.
73 Dave

3514. Re: Beam v. Vertical: Which causes more interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 12:24:04 UTC
From: Terry <ve1trb@hotmail.com>
Message-ID: <Ljq3a.1089$cB3.12758@nnrp1.uunet.ca>
Source record: 124553

I have a beam (Cushcraft A3s) up 50 feet, and a vertical (Cushcraft AV5) on the ground and have no reported problems with either. I tend to think whichever way you decide to go, the further away from possible problems the better, and the further away from anything metal (sheds etc) that may resonate the better too.
Hope this is useful.

Terry VE1TRB

"fch" <na@hle.com> wrote in message news:3E4DADF3.AB68BC25@hle.com...
> Anyone have a beam up around 25 ft
> and a ground mounted vertical?
>
> Is the beam a lot less likely to cause interference
> to household devices (and neighbors) than the
> ground mounted vertical?
>
> Especially at about 400 w?
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.449 / Virus Database: 251 - Release Date: 1/27/2003

3515. Line Of Sight Propagation Type Question: From A Newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 13:23:20 UTC
From: Robert11 <rgsrose@tiac.net>
Message-ID: <b2let3$7pf$1@slb3.atl.mindspring.net>
Source record: 124554

Hi,

New at this, and have a really basic type of question.

Was wondering a bit about modes, and Line Of Sight propagation.

I understand that the curvature of the earth limits what you can receive
from, e.g., a fm antenna
at a given height. So, that's the reason I guess I can't receive any police
calls from Philadelphia if
I live in Boston.

But, was wondering:

Is this also mode dependent?
Is it just as true for am as it is for fm?

The reason I'm asking is that I wonder why I CAN receive two way aero
conversations from Gander.

The plane transmits over a pretty wide cone angle I would think, so that's
probably why I can receive it in Boston.

But, why can I also receive what being transmitted From Gander to the plane?
Wouldn't line of sight apply here also, and prohibit my receiving it in
Boston?

The frequencies in question are around 133 MHz (AM), so wouldn't LOS
limitations apply too?

Or, is it that being am, LOS doesn't really apply, and the "133 MHz high
freq." am "bounces" off the ionospheric layers like
the low am frequencies do?

Thanks,
Bob

3516. Re: Line Of Sight Propagation Type Question: From A Newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 13:59:23 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4E47BB.678AD3A4@cwis.net>
Source record: 124555

Bob,
Propagations does not depend on the mode of
transmission. Some modes of transmission are
affected by propagation more than others, though.
I would imagine that you are able to hear the
aircraft because of it's altitude. The land based
transmitter, I have no idea why you're hearing it,
primarily because I don't know where it is in
relation to Boston. The FAA has the capability of
transmitting from various locations other than the
originating station's (remote transmitters). At
least that's one explanation...
'Doc

3517. Re: receive antenna spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 14:02:31 UTC
From: Joe O <jenjoeo@zianet.com>
Message-ID: <3e4e4b54$1@news.zianet.com>
Source record: 124556

I suggest you install a relay to open up the receive only antenna when transmitting. I have a 350 ft beverage up 5 ft and it picks up enough transmitted RF to brightly illuminate a 12 volt bulb. My low band transmitting vertical is 70 ft away from the beverage.

Joe O, KI5FJ

"Larry D. Clark" <buddycl@swbell.net> wrote in message news:VGg3a.106$Dy5.70575120@newssvr12.news.prodigy.com...
> i'm running an icom 756-pro i want to experiment
> with using a separate receive antenna(via ant 1 and 1/r button)
> in conjunction with a shunt fed tower on 160m.
> any sage words of wisdom on the minimum
> separation between them when running around 750watts?
>
> larry
> kd5foy
>
>

3518. Re: Line Of Sight Propagation Type Question: From A Newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 14:18:48 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E4E4C0F.1CF526A1@attbi.com>
Source record: 124557

The effective line of sight from 40,000 feet is approximately 280 miles.
A little height on the receiving antenna can push it to 300 miles.

The are other propagation modes that MAY enter into the LOS propagation.
They are called DUCTING.

If there is a weather front in the area the difference in baro pressure,
or a difference in humidity levels, or a difference in local atmospheric
dielectric constant, a sharp difference in temperature, a cloud front,
all make a discontinuity that can support VHF and UHF signals. These
conditions can allow propagation up to several thousand miles but it is
intermittent propagation.

Additionally, there may be some sporadic E. But if I recall correctly,
133 MHz would be at the upper limits of Sporadic E.

If we have a VHF propagation expert on board [s]he may be able to shed
more light on this.

73,

Deacon Dave, W1MCE
+++

Robert11 wrote:
>
> Hi,
>
> SNIP
>
> Was wondering a bit about modes, and Line Of Sight propagation.
>
> I understand that the curvature of the earth limits what you can receive
> from, e.g., a fm antenna
> at a given height. So, that's the reason I guess I can't receive any police
> calls from Philadelphia if
> I live in Boston.
>
> But,

SNIP

> The reason I'm asking is that I wonder why I CAN receive two way aero
> conversations from Gander.
>
> The plane transmits over a pretty wide cone angle I would think, so that's
> probably why I can receive it in Boston.

>
> But, why can I also receive what being transmitted From Gander to the plane?
> Wouldn't line of sight apply here also, and prohibit my receiving it in
> Boston?
>
> The frequencies in question are around 133 MHz (AM), so wouldn't LOS
> limitations apply too?

SNIP

> Thanks,
> Bob

3519. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 14:20:52 UTC
From: "J. Harvey" <JM002.Harvey_ANT|*SPAM_@Sympatico.ca>
Message-ID: <41s3a.1338$bU6.192922@news20.bellglobal.com>
Source record: 124558

"Bill, W7TI"
> You could not have written a more powerful admission
> that I was right. ... Sorry that you'll be busy deleting your
> website, revamping theories, withdrawing articles, etc.

Bill, my lack of response to your previous posting is simply because it has become obvious that you display the following characteristics:

1) You're rude, surly and quick to launch insults (why?).
2) You've display a complete lack of basic reading comprehension skills.
3) You're apparently incapable of understanding the subject.

There's no point in trying to make you understand. I'm giving up because you are simply not worth the effort.

The article, its fairly trivial logic, and its conclusions are fine - even if you can't grasp them.

Those that do understand the written version of english will see that your critcisms are based on your lack of understanding of the key concepts.

If you really think that there are serious problems with the article, then why don't you write a detailed rebuttal and post it up on the web somewhere. Perhaps, if your ideas are correct, then your new website will rise to #1 on Google on a search of related key words. Perhaps your article will be published by a national Mensa magazine. Perhaps a flock of penguins will land on Mars.

3520. Re: 40/15 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 14:29:15 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <qijs4vkb9u2de9vns1fstquqkn1fc7i6nf@4ax.com>
Source record: 124559

On 15 Feb 2003 04:01:01 GMT, ann7how@aol.com (ANN7HOW) wrote:

>I have found that fundamental and 3rd harmonic horizontal HFantennas work just
>fine if one is willing to accept the pattern on the 3rd harmonic. I have never
>tried a vertical. Has anybody had any experience with one? Anybody had
>experience with 2m/0.7m vertical? Hal, W9UYA

well, hal, i "discovered", quite by accident, that my 2m ringo ranger
works very well on 70cm as well. i've had it for 25 years (acquired
it from a friend who tells me it is not a dual-band ringo) but just
recently put 70cm in the shack. thought...what the heck, gave it a
try and was floored when the swr was flat and i was able to hit my
favorite systems.

73,
rich, n9dko

3521. Re: Line Of Sight Propagation Type Question: From A Newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 14:30:35 UTC
From: "J. Harvey" <JM002.Harvey_ANT|*SPAM_@Sympatico.ca>
Message-ID: <bas3a.1339$bU6.194338@news20.bellglobal.com>
Source record: 124560

"Robert11"
> I live in Boston. ...why can I also receive
> what being transmitted From Gander to
> the plane?

Perhaps you're hearing a remote base that is linked by a leased telephone
line back to Gander.

http://www.canairradio.com/acc.html
about halfway down the page.

3522. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 14:57:19 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932346C099635pookster@216.168.3.50>
Source record: 124561

"J. Harvey" <JM002.Harvey_ANT|*SPAM_@Sympatico.ca> wrote in
news:41s3a.1338$bU6.192922@news20.bellglobal.com:

> Bill, my lack of response to your previous posting is simply because
> it has become obvious that you display the following characteristics:
>
> 1) You're rude, surly and quick to launch insults (why?).

Guilty as charged. The reason is because I hate junk science which
masquerades as the real thing. People like you give real science a bad
name. Throughout history there have been charlatans who beat the drums
for some phony cause and you are one of them.

> 2) You've display a complete lack of basic reading comprehension
> skills.

And you accuse me of being "rude, surly and quick to launch insults"?
What do you call the above? I can read as well as anyone, including you,
and you know it. What you are having a problem with is not my reading
skills, it's the conclusions I draw from reading your stuff. Call a
spade a spade, fer chrissakes.

3) You're apparently incapable of understanding the subject.

Wrong again. I'm incapable of agreeing with *your* understanding of the
subject. I understand it just fine. More of your flawed logic.

> There's no point in trying to make you understand. I'm giving up
> because you are simply not worth the effort.

The charlatan knows he's been found out.

> The article, its fairly trivial logic, and its conclusions are fine -
> even if you can't grasp them.

Surly.

> Those that do understand the written version of english will see that
> your critcisms are based on your lack of understanding of the key
> concepts.

Rude.

> If you really think that there are serious problems with the article,
> then why don't you write a detailed rebuttal and post it up on the web
> somewhere.

I might do that. I'd be serving the cause of real science, wouldn't I?
If I do, would you add a link to it in your article? I'd certainly have

a link to yours in mine. Think your answer over carefully; searchers for truth will answer one way, charlatans another.

>Perhaps, if your ideas are correct, then your new website
> will rise to #1 on Google on a search of related key words.

No, that won't happen because most people see through your arguments and don't really need to research it further. I cite Scientific American and Discovery magazine as examples.

> Perhaps
> your article will be published by a national Mensa magazine.

Only ordinary intelligence is required to uncover the flaws in the Eve Hypothesis, nothing like true Mensa capabilities. Mensans have larger fish to fry.

> Perhaps
> a flock of penguins will land on Mars.

The next Mars lander may indeed carry some version of Linux.

--
Bill, W7TI

3523. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 15:42:24 UTC
From: "J. Harvey" <JM002.Harvey_TRIM*THIS_@Sympatico.ca>
Message-ID: <wdt3a.33466$ns3.995960@news20.bellglobal.com>
Source record: 124562

"Bill, W7TI" <jamspam@upyours.now>

Regarding rudeness - you came out 'guns a blazing' from your first posting.
You're basically a rude old bugger. That is obvious to all.

> If I do, would you add a link to it in your article?

Yes. Allow up to one month in case I'm busy or away on business. Hint -
you may want to revisit the concept of MLER before you embarrass yourself.
Your previous posting (the one that I have ignored) is ridiculous and
founded on ignorance.

> Only ordinary intelligence is required to uncover
> the flaws in the Eve Hypothesis, nothing like true
> Mensa capabilities.

Just to be clear - you understand that the point of my article is to point
out the flaws in the Eve Hypothesis ? I'm *not* in favour of the basic Eve
Hypothesis because it can be shown to be *inevitable* through simple logic -
therefore the whole theory is not as interesting as some people might think.

> Mensans have larger fish to fry.

I *am* a Mensan (though not an active member right now), but I don't like
fried fish.

3524. Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 16:15:18 UTC
From: Casper Gripenberg <casper_cg@hotmail.com>
Message-ID: <b2lp2m$gc1$1@phys-news1.kolumbus.fi>
Source record: 124563

I hope this isn't too off topic. I couldn't figure out where else to post. Can anyone identify what type of an antenna this is?

http://zoidberg.homeip.net/alien

..unfortunately my webcam is a little bit low on zooming capability, but the shapes in the antenna remind me of something from the 60-70's. It has 6 'donuts' on top of each other. In between the donuts there is a metal net surrounding the 'core'. The core contains some shaped metal pieces, but you can still see through it.

Can't really describe it any better than that. I can see one grounding wire connected to the side of the pipe, and two wires coming off the bottom end of the pipe. Just guessing, but one looks like the power cord and the other looks like a shielded wire..

Any ideas?

Thanks..

Casper

3525. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 16:24:41 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93235590C236Bpookster@216.168.3.50>
Source record: 124564

"J. Harvey" <JM002.Harvey_TRIM*THIS_@Sympatico.ca> wrote in
news:wdt3a.33466$ns3.995960@news20.bellglobal.com:

> Your previous posting (the one that I have ignored) is ridiculous and
> founded on ignorance.

If you ignored it, how do you know what's in there? Guessing? This is
just more evidence of your flawed logic (as if more were needed).

> Just to be clear - you understand that the point of my article is to
> point out the flaws in the Eve Hypothesis ? I'm *not* in favour of
> the basic Eve Hypothesis because it can be shown to be *inevitable*
> through simple logic - therefore the whole theory is not as
> interesting as some people might think.

Say what?

Maybe you're right about my reading comprehension. The above sounds
like it was written by me, not you. Did Jesus suddenly convert to Islam?

And I am going to hold you to your promise about including the link.
That is, if I ever get around to it, which I probably won't. Yawn.

--
Bill, W7TI

3526. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 16:36:59 UTC
From: "J. Harvey" <JM002.Harvey_TRIM*THIS_@Sympatico.ca>
Message-ID: <H0u3a.35867$Ww1.996985@news20.bellglobal.com>
Source record: 124565

>> Just to be clear - you understand that the point of my article
>> is to point out the flaws in the Eve Hypothesis ? I'm *not*
>> in favour of the basic Eve Hypothesis because it can be shown
>> to be *inevitable* through simple logic - therefore the whole
>> theory is not as interesting as some people might think.

"Bill, W7TI"
> Maybe you're right about my reading comprehension.
> The above sounds like it was written by me, not you.

<smirk> Peace brother. Sorry if I got mad.

3527. Re: Line Of Sight Propagation Type Question: From A Newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 17:05:34 UTC
From: JohnB <john.g8ozh@freeuk.co.uk>
Message-ID: <1045328890.29918.0@iris.uk.clara.net>
Source record: 124566

"'Doc" <w5lz@cwis.net> wrote in message news:3E4E47BB.678AD3A4@cwis.net...
> Bob,
> Propagations does not depend on the mode of
> transmission. Some modes of transmission are
> affected by propagation more than others, though.
> I would imagine that you are able to hear the
> aircraft because of it's altitude. The land based
> transmitter, I have no idea why you're hearing it,
> primarily because I don't know where it is in
> relation to Boston. The FAA has the capability of
> transmitting from various locations other than the
> originating station's (remote transmitters). At
> least that's one explanation...
> 'Doc

Here in UK there is a network of transmitter sites operated remotely by air traffic controllers located in a central facility. The controller in London may well be speaking to an aircraft off the north west coast of Scotland or west of Lands End etc. via a transmitter in that area although he would be identified as 'London ATC'. I would guess that in USA a similar system is in use. If you are within 20 miles or so of one of these sites you would probably receive a good noise free signal.

Hope this helps,

JohnB

3528. wtb th11,kt34xa,x-9

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 17:21:28 UTC
From: lemwnash@aol.com
Message-ID: <20030215122128.21544.00001244@mb-mu.aol.com>
Source record: 124567

want new in box

3529. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 17:30:09 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4E7921.C088F7A4@cwis.net>
Source record: 124568

Casper,
Might not be an antenna...
'Doc

3530. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 18:13:32 UTC
From: richardharrison@webtv.net
Message-ID: <14899-3E4E834C-74@storefull-2318.public.lawson.webtv.net>
Source record: 124619

Bill, W7TI wrote:
"I just don`t see how all those lines had to converge."

During innumerable generations, lines of descendency become extinct. "If your mother didn`t have any children, chances are you won`t either." Each time this happens, there are fewer first generation progenitors with survivors.

After many generations (Jeff mentioned 80) only one great-grandmother of the species remains as the mother of all descendents. Jeff says it`s mathematically inevitable, and so it seems to me, too.

I had another view which drew the same conclusion but won`t confuse things by offering it now. I think the logic above is just a restatement of Jeff`s idea.

Best regards, Richard Harrison, KB5WZI

3531. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 18:57:26 UTC
From: richardharrison@webtv.net
Message-ID: <16137-3E4E8D96-134@storefull-2312.public.lawson.webtv.net>
Source record: 124622

Art, KB9MZ wrote:
"---no real barrier or scientific fact that would suggest that use of a random length could not be as successful as any other radiator".

Certainly OK if you are completely free to adjust the length, configuration, and placement of the "random" wire.

Every antenna is directional. The isotropic source is fictional. Directionality is a function of wire lengths and placements.

With random wire, results are random.

Best regards, Richard Harrison, KB5WZI

3532. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 19:03:53 UTC
From: "Larry D. Clark" <buddycl@swbell.net>
Message-ID: <taw3a.89$M%3.141215954@newssvr11.news.prodigy.com>
Source record: 124620

storm sirens

larry
kd5foy

"Casper Gripenberg" <casper_cg@hotmail.com> wrote in message
news:b2lp2m$gc1$1@phys-news1.kolumbus.fi...
>
> I hope this isn't too off topic. I couldn't figure out
> where else to post. Can anyone identify what type of
> an antenna this is?
>
> http://zoidberg.homeip.net/alien
>
> ..unfortunately my webcam is a little bit low on
> zooming capability, but the shapes in the antenna
> remind me of something from the 60-70's. It has
> 6 'donuts' on top of each other. In between the
> donuts there is a metal net surrounding the 'core'.
> The core contains some shaped metal pieces, but
> you can still see through it.
>
> Can't really describe it any better than that. I
> can see one grounding wire connected to the side
> of the pipe, and two wires coming off the bottom
> end of the pipe. Just guessing, but one looks like
> the power cord and the other looks like a shielded
> wire..
>
> Any ideas?
>
> Thanks..
>
> Casper
>

3533. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 19:11:32 UTC
From: Casper Gripenberg <casper_cg@hotmail.com>
Message-ID: <b2m3d4$4s3$1@phys-news1.kolumbus.fi>
Source record: 124621

In article <3E4E7921.C088F7A4@cwis.net>, 'Doc <w5lz@cwis.net> wrote:
>Casper,
> Might not be an antenna...
> 'Doc

Right. Good point :) Just didn't have any other ideas.
Things that came to mind was one of those aerial attack
sirens..or perhaps some measuring instrument. Hmm. Kind
of bulky for an antenna I have to admit...oohkey..back to
the drawing board..

Casper

3534. test

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 19:18:15 UTC
From: usandthem@ij.net
Message-ID: <5i4t4vkcg8tsvg73v1696a4ceva56fsrd5@4ax.com>
Source record: 124627

1234

3535. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 19:21:38 UTC
From: Jackie <buzzygirl@REMOVETHIS.attbi.com>
Message-ID: <6rw3a.125507$Ec4.100932@rwcrnsc52.ops.asp.att.net>
Source record: 124623

"Casper Gripenberg" <casper_cg@hotmail.com> wrote in message
news:b2lp2m$gc1$1@phys-news1.kolumbus.fi...
>
> I hope this isn't too off topic. I couldn't figure out
> where else to post. Can anyone identify what type of
> an antenna this is?
>
> http://zoidberg.homeip.net/alien

Hmm... living in one of the Great Plains states as I do, this looks like a civil defense/storm warning siren. They are all over the tops of buildings around here.

Jackie

3536. Re: Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 19:30:27 UTC
From: norbert <pa7nrNOSPAMMM@hotmail.com>
Message-ID: <1045337597.237846@halkan.kabelfoon.nl>
Source record: 124624

"EBrown2841" <ebrown2841@aol.com> schreef in bericht
news:20030214122632.02960.00000523@mb-mn.aol.com...
> I would like to receive comments from those of you who have had personal
> experience with the magnetic loop antenna. I am now living on a small lot
and
> am using a mobile screwdriver antenna with radials (High Sierra) at the
> present but am intrigued with the loop and have been toying with the idea
of
> buying the MFJ-1786 which covers 10-30 MHz. I'm wondering if it would be
worth
> the investment, both financially and performance wise. Thanks.
>
> Emory Brown, KD2DN/4
> EBrown2841@aol.com

I got very good results with magnetic loop antenna's. I use the AEA Isoloop
and the MFJ1788 magnetic loop. For me it was worth the investment as it
gave the best results out of all the antenna experiments I did here on my
balcony. Check my homepage to see some pictures.

--
73, norbert (pa7nr)
homepage : http://www.qsl.net/pa7nr/index.html

3537. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 19:51:15 UTC
From: Jim <kg4enu@carolina.rr.com>
Message-ID: <sf6t4vgsu27ajl67esrllgudnbdq6ullc8@4ax.com>
Source record: 124625

looks like a bug zapper to me. look for lawn chairs in the area

On Sat, 15 Feb 2003 16:15:18 +0000 (UTC), Casper Gripenberg
<casper_cg@hotmail.com> wrote:

>
>I hope this isn't too off topic. I couldn't figure out
>where else to post. Can anyone identify what type of
>an antenna this is?
>
>http://zoidberg.homeip.net/alien
>
>..unfortunately my webcam is a little bit low on
>zooming capability, but the shapes in the antenna
>remind me of something from the 60-70's. It has
>6 'donuts' on top of each other. In between the
>donuts there is a metal net surrounding the 'core'.
>The core contains some shaped metal pieces, but
>you can still see through it.
>
>Can't really describe it any better than that. I
>can see one grounding wire connected to the side
>of the pipe, and two wires coming off the bottom
>end of the pipe. Just guessing, but one looks like
>the power cord and the other looks like a shielded
>wire..
>
>Any ideas?
>
>Thanks..
>
>Casper

3538. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 19:54:14 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <3v4t4vkhg5doiffiscm7d0u30nbafvp3og@4ax.com>
Source record: 124626

On Thu, 13 Feb 2003 19:01:52 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>Roger:
>
>Thanks for those inputs.

You're quite welcome.

>
>My location here on the Florida barrier island is about 400 - 500 feet
>from the Atlantic Ocean beach about 20 miles South of Cape
>Canaveral, FL. As ya'll know, the probablility at this location is that
>from time to time we will get really big windstorms.

I've been there. The terrain and weather are a tad different than what
I'm currently seeing. Visibility is about 1/4 mile with blowing snow.

The antenna system here:
http://www.rogerhalstead.com/tower.htm (takes a while to load)
has an entirely different set of hazards <:-))

>
>The long term windstorm "strategy" for residents on the barrier island
>is to "button up" homes and evacuate to the mainland in the event of a
>windstorm approach.
>
>I'd like to be able to "button up" my tower and antennas quickly before I
>leave the island. At that time of "buttoning up" there might already be
>quite
>a substantial wind already blowing, say 30 - 40 mph.

If you have everything organized you should be able to crank down and
lay down a good size tower.
I'm not so sure I'd use a house bracket, but more likely I'd use a
heavy steel post with a winch and pulley arrangement, so I could crank
the tower down, then lay it over.

My self, I think I'd want to be able to remove the antenna and anchor
it to a pad of some type and then lay the tower down flat.

One thing you will find, is a self standing tower of even 60 feet
requires one whale of a concrete block under it. Particularly when it
is set in coral sand, or any sand for that matter.

Mine is designed for 90 MPH survival with a hefty safety factor built
in. Up here, if we make much over 90 the tower and antennas are going

to be the least of my worries.

BTW, a few years back we had severe thunderstorm warnings and a Tornado watch. I was working as net control on the Midland 147.00 repeater (regional).

I had the HT out in the back yard so I could get a better view of the sky. One of the guys on the net was logging stations and locations for me. It appeared as if most of the storm had passed us, but it was getting really windy. I was actually leaning at a pretty good angle to hold my position. I saw my neighbor's wife head across their yard to catch something and it was as if she had hit a wall. She just could not go any farther.

At this point, my wife, company, friends, and a number of the neighbors were down in our basement.

Then I heard some snapping and cracking along with a rushing sound. I looked up to see branches coming out of the tops of the trees and spiraling up into the cloud base (which was only a couple hundred feet). That small ditch between us and the neighbors was beginning to look pretty good, mud and all. Then I was standing in a calm spot. All around I could see the brush and tops of the trees shedding limbs up to about an inch in diameter, but not a breath of wind where I was standing. (I edged over to the side of the ditch!). Then it was gone.

However, about 400 yards east of me it twisted to entire top out of an old Oak tree. The tree was over 2 feet in diameter where it twisted off.

BTW, my tower was directly in its path, but suffered no damage nor did the antennas.

What I had experienced was basically a little F-1 clear air vortex (it wasn't picking up enough trash to make the funnel visible)

>
>My plan is to try to arrange a tower setup so that I can take it all down
>quickly during those incipient winds, at least into a lower or ground
>staked configuration that can then potentially withstand 110 - 140 mph,
>and to be able to do this all by myself whenever an island evacuation is
>called for by the authorities. [by quickly I mean tower and antenna
>takedown in an hour or so]

With a bit of planning and proper construction I see no reason why you couldn't do that.
>
>My questions are:
>
>Is this right? Does this make sense? Is it feasible?

It seems that way to me, It does to me, and to me it would be.

Good Luck,

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

3539. limp wire emulating telescoping antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 22:15:38 UTC
From: Dan Jacobson <jidanni@dman.ddts.net>
Message-ID: <87isvlmfc5.fsf@jidanni.org>
Source record: 124634
Cross-posted to: rec.radio.amateur.antenna,rec.radio.scanner

I've had great success replacing the telescoping antenna of my 48 Mhz cordless phone with an equivalent length of dangling limp insulated wire so I won't snap the antenna off again when walking in the woods with the phone in a fanny pack.

But now for the Icom R2 receiver with coverage from .5 to 1300 Mhz, I again plan to attach a limp wire. My question is what actions of coiling, bunching, looping, folding the wire will emulate changing the length of a telescoping antenna? Will I achieve my goal of being able to tailor my antenna to a particular frequency in an instant, while avoiding a rigid antenna sure to get bent?

I suppose the antenna will dangle down from a secure tie to my belt. If I somehow get the antenna caught, it will only yank my belt and not the radio... Perhaps I could even have the antenna 2 meters long with the first meter in a tight coil and the rest dangling down, with that first meter only extended for special occasions... or will that detract from regular performance?

In the bottom of the http://www.strongsignals.net/access/reviews/ of the R2, it is noted that there is a deep null in the 200Mhz band with the stock antenna provided, with a telescoping whip being the ultimate solution. With my limp wire I will do as good?
--
http://jidanni.org/ Taiwan(04)25854780

3540. practical antenna handbook--- none explained equations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 22:56:02 UTC
From: Xanax <keepItInTheNewsGroups@news.com>
Message-ID: <8yz3a.9834$V6.13266@news.indigo.ie>
Source record: 124628

Hi all,
I was wondering about the equation I saw in the PA handbook, regarding calculating the length of an antenna using the formula L=K/F
where L=length in ft
K is a constant
F is freq in Mhz
on page 260 of the fourth edition of PA handbook the example explains how to calculate the length of various elements in a yagi. But the value of K varies for each element and also the element spacing.

My question is What is K?
And how do I calculate K for any given frequency of operation?

Cheers
Xanax.

3541. Re: Antenna design Software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 23:00:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4EC67A.5000307@ieee.org>
Source record: 124630

Xanax wrote:
> Where can I get my hands on Antenna design software like EZNEC etc...

http://www.eznec.com
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3542. Antenna design Software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 23:01:09 UTC
From: Xanax <keepItInTheNewsGroups@news.com>
Message-ID: <XCz3a.9837$V6.13130@news.indigo.ie>
Source record: 124629

Where can I get my hands on Antenna design software like EZNEC etc...

Cheers
Xanax

3543. Re: Antenna design Software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 23:27:26 UTC
From: Gary <dodogrp@dodo.com.au>
Message-ID: <3e4eccda@news.comindico.com.au>
Source record: 124631

http://www.homestead.com/antennas/files/models.htm

Gary

"Xanax" <keepItInTheNewsGroups@news.com> wrote in message
news:XCz3a.9837$V6.13130@news.indigo.ie...
> Where can I get my hands on Antenna design software like EZNEC etc...
>
> Cheers
> Xanax
>
>

3544. Re: Antenna design Software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 23:34:01 UTC
From: Eskay <ve3juaNO@SPAMrac.ca>
Message-ID: <3E4ECE69.6010309@SPAMrac.ca>
Source record: 124632

4nec2 or MMANA.
Both freeware,look for them with Google..
73 de VE3JUA...

Xanax wrote:
> Where can I get my hands on Antenna design software like EZNEC etc...
>
> Cheers
> Xanax
>
>

3545. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-15 23:35:59 UTC
From: Henrik <henrik>
Message-ID: <3e4ecedd$0$228$edfadb0f@dread15.news.tele.dk>
Source record: 124633

"'Doc" <w5lz@cwis.net> wrote in message news:3E4E7921.C088F7A4@cwis.net...
>
>
> Casper,
> Might not be an antenna...
> 'Doc

It is an electric siren, used here for addressing the civil population in case of disasters....in essence a loudspeaker, which can be tested at frequencies above our hearing...and they are only tested with audio once a year here in Denmark.
They stack more elements for wider coverage.

H.

3546. Re: Antenna design Software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 01:17:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2moqk$75i$1@helle.btinternet.com>
Source record: 124635

A selection of small single-file programs, download in a few seconds, not zipped up, run immediately, user friendly, run on a what-if basis.

Read one-line descriptions of subject matter against list of click-on program names.
==========
Regards from Reg, G4FGQ
For FREE Radio Design Software
go to http://www.g4fgq.com
==========

> Where can I get my hands on Antenna design software like EZNEC etc...
>
> Cheers
> Xanax
>
>

3547. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 01:17:09 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2moql$75i$2@helle.btinternet.com>
Source record: 124636

"Henrik" wrote

> It is an electric siren, used here for >addressing the civil population in
> case of disasters ....

==========

. . . such as Denmark being invaded by a foreign army mounted on high-speed camels ?

;o) ;o) ;o) ;o) ;o) ;o)

3548. Re: practical antenna handbook--- none explained equations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 01:18:00 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <cFB3a.34988$ns3.1075523@news20.bellglobal.com>
Source record: 124637

"Xanax"
> L=K/F
> where L=length in ft
> K is a constant
> F is freq in Mhz
> My question is What is K?

K = 492 is a half wavelength, but this ignores end effect

K = 468 for a real world dipole *
K = 234 for a quarterwave monopole *

* Still might need trimming.

3549. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 01:40:05 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2mq5g$gc3$1@slb3.atl.mindspring.net>
Source record: 124638

Roger:

[snip]
"> The antenna system here:
> http://www.rogerhalstead.com/tower.htm (takes a while to load)
> has an entirely different set of hazards <:-))
[snip]

Wow, now that's a real antenna "project"!

Nice work.

I'll bet those babies can really squirt RF out there.

I don't have as much room out here on the barrier island as you seem to have at your QTH, and... because of the local high hurricane probability [they've been through here before and they will come again] I don't want to risk a tower
that remains standing when we evacuate to the mainland. Hence I'll be going with a crank-up tower and the limitations inherent in that kind of set up.

BTW... is that a hombrew antenna tuner on the shelf above your ICOM rig?

--
Peter K1PO
Indialantic By-the-Sea, FL.

3550. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 01:58:37 UTC
From: richardharrison@webtv.net
Message-ID: <25803-3E4EF04D-43@storefull-2316.public.lawson.webtv.net>
Source record: 124639

Reg wrote:
". . . such as Denmark being invadeed by an army on high-speed camels?"

Denmark is one of the nicest countries in the world. Last time I was there, those wonderful Danish women weren`t smoking Camels or Players either. They were smoking great big cigars, just like the Philipine women do.

Maybe these real women of the world can unite to smoke out all the terrorists before evil befalls.

Best regards, Richard Harrison, KB5WZI

3551. Re: Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 02:27:41 UTC
From: richardharrison@webtv.net
Message-ID: <25802-3E4EF71D-94@storefull-2316.public.lawson.webtv.net>
Source record: 124640

Norbert, PA7NR wrote:
'I get very good results with magnetic loop antennas."

Norbert has a very nice homepage with excellent pictures and a map showing where he is. If Norbert can`t get a good connection to the earth in Holland, there`s not much hope for the rest of us. He has a good collection of antennas all nicely contained in a small space to cover a wide frequency range right from his veranda. It`s well worth a look.

Best regards, Richard Harrison, KB5WZI

3552. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 02:48:39 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302151848.2759ae3e@posting.google.com>
Source record: 124641

'Doc <w5lz@cwis.net> wrote in message news:<3E4ADAAE.9A52965D@cwis.net>...
> Richard,
> As I understand it, frequency and wave length are
> just two ways of describing the same thing ('thing'
> in this instance is a scientific term used because
> I can't spell phenomenon, whatever). Sort of like
> saying 1 = 1. So if you disassociate wave length
> from frequency, then 1 = X, where 'X' does not equal
> 1. Yep, that's Art...
> 'Doc

Silly man, are the units the same ?
Art

3553. Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 03:19:29 UTC
From: "G. Watts" <gwatts@gb.nrao.edu>
Message-ID: <3E4F0341.4B3C24BF@gb.nrao.edu>
Source record: 124642

Greetings,
My Heathkit Cantenna rusted through the bottom of the can and dumped the oil all over the floor of the shack. I was using mineral oil so it wasn't as bad as it could have been, in the future I'll be putting the replacement can in a 2 gallon plastic bucket or something similar. I plan to get a replacement can from my friendly paint dealer.

I'd like to replace the oil with transformer oil as the thermal capabilities are better than mineral oil, any suggestions? I remember wayyyy back reading that some kinds of hydraulic oil are the same as transformer oil but sold under a different label, does anyone know of any brands or sources?

I've had my Cantenna for at least 15 years, and a search on google brings up a lot of Wi-Fi antennas called "Cantennas," it made me feel old.

73!
Galen, W8LNA

3554. Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 03:22:59 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <1rD3a.36224$RL1.14628@fe08.atl2.webusenet.com>
Source record: 124643

Have a quick question about RF grounding.

I know that using a RF ground is important. But can I get away with a poor(er) (a lot less then optimum) RF ground using Twinlead or ladder line feeding a dipole.

I feel that the answer is no, I still need a good RF ground for it to work properly and to keep from feeding fingers to the nasty RF beastie. Until the weather clears, warms up and dries out some, I can't get a good ground in.

I would consider an artificial ground, but I think I have pushed the money issue to the extreme. (Shirley is a Technician and does understand, but there is a limit.

TNX
--
73,
Chuck
KE4ETH
USA-NA

3555. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 03:27:13 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <%uD3a.36288$RL1.10045@fe08.atl2.webusenet.com>
Source record: 124644

"G. Watts" <gwatts@gb.nrao.edu> wrote in message
news:3E4F0341.4B3C24BF@gb.nrao.edu...
> Greetings,
> My Heathkit Cantenna rusted through the bottom of the can and dumped the
oil
> all over the floor of the shack. I was using mineral oil so it wasn't as
bad
> as it could have been, in the future I'll be putting the replacement can
in a
> 2 gallon plastic bucket or something similar. I plan to get a replacement
> can from my friendly paint dealer.
>
> I'd like to replace the oil with transformer oil as the thermal
capabilities
> are better than mineral oil, any suggestions? I remember wayyyy back
reading
> that some kinds of hydraulic oil are the same as transformer oil but sold
> under a different label, does anyone know of any brands or sources?
>
> I've had my Cantenna for at least 15 years, and a search on google brings
up
> a lot of Wi-Fi antennas called "Cantennas," it made me feel old.
>
> 73!
> Galen, W8LNA

Galen,

I have a friend that swears but using transmission fluid in a cantenna.
Says it work fine, becaause it is a high temp oil.

Hope this helps

--
73,
Chuck
KE4ETH
USA-NA

3556. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 03:37:35 UTC
From: richardharrison@webtv.net
Message-ID: <26998-3E4F077F-159@storefull-2314.public.lawson.webtv.net>
Source record: 124645

Peter, K1PO weote:
"What is the best reference for your dual polarization antenna?"

Terman`s 1955 opus, page 885:
"Consequently, to obtain strong radiation in directions approaching the horizontal using a horizontally polarized radiating system, it is necessary that the height of the antenna above earth be of the order of one wavelength or more."

When you have excellent earth conductivity, you generally do better at great distances by using vertical polarization. Its reflection isn`t shorted out by the earth at low elevation angles as happens with the strong reflection from excellent conduction surrounding a horizontally polarized antenna. This redirects the energy towards the zenith with horizontal polarization.
Reflection from a vertically polarized antenna is in-phase at low elevation angles and contributes positively to signals at low angles. Don`t waste any of your signal on horizontal polarization unless you are at really high frequencies where 60 feet is wavelengths.

Best regards, Richard Harrison, KB5WZI

3557. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 03:59:05 UTC
From: richardharrison@webtv.net
Message-ID: <26999-3E4F0C89-49@storefull-2314.public.lawson.webtv.net>
Source record: 124646

Art, KB9MZ wrote:
"Silly man, are the units the same?"

No, frequency is in cycles per second. Wavelength is in meters per cycle. But frequency and wavelength are related by propagation velocity (V).

V = (frequency)(wavelength)

If you double frequency, you must halve wavelength because V is normally a constant.

Frequency and wavelength are reciprocals just as resistance and conductance are reciprocals. When one goes up the other goes down in the same proportion.

Best regards, Richard Harrison, KB5WZI

3558. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 04:20:14 UTC
From: Quahog <quahog@localnet.com>
Message-ID: <v4u4buaqha1e6e@corp.supernews.com>
Source record: 124647

Jim <kg4enu@carolina.rr.com> wrote in
news:sf6t4vgsu27ajl67esrllgudnbdq6ullc8@4ax.com:

> looks like a bug zapper to me. look for lawn chairs in the area

Naahhh... them's birdhouses.

Q

3559. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 04:32:03 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3E4F1443.7020009@comcast.net>
Source record: 124648

Put a sheet metal screw in the fittings. The thing could be soldered on
the cookstove but you would need solder!
Les, AA4F
Plumber!

Benny Miller wrote:
> I am trying to find ideas for creating a 1/2" copper tube J-Pole that does
> not use solder. I have the tubing and the caps and the T & L connectors.
> Is there a way that I could put the whole thing together with out having to
> solder any of the pieces together? I am a super poor college student
> (living on loans) and i do not want to spend (nor do i have) the money to
> purchase a butane-type torch to solder the connections. I do have a little
> hobby soldering iron (pen style not gun) that doesn't seem to generate
> enough heat to get the solder flowing. Could I use aluminum foil around the
> connections to make them tight and then just wrap electrical tape around the
> connections? Any suggestions would be well used.
> 73
> Benny
> KC8TRN
>
>

3560. Re: 40/15 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 04:44:11 UTC
From: Leland Cox <lcox107@comcast.net>
Message-ID: <3E4F171B.5010608@comcast.net>
Source record: 124649

The third harmonic of an antenna has some serious dead spots and major
lobes.
A ringo will work on the third harmonic with a low swr but the signal
must go straight up. I tried using a ringo on 450 with little luck on
the local repeaters.
I solved this problem by putting a 1/4 wave length of wire (Abt 4.5") at
the feed point of the ringo. This works so much better! It didn't seem
to interfere with two meter operation.

A vertical working on the third harmonic has lobed that go up on about a
45 Deg angle. This goes right over local stations. You can find more
about this in the ARRL Handbook!
Les, AA4F

Rich wrote:
> On 15 Feb 2003 04:01:01 GMT, ann7how@aol.com (ANN7HOW) wrote:
>
>
>>I have found that fundamental and 3rd harmonic horizontal HFantennas work just
>>fine if one is willing to accept the pattern on the 3rd harmonic. I have never
>>tried a vertical. Has anybody had any experience with one? Anybody had
>>experience with 2m/0.7m vertical? Hal, W9UYA
>
>
> well, hal, i "discovered", quite by accident, that my 2m ringo ranger
> works very well on 70cm as well. i've had it for 25 years (acquired
> it from a friend who tells me it is not a dual-band ringo) but just
> recently put 70cm in the shack. thought...what the heck, gave it a
> try and was floored when the swr was flat and i was able to hit my
> favorite systems.
>
> 73,
> rich, n9dko
>

3561. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 07:06:51 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ZSFg9aALizT+EAa3@ifwtech.co.uk>
Source record: 124651

Leland Cox wrote:
>Put a sheet metal screw in the fittings. The thing could be soldered
>on the cookstove but you would need solder!
>Les, AA4F
>Plumber!
>
>Benny Miller wrote:
>> I am trying to find ideas for creating a 1/2" copper tube J-Pole that does
>> not use solder. I have the tubing and the caps and the T & L connectors.
>> Is there a way that I could put the whole thing together with out having to
>> solder any of the pieces together? I am a super poor college student
>> (living on loans) and i do not want to spend (nor do i have) the money to
>> purchase a butane-type torch to solder the connections. I do have a little
>> hobby soldering iron (pen style not gun) that doesn't seem to generate
>> enough heat to get the solder flowing. Could I use aluminum foil around the
>> connections to make them tight and then just wrap electrical tape around the
>> connections? Any suggestions would be well used.
>> 73
>> Benny
>> KC8TRN
>>
>

Try pre-heating the copper on a stove, until it's hot enough that the
small soldering iron will work.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3562. Re: practical antenna handbook--- none explained equations

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 07:13:24 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <KiykB$BUozT+EAa7@ifwtech.co.uk>
Source record: 124652

J. Harvey wrote:
>"Xanax"
>> L=K/F
>> where L=length in ft
>> K is a constant
>> F is freq in Mhz
>> My question is What is K?
>
>K = 492 is a half wavelength, but this ignores end effect
>
>K = 468 for a real world dipole *
>K = 234 for a quarterwave monopole *
>
>* Still might need trimming.

The magic number 468 is reputed to apply to a 40m dipole hanging in the rear alley of the old ARRL HQ building (do not use a new HQ building for this experiment).

Everyone else's footage *will* vary.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3563. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 07:22:59 UTC
From: gmz79@aol.comnospam
Message-ID: <20030216022259.05111.00000824@mb-cn.aol.com>
Source record: 124650

A ham without at least one torch???
For shame!!!
Greg Z
to thine own sound be true

3564. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 07:43:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <+k2JAeEEE0T+EAsq@ifwtech.co.uk>
Source record: 124653

Chuck/KE4ETH wrote:
>Have a quick question about RF grounding.
>
>I know that using a RF ground is important. But can I get away with a
>poor(er) (a lot less then optimum) RF ground using Twinlead or ladder line
>feeding a dipole.
>
>I feel that the answer is no, I still need a good RF ground for it to work
>properly and to keep from feeding fingers to the nasty RF beastie. Until
>the weather clears, warms up and dries out some, I can't get a good ground
>in.
>
>I would consider an artificial ground, but I think I have pushed the money
>issue to the extreme. (Shirley is a Technician and does understand, but
>there is a limit.

Do you have a problem now, with either RFI or "RF in the shack"? If not, then don't worry - go ahead and operate.

You *don't* always need an RF ground in the shack. If the shack is upstairs, a good RF ground is very difficult to achieve on any band above 80m due to the lead lengths involved... and even then, it may make the problems either better or worse, depending on where your shack is with respect to the antenna and real ground (dirt), and the band you're operating on.

Even if you do have problems, an RF ground may not be the solution. In many cases the problem is that the antenna is trying to enlist the mains service ground as an RF ground, which gives you RF in the mains (and also couples mains noise into the antenna). If so, the solution is to keep your RF out of the mains wiring.

One way to do this is to organize the mains feeds to the entire shack into a single cable, and then wind this cable - *all* the conductors, live, neutral and ground - into a large RF choke. This will stop RF, but will not affect your mains safety grounding. For HF, make about 10 turns on a big ferrite core. Big ferrite toroids are horribly expensive, but the funnel-shaped core stripped from the deflection yoke of a scrapped TV is just fine for this job... and it's free.

If you do have these problems, the essential tool to fix them is a clip-on RF current probe. This simple little gadget lets you *see* which leads are carrying RF current, and roughly how much (it doesn't have to be calibrated). Without it, you're groping in the dark. You can very easily build one out of a clip-on ferrite bead sold for RFI suppression and just about any small cheap meter (see

www.ifwtech.co.uk/g3sek/clip-on/clip-on.htm for a schematic and some construction ideas) or you can buy one from Palomar and possibly MFJ.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3565. Recent TV antenna inconsistencies

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 08:08:00 UTC
From: "Mike S. Nowostawsky" <mikenowo@sympatico.ca>
Message-ID: <WEH3a.1$mZ2.367@news20.bellglobal.com>
Source record: 124654

First off, I realize this is a TV antenna question, but I couldn't find a newsgroup for that specifically (if anyone knows of a better place to post, please advise).

So:
We have had a TV antenna on our roof for several years now, but most recently (past few months) the reception has been abysmally inconsistent. On some days, all channels will play well for hours; on others turning the rotator unit indoors to ANY location (N, S, E, W, or any combinations) result in bad or no reception on all or most channels! A baffling example was today when in the morning keeping it at EAST all channels came in fairly well, then after a few hours all were gone. After minutes of frustrating back and forth rotation, WEST finally got the channels back. Then after half an hour they were gone or many lost again!! Turning it to SOUTH (once again after many tries) and all was well until about 7 PM. Readjusting yet again to SW helped up to now, 11PM. For the moment, it is still working, knock wood. I might be tempted to say it is worse during colder weather, but it is 20 below right now and all is working well, so that can't be the reason. Also it is not specific to a particular time of day (yesterday I could not tune anything in at 11PM, unlike today).

Once again, this started about 3 months ago and has been ridiculously inconsistent since then. WHAT could possibly cause this? We have tried BOTH rotator units (ARCHEROTOR: model 15-1225 and model 15-1225B) and the problem persists on both. Nothing has changed regarding the connections indoors or outdoors and as far as we know nothing has been built around us recently to interfere with reception.

What should we be looking for regarding rectifying this situation? Can both rotator units be failing (do they even mean anything regarding reception or do they simply rotate the antenna)? Is there a problem with the antenna itself? If so, what part is most likely the culprit? We have boosters on all TVs as well, so that shouldn't be a problem.

Any suggestions as to possible things to look for regarding a fix would be most appreciated. Getting reception these days is like rolling the dice (and it seems they're loaded)!

Thanks for any help.

Regards,
==========
Mike S. Nowostawsky:
Email: mikenowo@sympatico.ca, mikenowo@yahoo.ca
Home Page: http://www3.sympatico.ca/mikenowo/
Lachine (Montreal), Quebec, Canada

3566. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 09:16:48 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4F5700.9497E3B6@cwis.net>
Source record: 124655

Galen,
Our local power company stocks transformer
oil for their own use. When asked if I could
buy a gallon of it, they were nice enough to
give it to me for free. Said keeping record
of a 1 gallon sale wasn't worth the cost. That,
and the time I got an electric bill for $0.00
were the only times I can say I was happy with
anything they've done...
'Doc

3567. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 09:33:45 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E4F5AF9.7BF50728@cwis.net>
Source record: 124656

'Silly' Art,
Of course not. Just as the unit, 'yard', is
not the same as the unit, 'hour'. But if either
unit is used to measure a quantity, then the
measure of that quantity can be expressed in either
unit. The exact same quantity can be expressed in
either unit, and in that instance, they are 'equal',
or equivalent. Yes or no?
'Doc

PS - I'll help it out a little, but this thread will
never make your mythical '600'.

3568. Re: Recent TV antenna inconsistencies

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 12:12:34 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b2nv7g$1f3mjb$1@ID-175933.news.dfncis.de>
Source record: 124657

How far away are the TV stations? If you are trying to get 24/7 reception of signals originating well over the horizon, you will encounter high variability due to weather and atmospheric conditions.

If your antenna rotator actually rotates the antenna to the directions you want then it has nothing to do with the problem.

RF

3569. KT-36XA Queries

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 13:02:11 UTC
From: "Michael J. Donohue" <mdonohue@sympatico.ca>
Message-ID: <fu2v4v8nu9410jp0h7s8imcego4uldplis@4ax.com>
Source record: 124658

Hi:
Contemplating on purchasing a KT-36XA and just curious as to what others think of its performance compared to the smaller KT-34M2. How does it perform compared to that of the Hy-Gain TH7. I will be using it up around 50'. The specs seem to be superior, but just curious of real world use.

Mike

3570. Re: Recent TV antenna inconsistencies

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 13:25:44 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <rjM3a.23$sv3.9818@news20.bellglobal.com>
Source record: 124659

"Mike S. Nowostawsky" of Lachine (Montreal), Quebec, Canada
> We have had a TV antenna on our roof for several years now,
> but most recently (past few months) the reception has been
> abysmally inconsistent.

Just a guess: corrosion around the connections. In the spring, take it down
and clean it up (steel wool, elbow grease). Replace the corroded wires.
Maybe add some anti-corrosion grease.

3571. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 13:31:00 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3e4f9260$1@news.netacc.net>
Source record: 124660

"Quahog" <quahog@localnet.com> wrote in message
news:v4u4buaqha1e6e@corp.supernews.com...
> Jim <kg4enu@carolina.rr.com> wrote in
> news:sf6t4vgsu27ajl67esrllgudnbdq6ullc8@4ax.com:
>
> > looks like a bug zapper to me. look for lawn chairs in the area
>
> Naahhh... them's birdhouses.
>

Not birdhouses.... Definitely govemunt mind control units :-)

(Reaches for aluminum foil lined bubba hat)

Steve

3572. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 14:14:35 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <f1N3a.16073$9i7.478523@twister.southeast.rr.com>
Source record: 124661

A 1db pad would work as well and be a heck of a lot easier to build.

"Walter Maxwell" <w2du@iag.net> wrote in message
news:pgx1a.7889$1q2.758321@newsread2.prod.itd.earthlink.net...
>
> H. Adam Stevens <solo@totalaccess.net> wrote in message
> news:v4bhjgibpkrufb@corp.supernews.com...
> > oh
> > and two 1900 ohm stubs in series are a 3800 ohm load across a 50 ohm
> antenna
> > 20log3800/50=37
> > point is the damn thing works; build one and see
> > but it is tedious to get both stubs and the dipole resonant on the same
> > frequency to 4 digits
> > the reward is nothing reflected over a 100+ khz bandwidth
> > H.
> > NQ5H
> >
> Sorry to disillusion all you gentlemen, but the bazooka doesn't work at
all
> the way you're thinking.
>
> I made an in-depth analysis of the beast (and I mean 'beast') that I
> published in Ham Radio, August 1976, with a shortened version published in
> QST, Technical Correspondence, September 1976.
>
> You can download a copy of the QST version from my web page at
> http://home.iag.net/~w2du. From that paper you'll find proof that the
> reactances found in the two stub portions are not reponsible for the
> increased bandwidth, but rather it's the dielectric loss in the coax that
> establishes a shunt resistance across the input terminals of the antenna,
> resulting in lost power as if a dummy load were shunted across the antenna
> terminals.
>
> :You will observe in my paper that I give Frank Witt, AI1h, credit for
> determining the resistance loss, proving my mathematical analysis correct.
>
> Walt Maxwell, W2DU
>
>

3573. Re: Antenna design Software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 14:40:58 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ct7v4vorbuhvhmqrfsif9vbe5oem44pkcu@4ax.com>
Source record: 124662

On Sat, 15 Feb 2003 23:01:09 -0000, "Xanax"
<keepItInTheNewsGroups@news.com> wrote:

|Where can I get my hands on Antenna design software like EZNEC etc...

MultiNEC is available at:

http://www.qsl.net/ac6la/

This is a slick program. It has a built-in NEC-2 engine or can
overlay and add functionality to any of the other popular programs
(EZNEC, 4nec2, Antenna Model).

It can read and use files in EZNEC, NEC, A.M., ELNEC, MMANA, AO, or
Nec/Wires format.

The program interfaces with VOACAP to allow you to see how your newly
created (or existing design) antenna will play on any desired
propagation path.

Since the core is Excel, cut-and-paste into other Excel worksheets is
a snap. Another Excel application at the same site is XLZIZL which is
a great transmission line/matching network design aid.

Wes, N7WS

3574. Re: 40/15 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 14:41:28 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <sj8v4v8pg2ulv7ua9tgcct8k80d5m7unt0@4ax.com>
Source record: 124663

On Sat, 15 Feb 2003 22:44:11 -0600, Leland Cox <lcox107@comcast.net>
wrote:

>The third harmonic of an antenna has some serious dead spots and major
>lobes.
>A ringo will work on the third harmonic with a low swr but the signal
>must go straight up. I tried using a ringo on 450 with little luck on
>the local repeaters.
>I solved this problem by putting a 1/4 wave length of wire (Abt 4.5") at
>the feed point of the ringo. This works so much better! It didn't seem
>to interfere with two meter operation.
>
>A vertical working on the third harmonic has lobed that go up on about a
>45 Deg angle. This goes right over local stations. You can find more
>about this in the ARRL Handbook!
>Les, AA4F
>

i don't dispute what you've written, les. but i'm hitting UHF systems
near and far with my 2m ringo...at least enough to satisfy me.

73,
rich, n9dko

3575. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 15:09:31 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v4vafrlqmihj22@corp.supernews.com>
Source record: 124664

Maybe easier to build but it won't "work just as well".
Build one and do the measurements.
A correctly tuned double bazooka radiates just as well as a dipole over
>100KHz with a flat 1:1 SWR.
This is NOT a "low Q" concept.
The two terminal model is two series-connected parallel resonant circuits
(the stubs)
in parallel with a series resonant circuit (the dipole).
Constrain all three circuits to be resonant at the same frequency and do the
math.
The tedious part in building the antenna is physically realizing the
resonance constraint.
H.
"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:f1N3a.16073$9i7.478523@twister.southeast.rr.com...
> A 1db pad would work as well and be a heck of a lot easier to build.
>
handwaving arguments snipped

3576. Re: Recent TV antenna inconsistencies

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 16:08:21 UTC
From: "ked1075@localnet.com" <ked1075@localnet.com>
Message-ID: <3E4FB775.8010406@localnet.com>
Source record: 124665

Hi Mike;

Sounds like a broken/shorting downlead. If it works well in
one direction then suddenly breaks down as the rotor turns or a gust of
wind then something is making/breaking contact. Time to go up and look
over your antenna system connections.

Good luck Paul

Mike S. Nowostawsky wrote:

> First off, I realize this is a TV antenna question, but I couldn't find a
> newsgroup for that specifically (if anyone knows of a better place to post,
> please advise).
>
> So:
> We have had a TV antenna on our roof for several years now, but most
> recently (past few months) the reception has been abysmally inconsistent. On
> some days, all channels will play well for hours; on others turning the
> rotator unit indoors to ANY location (N, S, E, W, or any combinations)
> result in bad or no reception on all or most channels! A baffling example
> was today when in the morning keeping it at EAST all channels came in fairly
> well, then after a few hours all were gone. After minutes of frustrating
> back and forth rotation, WEST finally got the channels back. Then after half
> an hour they were gone or many lost again!! Turning it to SOUTH (once again
> after many tries) and all was well until about 7 PM. Readjusting yet again
> to SW helped up to now, 11PM. For the moment, it is still working, knock
> wood. I might be tempted to say it is worse during colder weather, but it is
> 20 below right now and all is working well, so that can't be the reason.
> Also it is not specific to a particular time of day (yesterday I could not
> tune anything in at 11PM, unlike today).
>
> Once again, this started about 3 months ago and has been ridiculously
> inconsistent since then. WHAT could possibly cause this? We have tried BOTH
> rotator units (ARCHEROTOR: model 15-1225 and model 15-1225B) and the problem
> persists on both. Nothing has changed regarding the connections indoors or
> outdoors and as far as we know nothing has been built around us recently to
> interfere with reception.
>
> What should we be looking for regarding rectifying this situation? Can both
> rotator units be failing (do they even mean anything regarding reception or
> do they simply rotate the antenna)? Is there a problem with the antenna
> itself? If so, what part is most likely the culprit? We have boosters on all
> TVs as well, so that shouldn't be a problem.
>

> Any suggestions as to possible things to look for regarding a fix would be
> most appreciated. Getting reception these days is like rolling the dice (and
> it seems they're loaded)!
>
> Thanks for any help.
>
> Regards,
> ==========
> Mike S. Nowostawsky:
> Email: mikenowo@sympatico.ca, mikenowo@yahoo.ca
> Home Page: http://www3.sympatico.ca/mikenowo/
> Lachine (Montreal), Quebec, Canada
>
>
>

3577. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 16:30:04 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9324567AE4A50pookster@216.168.3.50>
Source record: 124666

richardharrison@webtv.net (Richard Harrison) wrote in
news:14899-3E4E834C-74@storefull-2318.public.lawson.webtv.net:

> During innumerable generations, lines of descendency become extinct.
> "If your mother didn`t have any children, chances are you won`t
> either." Each time this happens, there are fewer first generation
> progenitors with survivors.
>

Lines of descendancy do indeed become extinct, but that's not relevant to the Eve Hypothesis. Here's why.

Remember Mr. Harvey's example about the four families which have two children each? He says (correctly) that, on average, one of the families will have two sons and no daughters, thereby extinguishing that particular line of matrlileal DNA. What he fails to note is that, on average, one of the other four families will have two daughters and no sons, thereby exactly compensating for the loss. And since matrilineal DNA is the same in all women, the net change is zero. Four lines before, four lines after. It doesn't matter whether it's four families or four million or four billion. The ratio remains the same.

Also, it doesn't matter how many children the families have. For every family that has four sons, another will have four daughters. The number of matrilineal DNA lines remains the same, changing only if the total population grows or diminishes, but even then, maintaining the same ratio.

The Eve Hypothesis is junk science and the sooner it goes away, the better.

--
Bill, W7TI

3578. Re: Recent TV antenna inconsistencies

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 16:36:16 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <46P3a.125008$SD6.6678@sccrnsc03>
Source record: 124667

I'd have to agree. It sounds like a bad connection.
"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:rjM3a.23$sv3.9818@news20.bellglobal.com...
>
> Just a guess: corrosion around the connections. In the spring, take it
down
> and clean it up (steel wool, elbow grease). Replace the corroded wires.
> Maybe add some anti-corrosion grease.
>
>
>

3579. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 17:24:19 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <d8iv4v4ij3uhkoasetd1dacfn9eu5qqm16@4ax.com>
Source record: 124668

Aw, not AGAIN. We do this "cantenna oil" thread at least three or four times a year. Did you do an archive search?

Jim

"G. Watts" <gwatts@gb.nrao.edu>
shared these priceless pearls of wisdom:

->I'd like to replace the oil with transformer oil as the thermal capabilities
->are better than mineral oil, any suggestions?

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

3580. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 17:45:02 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E4FCE1E.3090101@ieee.org>
Source record: 124419

Chuck/KE4ETH wrote:
> I know that using a RF ground is important. But can I get away with a
> poor(er) (a lot less then optimum) RF ground using Twinlead or ladder line
> feeding a dipole.

A balanced antenna system doesn't need a ground to radiate efficiently.
You might need a ground for other reasons but not for radiation
efficiency with balanced antenna systems.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3581. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 17:52:13 UTC
From: larryc@northwest.com
Message-ID: <3E4FCFCD.F2942B72@northwest.com>
Source record: 124420

is there some reason that only "new" things are permitted in the newsgroups?

=========

Jim Weir wrote:

> Aw, not AGAIN. We do this "cantenna oil" thread at least three or four times a
> year. Did you do an archive search?
>
> Jim
>
> "G. Watts" <gwatts@gb.nrao.edu>
> shared these priceless pearls of wisdom:
>
> ->I'd like to replace the oil with transformer oil as the thermal capabilities
> ->are better than mineral oil, any suggestions?
>
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

3582. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 18:23:53 UTC
From: W8LNA <gwatts@nrao.edu>
Message-ID: <3E4FD739.6030804@nrao.edu>
Source record: 124421

I wish I'd had my flak jacket, helmet and goggles on before
Jim Weir spewed in an angry tone:

> Aw, not AGAIN. We do this "cantenna oil" thread at least three or four times a
> year. Did you do an archive search?
>
> Jim
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

Why, yes Jimmy, I did do an archive search on 'Cantenna,' and after a
while I only found references to using mineral oil. Then I thought,
"Gee, hams tend to be a friendly lot, maybe I'll just ask, being as how
there's these newsgroups for discussing just this kind of thing and
maybe, just maybe someone out there knows what the hell they're talking
about when it comes to transformer oil and what other labels it might be
sold under."

Guess that someone ain't you, Jimmy.

Too bad a simple question got your dainty panties in such a wad.

Sorreee!

I'll be going now so Jimmy can untangle his underwear.

Thanks to those who actually had something USEFUL to say,
-Galen

3583. Re: KT-36XA Queries

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 18:46:43 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <v4vn4pdnmfps0b@corp.supernews.com>
Source record: 124422

Hi,

Go for a Force 12. <G>
http://www.force12inc.com

Regards,
Jim
--
email sent to: denews@taborsoft.com
is discarded without being seen.
Sorry for any inconvenience.

3584. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 19:00:48 UTC
From: tdonaly@aol.com
Message-ID: <20030216140048.23426.00000132@mb-mi.aol.com>
Source record: 124423

Bill wrote,
>
>Lines of descendancy do indeed become extinct, but that's not relevant
>to the Eve Hypothesis. Here's why.
>
(Boring, simplistic, off-topic argument skipped.)

In his book, _The Origin of Modern Humans_ Roger Lewin examines
most of the arguments pro and con of what he calls "mitochondrial
Eve." All of the arguments rehashed on this newsgroup have been
gone over by academics years ago. Read Lewin's book, then go to
a different newsgroup and talk about it.
73
Tom Donaly, KA6RUH

3585. Re: Recent TV antenna inconsistencies

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 19:50:37 UTC
From: "Mike S. Nowostawsky" <mikenowo@sympatico.ca>
Message-ID: <DXR3a.702$iu1.56768@news20.bellglobal.com>
Source record: 124424

Ok, thanks for the corroboration folks. One more thing to add to spring
cleaning <chuckle>.
--
l8r,
Mike

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:rjM3a.23$sv3.9818@news20.bellglobal.com...
> "Mike S. Nowostawsky" of Lachine (Montreal), Quebec, Canada
> > We have had a TV antenna on our roof for several years now,
> > but most recently (past few months) the reception has been
> > abysmally inconsistent.
>
> Just a guess: corrosion around the connections. In the spring, take it
down
> and clean it up (steel wool, elbow grease). Replace the corroded wires.
> Maybe add some anti-corrosion grease.
>
>
>

3586. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 20:12:08 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93247C21B3F0Cpookster@216.168.3.50>
Source record: 124425

tdonaly@aol.com (Tdonaly) wrote in news:20030216140048.23426.00000132@mb-mi.aol.com:

> In his book, _The Origin of Modern Humans_ Roger Lewin examines
> most of the arguments pro and con of what he calls "mitochondrial
> Eve." All of the arguments rehashed on this newsgroup have been
> gone over by academics years ago. Read Lewin's book, then go to
> a different newsgroup and talk about it.
>

Wish I could think of a clever comeback to this, but he's right. I hate it when that happens.

--
Bill, W7TI

3587. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 20:18:28 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93247D3485CD6pookster@216.168.3.50>
Source record: 124426

Jim Weir <jim@rst-engr.com> wrote in
news:d8iv4v4ij3uhkoasetd1dacfn9eu5qqm16@4ax.com:

> Aw, not AGAIN. We do this "cantenna oil" thread at least three or
> four times a year. Did you do an archive search?
>

While you're at it, do a search for whiny replies like the above. Then you
can have it all together.

--
Bill, W7TI

3588. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 20:22:44 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93247DED7F81Bpookster@216.168.3.50>
Source record: 124428

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in
news:1rD3a.36224$RL1.14628@fe08.atl2.webusenet.com:

> I know that using a RF ground is important.

Really? I have 322 countries worked and have *never* used an RF ground.
Please explain why it is important. Maybe I can get the rest.

--
Bill, W7TI

3589. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 20:22:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hssv4v4mhg03s1v6qa7bdbof86maud85tc@4ax.com>
Source record: 124427

On Sun, 16 Feb 2003 11:45:02 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>
>A balanced antenna system doesn't need a ground to radiate efficiently.
>You might need a ground for other reasons but not for radiation
>efficiency with balanced antenna systems.
>--
>cheers, CAM http://www.qsl.net/w5dxp

Hi Cecil,

Gee, I simply add a ground mat under a common dipole and the WHOLE
radiation pattern shows improvement. Not to take the obvious case of
reflection straight up, I also looked at the change to radiation at an
angle of 10ï¿½ and found about half a dB improvement.

What do you mean by efficiency, the ability to bury signal into a
dissipative ground, or the ability to achieve a QSO?

73's
Richard Clark, KB7QHC

3590. FM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 20:24:44 UTC
From: normanseifert@webtv.net
Message-ID: <16138-3E4FF38C-137@storefull-2312.public.lawson.webtv.net>
Source record: 124429

I have a DX-392 Radio Shack AM-FM-SW radio. The FM antenna is a telescoping rod antenna. What is the best way to connect an outside FM antenna to this radio? Also a station at 91.3 FM is knocking out a station at 91.1 FM that is farther away, but close enough to receive; anyway to correct this? Thanks,

Norman Seifert
Swannanoa, N.C., U.S.A.

3591. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 20:25:21 UTC
From: richardharrison@webtv.net
Message-ID: <10309-3E4FF3B1-97@storefull-2317.public.lawson.webtv.net>
Source record: 124430

Bill, W7TI wrote:
"The Eve hypothesis is junk science and the sooner it goes away, the better."

I think there is a simpler reason we are very likely nearly all related. It`s just mathematical probability as Jeff has written. Take Jeff`s 80 generarions. I haven`t counted and I don`t have an estimate from datings of prehistorical relics. There may have been a human existence of at least 160 generations, depending on your definition of human. Instead of Jeff`s 80 generations, make it 160 generations. The number "2" raised to that power represents an estimate of the number of your ancestors. With such a large number of your ancestors, a descendent of "Eve" is surely among them and so are you.

The speculation above still does require you to have no descendents if your ancestors had none.

Best regards, Richard Harrison, KB5WZI

3592. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 21:30:44 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932489755242Bpookster@216.168.3.50>
Source record: 124431

richardharrison@webtv.net (Richard Harrison) wrote in
news:10309-3E4FF3B1-97@storefull-2317.public.lawson.webtv.net:

> I think there is a simpler reason we are very likely nearly all
> related. It`s just mathematical probability as Jeff has written. Take
> Jeff`s 80 generarions. I haven`t counted and I don`t have an estimate
> from datings of prehistorical relics. There may have been a human
> existence of at least 160 generations, depending on your definition of
> human. Instead of Jeff`s 80 generations, make it 160 generations. The
> number "2" raised to that power represents an estimate of the number
> of your ancestors. With such a large number of your ancestors, a
> descendent of "Eve" is surely among them and so are you.

Exactly. And that shows why we are descendants of "all" of our ancient ancestors, not just the one and only "Eve". For someone who has never thought about this concept, it may give them pause. You are a blood relative of every human who ever lived, either as a direct descendant or as a much-removed cousin, niece or nephew. You only have to go back about 800 years and you have more ancestors than there were people on earth. Go back 100,000 years and the interweaving of bloodlines is so complete as to become a statistical certainty comparable to winning the lottery on every try.

> The speculation above still does require you to have no descendents if
> your ancestors had none.
>
I don't beleive Mr. Harvey's ancestors had any descendents. Call it the "Harvey Hypothesis". It's as logical as his.

--
Bill, W7TI

3593. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 22:04:31 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302161404.19e0f546@posting.google.com>
Source record: 124432

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:<1rD3a.36224$RL1.14628@fe08.atl2.webusenet.com>...
> Have a quick question about RF grounding.
>
> I know that using a RF ground is important.

Uh oh...I guess I'm in trouble then...

But can I get away with a
> poor(er) (a lot less then optimum) RF ground using Twinlead or ladder line
> feeding a dipole.

You don't need an rf ground at all for a center fed dipole. It's a
complete antenna.
>
> I feel that the answer is no, I still need a good RF ground for it to work
> properly and to keep from feeding fingers to the nasty RF beastie. Until
> the weather clears, warms up and dries out some, I can't get a good ground
> in.

Nope. Having an rf ground in the shack has nothing to do with rf
problems in the shack. You can have them with or without a ground. If
you have rf problems, you have an antenna or feedline problem. Poor
decoupling from the feedline to the antenna is the usual cause. So if
you use coax to feed, you should use a good balun. If you run ladder
line, in theory the line is balanced, and you usually won't have a
problem with feedline radiation. I don't notice any problems here when
I use ladder line or twinlead. Certain line lengths could cause
problems in some cases, but that fixable by changing the length. Even
then, it's usually more of a matching problem, rather than feeder
radiation problem.

>
> I would consider an artificial ground, but I think I have pushed the money
> issue to the extreme. (Shirley is a Technician and does understand, but
> there is a limit.

Don't waste the money. You don't need it, and it's a band aid approach
to fixing the problem anyway, if you do have an rf in the shack
problem. A 1/4 wave piece of wire for a given freq, run from the shack
will do much the same job if you do want to try it. Much cheaper...
But, I'd fix the real problem.

The only time you should need an rf ground at the shack is when
feeding an antenna direct from the shack, with no feedline. IE: random
wire fed from a tuner in the shack. Only incomplete antennas such as

verticals, etc require an rf ground. And it should be located under the antenna, not at the shack.

There are times you might want a ground at the shack, but not for the purposes of reducing rf problems. You should fix the root problem which is antenna/feedline related.
I run no rf ground at all here. Don't need it.

BTW, this post has nothing to do with safety grounding, or lightning grounding , which are totally different topics doing totally different jobs. You DO need safety grounding in the shack, if you run anything with line voltage, but it can be as simple as a line cord with a grounding pin plugged into a properly grounded socket. MK

3594. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 22:14:13 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <vWT3a.48884$6N1.39336@fe04.atl2.webusenet.com>
Source record: 124433

Thanks for all the replies.

I just upgraded last weekend (8 Feb. 03) and am trying to get on HF. When I checked SWR (I know Tuning indicator) with an antenna analyzer it was reading about 1.2-1.5:1. Picked up a MFJ-948 Versa-Tuner and getting 2:1 even with trying to adjust the controls. That was the main reason for the question. Sorry about not giving all the questions that I should have.

Rig is an older Atlas 210X with the 220 Console, the MFJ tuner, a dipole cut for 3.900 MHz (inverted V, apex at about 25 feet, ends about 5 feet off the ground. Planning on putting tower up in the spring and would have the apex at about 40-50 feet. Ends would be higher then they are now) and about 35 feet of coax. The antenna and coax have been installed for about 7 or 8 years. And it has been raining a lot the last few days (Maybe water in the coax) I need to replace the coax if so.

Hope I didn't forget anything this time.

Thanks again. Sorry about no conveying all the info the first time.
--
73,
Chuck
KE4ETH
USA-NA

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:1rD3a.36224$RL1.14628@fe08.atl2.webusenet.com...
> Have a quick question about RF grounding.
>
> I know that using a RF ground is important. But can I get away with a
> poor(er) (a lot less then optimum) RF ground using Twinlead or ladder line
> feeding a dipole.
>
> I feel that the answer is no, I still need a good RF ground for it to work
> properly and to keep from feeding fingers to the nasty RF beastie. Until
> the weather clears, warms up and dries out some, I can't get a good ground
> in.
>
> I would consider an artificial ground, but I think I have pushed the money
> issue to the extreme. (Shirley is a Technician and does understand, but
> there is a limit.
>
> TNX
> --
> 73,
> Chuck

> KE4ETH
> USA-NA
>
>
>
>

3595. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 22:18:10 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b2p2mtltu1@slb6.atl.mindspring.net>
Source record: 124434

Dear Mr. Watts:

[snip]
"G. Watts" <gwatts@gb.nrao.edu> wrote in message
news:3E4F0341.4B3C24BF@gb.nrao.edu...
> Greetings,
> My Heathkit Cantenna rusted through the bottom of the can and dumped the
oil
> all over the floor of the shack. I was using mineral oil so it wasn't as
bad
> as it could have been, in the future I'll be putting the replacement can
in a
> 2 gallon plastic bucket or something similar. I plan to get a replacement
> can from my friendly paint dealer.
[snip]

Well you certainly didn't have mineral oil in that "cantenna", cuz nothing
emersed
in mineral oil ever rusts!

My mineral own mineral oil filled cantenna has never leaked in over 50
years!

When you went to the druggist to buy your mineral oil, you were sold
something
else! Did you ever smell or taste that stuff? They sold you a "bill of
goods"!

BTW... I set my cantenna in one of my wife's turkey roasting pans, simply
because
the rust inhibiting mineral oil in the can tends to migrate and coat
everything around
it, but.... It never rusts!

--
Peter K1PO
Indialantic By-the-Sea, FL.
[Where everything rusts because the Atlantic ocean is only a few feet from
my door!]

3596. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 22:19:12 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <3c305vggp11fn6ni0i1mt9j49fvvnaeiq5@4ax.com>
Source record: 124435

On Sat, 15 Feb 2003 22:19:29 -0500, "G. Watts" <gwatts@gb.nrao.edu>
wrote:

>Greetings,
>My Heathkit Cantenna rusted through the bottom of the can and dumped the oil
>all over the floor of the shack. I was using mineral oil so it wasn't as bad
>as it could have been, in the future I'll be putting the replacement can in a
>2 gallon plastic bucket or something similar. I plan to get a replacement
>can from my friendly paint dealer.
>
>I'd like to replace the oil with transformer oil as the thermal capabilities
>are better than mineral oil, any suggestions? I remember wayyyy back reading
>that some kinds of hydraulic oil are the same as transformer oil but sold
>under a different label, does anyone know of any brands or sources?
>
>I've had my Cantenna for at least 15 years, and a search on google brings up
>a lot of Wi-Fi antennas called "Cantennas," it made me feel old.
>
>73!
>Galen, W8LNA

Galen,

The next time you see a power company crew in your neighborhood,
bring 'em some coffee or ice water and ask them how to get a gallon or
so of transformer oil. They will either give you some or refer you to
the transformer repair shop. Be nice to the utilities folks and they
can be right helpful. In fact, bring then some water or coffee even
if you don't want something. You'll be remembered.

Russ

3597. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 22:31:54 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <sjU3a.752$iu1.78476@news20.bellglobal.com>
Source record: 124436

"Bill, W7TI" <jamspam@upyours.now>
> ...one of the other four families will have two daughters
> and no sons, thereby exactly compensating for the loss.

Henry the VIII would disagree. The peasant next door having two sons isn't compensation for the more immediate lineage problem. The only compensations are in overall population numbers and 50:50 sex ratios - that is *NOT* (!!!) the same thing as 'lineages'. The number of lineages (male surnames, female mtDNA) tends to drop by about 25% with each passing generation. MLER/PLER.

> ...since matrilineal DNA is the same in all women...

But *why* is it the same ? (Answer: MLER). You're coming in to the concept too late; don't assume that mtDNA is all the same at the outset. There is a mtDNA mutation rate (1 per 20k years - roughly!). But MLER is a much stronger force assuming an adequate degree of population mixing. The theorists are assuming a minimum amount of migration - there was probably *much* more migration than they now realize.

MLER is the reason why mtDNA is driven to a single lineage. MLER is the reason why your statement above is basically true (now, excluding a few markers (recent mutations)).

> The Eve Hypothesis is junk science and the sooner it goes
> away, the better.

I agree - it certainly needs some work. That is the point.

3598. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 22:55:31 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <awU3a.41107$742.36086@fe07.atl2.webusenet.com>
Source record: 124437

You are all going to hate me and ignore me. I miss typed something in my last. The analyzer reading was 1.5 to 1.5:1 on at 3.900 MHz. When I tried the tuner I am showing infinity on 3.900 MHz, but 1.2:1 on 10 meters. This from an antenna that is cut for 3.900 MHz. I guess I'm just confused.

I promise next time I'll do better, otherwise I will stand in the corner in a circular room.

THX

--
73,
Chuck
KE4ETH
USA-NA

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message news:vWT3a.48884$6N1.39336@fe04.atl2.webusenet.com...
> Thanks for all the replies.
>
> I just upgraded last weekend (8 Feb. 03) and am trying to get on HF. When I
> checked SWR (I know Tuning indicator) with an antenna analyzer it was
> reading about 1.2-1.5:1. Picked up a MFJ-948 Versa-Tuner and getting 2:1
> even with trying to adjust the controls. That was the main reason for the
> question. Sorry about not giving all the questions that I should have.
>
> Rig is an older Atlas 210X with the 220 Console, the MFJ tuner, a dipole cut
> for 3.900 MHz (inverted V, apex at about 25 feet, ends about 5 feet off the
> ground. Planning on putting tower up in the spring and would have the apex
> at about 40-50 feet. Ends would be higher then they are now) and about 35
> feet of coax. The antenna and coax have been installed for about 7 or 8
> years. And it has been raining a lot the last few days (Maybe water in the
> coax) I need to replace the coax if so.
>
> Hope I didn't forget anything this time.
>
> Thanks again. Sorry about no conveying all the info the first time.
> --
> 73,
> Chuck
> KE4ETH
> USA-NA

>
Snip about RF grounding.

3599. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 22:57:53 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9324983BC1153pookster@216.168.3.50>
Source record: 124438

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in
news:sjU3a.752$iu1.78476@news20.bellglobal.com:

>> The Eve Hypothesis is junk science and the sooner it goes
>> away, the better.
>
> I agree - it certainly needs some work. That is the point.
>
>

Just when I think I've nailed your fallacies, you start agreeing with
me. It's like boxing with smoke.

--
Bill, W7TI

3600. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 23:37:16 UTC
From: Quahog <quahog@localnet.com>
Message-ID: <v5085cqhes2t89@corp.supernews.com>
Source record: 124439

"Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net> wrote in
news:3e4f9260$1@news.netacc.net:

>
> "Quahog" <quahog@localnet.com> wrote in message
> news:v4u4buaqha1e6e@corp.supernews.com...
>> Jim <kg4enu@carolina.rr.com> wrote in
>> news:sf6t4vgsu27ajl67esrllgudnbdq6ullc8@4ax.com:
>>
>> > looks like a bug zapper to me. look for lawn chairs in the area
>>
>> Naahhh... them's birdhouses.
>>
>
> Not birdhouses.... Definitely govemunt mind control units :-)
>
> (Reaches for aluminum foil lined bubba hat)
>
> Steve
>
>
>

BTW, them foil hats don't work any more. The gummint figgered out how to
use cell towers to bounce signals off tha pavement while yer driven. Ya
need *real* pertection:

==========

Citizens! Tired of being bombarded by every manner of
electromagnetic ray? Are you being controlled by alien intelligences? Is
the government listening to your most private thoughts? Well, fear no
more! the Quahog Protective Company's line of attractive and comforatble
Far-A-Day(tm) electromagnetic protective garments are now available at fine
stores everywhere.
For basic protection, try the Far-A-Day(tm) balaclava. Never again
will your sleep or quiet times be interrupted by those incessant voices.
For more complete protection of vital organs and bodily fluids, add the
Far-A-Day(tm) doublet and codpiece combo.
Our fine fabrics are woven with micro-fine conductive threads and
impregnated with a secret formula conductive sizing that will withstand
many washings.
Available in sizes XXS to XXXXL in a range of colors and trim
options. (Pet model quotes on request)

What a difference a Far-A-Day(tm) makes!

==========

Q

3601. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 23:38:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5020FD.6070701@ieee.org>
Source record: 124440

Richard Clark wrote:
> What do you mean by efficiency, the ability to bury signal into a
> dissipative ground, or the ability to achieve a QSO?

If you lose half your signal into the ground, you have lost half
an S-unit which is usually of no consequence in achieving a QSO.
I have tried ground planes under balanced dipoles and couldn't
detect any change except for NVIS signals which changed my signal
from 10dB over S-9 to 12dB over S-9.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3602. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-16 23:59:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2p8kinjg1@sparta.btinternet.com>
Source record: 124441

If you suffer from TVI, before doing anything else shift the TV receiver a
few feet to the left or the right. Or wind a few turns of the TV antenna
line round a ferrite ring. Or wind the TV power cord around a ferrite ring.

In all probabilty TVI arises from direct radiation from the antenna. After
all said and done, antennas are intended to radiate - it says so in the
Handbooks.

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================

--
========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================
"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:awU3a.41107$742.36086@fe07.atl2.webusenet.com...
> You are all going to hate me and ignore me. I miss typed something in my
> last. The analyzer reading was 1.5 to 1.5:1 on at 3.900 MHz. When I tried
> the tuner I am showing infinity on 3.900 MHz, but 1.2:1 on 10 meters. This
> from an antenna that is cut for 3.900 MHz. I guess I'm just confused.
>
> I promise next time I'll do better, otherwise I will stand in the corner
in
> a circular room.
>
> THX
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:vWT3a.48884$6N1.39336@fe04.atl2.webusenet.com...
> > Thanks for all the replies.
> >
> > I just upgraded last weekend (8 Feb. 03) and am trying to get on HF.
When

> I
> > checked SWR (I know Tuning indicator) with an antenna analyzer it was
> > reading about 1.2-1.5:1. Picked up a MFJ-948 Versa-Tuner and getting 2:1
> > even with trying to adjust the controls. That was the main reason for
the
> > question. Sorry about not giving all the questions that I should have.
> >
> > Rig is an older Atlas 210X with the 220 Console, the MFJ tuner, a dipole
> cut
> > for 3.900 MHz (inverted V, apex at about 25 feet, ends about 5 feet off
> the
> > ground. Planning on putting tower up in the spring and would have the
apex
> > at about 40-50 feet. Ends would be higher then they are now) and about
35
> > feet of coax. The antenna and coax have been installed for about 7 or 8
> > years. And it has been raining a lot the last few days (Maybe water in
the
> > coax) I need to replace the coax if so.
> >
> > Hope I didn't forget anything this time.
> >
> > Thanks again. Sorry about no conveying all the info the first time.
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA
> >
> Snip about RF grounding.
>
>
>

3603. Re: limp wire emulating telescoping antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 00:42:24 UTC
From: Dan Jacobson <jidanni@dman.ddts.net>
Message-ID: <87lm0fzqj3.fsf@jidanni.org>
Source record: 124449
Cross-posted to: rec.radio.amateur.antenna,rec.radio.scanner

K> You will likely see little change in performance with a dangling
K> antenna although in isolated cases it will be poorer but that is a
K> chance thing. There is NO need to try to have a resonent antenna
K> or even be concerned about it for a wide range receive only
K> appliction. The telescopic antenna is non-resonent in virtually
K> all cases anyway.

Wait, but what if one adjusts the length to 1/2, 1/4, etc. of the band section of interest?

OK. By the way, what are the exact actions one can do with a length of wire that would emulate changing the length of a telescoping antenna---short of cutting the wire, of course.

Hmm, just folding temporarily unwanted extra length back over seems to be a valid answer:

```
_______________________________[radio]
|_______
```

What miracle properties does the ICOM R2 stock ducky 16cm antenna have over an equivalent length of speaker wire? I hear Icom's is coiled inside.

Still with my adjustable meter of wire, it seems I can do better than Icom's fixed 16cm. Say most of today I was concentrating on a certain few megahertz of bandwidth. I would fold the limp wire antenna appropriately once for hours of resonant matched listening, eh?

--
http://jidanni.org/ Taiwan(04)25854780

3604. Re: J-Pole suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 00:46:09 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E5030D1.6D119CF7@bloomer.net>
Source record: 124442

Build a Cactus! You will need solder and a torch, but one will last a
lifetime (the antenna, that is)...

http://archimedes.galilei.com/raiar/cactus.html

Scott
N0EDV

Benny Miller wrote:
>
> I am trying to find ideas for creating a 1/2" copper tube J-Pole that does
> not use solder. I have the tubing and the caps and the T & L connectors.
> Is there a way that I could put the whole thing together with out having to
> solder any of the pieces together? I am a super poor college student
> (living on loans) and i do not want to spend (nor do i have) the money to
> purchase a butane-type torch to solder the connections. I do have a little
> hobby soldering iron (pen style not gun) that doesn't seem to generate
> enough heat to get the solder flowing. Could I use aluminum foil around the
> connections to make them tight and then just wrap electrical tape around the
> connections? Any suggestions would be well used.
> 73
> Benny
> KC8TRN

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

3605. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 01:31:53 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <aYW3a.882$iu1.102697@news20.bellglobal.com>
Source record: 124443

"Bill, W7TI"
> Just when I think I've nailed your fallacies,
> you start agreeing with me. It's like boxing
> with smoke.

So what exactly are you smoking ? My position, logic and conclusions on this topic have not changed since they were first formulated in 1995. If that's not clear to you, then... well...

3606. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 02:08:25 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <FIX3a.46146$9O1.10817@fe06.atl2.webusenet.com>
Source record: 124444

Thanks Reg. The problem isn't TVI, but an infinit SWR on 80 and 1.2:1 on 10. This from a 80 meter dipole. The other band show a lower SWR the the band it was cut for.

--
73,
Chuck
KE4ETH
USA-NA

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message news:b2p8kinjg1@sparta.btinternet.com...
> If you suffer from TVI, before doing anything else shift the TV receiver a
> few feet to the left or the right. Or wind a few turns of the TV antenna
> line round a ferrite ring. Or wind the TV power cord around a ferrite ring.
>
> In all probabilty TVI arises from direct radiation from the antenna. After
> all said and done, antennas are intended to radiate - it says so in the
> Handbooks.
> ---
> ========================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ========================
>
> --
> ========================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ========================
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:awU3a.41107$742.36086@fe07.atl2.webusenet.com...
> > You are all going to hate me and ignore me. I miss typed something in my
> > last. The analyzer reading was 1.5 to 1.5:1 on at 3.900 MHz. When I tried
> > the tuner I am showing infinity on 3.900 MHz, but 1.2:1 on 10 meters. This
> > from an antenna that is cut for 3.900 MHz. I guess I'm just confused.
> >
> > I promise next time I'll do better, otherwise I will stand in the corner
> in

> > a circular room.
> >
> > THX
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA
> >
> > "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> > news:vWT3a.48884$6N1.39336@fe04.atl2.webusenet.com...
> > > Thanks for all the replies.
> > >
> > > I just upgraded last weekend (8 Feb. 03) and am trying to get on HF.
> When
> > I
> > > checked SWR (I know Tuning indicator) with an antenna analyzer it was
> > > reading about 1.2-1.5:1. Picked up a MFJ-948 Versa-Tuner and getting
2:1
> > > even with trying to adjust the controls. That was the main reason for
> the
> > > question. Sorry about not giving all the questions that I should have.
> > >
> > > Rig is an older Atlas 210X with the 220 Console, the MFJ tuner, a
dipole
> > cut
> > > for 3.900 MHz (inverted V, apex at about 25 feet, ends about 5 feet
off
> > the
> > > ground. Planning on putting tower up in the spring and would have the
> apex
> > > at about 40-50 feet. Ends would be higher then they are now) and about
> 35
> > > feet of coax. The antenna and coax have been installed for about 7 or
8
> > > years. And it has been raining a lot the last few days (Maybe water in
> the
> > > coax) I need to replace the coax if so.
> > >
> > > Hope I didn't forget anything this time.
> > >
> > > Thanks again. Sorry about no conveying all the info the first time.
> > > --
> > > 73,
> > > Chuck
> > > KE4ETH
> > > USA-NA
> > >
> > Snip about RF grounding.

> >
> >
> >
>
>

3607. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 03:28:56 UTC
From: "Dr. Phil" <robert931@sympatico.ca>
Message-ID: <WFY3a.839$mZ2.176038@news20.bellglobal.com>
Source record: 124446

A motor repair/rewinding shop carries the transformer oil. That's what I use in my Cantenna.

"G. Watts" <gwatts@gb.nrao.edu> wrote in message news:3E4F0341.4B3C24BF@gb.nrao.edu...
> Greetings,
> My Heathkit Cantenna rusted through the bottom of the can and dumped the oil
> all over the floor of the shack. I was using mineral oil so it wasn't as bad
> as it could have been, in the future I'll be putting the replacement can in a
> 2 gallon plastic bucket or something similar. I plan to get a replacement
> can from my friendly paint dealer.
>
> I'd like to replace the oil with transformer oil as the thermal capabilities
> are better than mineral oil, any suggestions? I remember wayyyy back reading
> that some kinds of hydraulic oil are the same as transformer oil but sold
> under a different label, does anyone know of any brands or sources?
>
> I've had my Cantenna for at least 15 years, and a search on google brings up
> a lot of Wi-Fi antennas called "Cantennas," it made me feel old.
>
> 73!
> Galen, W8LNA

3608. Re: Antenna design Software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 03:32:09 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <ZIY3a.5421$4y4.2769067@newssvr28.news.prodigy.com>
Source record: 124445

Very cool program, Wes. I downloaded it an tried it with the included NEC engine, and also with EZNEC and Antenna Model. It is a simple concept, basing the program on an Excel workbook, but very well executed. It really extends the capabilities of the many NEC programs...in fact it addresses almost all the complaints I had with the others in terms of missing features, especially in regards to analytical tools and graphing. And it gives me a single place to store my models. It allows me to choose which engine is the best for the model...and to easily compare results between the various engines.

I have already moved some of my recent models over to MultiNEC, and used it to fine tune some parameters for best overall performance over a frequency range.

Kudos to Dan, AC6LA for a great little app.
--
73,
Larry N8LP
www.telepostinc.com

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:ct7v4vorbuhvhmqrfsif9vbe5oem44pkcu@4ax.com...
> On Sat, 15 Feb 2003 23:01:09 -0000, "Xanax"
> <keepItInTheNewsGroups@news.com> wrote:
>
> |Where can I get my hands on Antenna design software like EZNEC etc...
>
> MultiNEC is available at:
>
> http://www.qsl.net/ac6la/
>
> This is a slick program. It has a built-in NEC-2 engine or can
> overlay and add functionality to any of the other popular programs
> (EZNEC, 4nec2, Antenna Model).
>
> It can read and use files in EZNEC, NEC, A.M., ELNEC, MMANA, AO, or
> Nec/Wires format.
>
> The program interfaces with VOACAP to allow you to see how your newly
> created (or existing design) antenna will play on any desired
> propagation path.
>
> Since the core is Excel, cut-and-paste into other Excel worksheets is
> a snap. Another Excel application at the same site is XLZIZL which is
> a great transmission line/matching network design aid.

>
> Wes, N7WS

3609. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 03:47:13 UTC
From: el34guy@aol.com
Message-ID: <20030216224713.08383.00000581@mb-mt.aol.com>
Source record: 124447

mfj sells it too with the Heathkit replacement product. It looks just like the cantenna, I bought one about 2 yrs ago and it was like 50-60 dollars with the oil(xfmr). 73

3610. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 04:05:54 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302162005.1cad2137@posting.google.com>
Source record: 124448

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b1csta$8h5$2@sparta.btinternet.com>...
> "Art wrote -
>
> > Hmmmm, the closeness of the coil windings increases the
> > capacitive component, ...
>
> ==========
>
> Actually, turns-per-inch and wire diameter of a single-layer multi-turn
> solenoid does not affect its self-capacitance. Self-capacitance is primarily
> a function of a coil's overall length and diameter.
>
snip
Reg,
sorry to be so slow in responding but it took a long while to
decipher all that you said since you used the word 'apparent','real'
and also used the word
"primarily" as shown above.Thus I am answering as I see it even tho
you may be saying the same thing. The bottom line to my mind is that
closeness of wire winding IS real and must always be a factor separate
from what you call
"primarily', the interwinding capacity is one that is 'distributed'
which has a different equivalent circuit to that of a lumped
capacitance. I would suspect
that the resonant circuit of a coil would be different in the real
world as opposed to that calculated by ignoring interwound
capacitance. Thus I still feel
that the winding capacitance is real and does have an effect in many
ways tho actual mathematicians might consider it is so small as to be
irrevalent in the majority of cases.
There again Reg I may be grabbing at straws Hi hi
Regards
Art

> ---
> ==========
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ==========

3611. FS Alliance HD 73 rotator controller

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 04:32:30 UTC
From: edge3431@aol.comnospam
Message-ID: <20030216233230.03532.00000512@mb-cp.aol.com>
Source record: 124450

Model 73 (AC only, 60 Hertz, 0.8 amps.) I believe unit to be in good operating condition but I have no way to test. Unit is from an estate sale for a neighbor.
Asking $45 plus shipping in U.S. only, Postal Money Order only. Questions or request for picture please use e-mail address below. Thanks, Ed
edge4two@valleysurf.com

3612. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 05:04:09 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e506ebc_1@news1.prserv.net>
Source record: 124451

```
Yes, but that wasn't the question, Richard. You just placed the ground mat.
You don't have to connect it for it to be effective, just that it be there.
```

--
Crazy George
Remove NO and SPAM from return address
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:hssv4v4mhg03s1v6qa7bdbof86maud85tc@4ax.com...
> On Sun, 16 Feb 2003 11:45:02 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
> >
> > >A balanced antenna system doesn't need a ground to radiate efficiently.
> > >You might need a ground for other reasons but not for radiation
> > >efficiency with balanced antenna systems.
> > >--
> > >cheers, CAM http://www.qsl.net/w5dxp
>
> Hi Cecil,
>
> Gee, I simply add a ground mat under a common dipole and the WHOLE
> radiation pattern shows improvement. Not to take the obvious case of
> reflection straight up, I also looked at the change to radiation at an
> angle of 10° and found about half a dB improvement.
>
> What do you mean by efficiency, the ability to bury signal into a
> dissipative ground, or the ability to achieve a QSO?
>
> 73's
> Richard Clark, KB7QHC

3613. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 05:12:54 UTC
From: K6ME <k6me@adelphia.net>
Message-ID: <qb_3a.1226$aq6.1282775@news3.news.adelphia.net>
Source record: 124452

Bill and Mark speak from experience.

I will only add (Get some new coax) and don't sweat
SWR readings below 2/1. No one else will notice...

73: K6ME

3614. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 05:23:03 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5071B7.58A87EDD@cwis.net>
Source record: 124453

Chuck,
An SWR of 1.5 isn't bad at all, why bother
with the tuner?
'Doc

3615. 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 05:52:21 UTC
From: "... - - - ..."
Message-ID: <0XSdnYQCI7AO5c2jXTWcqQ@comcast.com>
Source record: 124454

The claim of this I10K antenna is his form of matching is much more efficient than any other, and will provide 2db more than some factory made antennas. any comments appreciated

Geo

http://www.a1antennas.com/

Reposted from another NG

The Penetrator 500 uses a matching hairpin in the VERTICAL PLANE. This affects the radiation patter of the antenna. The driven element is also surrounded by the ground plane brackets and radials.

The I10K uses TWO trombones. The first is to fine tune the resonant frequency. The second is used for impeadance matching. The I10K also uses an ELEVATED FEED which lowered the capacitance of the feed system. This equates to more signal getting to the antenna. These trombones are in the HORIZONTAL PLANE of the radiated signal which does NOT affect the radiation pattern of the 5/8 element. The I10K has lower loss. Just these facts alone
warrant the purchase of this antenna for me! If you want to compromise, thats up to you.

A true 5/8 antenna length is near impossible to match to a 50 ohm load. The reason for having an antenna length of 5/8 has everything to do with the WAVE
RADIATION PATTERN. In order to match it, you need to bring the antenna to a 3/4 wave length (next 1/4 wave length). BUT, adding this length in the vertical plane would RUIN the radiation pattern! So by placing this "section" in the horizontal plane eliminates the affects on the vertical plane. You will see this on the Avanti igma 5/8 and the Maco V58 as a loop! (for this reason alone, I have always felt the Avanti was better than the Penetrator).

The I10K also uses top hat loading for improved performance. We already agree on the better construction of the antenna and the materials used.

One other point, Jay's claim of 2db is over the difference of the I10K and the Penetrator...NOT dbi or dbd! Jay only claims 3.x of dbd gain for his antenna based on it being a 5/8 wave ground plane. Basic antenna theory states that a 5/8 antenna has "x" amount of gain over dbi or dbd. This is true! But then there is the losses in the matching network. What Jay has learned is how to eliminate these losses! Less loss, better efficiency! Better efficiency, better performance!

Also, the I10K can take an honest 10,000 watts! I've talked on two 50,000 watt stations, KFI and KOA in Denver (via the phone) HA HA... Any way, you need better components to run that kind of power. This is what you get right
out of the box! You don't need to buy that 5KW gamma like some other antennas. Better materials, better efficiency, better antenna!

The I10K is not for everyone! But if you want the best, the buck stops here!

Dino

3616. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 06:43:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5114ojqulra5e@corp.supernews.com>
Source record: 124455

The gain claims I see at their web site are:

"The I-10K uses a very efficient Impedance Matching System that allows several more dB of transmitted and received signal levels, as compared to other antennas that have lossy Impedance Matching Devices." (from http://www.a1antennas.com/about.html) and

"The Interceptor 10,000 or I-10K has a Elevated Vertical Element, that reduces unwanted losses at the base of the antenna. This is done with the mounting design and Impedance Matching Circuit. The I-10K has 3 to 4 dB stronger field strength, as compared to the Mastodon 5K, which has approx. 6 to 7 more dB than compared to the A99 type antennas.", and

"After replacing the Sigma 4 or foreign made copies of the Sigma 4, (Serio Vector 4000 or Galaxy 27, or Salute 27) Prototype I-10K uses [sic] report 2 to 3 dB stronger field strength levels, and a [sic] much quieter received noise levels, as compared to the Sigma 4 type antennas." (both from http://www.a1antennas.com/history.html)

I'll accept the claim that their matching network is pretty efficient. However, I seriously doubt that many similar antennas have matching networks that are several dB less efficient. Google didn't get any hits at all on "Mastodon 5k" except in the quote referenced above, so there's no way to know where this supposed 3 or 4 dB gain improvement over that antenna might come from.

The second quote claims that the Interceptor has from 9 to 11 dB gain relative to "the A99 type antennas". Like most commercial antennas, quantitative data is lacking for the A99 as far as I can tell. But it's really hard to imagine that a full size 10 meter antenna could be built that's only 10% efficient (which would be necessary in order for the Interceptor claims to be true) without intentionally incorporating a resistor in the design. So I strongly doubt this claim.

It appears that the "Interceptor" is an ordinary 5/8 wave ground plane antenna, no better or worse from a performance standpoint than any other similar antenna, unless the competing antenna has an unusually and unnecessarily inefficient matching arrangement. Since it's not difficult to efficiently match a 5/8 wavelength antenna, it's unlikely you'd see any appreciable difference among antennas of the same general construction.

Roy Lewallen, W7EL

... - - - ... wrote:
> The claim of this I10K antenna is his form of matching is much more
> efficient than any other, and will provide 2db more than some factory made
> antennas. any comments appreciated

>
> Geo
>
>
>
> http://www.a1antennas.com/
>
> Reposted from another NG
>
>
> The Penetrator 500 uses a matching hairpin in the VERTICAL PLANE. This
> affects the radiation patter of the antenna. The driven element is also
> surrounded by the ground plane brackets and radials.
>
> The I10K uses TWO trombones. The first is to fine tune the resonant
> frequency. The second is used for impeadance matching. The I10K also uses
> an ELEVATED FEED which lowered the capacitance of the feed system. This
> equates to more signal getting to the antenna. These trombones are in the
> HORIZONTAL PLANE of the radiated signal which does NOT affect the radiation
> pattern of the 5/8 element. The I10K has lower loss. Just these facts
> alone
> warrant the purchase of this antenna for me! If you want to compromise,
> thats up to you.
>
> A true 5/8 antenna length is near impossible to match to a 50 ohm load. The
> reason for having an antenna length of 5/8 has everything to do with the
> WAVE
> RADIATION PATTERN. In order to match it, you need to bring the antenna to a
> 3/4 wave length (next 1/4 wave length). BUT, adding this length in the
> vertical plane would RUIN the radiation pattern! So by placing this
> "section" in the horizontal plane eliminates the affects on the vertical
> plane. You will see this on the Avanti igma 5/8 and the Maco V58 as a loop!
> (for this reason alone, I have always felt the Avanti was better than the
> Penetrator).
>
> The I10K also uses top hat loading for improved performance. We already
> agree on the better construction of the antenna and the materials used.
>
> One other point, Jay's claim of 2db is over the difference of the I10K and
> the Penetrator...NOT dbi or dbd! Jay only claims 3.x of dbd gain for his
> antenna based on it being a 5/8 wave ground plane. Basic antenna theory
> states that a 5/8 antenna has "x" amount of gain over dbi or dbd. This is
> true! But then there is the losses in the matching network. What Jay has
> learned is how to eliminate these losses! Less loss, better efficiency!
> Better efficiency, better performance!
>
> Also, the I10K can take an honest 10,000 watts! I've talked on two 50,000
> watt stations, KFI and KOA in Denver (via the phone) HA HA... Any way, you
> need better components to run that kind of power. This is what you get
> right

> out of the box! You don't need to buy that 5KW gamma like some other
> antennas. Better materials, better efficiency, better antenna!
>
> The I10K is not for everyone! But if you want the best, the buck stops
> here!
>
> Dino
>
>

3617. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 06:51:40 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v511jv6kh9d8e4@corp.supernews.com>
Source record: 124456

I am convinced, I need two so I can "co-phase" them and get my SWRs down and my signal treetop tall. 3dB more than other verticals that get 5.7 dBi and 10,000 watts gets me all excited. See ya on the flipside, I'm outta here...

"... - - - ..." <.@... .com> wrote in message news:0XSdnYQCI7AO5c2jXTWcqQ@comcast.com...
> The claim of this I10K antenna is his form of matching is much more
> efficient than any other, and will provide 2db more than some factory made
> antennas. any comments appreciated
>
> Geo
>
>
>
> http://www.a1antennas.com/
>
> Reposted from another NG
>
>
> The Penetrator 500 uses a matching hairpin in the VERTICAL PLANE. This
> affects the radiation patter of the antenna. The driven element is also
> surrounded by the ground plane brackets and radials.
>
> The I10K uses TWO trombones. The first is to fine tune the resonant
> frequency. The second is used for impeadance matching. The I10K also
uses
> an ELEVATED FEED which lowered the capacitance of the feed system. This
> equates to more signal getting to the antenna. These trombones are in the
> HORIZONTAL PLANE of the radiated signal which does NOT affect the
radiation
> pattern of the 5/8 element. The I10K has lower loss. Just these facts
> alone
> warrant the purchase of this antenna for me! If you want to compromise,
> thats up to you.
>
> A true 5/8 antenna length is near impossible to match to a 50 ohm load.
The
> reason for having an antenna length of 5/8 has everything to do with the
> WAVE
> RADIATION PATTERN. In order to match it, you need to bring the antenna to
a
> 3/4 wave length (next 1/4 wave length). BUT, adding this length in the
> vertical plane would RUIN the radiation pattern! So by placing this
> "section" in the horizontal plane eliminates the affects on the vertical

> plane. You will see this on the Avanti igma 5/8 and the Maco V58 as a
loop!
> (for this reason alone, I have always felt the Avanti was better than the
> Penetrator).
>
> The I10K also uses top hat loading for improved performance. We already
> agree on the better construction of the antenna and the materials used.
>
> One other point, Jay's claim of 2db is over the difference of the I10K and
> the Penetrator...NOT dbi or dbd! Jay only claims 3.x of dbd gain for his
> antenna based on it being a 5/8 wave ground plane. Basic antenna theory
> states that a 5/8 antenna has "x" amount of gain over dbi or dbd. This is
> true! But then there is the losses in the matching network. What Jay has
> learned is how to eliminate these losses! Less loss, better efficiency!
> Better efficiency, better performance!
>
> Also, the I10K can take an honest 10,000 watts! I've talked on two 50,000
> watt stations, KFI and KOA in Denver (via the phone) HA HA... Any way,
you
> need better components to run that kind of power. This is what you get
> right
> out of the box! You don't need to buy that 5KW gamma like some other
> antennas. Better materials, better efficiency, better antenna!
>
> The I10K is not for everyone! But if you want the best, the buck stops
> here!
>
> Dino
>
>

3618. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 07:19:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v51384bpg7do30@corp.supernews.com>
Source record: 124457

... - - - ... wrote:
> The claim of this I10K antenna is his form of matching is much more
> efficient than any other, and will provide 2db more than some factory made
> antennas. any comments appreciated
>
> Geo
>
>
>
> http://www.a1antennas.com/
>
> Reposted from another NG

> . . .
> A true 5/8 antenna length is near impossible to match to a 50 ohm load. The
> reason for having an antenna length of 5/8 has everything to do with the
> WAVE
> RADIATION PATTERN. In order to match it, you need to bring the antenna to a
> 3/4 wave length (next 1/4 wave length). BUT, adding this length in the
> vertical plane would RUIN the radiation pattern! So by placing this
> "section" in the horizontal plane eliminates the affects on the vertical
> plane. You will see this on the Avanti igma 5/8 and the Maco V58 as a loop!
> (for this reason alone, I have always felt the Avanti was better than the
> Penetrator).

This is untrue. It's relatively easy to match a 5/8 wave antenna, and
there's no need to "bring the antenna to a 3/4 wave length", whatever
that means.

> Also, the I10K can take an honest 10,000 watts!

On the other hand, that's a real selling point! You can forget all the
efficiency and gain claims. The antenna's proven ability to take what a
real ham (or CBer) can dish out is enough all by itself. They'll go
like hotcakes! I can finally dump that wimpy 6,000 watt whip I got at
the truck stop, and crank th' ol' "booger" up to full power. Well,
closer to full power anyhow. . .

Roy Lewallen, W7EL

3619. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 08:15:00 UTC
From: g3tmh@gb7abc.net
Message-ID: <g3tmh000341@hamradio>
Source record: 124371

I went to my local power station and asked for some oil, they told me
it wasn't worth there while for a gallon and told me to get lost.

I then approached a workman, who got me a gallon of used oil from a
transformer.

Eventually the inner metal that holds the dummy load disolved.

Reading up on it, I found that oil has to be changed as it turns
acidic after a few years of power...

Ken

>Dear Mr. Watts:
>
>[snip]
>"G. Watts" <gwatts@gb.nrao.edu> wrote in message
>news:3E4F0341.4B3C24BF@gb.nrao.edu...
>> Greetings,
>> My Heathkit Cantenna rusted through the bottom of the can and dumped the
>oil
>> all over the floor of the shack. I was using mineral oil so it wasn't as
>bad
>> as it could have been, in the future I'll be putting the replacement can
>in a
>> 2 gallon plastic bucket or something similar. I plan to get a replacement
>> can from my friendly paint dealer.
>[snip]
>
>Well you certainly didn't have mineral oil in that "cantenna", cuz nothing
>emersed
>in mineral oil ever rusts!
>
>My mineral own mineral oil filled cantenna has never leaked in over 50
>years!
>
>When you went to the druggist to buy your mineral oil, you were sold
>something
>else! Did you ever smell or taste that stuff? They sold you a "bill of
>goods"!
>
>BTW... I set my cantenna in one of my wife's turkey roasting pans, simply
>because
>the rust inhibiting mineral oil in the can tends to migrate and coat
>everything around
>it, but.... It never rusts!

>
>--
>Peter K1PO
>Indialantic By-the-Sea, FL.
>[Where everything rusts because the Atlantic ocean is only a few feet from
>my door!]
>
>
>

--

(Sent using HamServ)
email: g3tmh@gb7abc.net
ax25 : g3tmh@gb7yks.#19.gbr.eu
Web site. http://www.gb7abc.net

3620. KT34XA For Sale

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 09:59:52 UTC
From: Ed <none-given@this-time>
Message-ID: <PjKdnbkqD5fML82jXTWcrg@texas.net>
Source record: 124458

On the ground in good condition. Elememts separated from boom, otherwise assembled. Pick-up only, in Dallas, Texas.
Good condition, $100.KV5I
ditdah(nospam)@texas.net

3621. lenght of coil ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 11:41:34 UTC
From: ronang@xs4all.nl
Message-ID: <b36845ed.0302170341.7265c902@posting.google.com>
Source record: 124459

Hello,

Thanks for reading this message

I would like to now the following , im am trying to build a short vertical
short-wave antenne
the reasson that i am building this is restrictions to hang-up wire
aerials.

But now i want to now how do you calculate the lenght of the coil that is in
the bottom of
the antenna (like mobile 27 MHZ antennas)

So if you now how to do this , pleasse let me now.

greetings, an gd dx from a sunny Netherlands

Ron (ronang@xs4all.nl)

3622. Re: lenght of coil ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 11:54:43 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2qii3$qc2$1@helle.btinternet.com>
Source record: 124460

> But now i want to now how do you calculate the lenght of the coil that is
in
> the bottom of
> the antenna
============================

Download program BOTLOAD from website below for the answers to all your
problems.

=======================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
=======================

3623. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 12:10:32 UTC
From: k3bu@aol.com
Message-ID: <20030217071032.10249.00001380@mb-md.aol.com>
Source record: 124461

>
>The I10K is not for everyone! But if you want the best, the buck stops
>here!
>
>Dino
>
>

... and allows you to hear / work signals from yesterday. It is faster than light, 50 dB better than Fractalides, gold plated connectors, oh just worth mortgaging the house and dying happy person :-)

Bada BUm

3624. Re: Ice on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 12:16:32 UTC
From: Steve <n4lq@iglou.com>
Message-ID: <3e5118d1$1_1@news.iglou.com>
Source record: 124477

My 160m windom has 1/2" of ice on the wire. It still works but the swr has gone way up. Perhaps a coating of RF grease will help prevent this next time.

--
Steve
N4LQ

"PDQ" <pdq@volaris.net> wrote in message
news:170220031007199924%pdq@volaris.net...
>
> My antennas (tribander, 6 meter beam, 2 meter beam) have suffered their
> first ice storm and I noticed that although they are intact (nothing
> broke, but still covered with ice) they have ceased to work, with only
> the 2 meter beam performing somewhat better than a magmount in the
> shack. The HF beam seems to have turned into a non resonant dummy load.
> Is this typical of the effects of icing? Hope they go back to normal
> when everything melts.

3625. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 12:42:09 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <4D44a.95$4q4.13@fe07.atl2.webusenet.com>
Source record: 124462

Doc,
I had mixed up my info when I typed the previous. I have infinity in the
75-80 meter band and less the 2-3:1 in most of the other bands. 1.2:1 on 10
meters with an antenna cut for 3.980MHz.

--
73,
Chuck
KE4ETH
USA-NA

"'Doc" <w5lz@cwis.net> wrote in message news:3E5071B7.58A87EDD@cwis.net...
>
>
> Chuck,
> An SWR of 1.5 isn't bad at all, why bother
> with the tuner?
> 'Doc

3626. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 13:01:22 UTC
From: cprstn54zz@att.net
Message-ID: <3e50dbe2.281873250@news-server.optonline.net>
Source record: 124463

On Sat, 15 Feb 2003 22:19:29 -0500, "G. Watts" <gwatts@gb.nrao.edu>
wrote:
>I'd like to replace the oil with transformer oil as the thermal capabilities
>are better than mineral oil, any suggestions?

The cheapest, most practical solution is to buy replacement mineral
oil at K-Mart, or just buy a whole new "cantenna" at TexasTowers.com
with nontox transformer oil (MFJ-250) for $49.

Or you could buy my "like new" MFJ-250 which I never used after
setting it up and is surplus to my needs now that I have a 2500 watt
dry load. $30 plus UPS. See:
http://www.texastowers.com/mfj250.htm

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

3627. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 13:55:12 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e50eec9_2@news1.prserv.net>
Source record: 124464

Chuck:
It sounds like you are trying to load up the coax. Go out and make sure:

1. The antenna is connected to the coax, and
2. The connection is not shorted.

My money is on problem #2.

--
Crazy George
Remove NO and SPAM from return address
"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:4D44a.95$4q4.13@fe07.atl2.webusenet.com...
> Doc,
> I had mixed up my info when I typed the previous. I have infinity in the
> 75-80 meter band and less the 2-3:1 in most of the other bands. 1.2:1 on
10
> meters with an antenna cut for 3.980MHz.
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>

3628. Re: Line Of Sight Propagation Type Question: From A Newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 14:05:38 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e50eeca_2@news1.prserv.net>
Source record: 124465

Robert:

The answer to your final question and source of your confusion is a company called Aircraft Radio Incorporated or ARINC. (I'm sure they have a web site of some kind. Whether it explains their network or now, I can't say.) There is a network of ground transmitting sites linked by microwave and fiber optic cable which ties to all the various (ARTCC) control centers. The operator may be in Gander, but depending on where the aircraft is located, he may be using a transmitter anywhere in the western hemisphere, literally. If you go to central Virginia, for example, you can regularly hear the Atlanta operator and the D. C. area operator, at the same strength, neither within VHF radio range. Because they share the same transmitter at Apple Orchard, up on the Blue Ridge mountains.

--
Crazy George
Remove NO and SPAM from return address
"Robert11" <rgsrose@tiac.net> wrote in message
news:b2let3$7pf$1@slb3.atl.mindspring.net...
> Hi,
>
> New at this, and have a really basic type of question.
>
> Was wondering a bit about modes, and Line Of Sight propagation.
>
> I understand that the curvature of the earth limits what you can receive
> from, e.g., a fm antenna
> at a given height. So, that's the reason I guess I can't receive any
police
> calls from Philadelphia if
> I live in Boston.
>
> But, was wondering:
>
> Is this also mode dependent?
> Is it just as true for am as it is for fm?
>
> The reason I'm asking is that I wonder why I CAN receive two way aero
> conversations from Gander.
>
> The plane transmits over a pretty wide cone angle I would think, so that's
> probably why I can receive it in Boston.
>
> But, why can I also receive what being transmitted From Gander to the
plane?

> Wouldn't line of sight apply here also, and prohibit my receiving it in
> Boston?
>
> The frequencies in question are around 133 MHz (AM), so wouldn't LOS
> limitations apply too?
>
> Or, is it that being am, LOS doesn't really apply, and the "133 MHz high
> freq." am "bounces" off the ionospheric layers like
> the low am frequencies do?
>
> Thanks,
> Bob
>

3629. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 14:34:19 UTC
From: richardharrison@webtv.net
Message-ID: <26999-3E50F2EB-129@storefull-2314.public.lawson.webtv.net>
Source record: 124466

Geo wrote:
"The claim of this l10K antenna is his form of matching is much more efficient than any other, and will provide 2 db more than some factory made antennas."

That could be an exaggeration.

An infinitely short (imaginary but useful for calculations and since it`s fictional it`s at home in this thread) antenna over perfectly conducting earth, and radiating 1 KW with perfect efficiency will produce 152 mV/m at one mile.

A 1/4 (0.25)-wave vertical antenna has a null at its zenith, so some of its energy is redirected along the horizontal plane. The perfect 1/4-wave with perfect conditions as above produces 195 mV/m at one mile.

A 0.311-wave antenna producces 200 mV/m at one mile.

A 0.5-wave antenna produces 236 mV/m at one mile

A 5/8 (0.625)-wave vertical ground mounted antenna with perfect conditions radiates 267 mV/m at one mile.

Formulas and calculations are found in "The Complete Broadcast Antenna Handbook" by John E. Cunningham.

The gain in volts per meter of a 5/8-wave antenna over a 1/4-wave antenna is seen to be only 40% or about 2.7 dB.

Fact is, most AM Broadcasters think the gain of a 5/8-wave antenna over a 1/4-wave antenna is not worth the cost. Of course foot-lengths of steel tower cost more than inches of whip. Some broadcasters do put up 5/8-wave towers, the highest that give increased gain along the horizontal without increasing high angle radiation to an objectionable level. The increased level along the horizontal is accompanied by enlarging the null overhead and this reduces sky wave until the antenna height (length) reaches 5/8-wave. More ground wave and less sky wave means a greater distance out to the point away from the station where sky wave interference with the ground wave causes objectionable fading.

But, without care, the 2.7 dB gain of a 5/8-wave antenna over a 1/4-wave antenna can be lost. Broadcasters don`t do that. Their matching networks are nearly lossless. But who knows about the Aether Shaker Aerial Company? Besides, that longer whip is going to break out more florescent lamps in parking garages and cause more havoc in other respects for very little gain.

Best regards, Richard Harrison, KB5WZI

3630. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 15:03:28 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <mJ64a.63924$a95.18334@fe05.atl2.webusenet.com>
Source record: 124467

I guess that might be the problem. We have had a lot of rain, freezing and otherwise in the last few days. It is still attached, but this is looking from the ground. I will check the connection when it warms up and the roof isn't so wet and slick. Since the tuner (MFJ-948) has balance line, I think I'll try 300-Ohm to feed it this time. Hopefully the twinlead at Radio Shack is better then the coax they sell.

TNX

--
73,
Chuck
KE4ETH
USA-NA

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3e50eec9_2@news1.prserv.net...
> Chuck:
> It sounds like you are trying to load up the coax. Go out and make sure:
>
> 1. The antenna is connected to the coax, and
> 2. The connection is not shorted.
>
> My money is on problem #2.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:4D44a.95$4q4.13@fe07.atl2.webusenet.com...
> > Doc,
> > I had mixed up my info when I typed the previous. I have infinity in the
> > 75-80 meter band and less the 2-3:1 in most of the other bands. 1.2:1 on
> 10
> > meters with an antenna cut for 3.980MHz.
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA
> >
>
>
>

3631. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 15:18:29 UTC
From: richardharrison@webtv.net
Message-ID: <9629-3E50FD45-55@storefull-2315.public.lawson.webtv.net>
Source record: 124471

Art, KB9MZ wrote:
"---clossness of wire winding IS real and must always be a factor---."

Reg wrote:
"Self capacitance is primarily a function of a coil`s overall length and diameter."

The subject is single layer solenoids. A rigid VHF coil may be compressed to increase its inductance and capacitance, thus lowering its resonant frequency.

Reg`s observation may be that for a given inductance, a close-wound coil has more capacitance between turns but it also has less turns, So, the self capacitance of the coil may be very nearly a function of the coil`s length and diameter. The close-wound coil has less turns which offsets the proximity of the turns when considering total capacitance.

Best regards, Richard Harrison, KB5WZI

3632. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 15:21:01 UTC
From: Joe <Joe.Clarke11230@ny.rr.com>
Message-ID: <3E50FDDC.8E3FBB10@ny.rr.com>
Source record: 124468

Hi,

Someone wrote that stuff in mineral oil will not rust, correct, but the bottom of the can is not
covered in oil, only the inside of the can is. so.

Try a local vet or agricultural supply house for a gallon of mineral oil, cheaper then the little
bottles at a pharmacy and no funny jokes when you go to pay for it.

Used on horses, cows pigs, etc. low cost.

I tried to get transformer oil but power co. was not interested in selling it or would take any
food/coffee I wanted to give them. Maybe I need to shave my beard off. !!!

73

"G. " wrote:

> Greetings,
> My Heathkit Cantenna rusted through the bottom of the can and dumped the oil
> all over the floor of the shack. I was using mineral oil so it wasn't as bad
> as it could have been, in the future I'll be putting the replacement can in a
> 2 gallon plastic bucket or something similar. I plan to get a replacement
> can from my friendly paint dealer.
>
> I'd like to replace the oil with transformer oil as the thermal capabilities
> are better than mineral oil, any suggestions? I remember wayyyy back reading
> that some kinds of hydraulic oil are the same as transformer oil but sold
> under a different label, does anyone know of any brands or sources?
>
> I've had my Cantenna for at least 15 years, and a search on google brings up
> a lot of Wi-Fi antennas called "Cantennas," it made me feel old.
>
> 73!
> Galen, W8LNA

3633. Re: Wave length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 15:27:14 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93254BD3F87CApookster@216.168.3.50>
Source record: 124469

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in news:aYW3a.882
$iu1.102697@news20.bellglobal.com:

> So what exactly are you smoking ? My position, logic and conclusions on
> this topic have not changed since they were first formulated in 1995. If
> that's not clear to you, then... well...
>

I'm worn out. Even shadow boxing is exercise. Time to give it a rest.

--
Bill, W7TI

3634. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 15:32:41 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93254CC09A26Dpookster@216.168.3.50>
Source record: 124470

Joe <Joe.Clarke11230@ny.rr.com> wrote in
news:3E50FDDC.8E3FBB10@ny.rr.com:

> I tried to get transformer oil but power co. was not interested in
> selling it

I bought five gallons at the Shell distributor in Seattle some years ago,
pretty reasonable as I recall. I'm thinking 4-5 bucks a gallon.

Use the one gallon you need and sell the rest at a hamfest.
Net cost = zero.

--
Bill, W7TI

3635. Ice on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 16:07:19 UTC
From: PDQ <pdq@volaris.net>
Message-ID: <170220031007199924%pdq@volaris.net>
Source record: 124472

My antennas (tribander, 6 meter beam, 2 meter beam) have suffered their first ice storm and I noticed that although they are intact (nothing broke, but still covered with ice) they have ceased to work, with only the 2 meter beam performing somewhat better than a magmount in the shack. The HF beam seems to have turned into a non resonant dummy load. Is this typical of the effects of icing? Hope they go back to normal when everything melts.

3636. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 16:16:14 UTC
From: James <home.james@newcityservice.com>
Message-ID: <3E510ACB.A418F2DD@newcityservice.com>
Source record: 124473

Hi,

Here is a link to the stuff:

http://www.shell-lubricants.com/Electrical/diala-mmx.html

73

"Bill, " wrote:

> Joe <Joe.Clarke11230@ny.rr.com> wrote in
> news:3E50FDDC.8E3FBB10@ny.rr.com:
>
> > I tried to get transformer oil but power co. was not interested in
> > selling it
>
> ____
>
> I bought five gallons at the Shell distributor in Seattle some years ago,
> pretty reasonable as I recall. I'm thinking 4-5 bucks a gallon.
>
> Use the one gallon you need and sell the rest at a hamfest.
> Net cost = zero.
>
> --
> Bill, W7TI

3637. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 16:17:58 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <4f225v4s1ljrnm97tgocq9vj2a8mi206sk@4ax.com>
Source record: 124475

On Sun, 16 Feb 2003 23:19:23 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>... - - - ... wrote:
>> The claim of this I10K antenna is his form of matching is much more
>> efficient than any other, and will provide 2db more than some factory made
>> antennas. any comments appreciated
>>
>> Geo
>>
>>
>>
>> http://www.a1antennas.com/
>>
>> Reposted from another NG
>
>> . . .
>> A true 5/8 antenna length is near impossible to match to a 50 ohm load. The
>> reason for having an antenna length of 5/8 has everything to do with the
>> WAVE
>> RADIATION PATTERN. In order to match it, you need to bring the antenna to a
>> 3/4 wave length (next 1/4 wave length). BUT, adding this length in the
>> vertical plane would RUIN the radiation pattern! So by placing this
>> "section" in the horizontal plane eliminates the affects on the vertical
>> plane. You will see this on the Avanti igma 5/8 and the Maco V58 as a loop!
>> (for this reason alone, I have always felt the Avanti was better than the
>> Penetrator).
>
>This is untrue. It's relatively easy to match a 5/8 wave antenna, and
>there's no need to "bring the antenna to a 3/4 wave length", whatever
>that means.
>
>> Also, the I10K can take an honest 10,000 watts!
>
>On the other hand, that's a real selling point! You can forget all the
>efficiency and gain claims. The antenna's proven ability to take what a
>*real* ham (or CBer) can dish out is enough all by itself. They'll go
>like hotcakes! I can finally dump that wimpy 6,000 watt whip I got at
>the truck stop, and crank th' ol' "booger" up to full power. Well,
>closer to full power anyhow. . .
>
>Roy Lewallen, W7EL

Roy,

Do we dare mention that a 5/8-wave ground plane falls short of the 3 dB claimed gain over a 1/4-wave ground also? Naw, it would open up a hornets nest. <g>

Danny, K6MHE

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

3638. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 16:27:02 UTC
From: Craig Buck <k4ia@cox.net>
Message-ID: <q384a.19399$P1.1480763@news1.east.cox.net>
Source record: 124474

Forget the Ratshack twin lead. It is only intended for short runs of TV reception and even then it is marginal. You can get decent ladder line from several sources at 14 cents or so a foot. Don't waste your money on the other stuff.

As for your SWR problem. I think you are trying to load the coax. It is either shorted, open (after all consider where you got it) or not connected at the antenna. I ran the entire 160 meter CW contest not realizing the antenna not connected to the coax. Coax loaded up fine but I am sure my signal suffered greatly.
--
Radio K4ia
Craig "Buck"
Fredericksburg, VA USA
FISTS 6702 cc 788 Diamond 64

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:mJ64a.63924$a95.18334@fe05.atl2.webusenet.com...
> I guess that might be the problem. We have had a lot of rain, freezing and
> otherwise in the last few days. It is still attached, but this is looking
> from the ground. I will check the connection when it warms up and the roof
> isn't so wet and slick. Since the tuner (MFJ-948) has balance line, I
think
> I'll try 300-Ohm to feed it this time. Hopefully the twinlead at Radio
Shack
> is better then the coax they sell.
>
> TNX
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
> news:3e50eec9_2@news1.prserv.net...
> > Chuck:
> > It sounds like you are trying to load up the coax. Go out and make
sure:
> >
> > 1. The antenna is connected to the coax, and
> > 2. The connection is not shorted.
> >
> > My money is on problem #2.

> >
> > --
> > Crazy George
> > Remove NO and SPAM from return address
> > "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> > news:4D44a.95$4q4.13@fe07.atl2.webusenet.com...
> > > Doc,
> > > I had mixed up my info when I typed the previous. I have infinity in
the
> > > 75-80 meter band and less the 2-3:1 in most of the other bands. 1.2:1
on
> > 10
> > > meters with an antenna cut for 3.980MHz.
> > >
> > > --
> > > 73,
> > > Chuck
> > > KE4ETH
> > > USA-NA
> > >
> >
> >
> >
>
>
>

3639. Re: Ice on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 17:14:35 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e51177a.222027156@news.galilei.com>
Source record: 124476

Hi PDQ

Rain, Sleet & Snow don't affect most of my antenna's, but let the store bought jobbies get covered in ice and they are completely useless. After the recent ice storm here, the only antennas that tuned up were the dipoles and inverted Vee's.

I don't know why but the ice melts off of them quite quickly if they are in use. Evident by needing to retune after a few transmissions until the tuner knobs are at their normal position for that band. Looking out the window after a QSO shows the ice gone from the dipoles. The same thing doesn't work with the other antenna's.

TTUL
Gary

3640. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 17:42:36 UTC
From: richardharrison@webtv.net
Message-ID: <10078-3E511F0C-43@storefull-2311.public.lawson.webtv.net>
Source record: 124478

Art, KB9MZ wrote:
"If the antenna is resonant then there can be a "loss less" match."

Reactance can be nearly lossless. An antenna that is a little too long has excess inductance which can be offset with an external capacitance which is nearly lossless.

Resistance. other than the antenna`s radiation resistance, in the antenna is considered a loss.
Antenna efficiency is related to the ratio of radiation resistance to the loss resistance in the antenna.

Resonance is required to remove the reactive impediment to antenna current. If it can`t flow in the antenna, current can`t cause radiation from the antenna.

Best regards, Richard Harrison, KB5WZI

3641. Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 18:45:53 UTC
From: VC <vca@crucialinfo.com>
Message-ID: <Xns932581DC157D8vcacrucialinfocom@137.192.100.18>
Source record: 124479

I do not want to start a "flame war." Out of frustration, I started a web site that not only reviews books and tools, but tells you where they are aimed - beginner to expert. I hope enough people will buy a book or product from Amazon.com to keep the site going. I am looking for reviewers of books or software. I wonder if someone would like to review their favorite antenna book or antenna software. There is zero pay! It is your opinion that matters. If you are interested, look at http://www.crucialinfo.com and then let me know.
"VC" KCEM

vca@crucialinfo.com

3642. "T" antenna fed against ground questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 18:55:23 UTC
From: Jerry Flanders <SeeSignature@below.com>
Message-ID: <oca25v82m7bb24l8dld96mvr45vqeiul9n@4ax.com>
Source record: 124480

If I use a simple coax-fed 50 ft high horizontal dipole (direct antenna to coax connection topside with no balun or beads at feedpoint) as a vertical "T" antenna fed against ground (by tying the downlead coax inner+outer together at ground level and feeding this against a ground connection with radials):

(1) Is there any feed phase difference topside between the side of the horizontal wire fed with the coax outer as opposed to the side fed with the inner? Seems there could be, since one side is fed with a line having a VF of 1 (current flows on the outside of the vertical coax, I presume) and the other side is fed with the center conductor, which probably is influenced by the dielectric, giving it a lower VF.

(2) Can this be modelled (the vertical coax section "outer" as a radiator and the "inner" as a feed for half of the top horizontal run)? How do I set it up?

Thanks

Jerry W4UK

3643. Re: Recent TV antenna inconsistencies

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 18:59:33 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <CaGdnfCZq9OKrMyjXTWcpw@comcast.com>
Source record: 124481

Mike,

This may sound stup, but is the antenna fed with 300 ohm twinlead that is taped to the mast, or some other metallic object? Unlesss you have a broken wire, make sure the twinlead is twisted at about 1 twist/foot, and mounted with standoff insulators.

When I bought this house, it came with an antenna and rotator. I have 7 local VHF stations whose transmitters are co located 26 miles away. Yet, the way the antenna was installed, I had to rotate the antenna over a range of almost 180 degrees to pick up these 7 stations. Reception in rain was almost useless. The twinlead was taped to the mast.

As for your rotators, eyeball the antenna, if it is pointing in the right direction, the rotator has nothing to do with it. I presume you do occasionally synchronize the rotator.

Tam/WB2TT
"Mike S. Nowostawsky" <mikenowo@sympatico.ca> wrote in message news:WEH3a.1$mZ2.367@news20.bellglobal.com...
> First off, I realize this is a TV antenna question, but I couldn't find a
> newsgroup for that specifically (if anyone knows of a better place to post,
> please advise).
>
> So:
> We have had a TV antenna on our roof for several years now, but most
> recently (past few months) the reception has been abysmally inconsistent. On
> some days, all channels will play well for hours; on others turning the
> rotator unit indoors to ANY location (N, S, E, W, or any combinations)
> result in bad or no reception on all or most channels! A baffling example
> was today when in the morning keeping it at EAST all channels came in fairly
> well, then after a few hours all were gone. After minutes of frustrating
> back and forth rotation, WEST finally got the channels back. Then after half
> an hour they were gone or many lost again!! Turning it to SOUTH (once again
> after many tries) and all was well until about 7 PM. Readjusting yet again
> to SW helped up to now, 11PM. For the moment, it is still working, knock
> wood. I might be tempted to say it is worse during colder weather, but it is
> 20 below right now and all is working well, so that can't be the reason.
> Also it is not specific to a particular time of day (yesterday I could not

> tune anything in at 11PM, unlike today).
>
> Once again, this started about 3 months ago and has been ridiculously
> inconsistent since then. WHAT could possibly cause this? We have tried
BOTH
> rotator units (ARCHEROTOR: model 15-1225 and model 15-1225B) and the
problem
> persists on both. Nothing has changed regarding the connections indoors or
> outdoors and as far as we know nothing has been built around us recently
to
> interfere with reception.
>
> What should we be looking for regarding rectifying this situation? Can
both
> rotator units be failing (do they even mean anything regarding reception
or
> do they simply rotate the antenna)? Is there a problem with the antenna
> itself? If so, what part is most likely the culprit? We have boosters on
all
> TVs as well, so that shouldn't be a problem.
>
> Any suggestions as to possible things to look for regarding a fix would be
> most appreciated. Getting reception these days is like rolling the dice
(and
> it seems they're loaded)!
>
> Thanks for any help.
>
> Regards,
> ==========
> Mike S. Nowostawsky:
> Email: mikenowo@sympatico.ca, mikenowo@yahoo.ca
> Home Page: http://www3.sympatico.ca/mikenowo/
> Lachine (Montreal), Quebec, Canada
>
>

3644. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 19:44:57 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302171144.7fd020a4@posting.google.com>
Source record: 124482

Richard, If you look at the question analyticaly you can determine the
resonant frequency for the same inductance but repeat it for one turn
removed and then two turns removed. If this is plotted in the form of
inductance versus frequency to get a straight line (plot would have
to be the reciprocal of frequency) one can strike a straight line
which conforms to a algebraic equation. Of course with diminishing
turns so will interwinding capacitance will reduce but for the
readings taken it is close enough to a straight line. Thus the
straight line should show a negative inductance for a zero frequency(
i.e. a capacitance that can be equated to the intercoil capacity for
the values from which the line was generated.
Ofcourse, in actual fact the capacitance will reduce as turns are
reduced so a true graph line will not be exactly straight,on another
thread but will show a relative magnitude of interwinding capacitance
for the initial rezonant frequency points made. The bottom line is
that these values are relatively small and thus capacitance in
'general' terms can be stated exactly as Reg stated.
Got the book by the way Richard from the library.The section that you
alluded to on another thread was exactly what I was looking for to
satisfy my curiousity.
Thanks a bunch.
Regards
Art

renrichardharrison@webtv.net (Richard Harrison) wrote in message
news:<9629-3E50FD45-55@storefull-2315.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "---clossness of wire winding IS real and must always be a factor---."
>
> Reg wrote:
> "Self capacitance is primarily a function of a coil`s overall length and
> diameter."
>
> The subject is single layer solenoids. A rigid VHF coil may be
> compressed to increase its inductance and capacitance, thus lowering its
> resonant frequency.
>
> Reg`s observation may be that for a given inductance, a close-wound coil
> has more capacitance between turns but it also has less turns, So, the
> self capacitance of the coil may be very nearly a function of the coil`s
> length and diameter. The close-wound coil has less turns which offsets
> the proximity of the turns when considering total capacitance.
>
> Best regards, Richard Harrison, KB5WZI

3645. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 19:52:19 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E513D73.E0CA8833@cwis.net>
Source record: 124483

Dan Richardson wrote:
>
-------ckipped------------
> No trees were destroyed in the sending of this message.
> However, a large number of electrons were terribly inconvenienced.

Oh, I wouldn't say no trees were destroyed. Wonder how
many telephone poles were used to support the phone lines
used to reach various computers? How about the trees used
to make the cardboard the computers were shipped in? Did
you ever think about that?
'Doc

3646. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 20:13:16 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <wnb4a.6885$_c6.678831@newsread2.prod.itd.earthlink.net>
Source record: 124484

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:10078-3E511F0C-43@storefull-2311.public.lawson.webtv.net...
> Art, KB9MZ wrote:
> "If the antenna is resonant then there can be a "loss less" match."
>
> Reactance can be nearly lossless. An antenna that is a little too long
> has excess inductance which can be offset with an external capacitance
> which is nearly lossless.
>
> Resistance. other than the antenna`s radiation resistance, in the
> antenna is considered a loss.
> Antenna efficiency is related to the ratio of radiation resistance to
> the loss resistance in the antenna.
>
> Resonance is required to remove the reactive impediment to antenna
> current. If it can`t flow in the antenna, current can`t cause radiation
> from the antenna.
>
> Best regards, Richard Harrison, KB5WZI

Richard, did you review my QST article that shows why the reactance cancellation concept simply doesn't achieve the increase in BW? If you don't recall the address of my web paage, where you will find the article, is http://home.iag.net/~w2du, Seems as if no one is paying any attention to the proven reason why the bazooka doesn't work the way many have been brainwashed to believe it works.

Walt, W2DU

3647. Third order intermodulation

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 20:37:48 UTC
From: radiotec@libero.it
Message-ID: <deea1d33.0302171237.7952c116@posting.google.com>
Source record: 124485

Hi folks,

Where can I find a good program (shareware or freeware) to compute
third order intermodulation?

73's

IK1GEN
Vincent

3648. Re: FM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 20:43:39 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <1JKdnRaxndfg1MyjXTWcoA@comcast.com>
Source record: 124486

"Norman Seifert" <normanseifert@webtv.net> wrote in message
news:16138-3E4FF38C-137@storefull-2312.public.lawson.webtv.net...
> I have a DX-392 Radio Shack AM-FM-SW radio. The FM antenna is a
> telescoping rod antenna. What is the best way to connect an outside FM
> antenna to this radio? Also a station at 91.3 FM is knocking out a
> station at 91.1 FM that is farther away, but close enough to receive;
> anyway to correct this? Thanks,
>
> Norman Seifert
> Swannanoa, N.C., U.S.A.
>
I just tried this with a Radio Shack DX60, and it works. Turn the radio on its side so the rod is horizontal. Now rotate the radio so you get the desired station without interference. In general, you will want to turn the radio so the rod is pointed directly at the INTERFERING station.

If you put up a dipole outside, orient it so the end of the dipole is pointing at the 91.3 station. The null will be quite sharp. So, you might want to listen to the radio as you orient the antenna. You might also have to use a TV balun and 75 ohm coax to get the desired amount of rejection..

Tam/WB2TT

3649. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 21:14:33 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <o4k25vg110iv500bhpk5q8ng7dkq2g1mmd@4ax.com>
Source record: 124488

On Mon, 17 Feb 2003 13:52:19 -0600, 'Doc <w5lz@cwis.net> wrote:

>
>
>Dan Richardson wrote:
>>
>-------ckipped------------
>> No trees were destroyed in the sending of this message.
>> However, a large number of electrons were terribly inconvenienced.
>--------------------------
>
> Oh, I wouldn't say no trees were destroyed. Wonder how
>many telephone poles were used to support the phone lines
>used to reach various computers? How about the trees used
>to make the cardboard the computers were shipped in? Did
>you ever think about that?
> 'Doc

Nope. They were dead before the message was created. <g>

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

3650. Re: "T" antenna fed against ground questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 21:26:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b2rk1veag1@helle.btinternet.com>
Source record: 124487

I don't understand your query.

You might learn something if you download program WINDOM2 from website
below.

Download in a few seconds. Not zipped up. Run immediately. 'What-if'
operating procedure.

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================
"Jerry Flanders" <SeeSignature@below.com> wrote in message
news:oca25v82m7bb24l8dld96mvr45vqeiul9n@4ax.com...
> If I use a simple coax-fed 50 ft high horizontal dipole (direct
> antenna to coax connection topside with no balun or beads at
> feedpoint) as a vertical "T" antenna fed against ground (by tying the
> downlead coax inner+outer together at ground level and feeding this
> against a ground connection with radials):
>
> (1) Is there any feed phase difference topside between the side of the
> horizontal wire fed with the coax outer as opposed to the side fed
> with the inner? Seems there could be, since one side is fed with a
> line having a VF of 1 (current flows on the outside of the vertical
> coax, I presume) and the other side is fed with the center conductor,
> which probably is influenced by the dielectric, giving it a lower VF.
>
> (2) Can this be modelled (the vertical coax section "outer" as a
> radiator and the "inner" as a feed for half of the top horizontal
> run)? How do I set it up?
>
> Thanks
>
> Jerry W4UK

3651. Re: Ice on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 21:45:28 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <NsqcnXgVcr0y-8yjXTWcpg@ctc.net>
Source record: 124491

"> My antennas (tribander, 6 meter beam, 2 meter beam) have suffered their
> first ice storm and I noticed that although they are intact (nothing
> broke, but still covered with ice) they have ceased to work, with only
> the 2 meter beam performing somewhat better than a magmount in the
> shack. The HF beam seems to have turned into a non resonant dummy load.
> Is this typical of the effects of icing? Hope they go back to normal
> when everything melts.

That sounds normal. Most beams will be way off when covered by a layer of
ice. You should be ok when it melts off. Sometimes they will seem to work
beter if turned around backwards tuil the spring thaw.

3652. need info on bencher skyhawk

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 22:01:18 UTC
From: tucsonamateur@aol.com
Message-ID: <20030217170118.08953.00000704@mb-cg.aol.com>
Source record: 124489

which is better choice-skyhawk or m2 kt36xa??

3653. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 22:05:53 UTC
From: richardharrison@webtv.net
Message-ID: <25802-3E515CC1-376@storefull-2316.public.lawson.webtv.net>
Source record: 124490

Walter, W2DU issued an invitation to his webpage at:
http:/home.iag.net/~w2du

It has a nice picture of the cover of Walter`s new book "REFLECTIONS
ll".

The links seem to be to pdf documents which Web TV doesn`t handle.

I plead complete ignorance. To me a bazooka was a cobbled-up musical instrument used by Arkansas radio comedian Bob Burns in the 1930`s to make mirth, not music. It was pictured as a prolifiration of pipes with a funnel on one end. Not brass, but more like a galvanized steel horn. It may have been refuse from an Ozarks distillery.

Some day I hope to read upon the electric Bazooka.

My comment was simply a reply to:
"If the antenna is resonant then there can be a loss less match."

Since only relatively lossless reactance is required to correct the phase angle, the statement seemed irrelevant to loss as a first approximation to me.

Best regards, Richard Harrison, KB5WZI

3654. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 22:45:04 UTC
From: richardharrison@webtv.net
Message-ID: <16139-3E5165F0-59@storefull-2312.public.lawson.webtv.net>
Source record: 124492

I`ll try again to repeat Walter, W2DU`s home page address. If it doesn`t work click on his last posting for it. Thank you.

http://home.iag.net/~w2du

Best regards, Richard Harrison, KB5WZI

3655. Re: "T" antenna fed against ground questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 23:23:54 UTC
From: richardharrison@webtv.net
Message-ID: <16141-3E516F0A-11@storefull-2312.public.lawson.webtv.net>
Source record: 124494

Reg wrote:
"Idon`t understand your query."

I guess his concern is about a difference in velocities inside and outside the coax. Jerry, W4UK noted the horizontal dipole has one side connected to the center conductor of his coax and the other side connected to the coax shield.

His concern seems to be a velocity factor near 1 on the outside of the shield and a velocity factor of about 2/3 on the inside of the coax. Does the difference in arrival times for signals inside and outside the shield to the two sides of the dipole unbalance the dipole enough to seriously affect the circularity of his horizontal pattern for his vertically polarized radiation? Ideally, he probably would like his horizontal radiation to balance out leaving only the vertical radiation of the coax. The horizontal dipole would serve only as a capacitive hat on the band where the coax is used as the radiator and fed against the ground system Jerry has installed.

I`ll keep my opinions to myself for now.

Best regards,Richard Harrison, KB5WZI

3656. Re: Ice on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-17 23:31:59 UTC
From: jder8745@aol.com
Message-ID: <20030217183159.03846.00000293@mb-cp.aol.com>
Source record: 124493

Howdy,

All of my antennas show a change of impedance when wet with rain or ice.

Most of the time I can still get them to load.

Worst performer in bad wx is 2-m Yagi.

73 de Jack, K9CUN

3657. dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 00:00:50 UTC
From: Tom DeYoung <tdeyoung@n0spam.mn.rr.com>
Message-ID: <SIe4a.122803$lb.2764859@twister.rdc-kc.rr.com>
Source record: 124495

Well-
I got the dipole up, only to run into problems:

A) it's only about 2 feet up at the lowest, in a v format

B) The feedline is a smaller gauge wire than the antenna wire....wrapping
them together isn't working.

I'll deal with A later, as for B:
Can I find/make some sort of device with 2 eyebolts connected to each other
and hook one side of the feed on one side and the antenna wire on the other?
Obviously, I'll need 2, as this is ladder line (450 ohm)

any ideas?

Thanks

Tom

3658. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 00:16:59 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <viu25vks7eeh55lg0pr30jnpqhmqcecom0@4ax.com>
Source record: 124496

On Tue, 18 Feb 2003 00:00:50 GMT, "Tom DeYoung" >

>I'll deal with A later, as for B:
>Can I find/make some sort of device with 2 eyebolts connected to each other
>and hook one side of the feed on one side and the antenna wire on the other?
>Obviously, I'll need 2, as this is ladder line (450 ohm)
>

You need a center insulator to take the strain of the dipole wires.
If you can't come up with a glass/porcelain insulator, use a piece
of plastic with two holes drilled in it - a chunk of plexiglass, an
old domino, whatever you can come up with. Then, if you have
a soldering iron, solder the ladderline conductors to the dipole
conductors instead of just twisting them together.

-fb-

3659. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 00:22:26 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <kUe4a.6060$aL3.4620@fe06.atl2.webusenet.com>
Source record: 124497

Thanks. I picked up some 300-Ohm this afternoon. Not the RS or Wal-Mart stuff, but some of the type (new) that a friend has used for years. His dipoles get rebuilt about every 4 - 5 years. If it lasts till I can pickup some 300/450 Ohm ladder line I'll be happy. Passed Extra and gotta have that QSO fix.

TNX

--
73,
Chuck
KE4ETH
USA-NA

"Craig Buck" <k4ia@cox.net> wrote in message
news:q384a.19399$P1.1480763@news1.east.cox.net...
> Forget the Ratshack twin lead. It is only intended for short runs of TV
> reception and even then it is marginal. You can get decent ladder line
from
> several sources at 14 cents or so a foot. Don't waste your money on the
> other stuff.
>
> As for your SWR problem. I think you are trying to load the coax. It is
> either shorted, open (after all consider where you got it) or not
connected
> at the antenna. I ran the entire 160 meter CW contest not realizing the
> antenna not connected to the coax. Coax loaded up fine but I am sure my
> signal suffered greatly.
> --
> Radio K4ia
> Craig "Buck"
> Fredericksburg, VA USA
> FISTS 6702 cc 788 Diamond 64
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:mJ64a.63924$a95.18334@fe05.atl2.webusenet.com...
> > I guess that might be the problem. We have had a lot of rain, freezing
and
> > otherwise in the last few days. It is still attached, but this is
looking
> > from the ground. I will check the connection when it warms up and the
roof
> > isn't so wet and slick. Since the tuner (MFJ-948) has balance line, I
> think
> > I'll try 300-Ohm to feed it this time. Hopefully the twinlead at Radio

> Shack
> > is better then the coax they sell.
> >
> > TNX
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA
> >
> > "Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
> > news:3e50eec9_2@news1.prserv.net...
> > > Chuck:
> > > It sounds like you are trying to load up the coax. Go out and make
> sure:
> > >
> > > 1. The antenna is connected to the coax, and
> > > 2. The connection is not shorted.
> > >
> > > My money is on problem #2.
> > >
> > > --
> > > Crazy George
> > > Remove NO and SPAM from return address
> > > "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> > > news:4D44a.95$4q4.13@fe07.atl2.webusenet.com...
> > > > Doc,
> > > > I had mixed up my info when I typed the previous. I have infinity in
> the
> > > > 75-80 meter band and less the 2-3:1 in most of the other bands.
1.2:1
> on
> > > 10
> > > > meters with an antenna cut for 3.980MHz.
> > > >
> > > > --
> > > > 73,
> > > > Chuck
> > > > KE4ETH
> > > > USA-NA
> > > >
> > >
> > >
> > >
> >
> >
> >
>
>

3660. Re: Recent TV antenna inconsistencies

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 00:28:17 UTC
From: "Mike S. Nowostawsky" <mikenowo@sympatico.ca>
Message-ID: <Z5f4a.2965$iu1.248525@news20.bellglobal.com>
Source record: 124498

I didn't personally set it up, but will pass this info on. We'll have to
check it this spring. Thx.
--
==========
Mike S. Nowostawsky:
Email: mikenowo@sympatico.ca, mikenowo@yahoo.ca
Home Page: http://www3.sympatico.ca/mikenowo/
Lachine (Montreal), Quebec, Canada

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:CaGdnfCZq9OKrMyjXTWcpw@comcast.com...
> Mike,
>
> This may sound stup, but is the antenna fed with 300 ohm twinlead that is
> taped to the mast, or some other metallic object? Unlesss you have a
broken
> wire, make sure the twinlead is twisted at about 1 twist/foot, and mounted
> with standoff insulators.
>
> When I bought this house, it came with an antenna and rotator. I have 7
> local VHF stations whose transmitters are co located 26 miles away. Yet,
the
> way the antenna was installed, I had to rotate the antenna over a range of
> almost 180 degrees to pick up these 7 stations. Reception in rain was
almost
> useless. The twinlead was taped to the mast.
>
> As for your rotators, eyeball the antenna, if it is pointing in the right
> direction, the rotator has nothing to do with it. I presume you do
> occasionally synchronize the rotator.
>
> Tam/WB2TT
> "Mike S. Nowostawsky" <mikenowo@sympatico.ca> wrote in message
> news:WEH3a.1$mZ2.367@news20.bellglobal.com...
> > First off, I realize this is a TV antenna question, but I couldn't find
a
> > newsgroup for that specifically (if anyone knows of a better place to
> post,
> > please advise).
> >
> > So:
> > We have had a TV antenna on our roof for several years now, but most
> > recently (past few months) the reception has been abysmally
inconsistent.

> On
> > some days, all channels will play well for hours; on others turning the
> > rotator unit indoors to ANY location (N, S, E, W, or any combinations)
> > result in bad or no reception on all or most channels! A baffling
example
> > was today when in the morning keeping it at EAST all channels came in
> fairly
> > well, then after a few hours all were gone. After minutes of frustrating
> > back and forth rotation, WEST finally got the channels back. Then after
> half
> > an hour they were gone or many lost again!! Turning it to SOUTH (once
> again
> > after many tries) and all was well until about 7 PM. Readjusting yet
again
> > to SW helped up to now, 11PM. For the moment, it is still working, knock
> > wood. I might be tempted to say it is worse during colder weather, but
it
> is
> > 20 below right now and all is working well, so that can't be the reason.
> > Also it is not specific to a particular time of day (yesterday I could
not
> > tune anything in at 11PM, unlike today).
> >
> > Once again, this started about 3 months ago and has been ridiculously
> > inconsistent since then. WHAT could possibly cause this? We have tried
> BOTH
> > rotator units (ARCHEROTOR: model 15-1225 and model 15-1225B) and the
> problem
> > persists on both. Nothing has changed regarding the connections indoors
or
> > outdoors and as far as we know nothing has been built around us recently
> to
> > interfere with reception.
> >
> > What should we be looking for regarding rectifying this situation? Can
> both
> > rotator units be failing (do they even mean anything regarding reception
> or
> > do they simply rotate the antenna)? Is there a problem with the antenna
> > itself? If so, what part is most likely the culprit? We have boosters on
> all
> > TVs as well, so that shouldn't be a problem.
> >
> > Any suggestions as to possible things to look for regarding a fix would
be
> > most appreciated. Getting reception these days is like rolling the dice
> (and
> > it seems they're loaded)!
> >
> > Thanks for any help.

> >
> > Regards,
> > ==
> > Mike S. Nowostawsky:
> > Email: mikenowo@sympatico.ca, mikenowo@yahoo.ca
> > Home Page: http://www3.sympatico.ca/mikenowo/
> > Lachine (Montreal), Quebec, Canada
> >
> >
>
>

3661. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 01:53:55 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Tmg4a.7318$_c6.729511@newsread2.prod.itd.earthlink.net>
Source record: 124499

Richard Harrison wrote:
> I`ll try again to repeat Walter, W2DU`s home page address. If it doesn`t
> work click on his last posting for it. Thank you.
>
> http://home.iag.net/~w2du
>
> Best regards, Richard Harrison, KB5WZI
>

Sorry, Richard, I didn't know you were limited to webtv. So if you have Reflections I the Bazooka article is there also.

The reason the Bozooka doesn't work as many believe incorrectly is that the two 1/4 wl stubs are in series, and the series stubs are in parallel with the antenna input terminals. Consequently, one must use parallel circuitry to determine the effect the stubs will have on the antenna input impedance.

First, when the resonant resistance of the dipole is roughly equal to the impedance of the feed line there can be no increase in impedance bandwidth by adding parallel reactances. However, an increase can be obtained if the feedline impedance is at least twice the resonant resistance of the dipole impedance.

In a practical example the resonant resistance of the dipole is 55 + j0 ohms in the center of the 80-m band at 3.750 MHz. At a frequency 200 kHz below, at 3.550 MHz, the dipole impedance is 50 - j90 ohms. On a 50-ohm line this impedance yields a 5.04:1 SWR. Now if a 90-ohm inductive reactance were placed in series with the antenna terminals the result would be a 1.0 SWR. But the coax stubs cannot be placed in series, so we're limited to a parallel connection.

The components of a parallel circuit equivalent to the antenna impedance 55 - j90 ohms is a resistor of 212 ohms and a capacitor of -117.8 ohms.

At 3.75 MHz the stubs have a very high resistive impedance, but at 3.550 mHz the inductive reactance of the stub combination is 1190.8 ohms. With 1190.8 ohms of inductive reactance added in parallel with the parallel circuit equivalent to the antenna impedance, the resulting parallel components are 212 ohms of resistance and -130.7 ohms of capacitive reactance. Thus the equivalent series impedance terminating the feed line is 58.5 - j94.7 ohms.

Observe that this impedance is still very close to the dipole impedance prior to adding the stubs. Wanna' guess the improvement in SWR?

The original SWR was 5.04, but with the stubs attached it went all the way down to 4.9.

Remember, of course, this is only effect the stubs produce. The decrease actually obtained is due to the resistive losses in the coax stubs, as Frank Witt has shown in a QST article that I can't recall at the moment.

Wat'cha think of the stub method of BW improvement now, huh?

Walt, W2DU

3662. Re: "T" antenna fed against ground questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 02:35:47 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <tSg4a.8022$0q5.125@fe01.atl2.webusenet.com>
Source record: 124500

Would say "its possible", but the ultimate effect would be that the SHEITH of the COAX will act as a Verticle (or sligtly scewed version), with a CAPACITIVE TOP HAT . used this version for 160 on few occasions, with a tuner- not the best, but it works (or even, just the center conductor of coax, to rig, counterpoise is ground), this with a 80/40 trap dipole. jim nn7k

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:16141-3E516F0A-11@storefull-2312.public.lawson.webtv.net...
> Reg wrote:
> "Idon`t understand your query."
>
> I guess his concern is about a difference in velocities inside and
> outside the coax. Jerry, W4UK noted the horizontal dipole has one side
> connected to the center conductor of his coax and the other side
> connected to the coax shield.
>
> His concern seems to be a velocity factor near 1 on the outside of the
> shield and a velocity factor of about 2/3 on the inside of the coax.
> Does the difference in arrival times for signals inside and outside the
> shield to the two sides of the dipole unbalance the dipole enough to
> seriously affect the circularity of his horizontal pattern for his
> vertically polarized radiation? Ideally, he probably would like his
> horizontal radiation to balance out leaving only the vertical radiation
> of the coax. The horizontal dipole would serve only as a capacitive hat
> on the band where the coax is used as the radiator and fed against the
> ground system Jerry has installed.
>
> I`ll keep my opinions to myself for now.
>
> Best regards,Richard Harrison, KB5WZI
>

3663. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 03:01:34 UTC
From: k3bu@aol.com
Message-ID: <20030217220134.10249.00001408@mb-md.aol.com>
Source record: 124501

>
>Wat'cha think of the stub method of BW improvement now, huh?
>
>Walt, W2DU
>
>

How do you reconcile that with measurements by NQ5H as stated below, huh?
Yuri, K3BU

NQ5H wrote:
>>Maybe, but definitely not 0.1%.....
(and 3% is very little to give up for the bandwidth)
Here's the SWR vs RF data for my 40 meter RG8X bazooka
I measured this yesterday using a 1 meter dipole about 300 feet
from the bazooka for the sense antenna .....
MHz SWR RF
7.00 1.2 89
7.03 1.1 93
7.06 1.0 97
7.09 1.0 97
7.12 1.0 97
7.15 1.0 99
7.18 1.0 100
7.21 1.0 97
7.24 1.0 97
7.27 1.1 93
7.30 1.2 89
it's 3% down at the 1:1 SWR extremes and it's not tuned perfectly
the alternative is a tuner with the associated insertion loss and
inconvenience
H.
NQ5H
<<

3664. Butternut HF6V - Base Matching and Coax Stub

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 03:33:47 UTC
From: Paul Buhse <buhse@earthlink.net>
Message-ID: <vQh4a.8330$YU4.708513@newsread1.prod.itd.earthlink.net>
Source record: 124502

I just purchased a used HF6V on e-bay but it is missing the base matching inductor and the 75 ohm coax stub. Does anyone know the inductance of (or even better - instructions for making) the base matching transformer? Also, the 75 ohm stub is supposed to be 1/4 wavelength at 20m, but I would like to get the stock length in case it was tweaked for this antenna.

Thanks,
Paul - KA0LKB

3665. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 03:45:39 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v53b5qte5dc930@corp.supernews.com>
Source record: 124503

Well Yuri
I am just an old experimental physicist. I measure stuff. Repeatedly.
I think Walt's model is wrong. Loss cannot change reactance.
Loss accounts for the measured 3% drop at the ends. Not the flat 1:1 SWR.
I think it's a parallel resonant circuit (stubs) in parallel with a series resonant circuit (antenna).
That model predicts what I measure.
H.
NQ5H

"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030217220134.10249.00001408@mb-md.aol.com...
> >
> >Wat'cha think of the stub method of BW improvement now, huh?
> >
> >Walt, W2DU
> >
> >
>
> How do you reconcile that with measurements by NQ5H as stated below, huh?
> Yuri, K3BU
>
> NQ5H wrote:
> >>Maybe, but definitely not 0.1%.....
> (and 3% is very little to give up for the bandwidth)
> Here's the SWR vs RF data for my 40 meter RG8X bazooka
> I measured this yesterday using a 1 meter dipole about 300 feet
> from the bazooka for the sense antenna .....
> MHz SWR RF
> 7.00 1.2 89
> 7.03 1.1 93
> 7.06 1.0 97
> 7.09 1.0 97
> 7.12 1.0 97
> 7.15 1.0 99
> 7.18 1.0 100
> 7.21 1.0 97
> 7.24 1.0 97
> 7.27 1.1 93
> 7.30 1.2 89
> it's 3% down at the 1:1 SWR extremes and it's not tuned perfectly
> the alternative is a tuner with the associated insertion loss and
> inconvenience
> H.

> NQ5H
> <<

3666. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 04:15:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E51B35B.9040501@ieee.org>
Source record: 124504

funkbastler wrote:
> You need a center insulator to take the strain of the dipole wires.

Those things are hard to find nowadays. Radio Shack doesn't carry
them any more. The only place I could find center insulators was
in the electric fence section at a hardware store.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3667. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 04:23:22 UTC
From: Tom DeYoung <tdeyoung@n0spam.mn.rr.com>
Message-ID: <_yi4a.119931$Gm2.3104259@twister.rdc-kc.rr.com>
Source record: 124505

I may just use a chunk of lucite or lexan

Question:

If I'm not supposed to twist the wires together, but to solder them, then
how do I make the physical connection so I can solder them?

I'm not visualizing this, LOL.

The problem I'm running into is that the feedline is 18ga and the wire is
14ga.....

I don't think I can just solder it, it won't be strong enough...wouldn't I
have to twist them together first, solder them, then slap a wire nut on
them???
All this in addition to a center insulator

TD
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E51B35B.9040501@ieee.org...
> funkbastler wrote:
> > You need a center insulator to take the strain of the dipole wires.
>
> Those things are hard to find nowadays. Radio Shack doesn't carry
> them any more. The only place I could find center insulators was
> in the electric fence section at a hardware store.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3668. Re: Butternut HF6V - Base Matching and Coax Stub

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 04:39:49 UTC
From: ccom2@socket.net
Message-ID: <3e51b906.29469298@news.socket.net>
Source record: 124506

Paul
What you need is

Q base Matching grounding coil:
17 turns of # 12 magnetic wire wound on a 1 1/4 "in form.

Matching Line for the 20 meters 75 ohm matching:
use RG - 11 75 ohm coax, 11 ft 4 in if solid dielectric, 13 ft 6 in if
foam type.

Mike
AB0IV

"Paul Buhse" <buhse@earthlink.net> wrote:

>I just purchased a used HF6V on e-bay but it is missing the base matching
>inductor and the 75 ohm coax stub. Does anyone know the inductance of (or
>even better - instructions for making) the base matching transformer? Also,
>the 75 ohm stub is supposed to be 1/4 wavelength at 20m, but I would like to
>get the stock length in case it was tweaked for this antenna.
>
>Thanks,
>Paul - KA0LKB
>
>

3669. Another grounding question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 04:59:01 UTC
From: "Dave (W4WLC)" <kaw1999@bellsouth.net>
Message-ID: <aWi4a.48980$EO2.967@fe10.atl2.webusenet.com>
Source record: 124507

My shack is the corner of a bedroom. I have a copper bus bar grounded to a 8ft ground rod. My coax will be coming in thru the window on the adjacent wall. I have an medal plate with barrel connectors mounted on it. This plate is grounded to a 8ft ground rod. The two ground rods are about 8-10 ft apart. I was going to run a #6 copper wire between the two ground rods. The two ground rods are around the corner of the house from each other. I guess my question is should I tie the two ground rods together.

Thanks,
Dave
W4WLC
Lynn Haven, FL

3670. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 05:00:51 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9325D5C4C9F26pookster@216.168.3.50>
Source record: 124508

"Tom DeYoung" <tdeyoung@n0spam.mn.rr.com> wrote in
news:_yi4a.119931$Gm2.3104259@twister.rdc-kc.rr.com:

> I don't think I can just solder it, it won't be strong
> enough...wouldn't I have to twist them together first, solder them,
> then slap a wire nut on them???
>

I doubt if the wire nut is necessary. Just twist them together well
enough so that alone would hold them together, then solder them to ensure
a good electrical connection.

--
Bill, W7TI

3671. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 05:06:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v53fq5643q15cd@corp.supernews.com>
Source record: 124509

H. Adam Stevens wrote:
> Well Yuri
> I am just an old experimental physicist. I measure stuff. Repeatedly.
> I think Walt's model is wrong. Loss cannot change reactance.
> Loss accounts for the measured 3% drop at the ends. Not the flat 1:1 SWR.
> I think it's a parallel resonant circuit (stubs) in parallel with a series
> resonant circuit (antenna).
> That model predicts what I measure.
> H.
> NQ5H

I don't think anything in Walt's model claims that loss changes reactance.

But loss can indeed change reactance.

Consider a 1 uH inductor at 10 MHz. Reactance is 6.28 ohms. Now put 5
ohms in parallel with it. What's the reactance of the parallel combination?

Roy Lewallen, W7EL

3672. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 05:08:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v53fv9b54fqn10@corp.supernews.com>
Source record: 124510

Tom DeYoung wrote:
> I may just use a chunk of lucite or lexan

I don't know about these particular materials, but many plastics will deteriorate severely (get weak and brittle) when exposed to the sun for any length of time. Make sure the material you choose is UV resistant, or your antenna will come down in a surprisingly short time.

Roy Lewallen, W7EL

3673. Re: Third order intermodulation

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 05:20:16 UTC
From: Alfred Lorona <w6wqc@dslextreme.com>
Message-ID: <b2sfqm$1fu6i4$1@ID-49117.news.dfncis.de>
Source record: 124511

"Vincent" <radiotec@libero.it> wrote in message
news:deea1d33.0302171237.7952c116@posting.google.com...
> Hi folks,
>
> Where can I find a good program (shareware or freeware) to compute
> third order intermodulation?
>
> 73's
>
> IK1GEN
> Vincent

Third order intermodulation distortion is difficult to compute. Almost all
third order numbers you see are the result of measurement.

73, AL

3674. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 05:25:41 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v53h1d6b6fto30@corp.supernews.com>
Source record: 124512

"I don't think anything in Walt's model claims that loss changes reactance."

sigh
let's start over
models are ways of thinking
experiments are physical
AND MUST BE REPEATABLE
are you ok with that?

empirical fact: antenna works over >100 KHz range with flat 1:1 SWR
Field strength compared to wire dipole is the same with a 3% drop at the
edge.
ONE KILOWATT OUT, NOTHING COMES BACK, ACCUSATIONS OF "10KW"
Ask the 7290 net folks here in Texas.

Model: start at resonance: two parallel perfectly resistive circuits, one's
impedance is ~4kohm or greater
the other's is 50 ohms or so; they're DECOUPLED by 40 db or so.
Use a variational method to expand the reactance about that point. It is a
constant to first order.
Walt went WAY OFF RESONANCE for one point. Failed to understand the initial
conditions.
No knowledge of expansion theory.
Using both SPICE and spreadsheets in Excel I see various flat widths and
interesting singularities
depending on the ratios of L1/L2 (and C1/C2) in the two circuits with a
constant product LC.
H.

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v53fq5643q15cd@corp.supernews.com...
> H. Adam Stevens wrote:
> > Well Yuri
> > I am just an old experimental physicist. I measure stuff. Repeatedly.
> > I think Walt's model is wrong. Loss cannot change reactance.
> > Loss accounts for the measured 3% drop at the ends. Not the flat 1:1
SWR.
> > I think it's a parallel resonant circuit (stubs) in parallel with a
series
> > resonant circuit (antenna).
> > That model predicts what I measure.
> > H.
> > NQ5H
>
> I don't think anything in Walt's model claims that loss changes reactance.

>
> But loss can indeed change reactance.
>
> Consider a 1 uH inductor at 10 MHz. Reactance is 6.28 ohms. Now put 5
> ohms in parallel with it. What's the reactance of the parallel
combination?
>
> Roy Lewallen, W7EL
>

3675. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 05:26:39 UTC
From: Tom DeYoung <tdeyoung@n0spam.mn.rr.com>
Message-ID: <juj4a.124305$lb.2792037@twister.rdc-kc.rr.com>
Source record: 124513

Old beer cans?

wait a minute :-)

Actually, I was thinking of a piece of Corian threshold. A friend used it
for a sky loop antenna insulator. It's durable, easily cut with a saw and
drilled with a push drill, and it won't resonate at UHF frequencies (though,
since I'm working with HF, that doesn't matter as much)

Would a PVC endcap work?

BTW, thanks for all the help!
TD
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v53fv9b54fqn10@corp.supernews.com...
> Tom DeYoung wrote:
> > I may just use a chunk of lucite or lexan
>
> I don't know about these particular materials, but many plastics will
> deteriorate severely (get weak and brittle) when exposed to the sun for
> any length of time. Make sure the material you choose is UV resistant,
> or your antenna will come down in a surprisingly short time.
>
> Roy Lewallen, W7EL
>

3676. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 06:27:39 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v53kiutdlmj280@corp.supernews.com>
Source record: 124514

I've made center insulators from a short piece of PVC pipe, a couple of end caps, and a couple of eye bolts. They hold up well in this sun-challenged climate, but might not last too long in someplace that's sunny and high altitude. I think there's UV-resistant PVC intended for outdoor unburied use. If there is, that would be better.

Roy Lewallen, W7EL

Tom DeYoung wrote:
> Old beer cans?
>
> wait a minute :-)
>
>
> Actually, I was thinking of a piece of Corian threshold. A friend used it
> for a sky loop antenna insulator. It's durable, easily cut with a saw and
> drilled with a push drill, and it won't resonate at UHF frequencies (though,
> since I'm working with HF, that doesn't matter as much)
>
> Would a PVC endcap work?
>
>
> BTW, thanks for all the help!
> TD

3677. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 06:37:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v53l4tr0ss41bd@corp.supernews.com>
Source record: 124515

The answer to the question I posted (the reactance of a 5 ohms of resistance in parallel with 6.28 ohms of reactance) is 2.44 ohms. This can be done without either SPICE or Excel.

I can't respond to the rest, since I don't know what a "variational method" is, how to expand a reactance about a point, or "expansion theory". My knowledge is pretty much limited to ordinary circuit analysis techniques. But I am curious to know what initial conditions Walt failed to understand, and also whether your analysis included loss.

Roy Lewallen, W7EL

H. Adam Stevens wrote:
> "I don't think anything in Walt's model claims that loss changes reactance."
>
> sigh
> let's start over
> models are ways of thinking
> experiments are physical
> AND MUST BE REPEATABLE
> are you ok with that?
>
> empirical fact: antenna works over >100 KHz range with flat 1:1 SWR
> Field strength compared to wire dipole is the same with a 3% drop at the
> edge.
> ONE KILOWATT OUT, NOTHING COMES BACK, ACCUSATIONS OF "10KW"
> Ask the 7290 net folks here in Texas.
>
> Model: start at resonance: two parallel perfectly resistive circuits, one's
> impedance is ~4kohm or greater
> the other's is 50 ohms or so; they're DECOUPLED by 40 db or so.
> Use a variational method to expand the reactance about that point. It is a
> constant to first order.
> Walt went WAY OFF RESONANCE for one point. Failed to understand the initial
> conditions.
> No knowledge of expansion theory.
> Using both SPICE and spreadsheets in Excel I see various flat widths and
> interesting singularities
> depending on the ratios of L1/L2 (and C1/C2) in the two circuits with a
> constant product LC.
> H.
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v53fq5643q15cd@corp.supernews.com...
>

>>H. Adam Stevens wrote:
>>
>>>Well Yuri
>>>I am just an old experimental physicist. I measure stuff. Repeatedly.
>>>I think Walt's model is wrong. Loss cannot change reactance.
>>>Loss accounts for the measured 3% drop at the ends. Not the flat 1:1
>>
> SWR.
>
>>>I think it's a parallel resonant circuit (stubs) in parallel with a
>>
> series
>
>>>resonant circuit (antenna).
>>>That model predicts what I measure.
>>>H.
>>>NQ5H
>>
>>I don't think anything in Walt's model claims that loss changes reactance.
>>
>>But loss can indeed change reactance.
>>
>>Consider a 1 uH inductor at 10 MHz. Reactance is 6.28 ohms. Now put 5
>>ohms in parallel with it. What's the reactance of the parallel
>
> combination?
>
>>Roy Lewallen, W7EL
>>
>
>
>

3678. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 06:44:23 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E51D647.360F2743@cwis.net>
Source record: 124516

Dan.
I have yet to see a tree used for sending
a message of any kind, that wasn't dead before
the message was sent. Have you?
'Doc

3679. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 07:09:36 UTC
From: richardharrison@webtv.net
Message-ID: <14902-3E51DC30-17@storefull-2318.public.lawson.webtv.net>
Source record: 124517

Roy Lewallen wrote:
"Consider a 1 uH inductor at 10 MHz.
Reactance is 6.28 ohms."

I calculate 62.8 ohms. So, I`ll assume Roy meant a 0.1 uH inductor with a reactance of 6.28 ohms at 10 MHz.

Then Roy wrote:
"What`s the reactance of the parallel combination (with a 5-ohm resistor)?"

Again, I`ll assume Roy meant 6.28 ohms for the reactance and the question was meant to be: What`s the impedance of the parallel combination?

Yt = 0.2 -J 0.159
Yt = 0.2555 on an angle of 52.5 degrees
Zt = 3.9 ohms on an angle of 52.5 degrees.

Best regards, Richard Harrison, KB5WZI

3680. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 07:40:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v53orgsuueb7c6@corp.supernews.com>
Source record: 124518

Looks like it's not the best evening for either of us. You're correct, I made an error in calculating the reactance at 10 MHz, and did intend 6.28 ohms of reactance (say, 1 uH at 1 MHz).

That would be:

Yt = 0.2 - j0.159
Yt = 0.26 at an angle of -38.48 degrees
Zt = 3.91 at an angle of +38.48 degrees
Zt = 3.06 + j2.44

Unless I goofed up again, in which case it's your turn next.

Thanks for spotting the error.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:
> "Consider a 1 uH inductor at 10 MHz.
> Reactance is 6.28 ohms."
>
> I calculate 62.8 ohms. So, I`ll assume Roy meant a 0.1 uH inductor with
> a reactance of 6.28 ohms at 10 MHz.
>
> Then Roy wrote:
> "What`s the reactance of the parallel combination (with a 5-ohm
> resistor)?"
>
> Again, I`ll assume Roy meant 6.28 ohms for the reactance and the
> question was meant to be: What`s the impedance of the parallel
> combination?
>
> Yt = 0.2 -J 0.159
> Yt = 0.2555 on an angle of 52.5 degrees
> Zt = 3.9 ohms on an angle of 52.5 degrees.
>
> Best regards, Richard Harrison, KB5WZI
>

3681. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 07:41:50 UTC
From: tdonaly@aol.com
Message-ID: <20030218024150.23109.00000853@mb-bd.aol.com>
Source record: 124369

H. Adam Stevens wrote,
>
>Well Yuri
>I am just an old experimental physicist. I measure stuff. Repeatedly.
>I think Walt's model is wrong. Loss cannot change reactance.
>Loss accounts for the measured 3% drop at the ends. Not the flat 1:1 SWR.
>I think it's a parallel resonant circuit (stubs) in parallel with a series
>resonant circuit (antenna).
>That model predicts what I measure.
>H.
>NQ5H
>
Some of these fellows claim you can put a resistor across the
feedpoint of a dipole and get the same response as your bazooka.
Did you try that? Say 150 Ohms?
73,
Tom Donaly

3682. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 07:56:19 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <k8p35vsifqqi4qs2nuedj1nvmf5io2h0hr@4ax.com>
Source record: 124370

On Sat, 15 Feb 2003 20:40:05 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>Roger:
>
>[snip]
>"> The antenna system here:
>> http://www.rogerhalstead.com/tower.htm (takes a while to load)
>> has an entirely different set of hazards <:-))
>[snip]
>
>Wow, now that's a real antenna "project"!
>
>Nice work.
>
>I'll bet those babies can really squirt RF out there.

Unfortunately it squirts right into my neighbors TV out in the garage.
Fortunately they seldom use that TV. <:-))

>
>I don't have as much room out here on the barrier island as you seem to have
>at your QTH, and... because of the local high hurricane probability [they've

We have two lots to give a total of 200 X 200.

>been through here before and they will come again] I don't want to risk a
>tower
>that remains standing when we evacuate to the mainland. Hence I'll be going
>with a crank-up tower and the limitations inherent in that kind of set up.
>
>BTW... is that a hombrew antenna tuner on the shelf above your ICOM rig?

Welll...Not exactly...It's called an Alpha 76 (old timer, before auto
tune) 160 through 10. Put a brick on the key and leave. It'll still
be running 1500 out when you come back. <:-)) At least that's what
I've been told. I operate more 6 than HF, but I do occasionally chase
DX on 20 or 75. I typically don't use the amp unless there is some DX
I'm really after.

To the right of the Alpha is an MFJ Versa Tuner V which is what I
assume you were referring to<:-)) I use it with the 75 and 40
slopers.
The watt meter reads either peak or average.

BTW, the 75 slopers are the same except one goes NE and the other SW.
The difference in tuning is amazing.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

3683. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 08:43:06 UTC
From: richardharrison@webtv.net
Message-ID: <26998-3E51F21A-536@storefull-2314.public.lawson.webtv.net>
Source record: 124373

Roy Lewallen wrote:
"Yt = 0.26 on an angle of -32.48 degrees
Zt = 3.91 on an angle of +32.48 degrees."

We agree on magnitudes. I calculated the phase angle as arctan X/R or 6.28/5 which is close to 1.256. My tables give an angle of about 52 degrees and 30 minutes which I characterized as about 52.5 degrees. I did the same arctan using the inverse functions:
0.159/0.2 which is close to 0,795 which my tables again identified as the tangent of 52.5 degrees.
I know that when one of the phasors is negative as the susceptance is, and the resistance and conductance are both positive, the phase angle for the adnittance will be negative while the angle for the impedance will be positive. But, I just didn`t think it necessary to explain in detaill.

Best regards, Richard Harrison, KB5WZI

3684. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 09:09:22 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302180109.282fc4bb@posting.google.com>
Source record: 124372

"... - - - ..." <.@... .com> wrote in message news:<0XSdnYQCI7AO5c2jXTWcqQ@comcast.com>...
> The claim of this I10K antenna is his form of matching is much more
> efficient than any other, and will provide 2db more than some factory made
> antennas. any comments appreciated

>
> Reposted from another NG
>
>
> The Penetrator 500 uses a matching hairpin in the VERTICAL PLANE. This
> affects the radiation patter of the antenna.

It wouldn't have that much of an effect on the pattern.

The driven element is also
> surrounded by the ground plane brackets and radials.

That is silly...Do the radials point up? I haven't seen one...
>
> The I10K uses TWO trombones. The first is to fine tune the resonant
> frequency. The second is used for impeadance matching.

You only need impedance matching. And a 5/8 is not resonant, so trying
to fine tune such a non resonance seems kind of silly.

The I10K also uses
> an ELEVATED FEED which lowered the capacitance of the feed system. This
> equates to more signal getting to the antenna.

Sounds kind of "gappish"..

These trombones are in the
> HORIZONTAL PLANE of the radiated signal which does NOT affect the radiation
> pattern of the 5/8 element. The I10K has lower loss. Just these facts
> alone
> warrant the purchase of this antenna for me! If you want to compromise,
> thats up to you.

Not me...
>
> A true 5/8 antenna length is near impossible to match to a 50 ohm load.

Good grief...All you need a simple coil of a few turns.

The
> reason for having an antenna length of 5/8 has everything to do with the
> WAVE
> RADIATION PATTERN. In order to match it, you need to bring the antenna to a

> 3/4 wave length (next 1/4 wave length). BUT, adding this length in the
> vertical plane would RUIN the radiation pattern!

Balony. Adding a series coil in the vertical plane, at the base of a
5/8 does not ruin the radiation pattern. The coil is not long enough
vs wavelength for one thing.

So by placing this
> "section" in the horizontal plane eliminates the affects on the vertical
> plane. You will see this on the Avanti igma 5/8 and the Maco V58 as a loop!
> (for this reason alone, I have always felt the Avanti was better than the
> Penetrator).

There is no real difference. Also, a single turn matching coil might
be a little more efficient than a small multi turn wire coil, but the
difference should be unnoticeable on the air.
>
> The I10K also uses top hat loading for improved performance. We already
> agree on the better construction of the antenna and the materials used.

What???? Not a realï¿½ full length 5/8 wave radiator? Sounds like a
"Fisher Price" 5/8 antenna.
>
> One other point, Jay's claim of 2db is over the difference of the I10K and
> the Penetrator...NOT dbi or dbd! Jay only claims 3.x of dbd gain for his
> antenna based on it being a 5/8 wave ground plane.

In theory, a 5/8 vertical is only about 1.1-1.2 db over a 1/2 wave
vertical at the most. The last "d" in dbd means compared to a dipole,
which is a 1/2 wave and has appx 2.15 dbi. A 5/8 has appx 3.2-3.3 dbi
gain. And all this would assume good ground planes, and decoupling
from the feedline to pay off in the real world. An extended double
zepp only has about 3 dbd gain, and thats "twin" 5/8's.

Basic antenna theory
> states that a 5/8 antenna has "x" amount of gain over dbi or dbd. This is
> true! But then there is the losses in the matching network.

Only if you use magnet wire for the coil, and wind the turns right
next to each other...:/ Any normally built coil for a 5/8 has very
little loss to speak of.

What Jay has
> learned is how to eliminate these losses! Less loss, better efficiency!
> Better efficiency, better performance!

I'll alert the media...
>
> Also, the I10K can take an honest 10,000 watts!

Yea, but who runs an honest 10,000 watts? Or should I ask, who the
heck would ever need to?

You don't need to buy that 5KW gamma like some other
> antennas.

Whats a 5KW gamma?

Better materials, better efficiency, better antenna!

Well, ok then....
>
> The I10K is not for everyone! But if you want the best, the buck stops
> here!

Not mine...I bet my 5/8 vertical will beat his 5/8 vertical. The
secret is in the radial system, not the matching coil.

MK

3685. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 10:58:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v544ff2o6isi04@corp.supernews.com>
Source record: 124374

Of course you're aware that the arctangent is double-valued (that is, two different angles produce the same tangent). So to get a correct phase angle from rectangular coordinates, it's necessary not only to calculate the arctangent but also to check the quadrant the complex value resides in so you can tell which of the two possible angles is correct. Of course, modern calculators with rectangular-to-polar conversion do this automatically. Indeed, 5 + j6.28 has a phase angle of about 52 degrees (although that impedance or admittance doesn't appear in the example I gave). But 0.2 + j0.159 has a phase angle of about 38 degrees. It should be obvious from a sketch that a point 0.2 out on the real axis and 0.159 up on the imaginary axis has angle of less than 45 degrees.

You might check your tables. The tangent of 52.5 degrees is 1.30, not 0.795.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy Lewallen wrote:
> "Yt = 0.26 on an angle of -32.48 degrees
> Zt = 3.91 on an angle of +32.48 degrees."
>
> We agree on magnitudes. I calculated the phase angle as arctan X/R or
> 6.28/5 which is close to 1.256. My tables give an angle of about 52
> degrees and 30 minutes which I characterized as about 52.5 degrees. I
> did the same arctan using the inverse functions:
> 0.159/0.2 which is close to 0,795 which my tables again identified as
> the tangent of 52.5 degrees.
> I know that when one of the phasors is negative as the susceptance is,
> and the resistance and conductance are both positive, the phase angle
> for the adnittance will be negative while the angle for the impedance
> will be positive. But, I just didn`t think it necessary to explain in
> detaill.
>
> Best regards, Richard Harrison, KB5WZI
>

3686. Re: Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 11:55:09 UTC
From: norbert <pa7nrNOSPAMMM@hotmail.com>
Message-ID: <1045569488.818094@halkan.kabelfoon.nl>
Source record: 124375

"Richard Harrison" <richardharrison@webtv.net> schreef in bericht
news:25802-3E4EF71D-94@storefull-2316.public.lawson.webtv.net...
> Norbert, PA7NR wrote:
> 'I get very good results with magnetic loop antennas."
>
> Norbert has a very nice homepage with excellent pictures and a map
> showing where he is. If Norbert can`t get a good connection to the earth
> in Holland, there`s not much hope for the rest of us. He has a good
> collection of antennas all nicely contained in a small space to cover a
> wide frequency range right from his veranda. It`s well worth a look.
>
> Best regards, Richard Harrison, KB5WZI
>

Richard,

Thank you very much for your compliments. I just added new pages and several
new pictures from my portable expedition to Finland last year. Soon I will
add more information about technical matters and the antenna's.

Best regards,
--
73, norbert (pa7nr)
homepage : http://www.qsl.net/pa7nr/index.html

3687. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 14:14:05 UTC
From: k3bu@aol.com
Message-ID: <20030218091405.27402.00000615@mb-ba.aol.com>
Source record: 124377

>
>Some of these fellows claim you can put a resistor across the
>feedpoint of a dipole and get the same response as your bazooka.
>Did you try that? Say 150 Ohms?
>73,
>Tom Donaly
>
>

Or better yet, remove the antenna and leave dummy load, you get "perfect match". :-)

Point is you will not get much power radiated with "dummying up" the antenna, where NQ5H showed that he can make Bazooka with low loss and RADIATE signal from a flat antenna across the 40 m band. "Experts" say "it can't be so".

I am amazed, how the wrong tangent gets picked on and the main focus of the problem is danced around. (W8JI style of dancing out of embarrassment?)

Let me try to formulate it again.
NQ5H BUILT the Bazooka dipole, he measured the SWR and efficiency or field strength, which is contrary to "scientific" theories and calculations paraded here as a fact and overthrow of "crappy" antenna. W2DU publishes the article "debunking" the antenna and goes "huh?".

Maybe he is wrong and retraction to the readers is in order?

Yuri, K3BU

3688. Re: Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 14:15:50 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E524016.3962E382@silverstar.com>
Source record: 124376

Write/email Worldradio in California. Ask for sample copy with any
Sturba Antenna review article. Max info, least bulls--t!

3689. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 14:24:11 UTC
From: richardharrison@webtv.net
Message-ID: <619-3E52420B-218@storefull-2313.public.lawson.webtv.net>
Source record: 124378

Roy gave a reactance of 6.28 ohms. Roy asked for the reactance (impedance) value of its parallel combination with a 5-ohm resistor.

My response was 3.9 ohms on an angle of 52.5 degrees.

The angle can be calculated as arctan 6.28 / 5 = arctan 1.256.

Roy wrote:
"You might check your tables. The tangent of 52.5 degrees is 1.3, not 0.795."

1.256 is close enough to 1.3 for me. At Roy`s suggestion I checked another handbook containing trig tables. It happened to be coarser than the original table. This table only gives tangents for whole degrees. For 52 degrees it gives tan = 1.2799. Still close enough for me.

My answer was close enough for practical purposes. Sorry I don`t have my trusty old slide rule, decent math tables, or a scientific calculator. My calculator is a $2.99 "Big Display" Chinese model that I can see with my failing eyesight.

Best regards, Richard Harrison, KB5WZI

3690. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:02:08 UTC
From: W8LNA <gwatts@nrao.edu>
Message-ID: <3E524AF0.8070106@nrao.edu>
Source record: 124379

Many thanks for all the replies and advice! Some highlights:

g3tmh@gb7abc.net wrote:
> I went to my local power station...workman, who got me a gallon of used oil from a
> transformer... Eventually the inner metal that holds the dummy load disolved.
> Reading up on it, I found that oil has to be changed as it turns
> acidic after a few years of power...
> Ken

James wrote:
> Here is a link to the stuff:
> http://www.shell-lubricants.com/Electrical/diala-mmx.html

Ken, KC2JDY wrote:
> or just buy a whole new "cantenna" at TexasTowers.com
> with nontox transformer oil (MFJ-250) for $49.
> http://www.texastowers.com/mfj250.htm

Dr. Phil advises:
> A motor repair/rewinding shop carries the transformer oil. That's what I
> use in my Cantenna.

And Peter, K1PO said
> Well you certainly didn't have mineral oil in that "cantenna", cuz nothing
> emersed in mineral oil ever rusts!...When you went to the druggist to
> buy your mineral oil, you were sold something else!

Which is a reasonable assumption, but wrong because I bought a sealed 5 liter jug of Sargent-Welch heavy mineral oil at the university chemistry stockroom. It was actually cheaper than multiple pint or quart bottles from the drug store and probably better oil.

I think my rusted through can came about from condensation, I'd stored some of my gear at a storage locker over a humid fall and cold winter. Mineral oil is lighter than water so the water would have settled to the bottom of the can. I've never run more than 300 watts into the cantenna so it never got hot enough to drive off the water. When I did a little cleaning of the surviving parts there was also rust between the SO-239 connector and the lid.

I also plan to wait a while before talking to the power company, I'm in that area of the country with a couple feet of snow on the ground, I suspect the power company is a bit busy this week. I did talk to a power company retiree neighbor, he suggested Chevron Flo-Cool 180 if I can find it in less than 55 gal. quantities.

Thanks again, folks!
-Galen, W8LNA

3691. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:02:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E524B14.4080009@ieee.org>
Source record: 124381

H. Adam Stevens wrote:
> Field strength compared to wire dipole is the same with a 3% drop at the
> edge.

Please describe your field strength measuring configuration.
Near field? Far field? Ground wave? Sky Wave? Reflections?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3692. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:04:59 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <i6h45v0v32u1c1ipocnh94gj5mt0o8khb9@4ax.com>
Source record: 124380

On Mon, 17 Feb 2003 23:25:41 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

|"I don't think anything in Walt's model claims that loss changes reactance."
|
|sigh
|let's start over
|models are ways of thinking
|experiments are physical
|AND MUST BE REPEATABLE
|are you ok with that?

Not if the experiment is flawed. So what if you get the same answer
every time. Your data are too good to be true, therefore, they are.

[bafflegab snipped]

3693. Re: Ice on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:07:59 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2ti8f$j9s$1@helle.btinternet.com>
Source record: 124382

> I don't know why but the ice melts off of them quite quickly if they
> are in use. Evident by needing to retune after a few transmissions
> until the tuner knobs are at their normal position for that band.

Um, I think that phenomena might be known as heat?!!

3694. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:10:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E524CD5.70702@ieee.org>
Source record: 124383

Yuri Blanarovich wrote:
> NQ5H BUILT the Bazooka dipole, he measured the SWR and efficiency or field
> strength, ...

Depending on how he measured the field strength, that could be the
source of the confusion. Did he use a helicopter in the far field?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3695. Re: Another grounding question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:15:00 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <7ri45v8asm9cu0edo7fajf2pa9t95q10pd@4ax.com>
Source record: 124384

On Mon, 17 Feb 2003 22:59:01 -0600, "Dave \(W4WLC\)"
<kaw1999@bellsouth.net> wrote:

>My shack is the corner of a bedroom. I have a copper bus bar grounded to a
>8ft ground rod. My coax will be coming in thru the window on the adjacent
>wall. I have an medal plate with barrel connectors mounted on it. This
>plate is grounded to a 8ft ground rod. The two ground rods are about 8-10
>ft apart. I was going to run a #6 copper wire between the two ground rods.
>The two ground rods are around the corner of the house from each other. I
>guess my question is should I tie the two ground rods together.
>
>Thanks,
>Dave
>W4WLC
>Lynn Haven, FL

Not only should you tie the grounds together, but you should (must!)
tie them to the utility entrance ground. A nice piece of #6 bare
wire, buried, brought around to the service entrance ground will do
nicely. I lived in Seminole County a few years back and my screen
house (over the pool) was never hooked up to the ground system. I
lost three alarm CPUs from inducted current from lightning. When I
hooked the (provided!) ground up, the alarm problems went away, never
to return. Working for a telco and in telcom has made me aware of
grounding but remember, amateur radio is a HOBBY. When the big
voltage is around, disconnect those antennas and ground them well.
Don't forget to attach both sides of the connector to ground. I only
disconnect from ground when I'm going to operate. Don't depend on a
switch for grounding. Disconnect the lead-in coax and ground it.
Read up on lightning protection from the manufacturers of the
protection products. Use strap for unburied connections, it goes on
and on, but what is your life, home and gear worth?

Russ - kf4wxd (guess my real email?)

3696. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:23:51 UTC
From: richardharrison@webtv.net
Message-ID: <631-3E525007-118@storefull-2311.public.lawson.webtv.net>
Source record: 124386

Roy wrote:
"You might check your tables."

I`ve located a CRC Handbook. It has real trig tables. For arctan 1.256
it shows an angle of 51 degrees and 29 minutes.

My error was about 1 degree from lousy tables. Roy gave an angle between
the volts and amps supplied the parallel circuit of 38.48 degrees.

Best regards, Richard Harrison, KB5WZI

3697. Re: Recent TV antenna inconsistencies

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:26:35 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <V0Odna2jcpMzzc-jXTWcoA@comcast.com>
Source record: 124385

You should be able to tell just by looking at it from the ground; possibly with binoculars.

Tam

3698. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:59:02 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v54m4vm8s5g0b0@corp.supernews.com>
Source record: 124387

I told you how I measured the field strength.
A dipole a few hundred feet away.
The antenna is here.
Come see for yourself.
Beer's on me. (just for Cecil and Yuri, not EVERYBODY)
H.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E524CD5.70702@ieee.org...
> Yuri Blanarovich wrote:
> > NQ5H BUILT the Bazooka dipole, he measured the SWR and efficiency or
field
> > strength, ...
>
> Depending on how he measured the field strength, that could be the
> source of the confusion. Did he use a helicopter in the far field?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3699. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 15:59:42 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v54m67i9a74oc7@corp.supernews.com>
Source record: 124388

The antenna is here.

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:i6h45v0v32u1c1ipocnh94gj5mt0o8khb9@4ax.com...
> On Mon, 17 Feb 2003 23:25:41 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> |"I don't think anything in Walt's model claims that loss changes
reactance."
> |
> |sigh
> |let's start over
> |models are ways of thinking
> |experiments are physical
> |AND MUST BE REPEATABLE
> |are you ok with that?
>
> Not if the experiment is flawed. So what if you get the same answer
> every time. Your data are too good to be true, therefore, they are.
>
>
> [bafflegab snipped]

3700. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 16:00:24 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v54m7hr5c80te4@corp.supernews.com>
Source record: 124389

Since when did anyone use trig tables?
1963?
sheesh!

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:631-3E525007-118@storefull-2311.public.lawson.webtv.net...
> Roy wrote:
> "You might check your tables."
>
> I`ve located a CRC Handbook. It has real trig tables. For arctan 1.256
> it shows an angle of 51 degrees and 29 minutes.
>
> My error was about 1 degree from lousy tables. Roy gave an angle between
> the volts and amps supplied the parallel circuit of 38.48 degrees.
>
> Best regards, Richard Harrison, KB5WZI
>

3701. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 16:17:17 UTC
From: tdonaly@aol.com
Message-ID: <20030218111717.11302.00000584@mb-cl.aol.com>
Source record: 124390

Yuri wrote,
>
>
>Or better yet, remove the antenna and leave dummy load, you get "perfect
>match". :-)
>
>Point is you will not get much power radiated with "dummying up" the antenna,
>where NQ5H showed that he can make Bazooka with low loss and RADIATE signal
>from a flat antenna across the 40 m band. "Experts" say "it can't be so".
>
>I am amazed, how the wrong tangent gets picked on and the main focus of the
>problem is danced around. (W8JI style of dancing out of embarrassment?)
>
>Let me try to formulate it again.
>NQ5H BUILT the Bazooka dipole, he measured the SWR and efficiency or field
>strength, which is contrary to "scientific" theories and calculations paraded
>here as a fact and overthrow of "crappy" antenna. W2DU publishes the article
>"debunking" the antenna and goes "huh?".
>
>Maybe he is wrong and retraction to the readers is in order?
>
>Yuri, K3BU
>
How do you know it's low loss, Yuri?
73,
Tom Donaly, KA6RUH

3702. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 16:19:35 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v54nbho8epdp15@corp.supernews.com>
Source record: 124391

Because a dipole next to it produces the same field strength at resonance
(7.15 MHz).
H.
NQ5H
"Tdonaly" <tdonaly@aol.com> wrote in message
news:20030218111717.11302.00000584@mb-cl.aol.com...
> Yuri wrote,
> >
> >
> >Or better yet, remove the antenna and leave dummy load, you get "perfect
> >match". :-)
> >
> >Point is you will not get much power radiated with "dummying up" the
antenna,
> >where NQ5H showed that he can make Bazooka with low loss and RADIATE
signal
> >from a flat antenna across the 40 m band. "Experts" say "it can't be so".
> >
> >I am amazed, how the wrong tangent gets picked on and the main focus of
the
> >problem is danced around. (W8JI style of dancing out of embarrassment?)
> >
> >Let me try to formulate it again.
> >NQ5H BUILT the Bazooka dipole, he measured the SWR and efficiency or
field
> >strength, which is contrary to "scientific" theories and calculations
paraded
> >here as a fact and overthrow of "crappy" antenna. W2DU publishes the
article
> >"debunking" the antenna and goes "huh?".
> >
> >Maybe he is wrong and retraction to the readers is in order?
> >
> >Yuri, K3BU
> >
> How do you know it's low loss, Yuri?
> 73,
> Tom Donaly, KA6RUH
>
>

3703. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 16:25:38 UTC
From: richardharrison@webtv.net
Message-ID: <14899-3E525E82-575@storefull-2318.public.lawson.webtv.net>
Source record: 124393

I wrote:
"I plead complete ignorance."

I`ve found what this discussion may concern in "Transmission Lines Antennas and Wave Guides" by King, Mimno, and Wing, on page 153, Fig. 27.4.

It says:
"In Fig. 27.4, the outside of the coaxial line used to center-feed an antenna is detuned by a detuning sleeve. The effects of the partly uncanceled forces acting tangentially along the outside of the line may be summarized roughly by stating that a part of the current from the lower antenna (A vertical dipole was used for the example and the shield was connected to the lower antenna section of the dipole.) is along the outside (it divides between the antenna and coax exterior?) instead of only along the inside, as it would be if no dissymmetry existed. A resonant current on the outside has its maximum directly at the end. (That`s where the coax meets the dipole, I believe.) Therefore, the open end of a coaxial 1/4-wave detuning sleeve must be placed there. If more convenient, it could also be placed a half-wavelength from the terminals of the antenna.

I`ll bet that detuning sleeve is a "bazooka". Now, I`ll try to figure what the fuss is about.

Best regards, Richard Harrison, KB5WZI

3704. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 16:42:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6qo45vkmvsq9ecu8s2kmevpn6f1j6r1gno@4ax.com>
Source record: 124392

On Tue, 18 Feb 2003 10:19:35 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>Because a dipole next to it produces the same field strength at resonance
>(7.15 MHz).
>H.
>NQ5H

Hi OM,

Two adjacent antennas, hmmm?

73's
Richard Clark, KB7QHC

3705. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 16:51:57 UTC
From: richardharrison@webtv.net
Message-ID: <14899-3E5264AD-577@storefull-2318.public.lawson.webtv.net>
Source record: 124397

H. Adam Stevens wrote:
"Since when did anyone use trig tables? 1963? Sheesh!"

I don`t use them often. It took almost a whole day to find them. I`m a no-one because I used the tables today.

Best regards, Richard Harrison, KB5WZI

3706. Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 16:52:15 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E5264C9.869552EC@earthlink.net>
Source record: 124394

I'm about to stretch out 175 feet of R6 cable between a sat dish and a building. I probably cannot
bury too much of it because the ground is very, very rocky. Any cheap way of protecting it from
beast like deer, rabbits, racoons, etc.? PVC? Other?

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Winter Tip: Now is not a bad time to think about oiling your doors, tools,
and the like.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

3707. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 16:53:51 UTC
From: k3bu@aol.com
Message-ID: <20030218115351.20005.00001527@mb-cu.aol.com>
Source record: 124395

>
>I told you how I measured the field strength.
>A dipole a few hundred feet away.
>The antenna is here.
>Come see for yourself.
>Beer's on me. (just for Cecil and Yuri, not EVERYBODY)
>H.
>

H. fuggetaboutit!
Let them live in their "calculated" world. It's OK if their assumptions are wrong, as long as formulas and calculations jive. :-)
Another example is RL Cebik, he has done fine work with antenna modeling programs, but built and verified few. There are few holes in his conclusions and articles.
First they claim formulas as a gospel, then when someone proves them wrong or brings up few "forgotten" variables that have impact, then the statement creeps in that there is this or that exception.
In my experience and making living I have to build things and make them work. No BS, no theories, no empty calculations using wrong formulas.
I just wonder if all those righteous experts built the darn antenna and verified their calculations by measurement. Or just debunking it on the paper, adding another brownie point to their "guru aura" and writing a "paper".
I have not built Bazooka Dipole, but was curious how it worked. I have used Bazooka Baluns and seen their effect on broadening the SWR curve. So far I thank you for posting your measurements, they confirm what I was seeing with baluns. As far as W2DU "debunking" it, well I keep wondering... Maybe that "debunking" needs debunking.

Enough of this, gotta go out and showel the white sh.. that we were blessed with on Presidents Day.

73 Yuri, K3BU

3708. Hyperlink disclaimer for BEFW11S4 802.11b

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 17:10:47 UTC
From: Phil Schuman <pschuman_NO_SPAM@interserv.com>
Message-ID: <b2tpek$j8b$1@bob.news.rcn.net>
Source record: 124396
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

hi -
We noticed the new disclaimer on the Hyperlink website -
Wonder what happened with the BEFW11S4 802.11b units
toi cause Hyperlink to no longer "support" them -
Was it high VSWR - and it blew up the RF stage ?
I would think the RF section in both units was the same -
WAP11 vs BEFW11S4

BTW - I wonder how some of these new 802.11b antenna
companies are doing with their products.
Having been around "commercial" RF products & antennas
for many years - I'm wondering what the RF patterns
and VSWR look like for these garage antenna companies ?

Phil - WA9TKA -

3709. Re: Ice on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 17:51:31 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e527199.310634296@news.galilei.com>
Source record: 124398

"Dean Elwood" <dean@legallyspeaking.co.uk> verbositized:

>
>Um, I think that phenomena might be known as heat?!!

I don't doubt that, but 100 times greater wattage is not enough to
keep the pipes from freezing, go figure.

TTUL
Gary

3710. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 17:57:33 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <dms45v4kmpqbu86s46b382b31e3n0mieh4@4ax.com>
Source record: 124399

On Tue, 18 Feb 2003 16:52:15 GMT, Wayne Watson
<mtnviews@earthlink.net> wrote:

>I'm about to stretch out 175 feet of R6 cable between a sat dish and a building. I
probably cannot
>bury too much of it because the ground is very, very rocky. Any cheap way of protecting it
from
>beast like deer, rabbits, racoons, etc.? PVC? Other?

PVC will work, but dang it'll be ugly if you just leave it on top of
ground. How about buying some bags of top soil, or compost,
or potting mix, or whatever, covering it up, and throwing some
grass seed on top?

-fb-

3711. Re: Butternut HF6V - Base Matching and Coax Stub

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 17:59:01 UTC
From: Jerry <jerryaa@prodigy.net>
Message-ID: <Fvu4a.316$Ov5.27150655@newssvr15.news.prodigy.com>
Source record: 124400

The coax stub affects 20 meters only. use the formula 492*v/freq. My
length is 11'3" using rg59. works great.
"Paul Buhse" <buhse@earthlink.net> wrote in message
news:vQh4a.8330$YU4.708513@newsread1.prod.itd.earthlink.net...
> I just purchased a used HF6V on e-bay but it is missing the base matching
> inductor and the 75 ohm coax stub. Does anyone know the inductance of (or
> even better - instructions for making) the base matching transformer?
Also,
> the 75 ohm stub is supposed to be 1/4 wavelength at 20m, but I would like
to
> get the stock length in case it was tweaked for this antenna.
>
> Thanks,
> Paul - KA0LKB
>
>

3712. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:12:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <s4r45vcodnfrh9r2c33betcmao6d7hjrf7@4ax.com>
Source record: 124401

On Tue, 11 Feb 2003 09:46:49 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>I measured this yesterday using a 1 meter dipole about 300 feet
>from the bazooka for the sense antenna ....
>MHz SWR RF
>7.00 1.2 89
>7.03 1.1 93
>7.06 1.0 97
>7.09 1.0 97
>7.12 1.0 97
>7.15 1.0 99
>7.18 1.0 100
>7.21 1.0 97
>7.24 1.0 97
>7.27 1.1 93
>7.30 1.2 89
>it's 3% down at the 1:1 SWR extremes and it's not tuned perfectly
>the alternative is a tuner with the associated insertion loss and
>inconvenience
>H.
>NQ5H

Hi OM,

In other correspondence you mention something of this conforming to a
model. If you did in fact model from the design that offers the
numbers above, are you willing to share the particulars? You have
made no mention of what the SWR is specified against (50/75).

If by some circumstance you find your dipole exhibits 50 Ohms Z at
resonance, then we may safely assume that ground has offered some loss
with its deadly embrace. Even as a thick radiator, your design is
still in the >60 Ohm category. Be that as it may, I will use the best
numbers for the best outcome to compare to yours above.

As for the numbers. On a first pass modeling job, even a perfect
dipole of the same gross geometry does not even come close:
>MHz SWR
>7.00 1.41
>7.03 1.32
>7.06 1.24
>7.09 1.16
>7.12 1.09
>7.15 1.03
>7.18 1.04

>7.21 1.11
>7.24 1.18
>7.27 1.25
>7.30 1.32

If I were to introduce one variable that is inescapable, earth, the model must attend a height specification (missing from your postings) Ground, at best/worst contributes to a broadening of characteristics, but not as aggressively as your numbers above.
>MHz SWR
>7.00 1.27
>7.03 1.21
>7.06 1.14
>7.09 1.09
>7.12 1.03
>7.15 1.02
>7.18 1.07
>7.21 1.13
>7.24 1.18
>7.27 1.24
>7.30 1.30

The Bazooka does not come with a prepared statement as to how it is better than itself. The argument that stubs in some way contribute to the tuning suggests that for this to be true, the stubs must resonate with an interior physical length shorter than its resonant outer physical dimension. This may be fine if there is an interior short to an otherwise long transmission line but I must have missed that discussion somewhere along the way. However, the data does not support a multiple resonance, so that avenue is closed.

Given I do not see any specification for the usual antenna characteristics these claims appear to be heavily burdened with loss which is apparent in the comparison of Q to a standard dipole.

The data itself supports Walt's thesis.

73's
Richard Clark, KB7QHC

3713. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:14:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5277FA.1090902@ieee.org>
Source record: 124402

H. Adam Stevens wrote:
> I told you how I measured the field strength.
> A dipole a few hundred feet away.

What is the accuracy of your measurements? Are you
measuring only the far field? Are you measuring ground
wave? Did you repeat the test with identical results?

Did you know that time of day made as much as 1.5dB
difference in 75m mobile shootout results?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3714. Ant DC resistance ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:19:43 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v54ua2pnpnuhd4@corp.supernews.com>
Source record: 124403

I just got a spool with 26,400 feet of brass plated steel wire, it wieghs about 46 pounds. It's four stands of 28 guage, nearly invisible and has breaking strength of over 150 pounds. I measusred about 30 ohms per 100 feet. I assume it was govt surplus and am curious what it was used for. If I were to build a 130' dipole for 75 meters what kind of loss would I see versus using number 12 copperclad. Can any of the antenna programs model using this wire?
I can always add as many extra strands as I want to lower resistance but then it becomes more visible. Maybe I could make a long cage with a dozen strands. I'm going to be moving to a new QTH where visible antennas may be frowned upon. Facts appreciated.
tnx
hank wd5jfr
tnx
hank wd5jfr

3715. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:21:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5279A0.3080502@ieee.org>
Source record: 124404

H. Adam Stevens wrote:
> Because a dipole next to it produces the same field strength at resonance
> (7.15 MHz).

Next to it? Please don't tell us you have the two antennas being tested
in the air at the same time next to each other. And how do you know you
are not measuring common-mode radiation from the feedlines?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3716. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:28:21 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v54usvftvjnf47@corp.supernews.com>
Source record: 124405

end to end
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:6qo45vkmvsq9ecu8s2kmevpn6f1j6r1gno@4ax.com...
> On Tue, 18 Feb 2003 10:19:35 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> >Because a dipole next to it produces the same field strength at resonance
> >(7.15 MHz).
> >H.
> >NQ5H
>
> Hi OM,
>
> Two adjacent antennas, hmmm?
>
> 73's
> Richard Clark, KB7QHC

3717. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:35:01 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v54v9fdn1khldd@corp.supernews.com>
Source record: 124406

Back before I cashed in my DELL (wish I'd bought more of it in '91)
and retired I used to get this sort of nonsense at Motorola
("I don't believe your data.")
No snow here. Beer's cold. Antennas work.
73
H.
"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030218115351.20005.00001527@mb-cu.aol.com...
> >
> >I told you how I measured the field strength.
> >A dipole a few hundred feet away.
> >The antenna is here.
> >Come see for yourself.
> >Beer's on me. (just for Cecil and Yuri, not EVERYBODY)
> >H.
> >
>
> H. fuggetaboutit!
> Let them live in their "calculated" world. It's OK if their assumptions
are
> wrong, as long as formulas and calculations jive. :-)
> Another example is RL Cebik, he has done fine work with antenna modeling
> programs, but built and verified few. There are few holes in his
conclusions
> and articles.
> First they claim formulas as a gospel, then when someone proves them wrong
or
> brings up few "forgotten" variables that have impact, then the statement
creeps
> in that there is this or that exception.
> In my experience and making living I have to build things and make them
work.
> No BS, no theories, no empty calculations using wrong formulas.
> I just wonder if all those righteous experts built the darn antenna and
> verified their calculations by measurement. Or just debunking it on the
paper,
> adding another brownie point to their "guru aura" and writing a "paper".
> I have not built Bazooka Dipole, but was curious how it worked. I have
used
> Bazooka Baluns and seen their effect on broadening the SWR curve. So far I
> thank you for posting your measurements, they confirm what I was seeing
with
> baluns. As far as W2DU "debunking" it, well I keep wondering... Maybe that
> "debunking" needs debunking.

>
> Enough of this, gotta go out and showel the white sh.. that we were
blessed
> with on Presidents Day.
>
> 73 Yuri, K3BU
>

3718. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:54:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v550bh981lsrb1@corp.supernews.com>
Source record: 124407

I'm sorry, I missed the efficiency measurement part. All I saw in his postings were SWR and an "RF level" reading vs frequency for the bazooka, and must have missed the part where he showed the reading compared to a standard dipole or other antenna of known efficiency. I also missed the part where he showed the calibration of the "RF" meter, so we can tell how much the bazooka differs from the known antenna in terms of percent or dB. If you'll give me the date and subject name where he gave this information, I'd be really interested in reviewing it. Thanks!

Roy Lewallen, W7EL

Yuri Blanarovich wrote:
> . . .
> Let me try to formulate it again.
> NQ5H BUILT the Bazooka dipole, he measured the SWR and efficiency or field
> strength, which is contrary to "scientific" theories and calculations paraded
> here as a fact and overthrow of "crappy" antenna. W2DU publishes the article
> "debunking" the antenna and goes "huh?".
>
> Maybe he is wrong and retraction to the readers is in order?
>
> Yuri, K3BU
>
>

3719. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:56:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rlu45v0lq5dqg5025ouvn4vo5l1r3g627q@4ax.com>
Source record: 124408

On Tue, 11 Feb 2003 09:46:49 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>Here's the SWR vs RF data for my 40 meter RG8X bazooka
>I measured this yesterday using a 1 meter dipole about 300 feet
>from the bazooka for the sense antenna ....
>MHz SWR RF
>7.00 1.2 89
>7.03 1.1 93
>7.06 1.0 97
>7.09 1.0 97
>7.12 1.0 97
>7.15 1.0 99
>7.18 1.0 100
>7.21 1.0 97
>7.24 1.0 97
>7.27 1.1 93
>7.30 1.2 89

Hi OM,

Even with your sense antenna residing in the near field,
proportionality should be useful.
>MHz SWR RF
>7.00 1.2 89 -1.01dB (SWR = 1.22)
>7.03 1.1 93 -0.63dB (SWR = 1.17)
>7.06 1.0 97 -0.26dB (SWR = 1.11)
>7.09 1.0 97 -0.26dB (SWR = 1.11)
>7.12 1.0 97 -0.26dB (SWR = 1.11)
>7.15 1.0 99 -.087dB (SWR = 1.06)
>7.18 1.0 100 0dB (SWR = 1.0)
>7.21 1.0 97 -0.26dB (SWR = 1.11)
>7.24 1.0 97 -0.26dB (SWR = 1.11)
>7.27 1.1 93 -0.63dB (SWR = 1.17)
>7.30 1.2 89 -1.01dB (SWR = 1.22)

If one is to believe the monitor, then the SWR meter is pretty poor at
the low end. If one is to believe the SWR meter, the monitor is
pretty poor at the high end. Choose your poison.

So, in response to Cecil's query as to the ability to measure Signal
strength to an accuracy of 1%, we can see how much that impacts the
data offered. At best, we can only see maybe three data points that
correlate with one another, that means the other 8 are in the noise of
error. That there are only three measurements that cross-correlate,
that says nothing of THEIR accuracy by any means.

By the usual conventions of Metrology, any reported value is variant in the last digit ï¿½ï¿½ digit. The FSM supports the observation of at least 0.1 variation in any SWR report. This, in turn suggests that the reported 1.2 values may be depressed from an actual 1.3, which as offered in other postings conforms to an earth hugging dipole.

In other words, any virtue of Bazookoid tendencies is swamped in the single variable of reality: earth (and most certainly loss).

73's
Richard Clark, KB7QHC

3720. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:57:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v550gcn0jol307@corp.supernews.com>
Source record: 124409

Actually, if efficiency and not pattern is the only thing that changes (as would be the case between a bazooka and an ordinary dipole), the measurement could be made anywhere, at any angle. What I've missed is where he measured the standard dipole for comparison, but hopefully Yuri will show us where he posted this information.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Yuri Blanarovich wrote:
>
>> NQ5H BUILT the Bazooka dipole, he measured the SWR and efficiency or
>> field
>> strength, ...
>
>
> Depending on how he measured the field strength, that could be the
> source of the confusion. Did he use a helicopter in the far field?

3721. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 18:59:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rs055v0ps6ij5h2eck4i7uedf7qvd7io3g@4ax.com>
Source record: 124410

On Tue, 18 Feb 2003 12:14:18 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>H. Adam Stevens wrote:
>> I told you how I measured the field strength.
>> A dipole a few hundred feet away.
>
>What is the accuracy of your measurements? Are you
>measuring only the far field? Are you measuring ground
>wave? Did you repeat the test with identical results?
>
>Did you know that time of day made as much as 1.5dB
>difference in 75m mobile shootout results?

Hi Cecil,

This is the FIRST time I've heard of that metric.

Expand a bit.

73's
Richard Clark, KB7QHC

3722. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 19:48:47 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <9t155vg9sqc2e57ualhhbgdfa6kvpqktqr@4ax.com>
Source record: 124411

On 18 Feb 2003 16:53:51 GMT, k3bu@aol.com (Yuri Blanarovich) wrote:

[snip]

|I just wonder if all those righteous experts built the darn antenna and
|verified their calculations by measurement.

Not calling myself an expert, righteous or otherwise, but I've built
antennas that were designed using software. As best as I can tell,
(and my 30+ years of professionally making laboratory rf measurements
make me understand the pitfalls of home measurements) the antennas
perform exactly as predicted.

I documented one of these exercises in an earlier thread (5/8
wavelength antenna). You should recall that in the same message I
described how a parallel stub actually functions and it wasn't the way
you said it did.

It is curious that in that thread, you had the parallel stub "loading
the antenna", i.e. making it electrically longer, and in this thread
it is a reactance compensator.
[snip]

|Maybe that "debunking" needs debunking.

My point exactly.

|
|Enough of this, gotta go out and showel the white sh.. that we were blessed
|with on Presidents Day.

Golly, I was out in the yard for most of yesterday doing some antenna
work and I think I got a touch of sunburn.

3723. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 19:56:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E529005.4050302@ieee.org>
Source record: 124413

H. Adam Stevens wrote:
> end to end

Hmmmmm, a phased array.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3724. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 19:57:05 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <gi355vs9i0s73nhc3jj6ov458u1vn2a3gl@4ax.com>
Source record: 124412

On Tue, 18 Feb 2003 16:52:15 GMT, Wayne Watson
<mtnviews@earthlink.net> wrote:

|I'm about to stretch out 175 feet of R6 cable between a sat dish and a building. I
probably cannot
|bury too much of it because the ground is very, very rocky. Any cheap way of protecting it
from
|beast like deer, rabbits, racoons, etc.? PVC? Other?

I have a similar situation and used electrical pvc conduit (the gray
stuff). I used 2" since I have a number of cables in. The only
problem is that after some time in the AZ sun, what started out as a
nice straight run has turned into a snake.

White pvc will turn brown in our climate but in the smaller diameters
you can get 20' lengths with integral unions.

3725. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 19:59:59 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <3hw4a.45357$Rx3.1730311@news1.west.cox.net>
Source record: 124414

Don't quote me on this -- but heard a while back Horse stores sell something
to keep horses from chompin on fences -- might work -- ask them.

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"funkbastler" <funkbastler@eudoramail.com> wrote in message
news:dms45v4kmpqbu86s46b382b31e3n0mieh4@4ax.com...
> On Tue, 18 Feb 2003 16:52:15 GMT, Wayne Watson
> <mtnviews@earthlink.net> wrote:
>
> >I'm about to stretch out 175 feet of R6 cable between a sat dish and a
building. I probably cannot
> >bury too much of it because the ground is very, very rocky. Any cheap way
of protecting it from
> >beast like deer, rabbits, racoons, etc.? PVC? Other?
>
> PVC will work, but dang it'll be ugly if you just leave it on top of
> ground. How about buying some bags of top soil, or compost,
> or potting mix, or whatever, covering it up, and throwing some
> grass seed on top?
>
> -fb-
>

3726. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 20:13:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5293E7.4030509@ieee.org>
Source record: 124415

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Did you know that time of day made as much as 1.5dB
>>difference in 75m mobile shootout results?
>
> This is the FIRST time I've heard of that metric.
> Expand a bit.

That 1.5dB figure above is in error as I read the results wrong.

When one does mobile shootout measurements, one uses a "standard"
where conditions are as close as possible at the beginning of the
shootout and at the end of the shootout. The variation was 0.3 dB
and not 1.5dB. K7POF was the standard and had three entries. I
looked at the wrong two of them. With everything as identical as
possible, K7POF scored 0.3 dB higher at 11 AM than he did at 7 AM.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3727. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 20:26:14 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v555q1to5hmi0e@corp.supernews.com>
Source record: 124416

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E529005.4050302@ieee.org...
> H. Adam Stevens wrote:
> > end to end
>
> Hmmmmm, a phased array.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

They don't couple much that way.
Just switch back and forth and compare the voltage from the little sense
antenna in the front pasture.
(I have 60 acres sandwiched in between a 12,000 acre military reservation
and a cattle ranch. The house is on a hill.)
Here are the SWR data from the first time I got the 40 meter dipole resonant
with the stubs.
Columns 1 through 4 are repeated SWR measurments as the dipole length is
trimmed.
The antenna is about 1/4 wave off the ground.
Half wave feedline, MFJ analyzer.
MHz SWR1 2 3 4
7.000 1.70 1.18 1.20 1.20
7.010 1.60 1.16 1.10 1.18
7.020 1.55 1.05 1.08 1.15
7.030 1.51 1.03 1.05 1.10
7.040 1.50 1.01 1.03 1.08
7.050 1.50 1.00 1.00 1.05
7.060 1.45 1.00 1.00 1.04
7.070 1.40 1.00 1.00 1.03
7.080 1.30 1.00 1.00 1.01
7.090 1.25 1.00 1.00 1.00
7.100 1.20 1.00 1.00 1.00
7.110 1.20 1.00 1.00 1.00
7.120 1.18 1.00 1.00 1.00
7.130 1.15 1.00 1.00 1.00
7.140 1.08 1.00 1.00 1.00
7.150 1.04 1.00 1.00 1.00
7.160 1.03 1.00 1.00 1.00

7.170 1.02 1.00 1.00 1.00
7.180 1.01 1.00 1.00 1.00
7.190 1.00 1.00 1.00 1.00
7.200 1.00 1.00 1.00 1.00
7.210 1.00 1.00 1.00 1.00
7.220 1.00 1.03 1.00 1.00
7.230 1.00 1.05 1.01 1.00
7.240 1.00 1.10 1.03 1.01
7.250 1.01 1.15 1.05 1.03
7.260 1.02 1.20 1.10 1.04
7.270 1.03 1.25 1.18 1.05
7.280 1.05 1.30 1.20 1.10
7.290 1.08 1.35 1.30 1.18
7.300 1.20 1.40 1.35 1.20

73
H.
NQ5H

PS Experimenting on 40 is cheaper than 80 or 160. HI

3728. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 20:27:52 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v555t3joeaq43b@corp.supernews.com>
Source record: 124417

Perhaps the antenna was lossy in the morning dew.
Just a thought.
;^)
H.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E5293E7.4030509@ieee.org...
> Richard Clark wrote:
>
> > <Cecil.A.Moore@ieee.org> wrote:
> >>Did you know that time of day made as much as 1.5dB
> >>difference in 75m mobile shootout results?
> >
> > This is the FIRST time I've heard of that metric.
> > Expand a bit.
>
> That 1.5dB figure above is in error as I read the results wrong.
>
> When one does mobile shootout measurements, one uses a "standard"
> where conditions are as close as possible at the beginning of the
> shootout and at the end of the shootout. The variation was 0.3 dB
> and not 1.5dB. K7POF was the standard and had three entries. I
> looked at the wrong two of them. With everything as identical as
> possible, K7POF scored 0.3 dB higher at 11 AM than he did at 7 AM.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3729. Re: "T" antenna fed against ground questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 20:31:16 UTC
From: Jerry Flanders <SeeSignature@below.com>
Message-ID: <sr455v46e2j49p80o491tg2hs80n1v6r1l@4ax.com>
Source record: 124418

Thanks for accurately explaining my question, Richard. Looks like
everyone else wants to keep their opinions to themselves as well.

My opinion is that, since there is no potential difference across the
coax dielectric, it will have no influence, there will be no delay,
and there will be no phase difference topside. But intuitively, that
just doesn't seem right, because the inner wire _IS_ surrounded by
that dielectric.

Does that help anyone get started on this question?

Actually, I am not really concerned about the pattern of my antenna -
this is more of a theoretical question. I am pretty sure I will never
lose a QSO due to any pattern distortion from this cause.

Jerry W4UK

For the original question, see last section below:

On Mon, 17 Feb 2003 17:23:54 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Reg wrote:
>"Idon`t understand your query."
>
>I guess his concern is about a difference in velocities inside and
>outside the coax. Jerry, W4UK noted the horizontal dipole has one side
>connected to the center conductor of his coax and the other side
>connected to the coax shield.
>
>His concern seems to be a velocity factor near 1 on the outside of the
>shield and a velocity factor of about 2/3 on the inside of the coax.
>Does the difference in arrival times for signals inside and outside the
>shield to the two sides of the dipole unbalance the dipole enough to
>seriously affect the circularity of his horizontal pattern for his
>vertically polarized radiation? Ideally, he probably would like his
>horizontal radiation to balance out leaving only the vertical radiation
>of the coax. The horizontal dipole would serve only as a capacitive hat
>on the band where the coax is used as the radiator and fed against the
>ground system Jerry has installed.
>
>I`ll keep my opinions to myself for now.
>
>Best regards,Richard Harrison, KB5WZI

The original question:

>If I use a simple coax-fed 50 ft high horizontal dipole (direct
>antenna to coax connection topside with no balun or beads at
>feedpoint) as a vertical "T" antenna fed against ground (by tying the
>downlead coax inner+outer together at ground level and feeding this
>against a ground connection with radials):
>
>(1) Is there any feed phase difference topside between the side of the
>horizontal wire fed with the coax outer as opposed to the side fed
>with the inner? Seems there could be, since one side is fed with a
>line having a VF of 1 (current flows on the outside of the vertical
>coax, I presume) and the other side is fed with the center conductor,
>which probably is influenced by the dielectric, giving it a lower VF.
>
>(2) Can this be modelled (the vertical coax section "outer" as a
>radiator and the "inner" as a feed for half of the top horizontal
>run)? How do I set it up?

3730. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 20:52:21 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E529D05.2020406@ieee.org>
Source record: 124219

H. Adam Stevens wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
>
>>H. Adam Stevens wrote:
>>>end to end
>>
>>Hmmmmm, a phased array.

> They don't couple much that way.

Seems that would depend upon the feedline length. What did you
do with the unused feedline? Open? Short? Either way it might
be resonant or close to it depending upon the length. I don't
think you can conduct valid measurements with both antennas
in the air "end to end" unless you actually measure the
mutual coupling.

Are these coax-fed antennas? If so, do you use a balun at the
feedpoint? If not, they might simply have equal amounts of
feedline radiation.

Have you have accounted for all the possible variables that
might swamp your measurements? I just modeled two end-to-end
resonant dipoles using EZNEC and the undriven dipole had almost
as much current in it as the driven dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3731. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 20:53:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E529D42.9050406@ieee.org>
Source record: 124220

H. Adam Stevens wrote:
> Perhaps the antenna was lossy in the morning dew.
> Just a thought.

Pretty good thought. It was foggy at 7 AM and sunny at 11 AM.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3732. Re: Third order intermodulation

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 21:04:09 UTC
From: ovni90901@aol.com
Message-ID: <20030218160409.10177.00000594@mb-fk.aol.com>
Source record: 124221

>Hi folks,
>
>Where can I find a good program (shareware or freeware) to compute
>third order intermodulation?
>
>73's

>IK1GEN
>Vincent

Vincent--
Try a "google" search on "intermod", "intermod distortion", "IMD", etc.
Here is one site that has freeware for computing frequencies:
http://rf.rfglobalnet.com/software_modeling/software/2/691.htm

Calculating the intermod frequencies is quite easy, but can be time consuming
(even with a computer) for a large number of transmitters and higher orders.
If you are only interested in 3rd orders for a few "emitters", you can easily
do that on a spreadsheet.

Calculating the power generated in the intermod process can be a real mess to
model. It is usually easier to move the emitter frequencies so that the
intermod products fall "out of band".

--Wayne

3733. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 21:05:35 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5583q7j1bnc15@corp.supernews.com>
Source record: 124222

I used 'em together on the air. The old folks on the 7290 net couldn't tell
the difference. ;^)
The dipole got shortened for 20 and the given away when I got my SteppIR
yagi.
Otherwise I'd go out and see if they couple. End-to-end shouldn't couple
much,
dipole fields being what they are.
H.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E529D05.2020406@ieee.org...
> H. Adam Stevens wrote:
> > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> >
> >>H. Adam Stevens wrote:
> >>>end to end
> >>
> >>Hmmmmm, a phased array.
> >
> > They don't couple much that way.
> >
> Seems that would depend upon the feedline length. What did you
> do with the unused feedline? Open? Short? Either way it might
> be resonant or close to it depending upon the length. I don't
> think you can conduct valid measurements with both antennas
> in the air "end to end" unless you actually measure the
> mutual coupling.
>
> Are these coax-fed antennas? If so, do you use a balun at the
> feedpoint? If not, they might simply have equal amounts of
> feedline radiation.
>
> Have you have accounted for all the possible variables that
> might swamp your measurements? I just modeled two end-to-end
> resonant dipoles using EZNEC and the undriven dipole had almost
> as much current in it as the driven dipole.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3734. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 21:08:22 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5589069a9a67e@corp.supernews.com>
Source record: 124223

So who won the shoot out and what was the antenna?
I'll bet a few cold 807's it wasn't a steel whip and auto tuner. ;^)
H.
NQ5H

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E529D42.9050406@ieee.org...
> H. Adam Stevens wrote:
> > Perhaps the antenna was lossy in the morning dew.
> > Just a thought.
>
> Pretty good thought. It was foggy at 7 AM and sunny at 11 AM.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>

3735. Re: Butternut HF6V - Base Matching and Coax Stub

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 21:37:51 UTC
From: Paul Buhse <buhse@earthlink.net>
Message-ID: <PIx4a.9548$YU4.818366@newsread1.prod.itd.earthlink.net>
Source record: 124224

Perfect!!

Thanks for the info,

Paul - KA0LKB

<ccom2@socket.net> wrote in message
news:3e51b906.29469298@news.socket.net...
>
>
> Paul
> What you need is
>
> Q base Matching grounding coil:
> 17 turns of # 12 magnetic wire wound on a 1 1/4 "in form.
>
> Matching Line for the 20 meters 75 ohm matching:
> use RG - 11 75 ohm coax, 11 ft 4 in if solid dielectric, 13 ft 6 in if
> foam type.
>
>
> Mike
> AB0IV
>
>
>
>
> "Paul Buhse" <buhse@earthlink.net> wrote:
>
> >I just purchased a used HF6V on e-bay but it is missing the base matching
> >inductor and the 75 ohm coax stub. Does anyone know the inductance of (or
> >even better - instructions for making) the base matching transformer?
Also,
> >the 75 ohm stub is supposed to be 1/4 wavelength at 20m, but I would like
to
> >get the stock length in case it was tweaked for this antenna.
> >
> >Thanks,
> >Paul - KA0LKB
> >
> >
>
>

3736. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 21:41:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E52A88E.7000400@ieee.org>
Source record: 124225

H. Adam Stevens wrote:
> End-to-end shouldn't couple much,
> dipole fields being what they are.

Do you know what the dipole near-fields look like?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3737. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 21:48:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E52AA2A.9010009@ieee.org>
Source record: 124226

H. Adam Stevens wrote:
> So who won the shoot out and what was the antenna?
> I'll bet a few cold 807's it wasn't a steel whip and auto tuner. ;^)

Actually, I won the shootout with my top-loaded steel whip
junk box antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3738. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 21:50:32 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v55ao2kcr4b85f@corp.supernews.com>
Source record: 124227

uh huh
and one gets minimum coupling end to end
H.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E52A88E.7000400@ieee.org...
> H. Adam Stevens wrote:
> > End-to-end shouldn't couple much,
> > dipole fields being what they are.
>
> Do you know what the dipole near-fields look like?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3739. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 22:14:02 UTC
From: tdonaly@aol.com
Message-ID: <20030218171402.22142.00000537@mb-fa.aol.com>
Source record: 124228

Aitch wrote,
>
>end to end
>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>news:6qo45vkmvsq9ecu8s2kmevpn6f1j6r1gno@4ax.com...
>> On Tue, 18 Feb 2003 10:19:35 -0600, "H. Adam Stevens"
>> <solo@totalaccess.net> wrote:
>>
>> >Because a dipole next to it produces the same field strength at resonance
>> >(7.15 MHz).
>> >H.
>> >NQ5H
>>
>> Hi OM,
>>
>> Two adjacent antennas, hmmm?
>>
>> 73's
>> Richard Clark, KB7QHC
>

You had two antennas end to end and the swr at 7.1 Mhz was 1:1, which
implies a feedpoint impedance of 50 ohms. When you removed the dipole,
the feedpoint impedance was still 50 ohms at 7.1 Mhz? How high above
ground were these antennas? How far apart were they?
73,
Tom Donaly

3740. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 22:55:32 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b2udl4$91f$1@knossos.btinternet.com>
Source record: 124229

High voltage maybe?!!

"Aspiring Elmer" <elmer@nowhere.com> wrote in message
news:3hw4a.45357$Rx3.1730311@news1.west.cox.net...
> Don't quote me on this -- but heard a while back Horse stores sell
something
> to keep horses from chompin on fences -- might work -- ask them.
>
> --
> Caveat Lector - Ya All
> I Doubt, Therefore I Might Be
> 73 From AC6V, who is QBF most of the time !!
> Rod In Oceanside, CA
> Home Page http://ac6v.com
> DX Book http://ac6v.com/DXSAMPLE.htm
>
> "funkbastler" <funkbastler@eudoramail.com> wrote in message
> news:dms45v4kmpqbu86s46b382b31e3n0mieh4@4ax.com...
> > On Tue, 18 Feb 2003 16:52:15 GMT, Wayne Watson
> > <mtnviews@earthlink.net> wrote:
> >
> > >I'm about to stretch out 175 feet of R6 cable between a sat dish and a
> building. I probably cannot
> > >bury too much of it because the ground is very, very rocky. Any cheap
way
> of protecting it from
> > >beast like deer, rabbits, racoons, etc.? PVC? Other?
> >
> > PVC will work, but dang it'll be ugly if you just leave it on top of
> > ground. How about buying some bags of top soil, or compost,
> > or potting mix, or whatever, covering it up, and throwing some
> > grass seed on top?
> >
> > -fb-
> >
>
>

3741. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 23:03:05 UTC
From: larryc@northwest.com
Message-ID: <3E52BBA8.9C7B8139@northwest.com>
Source record: 124230

used to be creosote...now illegal.

stuff now used to stop cribbing (horse chomping on the fence) is basically hot sauce or chilli powder.

=========

Aspiring Elmer wrote:

> Don't quote me on this -- but heard a while back Horse stores sell something
> to keep horses from chompin on fences -- might work -- ask them.
>
> --

3742. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 23:23:30 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Sfz4a.9666$YU4.833147@newsread1.prod.itd.earthlink.net>
Source record: 124231

H. Adams Smith wrote:

> >Here's the SWR vs RF data for my 40 meter RG8X bazooka
> >I measured this yesterday using a 1 meter dipole about 300 feet
> >from the bazooka for the sense antenna ....
> >MHz SWR RF
> >7.00 1.2 89
> >7.03 1.1 93
> >7.06 1.0 97
> >7.09 1.0 97
> >7.12 1.0 97
> >7.15 1.0 99
> >7.18 1.0 100
> >7.21 1.0 97
> >7.24 1.0 97
> >7.27 1.1 93
> >7.30 1.2 89

Hi OM,

It's obvious that you didn't interpret my previous post correctly. And there is nothing wrong with your experimental readings that I can detect.

However, the point that seems to be missed all around is that the significant increase in bandwidth is due entirely to the loss resistance in the coax of the stubs. My example was set in the major band that needs improved bandwidth, 80m. My example using verified, measured impedances, proves conclusively that the effect of the parallel-connected stub inductive reactances simply are not responsible for the improved bandwidth--the loss resistance is. Note that the change in SWR from the dipole alone was 5.04, but with the parallel stubs added the SWR went down only to 4.9. Do you consider this a sufficient change to warrant the use of parallel stubs?

Instead of going through lengthy discussions concerning parallel circuitry, why don't you just accept the parallel-circuitry example I gave in a previous post and on my web page. The phase angles , electrical lengths of the shorted coax, and other pertinent data are on the web page.

Do you guys have any problem with my data that was published in Ham Radio in August 1976, in QST in September 1976, in Reflections I in 1990, and in Reflections II in 2001? If you find anything wrong with my math please let me know.

Walt, W2DU

3743. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 23:30:20 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <Abz4a.108051$JY6.77509@fe02.atl2.webusenet.com>
Source record: 124232

Washes off. You would need to reapply.

--
73,
Chuck
KE4ETH
USA-NA

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:b2udl4$91f$1@knossos.btinternet.com...
> High voltage maybe?!!
>
>
> "Aspiring Elmer" <elmer@nowhere.com> wrote in message
> news:3hw4a.45357$Rx3.1730311@news1.west.cox.net...
> > Don't quote me on this -- but heard a while back Horse stores sell
> something
> > to keep horses from chompin on fences -- might work -- ask them.
> >
> > --
> > Caveat Lector - Ya All
> > I Doubt, Therefore I Might Be
> > 73 From AC6V, who is QBF most of the time !!
> > Rod In Oceanside, CA
> > Home Page http://ac6v.com
> > DX Book http://ac6v.com/DXSAMPLE.htm
> >
> > "funkbastler" <funkbastler@eudoramail.com> wrote in message
> > news:dms45v4kmpqbu86s46b382b31e3n0mieh4@4ax.com...
> > > On Tue, 18 Feb 2003 16:52:15 GMT, Wayne Watson
> > > <mtnviews@earthlink.net> wrote:
> > >
> > > >I'm about to stretch out 175 feet of R6 cable between a sat dish and
> a
> > building. I probably cannot
> > > >bury too much of it because the ground is very, very rocky. Any cheap
> way
> > of protecting it from
> > > >beast like deer, rabbits, racoons, etc.? PVC? Other?
> > >
> > > PVC will work, but dang it'll be ugly if you just leave it on top of
> > > ground. How about buying some bags of top soil, or compost,
> > > or potting mix, or whatever, covering it up, and throwing some
> > > grass seed on top?
> > >

> > > -fb-
> > >
> >
> >
>
>

3744. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-18 23:44:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jpf55v8lrjjicfk5td999olo9duodt8pji@4ax.com>
Source record: 124233

On Tue, 18 Feb 2003 14:26:14 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>Columns 1 through 4 are repeated SWR measurments as the dipole length is
>trimmed.
>The antenna is about 1/4 wave off the ground.
>Half wave feedline, MFJ analyzer.

Hi OM,

More digits is not more accuracy.

Case in point, again using the standard conventions of Metrology to
imply a measurement as encompassing ï¿½ï¿½ digit in the least digit; let's
test the validity in that silent assertion:
1.245
1.25
1.256
This claim through resolution leads to the conclusion that the basis
of difference 0.005 can be differentiated (or is the smallest unit of
information) IFF you can measure a 0.0001dB relationship (12ppm).
The MFJ is not such a candidate, and other data has already indicted
its accuracy.

I see a lack of data from your FSM which revealed the SWR meter
inaccuracies the first time through this exercise. It is also an odd
omission coming from the source that maintained earlier
>On Thu, 30 Jan 2003 22:17:24 -0600, "H. Adam Stevens" <solo@totalaccess.net> wrote:
>
>>Most useful piece of test equipment: field strength meter.
>>I find it amazing how so many people ignore it in favor of their fantasies.
>>

The data presented, as it progresses through the trim-to-frequency, at
more data points, also shows an explicit lack of neighboring
resonances. It is quite clear there is only one resonance, with a Low
Q, from a thickish radiator of 50 Ohms characteristic that embodies
some loss (the bazookoid Characteristic).

Pretty much the conclusion Walt published some years ago.

73's
Richard Clark, KB7QHC

3745. WTD:Heathkit trainers ET-3700 ET-3600

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 00:03:01 UTC
From: SWL <radiovintage@hotmail.com>
Message-ID: <VQz4a.8575$_c6.895047@newsread2.prod.itd.earthlink.net>
Source record: 124234
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Looking for heathkit trainers models ET-3700 and maybe an ET-3600.Please state price and condition.

3746. Re: Ant DC resistance ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 00:47:48 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <_uqdnXM-zbWpSc-jXTWcpQ@comcast.com>
Source record: 124235

At 30 Ohms/100 feet, that is equivalent to about #33 copper wire. I would find some use for it other than an antenna. I think EZNEC lets you specify wire loss. I suspect this wire was meant for some decorative non electrical use.

Tam/WB2TT
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message news:v54ua2pnpnuhd4@corp.supernews.com...
> I just got a spool with 26,400 feet of brass plated steel wire, it wieghs
> about 46 pounds. It's four stands of 28 guage, nearly invisible and has
> breaking strength of over 150 pounds. I measusred about 30 ohms per 100
> feet. I assume it was govt surplus and am curious what it was used for.
If
> I were to build a 130' dipole for 75 meters what kind of loss would I see
> versus using number 12 copperclad. Can any of the antenna programs model
> using this wire?
> I can always add as many extra strands as I want to lower resistance but
> then it becomes more visible. Maybe I could make a long cage with a dozen
> strands. I'm going to be moving to a new QTH where visible antennas may
be
> frowned upon. Facts appreciated.
> tnx
> hank wd5jfr
> tnx
> hank wd5jfr
>
>

3747. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 01:14:20 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v55mjgo7t0jlea@corp.supernews.com>
Source record: 124236

GIP aka galvanized iron pipe is best!
2nd is 6 inch PVC, it must be big enough to so the radius of curvature
doesn't allow the teeth to dig in..
EMT is relatively cheap and would be a good alternative..
In any of these alternatives make double sure that water can't collect in
low spots and freeze...
upon expansion while trying to rupture the pipe the ice will crush your coax
to point where it'll be unuseable...
good luck
hank wd5jfr
"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:gi355vs9i0s73nhc3jj6ov458u1vn2a3gl@4ax.com...
> On Tue, 18 Feb 2003 16:52:15 GMT, Wayne Watson
> <mtnviews@earthlink.net> wrote:
>
> |I'm about to stretch out 175 feet of R6 cable between a sat dish and a
building. I probably cannot
> |bury too much of it because the ground is very, very rocky. Any cheap way
of protecting it from
> |beast like deer, rabbits, racoons, etc.? PVC? Other?
>
> I have a similar situation and used electrical pvc conduit (the gray
> stuff). I used 2" since I have a number of cables in. The only
> problem is that after some time in the AZ sun, what started out as a
> nice straight run has turned into a snake.
>
> White pvc will turn brown in our climate but in the smaller diameters
> you can get 20' lengths with integral unions.

3748. Re: Another grounding question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 01:17:14 UTC
From: richardharrison@webtv.net
Message-ID: <633-3E52DB1A-48@storefull-2311.public.lawson.webtv.net>
Source record: 124238

Dave, W4WLC wrote:
"---should I tie the two ground rods together?"

Yes. You should take every reasonable precaution to minimize development of potential difference between ground connections. A heavy wire between rods helps. Connecting them all together and also connecting them to the electrical service ground connection is not only good practice, it is also required by the National Electrical Code.

Best regards, Richard Harrison, KB5WZI

3749. Re: Third order intermodulation

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 01:17:57 UTC
From: ovni90901@aol.com
Message-ID: <dc628532.0302181717.3bfb4b4d@posting.google.com>
Source record: 124237

radiotec@libero.it (Vincent) wrote in message
news:<deea1d33.0302171237.7952c116@posting.google.com>...
> Hi folks,
>
> Where can I find a good program (shareware or freeware) to compute
> third order intermodulation?
>
> 73's
>
> IK1GEN
> Vincent

There are two problems in intermod calculations: calculating the exact frequency of the intermod product, and estimating the power level of the signal. A Google search will provide some websites that have freeware for calculating the frequencies. For example, http://rf.rfglobalnet.com/software_modeling/software/2/691.htm has a program to calculate up to the fifth order. This may answer your needs.

If you are interested only in third order, it is quite simple to set up an excel spreadsheet to calculate the frequencies. That is, if there are not a large number of transmitters involved.

If the calculation shows that there is a 3rd order intermod product "in-band", there are two choices: evaluate the power level of the signal by modeling or by experiment, or change the transmit frequencies such that there are no "in-band" products. Normally, the simplest approach is to change the transmit or receive frequencies.

It is doubtful that you will find a freeware program to model your system, as it would require knowledge in advance of your system design.

3750. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 01:49:14 UTC
From: artie <silli_artie@hotmail.com>
Message-ID: <18022003174914251 5%silli_artie@hotmail.com>
Source record: 124239

I've used a mix suggested to me by a ham in Alaska. To Armorall (or other similar protectant) add bitter apple (available at pet stores) and Dave's Insanity Sauce (capsicum). Mix and spray on cables.

Tip: Wear gloves and something over your face. Wash *well* after using!

In article <3E5264C9.869552EC@earthlink.net>, Wayne Watson <mtnviews@earthlink.net> wrote:

> I'm about to stretch out 175 feet of R6 cable between a sat dish and a
> building. I probably cannot
> bury too much of it because the ground is very, very rocky. Any cheap way of
> protecting it from
> beast like deer, rabbits, racoons, etc.? PVC? Other?
>
> --
> Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada
> City, CA
>
> Winter Tip: Now is not a bad time to think about oiling your doors,
> tools,
> and the like.
>
> Web Page: <home.earthlink.net/~mtnviews>
> Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>
>
>

3751. Re: "T" antenna fed against ground questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 02:07:03 UTC
From: richardharrison@webtv.net
Message-ID: <9628-3E52E6C7-242@storefull-2315.public.lawson.webtv.net>
Source record: 124240

Jerry, W4UK wrote:
"Does that help get anyone started on this question?"

O.K. Skin effect, dielectric retardation, etc. discourage signal through the coax when the outside of the coax is available and is an easier path for the signal. Signal reaching the antenna section connected to the inner conductor of the coax, will instead get there from the outside of the coax. On arrival at the antenna end of the coax, some of the signal will flow around from outside to inside the sheath and be capacitively coupled to the inner conductor to energize the half of the antenna connected to the inner conductor. Energy feed to the two halves of the capacitive hat won`t be well balanced. But, that should not be a practical problem.

An unbalanced "T" top should be better than no balance at all which is what you get with an inverted "L" antenna. Many of these are used on vessels at sea where horizontal antennas are useless at long distances. The vertical section of the shipboard Marconi antenna does all the DX radiation. It is far from omnidirectional due to the unique path of the horizontal portion of the "L", plus all the clutter of conducting surfaces, topside. Given the excellent earth connection, the Marconi (Inverted L) works well enough anyway.

Best regards, Richard Harrison, KB5WZI

3752. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 02:18:36 UTC
From: fch <na@hle.com>
Message-ID: <3E52E97C.2DDEEA7E@hle.com>
Source record: 124242

Glad you asked...

I've tried everything and the only thing that worked well was
scent marking my coax.
Just go out and urinate on your coax. No need to get
all frisky while doing it.
Animals will know this is YOUR coax and will not
mess (he he he) with it.

Wayne Watson wrote:

> I'm about to stretch out 175 feet of R6 cable between a sat dish and a building. I
probably cannot
> bury too much of it because the ground is very, very rocky. Any cheap way of protecting
it from
> beast like deer, rabbits, racoons, etc.? PVC? Other?
>
> --
> Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA
>
> Winter Tip: Now is not a bad time to think about oiling your doors, tools,
> and the like.
>
> Web Page: <home.earthlink.net/~mtnviews>
> Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

3753. Re: "T" antenna fed against ground questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 02:35:46 UTC
From: Jerry Flanders <SeeSignature@below.com>
Message-ID: <r2r55vkhv09qs415r5p48pu7clpshl86s5@4ax.com>
Source record: 124241

OK. Sounds good. I am finally realizing that the inner conductor is effectively "shielded" from RF current flow, so there should be very little current there. Fits well with your explanation.

So it appears this would just make a semi-inverted "L" antenna as you say.

Anybody see a way to model this kind of a thing in any of the common modeling programs?

Jerry W4UK

On Tue, 18 Feb 2003 20:07:03 -0600 (CST), richardharrison@webtv.net (Richard Harrison) wrote:

>Jerry, W4UK wrote:
>"Does that help get anyone started on this question?"
>
>O.K. Skin effect, dielectric retardation, etc. discourage signal through
>the coax when the outside of the coax is available and is an easier path
>for the signal. Signal reaching the antenna section connected to the
>inner conductor of the coax, will instead get there from the outside of
>the coax. On arrival at the antenna end of the coax, some of the signal
>will flow around from outside to inside the sheath and be capacitively
>coupled to the inner conductor to energize the half of the antenna
>connected to the inner conductor. Energy feed to the two halves of the
>capacitive hat won`t be well balanced. But, that should not be a
>practical problem.
>
>An unbalanced "T" top should be better than no balance at all which is
>what you get with an inverted "L" antenna. Many of these are used on
>vessels at sea where horizontal antennas are useless at long distances.
>The vertical section of the shipboard Marconi antenna does all the DX
>radiation. It is far from omnidirectional due to the unique path of the
>horizontal portion of the "L", plus all the clutter of conducting
>surfaces, topside. Given the excellent earth connection, the Marconi
>(Inverted L) works well enough anyway.
>
>Best regards, Richard Harrison, KB5WZI

3754. Re: Ground Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 02:55:15 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <QcC4a.69951$sy2.29249@fe03.atl2.webusenet.com>
Source record: 124243

Thanks to all that answered.

I replaced the old coax fed dipole with another one today. This one is fed with belden 8230 300-ohm transmission line (I know twinlead) of an immensely better quality the RS. I can now load the 80-meter dipole and it reads 1.1:1 in the scale of the MFJ tuner. Course the old transmitter is only putting out about 20 watts with less the a half watt reflected on the watt meters. Now I need to figure out why the rig has low power. Need to check into a dummy load and check the output transistors.

Ah, the joys of setting up a shack.

Again thanks for the help.

--
73,
Chuck
KE4ETH
USA-NA

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:1rD3a.36224$RL1.14628@fe08.atl2.webusenet.com...
> Have a quick question about RF grounding.
>
> I know that using a RF ground is important. But can I get away with a
> poor(er) (a lot less then optimum) RF ground using Twinlead or ladder line
> feeding a dipole.
>
> I feel that the answer is no, I still need a good RF ground for it to work
> properly and to keep from feeding fingers to the nasty RF beastie. Until
> the weather clears, warms up and dries out some, I can't get a good ground
> in.
>
> I would consider an artificial ground, but I think I have pushed the money
> issue to the extreme. (Shirley is a Technician and does understand, but
> there is a limit.
>
> TNX
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
>
>

>

3755. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 03:06:39 UTC
From: k3bu@aol.com
Message-ID: <20030218220639.29720.00001249@mb-mv.aol.com>
Source record: 124244

Wes Stewart n7ws writes
>
>[snip]
>
>|I just wonder if all those righteous experts built the darn antenna and
>|verified their calculations by measurement.
>
>Not calling myself an expert, righteous or otherwise, but I've built
>antennas that were designed using software. As best as I can tell,
>(and my 30+ years of professionally making laboratory rf measurements
>make me understand the pitfalls of home measurements) the antennas
>perform exactly as predicted.
>

But did you try this specific case? Can you model stubs, wires, feedline of
Bazooka Dipole and show the curves and how they correlate with reality?

Generally right, but when we get "special" cases or variables involved and are
not aware of them, then there is a problem correlating reality with
calculations. (Multinec close to ground, etc.)
Like (my cheap, nonprofessional) EZNEC cannot accommodate insulated wire, or
elements within the antenna made of different materials (Quad Cu wire loops,
Yagi Al elements). Not exactly as "predicted".

>I documented one of these exercises in an earlier thread (5/8
>wavelength antenna). You should recall that in the same message I
>described how a parallel stub actually functions and it wasn't the way
>you said it did.
>
>It is curious that in that thread, you had the parallel stub "loading
>the antenna", i.e. making it electrically longer, and in this thread
>it is a reactance compensator.
>[snip]
>

Apples and oranges. I claim that inserting inductance (coil, hair pin) within
antenna changes (increases) electrical length - lowers the resonant frequency
(like in mobile 1/4 wave whip). Which means that if you insert inductance
(loading), you would have to shorten the radiator to compensate for it - to
maintain its electrical length or resonance.

If you add Bazooka Balun across the feedpoint, it widens the SWR curve by
compensating the change of antenna reactance with frequency vs. change of
reactance in 1/4 wave Bazooka Balun. Here we are talking feedpoint of dipole or
beam. That is reactance compensator, radiator (electrical) length remains
(practically) the same.

>|Maybe that "debunking" needs debunking.
>
>My point exactly.
>
>|

Uhm. I thought we are debating effectiveness of Bazooka stubs, which NQ5H showed to have positive effect on the bandwidth, SWR and (efficiency,) signal levels (I forgot to add previously) ACROSS THE BAND vs. "naked" dipole.
Now youze guyz are taking off on tangents, what about this, what about that...
The point is that Bazooka Dipole seems to work well as originally designed, shows flatter SWR curve and signal levels show no "horrible" loses as predicted in W2DU "debunking". (Little exaggeration to make a point.)
Its OK to question, but lets try to stick to the subject and problem.
Where are the calculations that would correlate to measured values? Forget the time of day testing, ground losses, moon phase, etc. Not relevant here.

Yuri, K3BU

3756. Re: Ant DC resistance ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 03:19:48 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <iJC4a.4141$iu1.441422@news20.bellglobal.com>
Source record: 124245

"Henry Kolesnik"
> 30 ohms per 100 feet
> 130' dipole for 75 meters

Look at the bright side: the bandwidth and match should be excellent.

3757. Re: Weird antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 06:01:02 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <y4F4a.19143$Se4.2535018@twister.southeast.rr.com>
Source record: 124246

Damn thing is a siren. My fatherin law has one in his work shop as part of his alarm system. When the thing goes off not only do you know the shop has been broken into you also know nothing has been stolen. You cant stand to be inside the shop.

"Larry D. Clark" <buddycl@swbell.net> wrote in message
news:taw3a.89$M%3.141215954@newssvr11.news.prodigy.com...
>
> storm sirens
>
> larry
> kd5foy
>
> "Casper Gripenberg" <casper_cg@hotmail.com> wrote in message
> news:b2lp2m$gc1$1@phys-news1.kolumbus.fi...
> >
> > I hope this isn't too off topic. I couldn't figure out
> > where else to post. Can anyone identify what type of
> > an antenna this is?
> >
> > http://zoidberg.homeip.net/alien
> >
> > ..unfortunately my webcam is a little bit low on
> > zooming capability, but the shapes in the antenna
> > remind me of something from the 60-70's. It has
> > 6 'donuts' on top of each other. In between the
> > donuts there is a metal net surrounding the 'core'.
> > The core contains some shaped metal pieces, but
> > you can still see through it.
> >
> > Can't really describe it any better than that. I
> > can see one grounding wire connected to the side
> > of the pipe, and two wires coming off the bottom
> > end of the pipe. Just guessing, but one looks like
> > the power cord and the other looks like a shielded
> > wire..
> >
> > Any ideas?
> >
> > Thanks..
> >
> > Casper
> >
>

>

3758. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 06:17:14 UTC
From: "--. .. ..."
Message-ID: <HrednYF-BYn0vM6jXTWcpQ@comcast.com>
Source record: 124248

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0302180109.282fc4bb@posting.google.com...

> Not mine...I bet my 5/8 vertical will beat his 5/8 vertical. The
> secret is in the radial system, not the matching coil.
>
> MK

Mark, I agree with you, and I reposted the comments you made in this
reply to the original post in another NG and the person who's comments you
replied to said your wrong, LOL

I guess Roy and Regs comments didn't get as detailed as yours.

3759. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 06:19:10 UTC
From: Dale Martin <nitram@rap.midco.net>
Message-ID: <b2v79r$1gavlc$1@ID-169764.news.dfncis.de>
Source record: 124247

I've used Barbed wire along the PVC or you could go whole hog and use Razor tape talk with the Sheriff I'm sue he can get a "Work Crew" out to install it, just have him informed your Emergency Communications Potential.
--
Dale Martin
President Black Hills Rocketry Club
NAR Chapter # 638
NAR 80678 L2
N0JFM
"Wayne Watson" <mtnviews@earthlink.net> wrote in message news:3E5264C9.869552EC@earthlink.net...
> I'm about to stretch out 175 feet of R6 cable between a sat dish and a building. I probably cannot
> bury too much of it because the ground is very, very rocky. Any cheap way of protecting it from
> beast like deer, rabbits, racoons, etc.? PVC? Other?
>
> --
> Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA
>
> Winter Tip: Now is not a bad time to think about oiling your doors, tools,
> and the like.
>
> Web Page: <home.earthlink.net/~mtnviews>
> Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>
>
>

3760. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 06:21:29 UTC
From: dino@nomail.com
Message-ID: <JnF4a.10207$YU4.897606@newsread1.prod.itd.earthlink.net>
Source record: 124249

Wow Mark, I see George took a post I put on rec.radio.cb and decided to bring it over here. While a few did take some jabs at my comments, I'll equate that to the dislike of CB radio in general.

I also see that responses to my comments were incorrect as my original comments were not fully understood or explained by me. So let me rebut...

George said...
>> The claim of this I10K antenna is his form of matching is much more
>> efficient than any other, and will provide 2db more than some factory made
>> antennas. any comments appreciated

The Interceptor antenna has a claimed gain of 3.x dbd of gain. This is a standard gain rating for a 5/8 wave antenna. Any claims of being 2 db better than another antenna is confusing and not meant to be equated to "dbd" or "dbi". Its meant to measure the radiating efficiency of one antenna and another. It would be like saying a 1/4 mobile antenna has 10db more gain than a rubber duck, when we all know a 1/4 wave antenna has no gain.

Dino said in another NG...
>The Penetrator 500 uses a matching hairpin in the VERTICAL PLANE. This
>affects the radiation patter of the antenna.

Mark said...
>It wouldn't have that much of an effect on the pattern.

It DOES have an effect on the pattern. You say it wouldn't have "much", but we do agree that it does have an effect. I believe it has a larger affect than you think.

Dino said in another NG...
>The driven element is also surrounded by the ground plane brackets and
>radials.

Mark said...
>That is silly...Do the radials point up? I haven't seen one...

No, it is not silly. No, the ground radials do not point up. I believe you HAVE seen one. Have you seen any of the Hy-Gain HF vertical antennas? Same thing! If you haven't seen any of the Hy-Gain HF verticals, then you can't speak intelligently on this subject, or at least understand what I'm talking about.

Dino said in another NG...
>The I10K uses TWO trombones. The first is to fine tune the resonant
>frequency. The second is used for impeadance matching.

Mark said...
>You only need impedance matching. And a 5/8 is not resonant, so trying
>to fine tune such a non resonance seems kind of silly.

You don't understand what I'm trying to say, so maybe its my fault for not explaining it better. A 5/8 element is NOT resonant and needs to be taken to the next 1/4 wave in order to make it resonant. You do not want this extra 1/8 to affect the 5/8 element (3/4 wave antennas have a a distorted wave pattern) so you coil it or bend it, preferably OUT of the radiation plane of the 5/8 element. Did I explain it better this time?

Dino said in another NG...
> The I10K also uses an ELEVATED FEED which lowered the capacitance of the
>feed system. This equates to more signal getting to the antenna.

Mark said...
>Sounds kind of "gappish"..

Gappish? Less loss...more signal!

Dino said in another NG...
>These trombones are in the HORIZONTAL PLANE of the radiated signal which
>does NOT affect the radiation pattern of the 5/8 element. The I10K has
>lower loss. Just these facts alone warrant the purchase of this antenna for
>me! If you want to compromise, thats up to you.

Mark said...
>Not me...

OK...

Dino said in another NG...
>A true 5/8 antenna length is near impossible to match to a 50 ohm load.

Mark said...
>Good grief...All you need a simple coil of a few turns.

Yes! I said that above! When I said this, I was talking about the 5/8 element WITHOUT the coil (next 1/4 segment).

Dino said in another NG...
>The reason for having an antenna length of 5/8 has everything to do with the
>WAVE RADIATION PATTERN. In order to match it, you need to bring the antenna
>to a 3/4 wave length (next 1/4 wave length). BUT, adding this length in the
>vertical plane would RUIN the radiation pattern!

Mark said...
>Balony. Adding a series coil in the vertical plane, at the base of a
>5/8 does not ruin the radiation pattern. The coil is not long enough
>vs wavelength for one thing.

Right, a horizontal wound coil will not hurt the pattern. If that coil was stretched out and vertical, then it would affect the pattern.

Dino said in another NG...
>So by placing this "section" in the horizontal plane eliminates the affects

>on the vertical plane. You will see this on the Avanti Sigma 5/8 and the
>Maco V58 as a loop! (for this reason alone, I have always felt the Avanti
>was better than the Penetrator).

Mark said...
>There is no real difference. Also, a single turn matching coil might
>be a little more efficient than a small multi turn wire coil, but the
>difference should be unnoticeable on the air.

I'm glad we agree about the single turn coil. There is a difference. I guess we can discuss what each of us think is "significant". Lets just agree that there is a difference and that the single turn coil is better.

Dino said in another NG...
>The I10K also uses top hat loading for improved performance. We already
>agree on the better construction of the antenna and the materials used.

Mark said...
>What???? Not a real full length 5/8 wave radiator? Sounds like a
>"Fisher Price" 5/8 antenna.

If you want to say that a top hat shortens the length of the 5/8 element, I would agree...its about 6 inches (educated guess). The advantages of the top hat has been sung out here many times! This was just a useless reply from you. Do you agree or disagree that there are advantages to top hat loading?

Dino said in another NG...
>One other point, Jay's claim of 2db is over the difference of the I10K and
>the Penetrator...NOT dbi or dbd! Jay only claims 3.x of dbd gain for his
>antenna based on it being a 5/8 wave ground plane.

Mark said...
>In theory, a 5/8 vertical is only about 1.1-1.2 db over a 1/2 wave
>vertical at the most. The last "d" in dbd means compared to a dipole,
>which is a 1/2 wave and has appx 2.15 dbi. A 5/8 has appx 3.2-3.3 dbi
>gain. And all this would assume good ground planes, and decoupling
>from the feedline to pay off in the real world. An extended double
>zepp only has about 3 dbd gain, and thats "twin" 5/8's.

Now I'm going to have to go back and look at my ARRL publications...You have me questioning myself on a 5/8 rating based on dbd pr dbi. A 1/2 wave antenna has 0 dbd gain, but 2.1 dbi. My original post should have said dbi. Thanks for the heads up on the typo.

Dino said in another NG...
>Basic antenna theory states that a 5/8 antenna has "x" amount of gain over
>dbi or dbd. This is true! But then there is the losses in the matching
>network.

Mark said...
>Only if you use magnet wire for the coil, and wind the turns right
>next to each other. Any normally built coil for a 5/8 has very
>little loss to speak of.

It depends on the matching network. Some are more lossy than others. Eliminate these losses and you have more signal getting to the antenna. This also changes with the amount of applied power. Do we agree?

Dino said in another NG...
>What Jay has learned is how to eliminate these losses! Less loss, better >efficiency! Better efficiency, better performance!

Mark said...
>I'll alert the media...

GOOD! get the word out! There is a new sheriff in town and he makes one heck of an antenna! :-) BTW, this antenna is tuneable from 12 to 10 meters! I would like to see someone out here take a SERIOUS look at this antenna for 12 meters!

Dino said in another NG...
>Also, the I10K can take an honest 10,000 watts!

Mark said...
>Yea, but who runs an honest 10,000 watts? Or should I ask, who the >heck would ever need to?

While I don't condone the use of these power output numbers, there are a NUMBER of people who regularly run this kind of power on CB and are in need of an antenna to handle their big signals. Just count your blessings they stay on CB and not light up 10 meters! :-)

Dino said in another NG...
>You don't need to buy that 5KW gamma like some other antennas.

Mark said...
>Whats a 5KW gamma?

A gamma match that can take 5KW. It would be like a balun that can take 5KW. I am NOT saying that a gamma match is the same thing as a balun. A company in the south east makes antennas and sells a gamma upgrade that can take 5KW.

Dino said in another NG...
> Better materials, better efficiency, better antenna!

Mark said...
>Well, ok then....

Dino said in another NG...
>The I10K is not for everyone! But if you want the best, the buck stops >here!

Mark said...
>Not mine...I bet my 5/8 vertical will beat his 5/8 vertical. The >secret is in the radial system, not the matching coil.

Ah, 5/8 at what frequency? My post was talking about CB antennas centered at 27.205Mhz. I will pull out the references, but I'm sure you will agree that as you go higher in frequency and the antenna gets shorter, the rules change. My reference material says that upper HF frequencies take advantage of a 4

ground radial system. 3 are good, 4 are better, and there is not a significant difference with numbers above 4. Now if we are talking about a 20 meter vertical mounted at ground level with a ground radial grid...thats different! If you could build a better antenna than the Interceptor 10K, I would like to see it and offer to market it for you! To date, the I10K is the best "upper HF" ground plane 5/8 wave antenna ever built.

I've appreciated this exchange although its taken me some time to properly format this post. May I suggest you try not to blast people on here, especially if you don't fully understand the material being discussed. I have the utmost respect for you although I don't necessarily appreciate the way you've communicated your point.

Dino

3761. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 06:29:52 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <5h465v4s5fpjun5k7tc1s0jgcqnkas8r31@4ax.com>
Source record: 124250

On Tue, 18 Feb 2003 14:26:14 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

[snip]

|Here are the SWR data from the first time I got the 40 meter dipole resonant
|with the stubs.
|Columns 1 through 4 are repeated SWR measurments as the dipole length is
|trimmed.
|The antenna is about 1/4 wave off the ground.
|Half wave feedline, MFJ analyzer.
|MHz SWR1 2 3 4
|7.000 1.70 1.18 1.20 1.20
|7.010 1.60 1.16 1.10 1.18
|7.020 1.55 1.05 1.08 1.15
|7.030 1.51 1.03 1.05 1.10
|7.040 1.50 1.01 1.03 1.08
|7.050 1.50 1.00 1.00 1.05
|7.060 1.45 1.00 1.00 1.04
|7.070 1.40 1.00 1.00 1.03
|7.080 1.30 1.00 1.00 1.01
|7.090 1.25 1.00 1.00 1.00
|7.100 1.20 1.00 1.00 1.00
|7.110 1.20 1.00 1.00 1.00
|7.120 1.18 1.00 1.00 1.00
|7.130 1.15 1.00 1.00 1.00
|7.140 1.08 1.00 1.00 1.00
|7.150 1.04 1.00 1.00 1.00
|7.160 1.03 1.00 1.00 1.00
|7.170 1.02 1.00 1.00 1.00
|7.180 1.01 1.00 1.00 1.00
|7.190 1.00 1.00 1.00 1.00
|7.200 1.00 1.00 1.00 1.00
|7.210 1.00 1.00 1.00 1.00
|7.220 1.00 1.03 1.00 1.00
|7.230 1.00 1.05 1.01 1.00
|7.240 1.00 1.10 1.03 1.01
|7.250 1.01 1.15 1.05 1.03
|7.260 1.02 1.20 1.10 1.04
|7.270 1.03 1.25 1.18 1.05
|7.280 1.05 1.30 1.20 1.10
|7.290 1.08 1.35 1.30 1.18
|7.300 1.20 1.40 1.35 1.20

Okay. Somewhere in this mess the basic dipole sans stubs should be resonant all by itself. Let's assume it is at 7.150 MHz.

H. specifies an SWR of 1.00:1, so the resonant impedance has to be *exactly* 50+j0. One must now ask, does a (lossless) half-wavelength dipole over ground ever have a 50+j0 impedance.

The classic chart showing feed-point resistance v. height for a horizontal dipole above ground appears many places. For example my 17th edition of the ARRL Antenna Book has it on p 3-11; Kraus has it as Figure 11-20, etc. These figures are for an antenna over perfect ground so they are not directly applicable to the situation under discussion. But it is informative to note that the antenna needs to be about 0.17 wavelengths above perfect ground to present 50+j0.

Using MultiNEC, I modeled a 7.15 MHz half-wave dipole over various ground types at heights from 0.1 to 1 wavelength in 0.05 increments and used the built-in graphing capability to display feed-point resistance v. height. At each height I used the built-in resonating capability to adjust the length for X = j0. (I love this program)

Over perfect ground, the curve matches Kraus' plot exactly; this in my mind validates the model. With other ground types, the effect is a damping of the resistance waveform so that the peak-to-peak variation is reduced and the very low resistance values seen at low heights are increased dramatically. For example, for an antenna over average ground, the resistance at the height of 0.17 wavelengths is approximately 64 Ohm.

It is also interesting to note that at a height of 0.25 wavelength, which H. says is the height of his antenna, there is almost no difference at all between the various ground types. Unfortunately for H. the resistance is about 80 Ohm (SWR = 1.6:1)

So what gives? I do not doubt H.'s honesty in reporting what he sees, no matter how misguided his reasoning is for why it is so.

Regardless of the broadening effects, or lack thereof, of the "bazooka" stubs (I agree with Walter, et.al. on this score) the fact is that the reported SWR is too good to be true. Since I have stipulated to H.'s honesty the fault probably lies with the instrumentation.

Consider that as little as 1/2 Ohm (resistive or reactive) away from 50 Ohm results in an SWR of 1.01:1. Are we to believe that H.'s antenna is flat 50+j0 from 7.09 to 7.23 MHz as his data proports? Of course not.

Once in a while a sanity check is in order. Step back and say, "Does this make sense?"

Clearly, in this case, it does not.

3762. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 06:47:56 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <j6965vcjupm2lgvictl7fuqh3l0i3e7odm@4ax.com>
Source record: 124251

On Tue, 18 Feb 2003 16:52:15 GMT, Wayne Watson
<mtnviews@earthlink.net> wrote:

>I'm about to stretch out 175 feet of R6 cable between a sat dish and a building. I
probably cannot
>bury too much of it because the ground is very, very rocky. Any cheap way of protecting it
from
>beast like deer, rabbits, racoons, etc.? PVC? Other?

PVC should work okay, not sure of longevity though due to UV exposure
- perhaps somebody more knowledgeable will chime in on that.

Nevada City is a nice place, have visited several times and have been
given the royal tour by the Honorable Mayor Arnett .... if you
bump into him tell him Howard from LA says hello.

Good luck,
Howard

3763. Basic Antenna Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 12:44:40 UTC
From: Walter <radio@nospam.com>
Message-ID: <29u65v814sbtipbikegtql5gtmmif1dnuo@4ax.com>
Source record: 124252

I use these antennas for receiving UTE on various bands, as well as AM DXing.

I have an 70' inverted V dipole which has the legs bent back about 20 degrees on my roof, mounted on a mast and oriented E-W. I recently put up an inverted L about 150' long pointing N-S. They are roughly equal in receiving across the span, but the L is more noisy.

My questions: How much does the bending back of the dipole affect performance? I understood if the L was put up pointing N-S, it would receive better to the sides (N-S) but seems omni. Is this assumption correct? What happens if I lengthen it and put it in a tree (200' and 50' up rather than 12' up)?

Finally, I have an Icom R75. I would like to experiment with a long-wire, but can't run it straight. I can run it 500 feet to the E then curling around to the S. What would be the characteristics of this antenna?

3764. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 13:40:13 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v572cla9cj2t09@corp.supernews.com>
Source record: 124253

The 1:1 SWR over 100KHz about resonance is with the bazooka all by itself
about 30 feet off the ground.
The antenna is in the air right now. I use it a lot on 40 meter traffic
nets. It plays.
I strung it up end to end with a dipole for comparison and couldn't tell 'em
apart.
They were quite close at the ends, three feet or so. But I have used both on
the air.
The dipole is long gone.
I've been playing with this antenna for some years now.
I cannot see the flat SWR about resonance, which requires the stubs and
dipole to be resonant at the same frequency, to be due to losses.
H.
NQ5H

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20030218171402.22142.00000537@mb-fa.aol.com...
> Aitch wrote,
> >
> >end to end
> >"Richard Clark" <kb7qhc@attbi.com> wrote in message
> >news:6qo45vkmvsq9ecu8s2kmevpn6f1j6r1gno@4ax.com...
> >> On Tue, 18 Feb 2003 10:19:35 -0600, "H. Adam Stevens"
> >> <solo@totalaccess.net> wrote:
> >>
> >> >Because a dipole next to it produces the same field strength at
resonance
> >> >(7.15 MHz).
> >> >H.
> >> >NQ5H
> >>
> >> Hi OM,
> >>
> >> Two adjacent antennas, hmmm?
> >>
> >> 73's
> >> Richard Clark, KB7QHC
> >
>
> You had two antennas end to end and the swr at 7.1 Mhz was 1:1, which
> implies a feedpoint impedance of 50 ohms. When you removed the dipole,
> the feedpoint impedance was still 50 ohms at 7.1 Mhz? How high above
> ground were these antennas? How far apart were they?
> 73,

> Tom Donaly
>
>

3765. FA: 7/16" Heliax adapters, lot of 8 - Cheap!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 13:43:07 UTC
From: Jack P <parmentier@mindspring.com>
Message-ID: <b301gf$j34$1@abc.exu.ericsson.se>
Source record: 124254

For Auction on eBay:

Lot of 8 - 7/16" Heliax adapters - Right Angle, and 7/16" to type-N.

Look here:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=25300&item=2509881357

Good luck bidding!

3766. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 13:47:44 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v572qp6rscd2bd@corp.supernews.com>
Source record: 124255

Walt
I'm not arguing with your math, but .....the antenna works better than
invoking loss would predict.
Did you do any calculations of small variations about resonance?
If losses account for the bandwidth, why does the signal strength hold up?
Why does the antenna require uniform resonance for the flat SWR to show up?
I am not being a gadfly. I want to understand the physics. And I think
there's more to it.
I'm trying numerical methods expanding about resonance but I'm an
experimental physicist,
so I have to beat the math to death before I trust it.
73 es gud dx
H.
NQ5H

"Walter Maxwell" <w2du@iag.net> wrote in message
news:Sfz4a.9666$YU4.833147@newsread1.prod.itd.earthlink.net...
> H. Adams Smith wrote:
>
> > >Here's the SWR vs RF data for my 40 meter RG8X bazooka
> > >I measured this yesterday using a 1 meter dipole about 300 feet
> > >from the bazooka for the sense antenna ....
> > >MHz SWR RF
> > >7.00 1.2 89
> > >7.03 1.1 93
> > >7.06 1.0 97
> > >7.09 1.0 97
> > >7.12 1.0 97
> > >7.15 1.0 99
> > >7.18 1.0 100
> > >7.21 1.0 97
> > >7.24 1.0 97
> > >7.27 1.1 93
> > >7.30 1.2 89
>
> Hi OM,
>
> It's obvious that you didn't interpret my previous post correctly. And
there
> is nothing wrong with your experimental readings that I can detect.
>
> However, the point that seems to be missed all around is that the
> significant increase in bandwidth is due entirely to the loss resistance
in

> the coax of the stubs. My example was set in the major band that needs
> improved bandwidth, 80m. My example using verified, measured impedances,
> proves conclusively that the effect of the parallel-connected stub
> inductive reactances simply are not responsible for the improved
> bandwidth--the loss resistance is. Note that the change in SWR from the
> dipole alone was 5.04, but with the parallel stubs added the SWR went down
> only to 4.9. Do you consider this a sufficient change to warrant the use
of
> parallel stubs?
>
> Instead of going through lengthy discussions concerning parallel
circuitry,
> why don't you just accept the parallel-circuitry example I gave in a
> previous post and on my web page. The phase angles , electrical lengths of
> the shorted coax, and other pertinent data are on the web page.
>
> Do you guys have any problem with my data that was published in Ham Radio
in
> August 1976, in QST in September 1976, in Reflections I in 1990, and in
> Reflections II in 2001? If you find anything wrong with my math please let
> me know.
>
> Walt, W2DU
>
>

3767. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 13:53:11 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5734ushvo0931@corp.supernews.com>
Source record: 124256

The antenna is here.
I can run a KW across the 1:1 portion and zip comes back.
Still not happy so back to numerical analysis and bazooka tuning.
H.
NQ5H

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:5h465v4s5fpjun5k7tc1s0jgcqnkas8r31@4ax.com...
> On Tue, 18 Feb 2003 14:26:14 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
snip>
> Once in a while a sanity check is in order. Step back and say, "Does
> this make sense?"
>
> Clearly, in this case, it does not.

3768. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 14:14:31 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v574cuhdi1di04@corp.supernews.com>
Source record: 124257

Yuri
It's a dipole at about thirty feet: all RG8X.
On 80 and 160 I see ground effects.
I can't get the flat response on 160 but I'm not convinced I nailed the
lengths.
On 80 I've never seen better than 75 KHz 1:1 bandwidth.
(I may not have that one spot-on either.)
But IIRC Walt was MUCH farther off-resonance for his 80 meter math.
I'm doing small variations about resonance while requiring the series and
parallel circuits
have the same resonant freq: hence the product LsCs=LpCp=const, where s and
c refer to series and parallel.
Cheaper to experiment on 40. HI
I want to understand the resonance effect.
Why does the SWR flatten out ONLY when all three circuits are resonant at
the SAME freq?
If losses made it that flat it wouldn't radiate at all!
;^)
H.

"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030219090423.11161.00000584@mb-dh.aol.com...
> Hi H.
> What about the argument that you should not see 50 ohms due to dipole
being at
> certain height?
> Are you using it as a dipole or Inverted Vee? (that would give 50 ohms)
> Is there some transformation or matching going on if it is a dipole?
>
> Yuri
>

3769. FA: Less than 9hrs left Realistic HTX-202 2 Meter Transceiver NR

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 14:22:48 UTC
From: Dennis <webmaster@show-the-world.com>
Message-ID: <6rM4a.2680$cB3.33906@nnrp1.uunet.ca>
Source record: 124258

Realistic HTX-202 2 Meter Transceiver NR

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4674&item=3007840821

Get it before its gone! Good luck!!!

Dennis
--
Hosting for as low as $1.99 a month!
Visit www.direct.for-hosting.com for details!

3770. Re: Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 14:48:10 UTC
From: richardharrison@webtv.net
Message-ID: <17666-3E53992A-19@storefull-2311.public.lawson.webtv.net>
Source record: 124260

Norbert, PA7NR wrote:
"I just added new pages and several new pictures from my portable
expedition to Finland last year.---homepage:
http://www.qsl.net/pa7nr/index.html

Difficulty obtaining a good earth connection in Holland puzzles me. I
recall the soil is so plastic, a passing truck on the street
hydraulically raises the pavement alongside underneath your feet!

Best regards, Richard Harrison, KB5WZI

3771. Re: Tower engineering?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 15:04:58 UTC
From: richardharrison@webtv.net
Message-ID: <17666-3E539D1A-20@storefull-2311.public.lawson.webtv.net>
Source record: 124259

Ian, G3SEK wrote:
"The Tower Talk residents encourage everyone to read the Rohn literature thoroughly before calling the company."

Good advice. 30 or so years ago I had a copy of the Rohn catalog / information book. Almost any tower question was answered. The book is worth seeking.

Best regards, Richard Harrison, KB5WZI

3772. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 15:31:10 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <2rN4a.12749$_k4.6564@nwrddc03.gnilink.net>
Source record: 124261

"Dino" <dino@nomail.com> wrote in message
news:JnF4a.10207$YU4.897606@newsread1.prod.itd.earthlink.net...
> Wow Mark, I see George took a post I put on rec.radio.cb and decided to
bring
> it over here. While a few did take some jabs at my comments, I'll equate
> that to the dislike of CB radio in general.
>
> I also see that responses to my comments were incorrect as my original
> comments were not fully understood or explained by me. So let me rebut...
>
>
>
> George said...
> >> The claim of this I10K antenna is his form of matching is much more
> >> efficient than any other, and will provide 2db more than some factory
made
> >> antennas. any comments appreciated
>
> The Interceptor antenna has a claimed gain of 3.x dbd of gain. This is a
> standard gain rating for a 5/8 wave antenna. Any claims of being 2 db
better
> than another antenna is confusing and not meant to be equated to "dbd" or
> "dbi". Its meant to measure the radiating efficiency of one antenna and
> another. It would be like saying a 1/4 mobile antenna has 10db more gain
> than a rubber duck, when we all know a 1/4 wave antenna has no gain.
>
>
> Dino said in another NG...
> >The Penetrator 500 uses a matching hairpin in the VERTICAL PLANE. This
> >affects the radiation patter of the antenna.
>
> Mark said...
> >It wouldn't have that much of an effect on the pattern.
>
> It DOES have an effect on the pattern. You say it wouldn't have "much",
but
> we do agree that it does have an effect. I believe it has a larger affect
> than you think.
>
>
> Dino said in another NG...
> >The driven element is also surrounded by the ground plane brackets and
> >radials.
>

> Mark said...
> >That is silly...Do the radials point up? I haven't seen one...
>
> No, it is not silly. No, the ground radials do not point up. I believe
you
> HAVE seen one. Have you seen any of the Hy-Gain HF vertical antennas?
Same
> thing! If you haven't seen any of the Hy-Gain HF verticals, then you
can't
> speak intelligently on this subject, or at least understand what I'm
talking
> about.
>
>
> Dino said in another NG...
> >The I10K uses TWO trombones. The first is to fine tune the resonant
> >frequency. The second is used for impeadance matching.
>
> Mark said...
> >You only need impedance matching. And a 5/8 is not resonant, so trying
> >to fine tune such a non resonance seems kind of silly.
>
> You don't understand what I'm trying to say, so maybe its my fault for not
> explaining it better. A 5/8 element is NOT resonant and needs to be taken
to
> the next 1/4 wave in order to make it resonant. You do not want this
extra
> 1/8 to affect the 5/8 element (3/4 wave antennas have a a distorted wave
> pattern) so you coil it or bend it, preferably OUT of the radiation plane
of
> the 5/8 element. Did I explain it better this time?
>
>
> Dino said in another NG...
> > The I10K also uses an ELEVATED FEED which lowered the capacitance of the
> >feed system. This equates to more signal getting to the antenna.
>
> Mark said...
> >Sounds kind of "gappish"..
>
> Gappish? Less loss...more signal!
>
>
> Dino said in another NG...
> >These trombones are in the HORIZONTAL PLANE of the radiated signal which
> >does NOT affect the radiation pattern of the 5/8 element. The I10K has
> >lower loss. Just these facts alone warrant the purchase of this antenna
for
> >me! If you want to compromise, thats up to you.
>

> Mark said...
> >Not me...
>
> OK...
>
>
> Dino said in another NG...
> >A true 5/8 antenna length is near impossible to match to a 50 ohm load.
>
> Mark said...
> >Good grief...All you need a simple coil of a few turns.
>
> Yes! I said that above! When I said this, I was talking about the 5/8
> element WITHOUT the coil (next 1/4 segment).
>
>
> Dino said in another NG...
> >The reason for having an antenna length of 5/8 has everything to do with
the
> >WAVE RADIATION PATTERN. In order to match it, you need to bring the
antenna
> >to a 3/4 wave length (next 1/4 wave length). BUT, adding this length in
the
> >vertical plane would RUIN the radiation pattern!
>
> Mark said...
> >Balony. Adding a series coil in the vertical plane, at the base of a
> >5/8 does not ruin the radiation pattern. The coil is not long enough
> >vs wavelength for one thing.
>
> Right, a horizontal wound coil will not hurt the pattern. If that coil
was
> stretched out and vertical, then it would affect the pattern.
>
>
> Dino said in another NG...
> >So by placing this "section" in the horizontal plane eliminates the
affects
> >on the vertical plane. You will see this on the Avanti Sigma 5/8 and the
> >Maco V58 as a loop! (for this reason alone, I have always felt the Avanti
> >was better than the Penetrator).
>
> Mark said...
> >There is no real difference. Also, a single turn matching coil might
> >be a little more efficient than a small multi turn wire coil, but the
> >difference should be unnoticeable on the air.
>
> I'm glad we agree about the single turn coil. There is a difference. I
> guess we can discuss what each of us think is "significant". Lets just
agree

> that there is a difference and that the single turn coil is better.
>
>
> Dino said in another NG...
> >The I10K also uses top hat loading for improved performance. We already
> >agree on the better construction of the antenna and the materials used.
>
> Mark said...
> >What???? Not a real full length 5/8 wave radiator? Sounds like a
> >"Fisher Price" 5/8 antenna.
>
> If you want to say that a top hat shortens the length of the 5/8 element,
I
> would agree...its about 6 inches (educated guess). The advantages of the
top
> hat has been sung out here many times! This was just a useless reply from
> you. Do you agree or disagree that there are advantages to top hat
loading?
>
>
> Dino said in another NG...
> >One other point, Jay's claim of 2db is over the difference of the I10K
and
> >the Penetrator...NOT dbi or dbd! Jay only claims 3.x of dbd gain for his
> >antenna based on it being a 5/8 wave ground plane.
>
> Mark said...
> >In theory, a 5/8 vertical is only about 1.1-1.2 db over a 1/2 wave
> >vertical at the most. The last "d" in dbd means compared to a dipole,
> >which is a 1/2 wave and has appx 2.15 dbi. A 5/8 has appx 3.2-3.3 dbi
> >gain. And all this would assume good ground planes, and decoupling
> >from the feedline to pay off in the real world. An extended double
> >zepp only has about 3 dbd gain, and thats "twin" 5/8's.
>
> Now I'm going to have to go back and look at my ARRL publications...You
have
> me questioning myself on a 5/8 rating based on dbd pr dbi. A 1/2 wave
> antenna has 0 dbd gain, but 2.1 dbi. My original post should have said
dbi.
> Thanks for the heads up on the typo.
>
>
> Dino said in another NG...
> >Basic antenna theory states that a 5/8 antenna has "x" amount of gain
over
> >dbi or dbd. This is true! But then there is the losses in the matching
> >network.
>
> Mark said...
> >Only if you use magnet wire for the coil, and wind the turns right

> >next to each other. Any normally built coil for a 5/8 has very
> >little loss to speak of.
>
> It depends on the matching network. Some are more lossy than others.
> Eliminate these losses and you have more signal getting to the antenna.
This
> also changes with the amount of applied power. Do we agree?
>
>
> Dino said in another NG...
> >What Jay has learned is how to eliminate these losses! Less loss, better
> >efficiency! Better efficiency, better performance!
>
> Mark said...
> >I'll alert the media...
>
> GOOD! get the word out! There is a new sheriff in town and he makes one
> heck of an antenna! :-) BTW, this antenna is tuneable from 12 to 10
meters!
> I would like to see someone out here take a SERIOUS look at this antenna
for
> 12 meters!
>
>
> Dino said in another NG...
> >Also, the I10K can take an honest 10,000 watts!
>
> Mark said...
> >Yea, but who runs an honest 10,000 watts? Or should I ask, who the
> >heck would ever need to?
>
> While I don't condone the use of these power output numbers, there are a
> NUMBER of people who regularly run this kind of power on CB and are in
need
> of an antenna to handle their big signals. Just count your blessings they
> stay on CB and not light up 10 meters! :-)
>
>
> Dino said in another NG...
> >You don't need to buy that 5KW gamma like some other antennas.
>
> Mark said...
> >Whats a 5KW gamma?
>
> A gamma match that can take 5KW. It would be like a balun that can take
5KW.
> I am NOT saying that a gamma match is the same thing as a balun. A
company
> in the south east makes antennas and sells a gamma upgrade that can take
5KW.

>
>
> Dino said in another NG...
> > Better materials, better efficiency, better antenna!
>
> Mark said...
> >Well, ok then....
>
>
> Dino said in another NG...
> >The I10K is not for everyone! But if you want the best, the buck stops
> >here!
>
> Mark said...
> >Not mine...I bet my 5/8 vertical will beat his 5/8 vertical. The
> >secret is in the radial system, not the matching coil.
>
> Ah, 5/8 at what frequency? My post was talking about CB antennas centered
at
> 27.205Mhz. I will pull out the references, but I'm sure you will agree
that
> as you go higher in frequency and the antenna gets shorter, the rules
change.
> My reference material says that upper HF frequencies take advantage of a
4
> ground radial system. 3 are good, 4 are better, and there is not a
> significant difference with numbers above 4. Now if we are talking about
a
> 20 meter vertical mounted at ground level with a ground radial
grid...thats
> different! If you could build a better antenna than the Interceptor 10K,
I
> would like to see it and offer to market it for you! To date, the I10K is
> the best "upper HF" ground plane 5/8 wave antenna ever built.
>
> I've appreciated this exchange although its taken me some time to properly
> format this post. May I suggest you try not to blast people on here,
> especially if you don't fully understand the material being discussed. I
> have the utmost respect for you although I don't necessarily appreciate
the
> way you've communicated your point.
>
> Dino

Spoken like a gentleman. Bravo, Dino. I don't think there's any doubt that
the I-10K is indeed the best commercially 10/11/12-meter 5/8th-wave ground
plane antenna available today. I just think some folks took issue with the
degree of superiority that was implied by the marketing.

--
73 de Bert

WA2SI

3773. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:19:42 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <7l975vglus8mpkmegqc0qnn91l70f0kegl@4ax.com>
Source record: 124271

On Wed, 19 Feb 2003 06:21:29 GMT, dino@nomail.com (Dino) wrote:
[snip]
>The Interceptor antenna has a claimed gain of 3.x dbd of gain. This is a
>standard gain rating for a 5/8 wave antenna. Any claims of being 2 db better
>than another antenna is confusing and not meant to be equated to "dbd" or
>"dbi". Its meant to measure the radiating efficiency of one antenna and
>another. It would be like saying a 1/4 mobile antenna has 10db more gain
>than a rubber duck, when we all know a 1/4 wave antenna has no gain.
[snip]

Here we go with the gain game again.

A 5/8-wave ground plane does not have 3dB gain compared to a ï¿½-wave
ground plane.

A 5/8-wave monopole mounted on perfect ground that extends to infinity
will produce the theoretical 3 dB gain companies to a 1/4-wave
monopole.

A 5.8-wave monopole will provide a 3 dB gain advantage over a 1/4-wave
monopole, but only under certain conditions. Witch are:

1) The antenna is to be a thin filament of perfectly conducting wire.

2) It is mounted perpendicular to a plane of infinite extent and
conductivity.

3) It is base fed with the current amplitude to be a sinusoidal
function of the distance down from the extremity of the antenna.

Change any of these conditions and all bets are off.

For example, Using NEC modeling both a 5/8 and 1.4 Ground plane
(using four ï¿½-wavelength radials) in free space. Gives the following
results: 1/4-wave = 1.31 dBi, 5/8-wave = 1.94 dBi (0.6 dB gain
difference)

If you prefer "measured results" then check "The 5/8-Wavelength
Antenna Mystique", ARRL Antenna Compendium, Vol I.

Next modeling the ground-planes ï¿½-wavelength over real ground.
Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

3774. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:23:21 UTC
From: "--. .. ..."
Message-ID: <8bOdnfGJvMbkMs6jXTWc2Q@comcast.com>
Source record: 124262

"Bert Craig" <wa2si@arrl.netNOSPAM> wrote in message
news:2rN4a.12749$_k4.6564@nwrddc03.gnilink.net...

> Spoken like a gentleman. Bravo, Dino. I don't think there's any doubt that
> the I-10K is indeed the best commercially 10/11/12-meter 5/8th-wave ground
> plane antenna available today. I just think some folks took issue with the
> degree of superiority that was implied by the marketing.
>
> --
> 73 de Bert
> WA2SI

Bert, is this your opinion or did you do some testing? Are you sucked in
by the marketing hype? lets bring it out to the real antenna gurus. I mean
the guy tells you that 6063 aluminum is aircraft grade when it is not, he
has the best matching network invented, And the Idea is proprietary. how is
his matching network proprietary.

3775. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:24:35 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <tob75v4qsad8tm42p3eokoegnv6g5kc72g@4ax.com>
Source record: 124270

OOPS hit the send button too soon. Here's the rest.

On Wed, 19 Feb 2003 06:21:29 GMT, dino@nomail.com (Dino) wrote:
[snip]
>The Interceptor antenna has a claimed gain of 3.x dbd of gain. This is a
>standard gain rating for a 5/8 wave antenna. Any claims of being 2 db better
>than another antenna is confusing and not meant to be equated to "dbd" or
>"dbi". Its meant to measure the radiating efficiency of one antenna and
>another. It would be like saying a 1/4 mobile antenna has 10db more gain
>than a rubber duck, when we all know a 1/4 wave antenna has no gain.
[snip]

Here we go with the gain game again.

A 5/8-wave ground plane does not have 3dB gain compared to a ï¿½-wave
ground plane.

A 5/8-wave monopole mounted on perfect ground that extends to infinity
will produce the theoretical 3 dB gain companies to a 1/4-wave
monopole.

A 5.8-wave monopole will provide a 3 dB gain advantage over a 1/4-wave
monopole, but only under certain conditions. Witch are:

1) The antenna is to be a thin filament of perfectly conducting wire.

2) It is mounted perpendicular to a plane of infinite extent and
conductivity.

3) It is base fed with the current amplitude to be a sinusoidal
function of the distance down from the extremity of the antenna.

Change any of these conditions and all bets are off.

For example, Using NEC modeling both a 5/8 and 1.4 Ground plane
(using four ï¿½-wavelength radials) in free space. Gives the following
results: 1/4-wave = 1.31 dBi, 5/8-wave = 1.94 dBi (0.6 dB gain
difference)

If you prefer "measured results" then check "The 5/8-Wavelength
Antenna Mystique", ARRL Antenna Compendium, Vol I.

Next modeling the ground-planes ï¿½-wavelength over real ground. Show
around a 2 dB difference.

Something to think about.

Danny, K6MHE

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

3776. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:32:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53B1A5.1050205@ieee.org>
Source record: 124263

H. Adam Stevens wrote:
> I cannot see the flat SWR about resonance, which requires the stubs and
> dipole to be resonant at the same frequency, to be due to losses.

It's pretty simple. Your dipole is 1/4WL high. It should have a feedpoint impedance at resonance around 85 ohms. That's an SWR of 1.7:1. That you obtain a perfect SWR of 1:1 indicates losses somewhere.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3777. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:35:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53B234.7050108@ieee.org>
Source record: 124264

H. Adam Stevens wrote:
> The antenna is here.
> I can run a KW across the 1:1 portion and zip comes back.

That's also true for a dummy load. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3778. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:43:26 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v57d1eb29uc708@corp.supernews.com>
Source record: 124265

It can be proved mathematically that a bee cannot fly, someone simply forgot
to tell the bee...

"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v5734ushvo0931@corp.supernews.com...
> The antenna is here.
> I can run a KW across the 1:1 portion and zip comes back.
> Still not happy so back to numerical analysis and bazooka tuning.
> H.
> NQ5H
>
> "Wes Stewart" <n7ws@#arrl.net> wrote in message
> news:5h465v4s5fpjun5k7tc1s0jgcqnkas8r31@4ax.com...
> > On Tue, 18 Feb 2003 14:26:14 -0600, "H. Adam Stevens"
> > <solo@totalaccess.net> wrote:
> >
> snip>
> > Once in a while a sanity check is in order. Step back and say, "Does
> > this make sense?"
> >
> > Clearly, in this case, it does not.
>
>

3779. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:45:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53B4A6.1040502@ieee.org>
Source record: 124266

H. Adam Stevens wrote:
> Why does the SWR flatten out ONLY when all three circuits are resonant at
> the SAME freq?
> If losses made it that flat it wouldn't radiate at all!

Certainly not true. A one dB loss can drop your SWR from
1.7:1 to 1:1, e.g. a 300 ohm resistor in parallel with an
85 ohm antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3780. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:48:16 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53B550.8060301@ieee.org>
Source record: 124268

Bert Craig wrote:
> Spoken like a gentleman. Bravo, Dino. I don't think there's any doubt that
> the I-10K is indeed the best commercially 10/11/12-meter 5/8th-wave ground
> plane antenna available today.

Wouldn't a sky-wave antenna be better for hams? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3781. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:48:27 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57ddhjruv3ua5@corp.supernews.com>
Source record: 124267

except I just relayed in KC5LFB to WA5LQZ on the Weather Service ARES net
NC couldn't hear him, I do lots of relaying, the bazooka works so well
I've been using this antenna on 40 meter traffic nets too long
(I've been accused of running illegal power)
hard to radiate with a dummy load
;^)
H
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53B234.7050108@ieee.org...
> H. Adam Stevens wrote:
> > The antenna is here.
> > I can run a KW across the 1:1 portion and zip comes back.
>
> That's also true for a dummy load. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3782. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:52:59 UTC
From: "Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid>
Message-ID: <5id75v0r8dj3hutqlmsqm24njravmrmars@4ax.com>
Source record: 124269

On Sat, 08 Feb 2003 18:59:28 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>This oughta be good for another couple hundred postings at least.

142 and counting! 8*)
Ken K4XL - Replace "invalid" with "net" to reply.
*** BoatAnchor Manual Archive ***
On the web at http://bama.sbc.edu or
FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

3783. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:57:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53B783.8050209@ieee.org>
Source record: 124273

H. Adam Stevens wrote:
> except I just relayed in KC5LFB to WA5LQZ on the Weather Service ARES net
> NC couldn't hear him, I do lots of relaying, the bazooka works so well
> I've been using this antenna on 40 meter traffic nets too long

Nobody is questioning whether it "works well" or not. If it is half
a dB down from a well-designed dipole, nobody would even notice.
You've got more loss than that in 100 ft. of RG8x coax on 40m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3784. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 16:58:06 UTC
From: "--. .. ..."
Message-ID: <BmmdnQifrsYCKs6jXTWcpQ@comcast.com>
Source record: 124272

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53B550.8060301@ieee.org...
> Bert Craig wrote:
> > Spoken like a gentleman. Bravo, Dino. I don't think there's any doubt
that
> > the I-10K is indeed the best commercially 10/11/12-meter 5/8th-wave
ground
> > plane antenna available today.
>
> Wouldn't a sky-wave antenna be better for hams? :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp

Cecil, Can you take a moment and look at the antenna they are claiming that puts all amateur antennas to shame. Look at the matching network, it is being touted as the best in the world, proprietary etc etc lowest loss of any L matching network, every been know to antennas. well maybe little exaggeration but Can you form a honest opinion about the claims and post your thoughts?

We already have one antenna expert Dino who says it is the best bar none.

http://www.a1antennas.com/

3785. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 17:09:43 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <rTO4a.13058$_k4.1626@nwrddc03.gnilink.net>
Source record: 124274

"--. .. ..." <.@... .com> wrote in message news:8bOdnfGJvMbkMs6jXTWc2Q@comcast.com...
>
> "Bert Craig" <wa2si@arrl.netNOSPAM> wrote in message
> news:2rN4a.12749$_k4.6564@nwrddc03.gnilink.net...
>
>
> > Spoken like a gentleman. Bravo, Dino. I don't think there's any doubt that
> > the I-10K is indeed the best commercially 10/11/12-meter 5/8th-wave ground
> > plane antenna available today. I just think some folks took issue with the
> > degree of superiority that was implied by the marketing.
> >
> > --
> > 73 de Bert
> > WA2SI
>
>
> Bert, is this your opinion or did you do some testing?

This is most certainly my opinion.

> Are you sucked in
> by the marketing hype? lets bring it out to the real antenna gurus.

Sounds like a good idea, but I believe they've already validated the facts while chewing up and spitting out the hype.

> I mean
> the guy tells you that 6063 aluminum is aircraft grade when it is not, he
> has the best matching network invented, And the Idea is proprietary. how is
> his matching network proprietary.

Point taken, however, he does appear to have the best available 5/8th-wave 10/11/12-meter ground plane antenna currently available by incorporating said matching network, be it proprietary or not. If someone else comes along with the same antenna constructed with 6061-T5, then they would have the best available model. As far as gain is concerned, whether it's by 0.0001 dBd or 10 dBd, the losses recouped by a better matching network is still gain. It's up to the consumer to decide whether or not they this "gain" is worth the price of admission. Pretty simple concept.

--
73 de Bert
WA2SI

3786. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 17:14:53 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57ev3dkp8df46@corp.supernews.com>
Source record: 124275

How long does RG8X coax have to be to have a resistance of 300 ohms?
Answer:
A whole lot more than 50 feet, which is all the coax available in this case.
;^)
H.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53B4A6.1040502@ieee.org...
> H. Adam Stevens wrote:
> > Why does the SWR flatten out ONLY when all three circuits are resonant
at
> > the SAME freq?
> > If losses made it that flat it wouldn't radiate at all!
>
> Certainly not true. A one dB loss can drop your SWR from
> 1.7:1 to 1:1, e.g. a 300 ohm resistor in parallel with an
> 85 ohm antenna.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3787. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 17:19:49 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57f8cndd23c4@corp.supernews.com>
Source record: 124277

there ya go
in the real world I can't tell it from a dipole and it is broadband and
quiet on receive,
being insulated and shorted at DC.
I still want to understand why it works so well only when everything is
resonant at the same frequency
hard to explain with the resistance of 50 feet of coax
73
H.
NQ5H
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53B783.8050209@ieee.org...
> H. Adam Stevens wrote:
> > except I just relayed in KC5LFB to WA5LQZ on the Weather Service ARES
net
> > NC couldn't hear him, I do lots of relaying, the bazooka works so well
> > I've been using this antenna on 40 meter traffic nets too long
>
> Nobody is questioning whether it "works well" or not. If it is half
> a dB down from a well-designed dipole, nobody would even notice.
> You've got more loss than that in 100 ft. of RG8x coax on 40m.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3788. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 17:20:22 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <q1P4a.41478$rE3.10197@nwrddc01.gnilink.net>
Source record: 124276

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53B550.8060301@ieee.org...
> Bert Craig wrote:
> > Spoken like a gentleman. Bravo, Dino. I don't think there's any doubt
that
> > the I-10K is indeed the best commercially 10/11/12-meter 5/8th-wave
ground
> > plane antenna available today.
>
> Wouldn't a sky-wave antenna be better for hams? :-)

If they're interested in solely working DX, I suppose you'd be correct. Then a directional might be more advatageous. For local rag-chewing, a <relatively> high gain omni has the advantage. I'm giving you the benefit of the doubt that you're not just being facetious wrt a "sky-wave" antenna and CBers, Cecil. ;-)

--
73 de Bert
WA2SI

> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3789. Re: Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 17:25:04 UTC
From: norbert <pa7nrNOSPAMMM@hotmail.com>
Message-ID: <1045675488.479653@halkan.kabelfoon.nl>
Source record: 124278

"Richard Harrison" <richardharrison@webtv.net> schreef in bericht

> Difficulty obtaining a good earth connection in Holland puzzles me. I
> recall the soil is so plastic, a passing truck on the street
> hydraulically raises the pavement alongside underneath your feet!
>
> Best regards, Richard Harrison, KB5WZI
>

Richard,

Thank you for your reply. You are right about the quality of the soil here in Holland. The ground is soft and we are always close to the ground water so getting a good ground connection shouldn't technically seen be a big deal. However... I'm not on the ground floor and it's not allowed for me to go down and drill holes into somebody else's garden. So that's the limitation that I face. Besides that, I would need to make ground radials of 20 meters (60') and the lot is too small to make nice long ground radial. The usage of a magnetic loop is a good compromise for my situation.

I hope that this explanation clears your question.

Best Regards,
--
73, Norbert (pa7nr)
homepage : http://www.qsl.net/pa7nr/index.html

3790. Diamond Quad Loops and "pure" polarity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 17:25:50 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E53BE1E.A4E60A8A@netscape.net>
Source record: 124279

I had a friend suggest to me that a driven quad loop oriented in the "diamond" configuration will not produce a "pure" horizontal or vertical polarized signal. He indicated that on a groundwave signal that if a quad was set up for horizontal polarity and was talking to, say another station with a yagi in the horizontal position there would be a -3dB loss from the mismatch in polarity. I've never heard this before - true???

Scott.

3791. Re: Ice on antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 17:37:38 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b30fd2$l2h$1@knossos.btinternet.com>
Source record: 124280

RF energy makes water molecules vibrate at the frequency of the rf wave -
rather like the theory which makes microwave ovens work.

"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message
news:3e527199.310634296@news.galilei.com...
> "Dean Elwood" <dean@legallyspeaking.co.uk> verbositized:
>
> >
> >Um, I think that phenomena might be known as heat?!!
>
> I don't doubt that, but 100 times greater wattage is not enough to
> keep the pipes from freezing, go figure.
>
> TTUL
> Gary
>

3792. Re: Diamond Quad Loops and "pure" polarity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 17:46:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b30fss$cl5$1@helle.btinternet.com>
Source record: 124281

> I've never heard this before -
> true???
==========
Check your hearing aid batteries. ;o)

3793. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 17:49:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vre75voe6b9ukmb0qd5j1e78ir3moibsfq@4ax.com>
Source record: 124282

On Tue, 18 Feb 2003 12:35:01 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>Back before I cashed in my DELL (wish I'd bought more of it in '91)
>and retired I used to get this sort of nonsense at Motorola
>("I don't believe your data.")
>No snow here. Beer's cold. Antennas work.
>73
>H.

Hi OM,

Yes, I've heard the "I don't believe your data" defense applied too.
It usually has the investigator ignoring his own results, adding
digits of resolution, skipping cross correlations that reveal
inaccuracies you could drive a truck through, and then closing with
testimonials like "it really gets out!"

This is the usual fate of bazookoid tendencies that are nearly
indifferentiable from cfa claims, e-h specifications, and fractal
announcements of a new physics. I've done a fair amount of actual
construction of these designs and find that the so called "proponents"
wimp out with tedious tinker-toy approximations like using cable for
stubs when large caged elements are far less lossy and contribute to a
real reduction in overall size and providing a vastly wider match
characteristic. The tinker-toy artists like to think they got there
simply by trying some and hoping harder than others.

So far, your own data supports Walt's thesis that you have put a lot
of effort into building an antenna that could be done simpler and
achieve better results with less loss. But on the other hand, for
some, the goal of a flat match is paramount over efficiency.
After-all, the difference between 99% for a simple dipole, and a
probable best of 70% for a bazookoid design is impossible to
differentiate over the air or across town. It did show in your near
field measurements by the way, but lately that method seems to have
been abandoned out of embarrassment.

If you are satisfied with 30% loss, you could have as easily followed
Cecil's advice with the 300 Ohm resistor and skipped the nonsense
about tuning, its added weight, and a myriad of petty details that
contributed nothing, and sucked down the efficiency. However, Cecil
probably does not appreciate how successful an air cooled resistor has
to be to shed those 300W in the combination of transmission lines.
The bazookoid designs are optimized in that regard as efficient heat
sinks.

I have a friend who has a dummy load that she used to complete a sched
from Seattle to Alaska with one of her friends: "it really gets out!"
Her signal (by reports) was the big one on the block too, and then she
really amazed them when she switched to a real antenna. Shows to go
you that testimonials are literally worthless:
"you are in here solid 10 Over!
... Could you repeat that?
... Say again?"

73's
Richard Clark, KB7QHC

3794. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 18:01:03 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57hll6e9qrif3@corp.supernews.com>
Source record: 124284

I beg your pardon?

"Richard Clark" <kb7qhc@attbi.com> wrote in message
snip
adding digits of resolution,
skipping cross correlations that reveal inaccuracies you could drive a truck
through,

snip

3795. Re: Diamond Quad Loops and "pure" polarity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 18:01:46 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E53C68A.86F3C064@netscape.net>
Source record: 124283

So does the "X" configuration have the same problems?

Reg Edwards wrote:

> > I've never heard this before -
> > true???
> ====================
> Check your hearing aid batteries. ;o)

3796. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 18:14:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <m2i75vsq60dkfpuf44vcm68k325lkqf1id@4ax.com>
Source record: 124285

On Wed, 19 Feb 2003 12:01:03 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>I beg your pardon?
>
>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>snip
>adding digits of resolution,
>skipping cross correlations that reveal inaccuracies you could drive a truck
>through,
>

Hi OM,

Pardons are not being offered for lossy designs - nor for obtuseness
for other postings in response to your own readings.

Consult your own numbers - they show quite clearly what Walt has
pointed out for a number of years. As an alternative to that obvious
evidence, you could warm up the amusing chorus to
>("I don't believe your data.")
with "I don't believe my data" in two-point harmony. ;-)

73's
Richard Clark, KB7QHC

3797. Re: Basic Antenna Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 18:15:14 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E53C9B2.4EFFCBE9@cwis.net>
Source record: 124286

Walter,
Both the inverted 'V' and the inverted 'L' antennas
have radiation patterns that are approximately the same,
and are reasonably omnidirectional. The longwire you
spoke of would tend to have a pattern that would receive
off the ends better than off the sides, but, that tendency
would not be very great. More of a long 'oval' than a
figure '8', if that makes any sense.
Any of your antennas would benefit from more height, the
radiation patterns would be 'more' directional than at a
lower height. The higher in frequency the signals you listen
to are, the more directionality the antennas would exhibit,
but not necessarily in the directions given above. It sounds
like a lot of "if's, but's, and maybe's", but patterns change
with height and length of antenna in relation to frequency.
'Doc

3798. Re: Diamond Quad Loops and "pure" polarity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 18:22:03 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <3E53CAF1.9C5785E6@parelectronics.com>
Source record: 124287

Scott wrote:

> So does the "X" configuration have the same problems?
>
> Reg Edwards wrote:
>
> > > I've never heard this before -
> > > true???
> > ====================
> > Check your hearing aid batteries. ;o)

A 1 wavelength quad loop's polarity is soley a function of where it is fed- when fed on a vertical side- it produces a vetically polarized signal. Fed on a horizontal side (read as bottom or top on a diamond config) it produces horizontal polarity. If you are familiar with vector analysis- employ it-it clearly shows the quads polarity.

W4OP

3799. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 18:26:56 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <DSQ4a.44691$e9.32762@fe04.atl2.webusenet.com>
Source record: 124295

Tom,

This link may help. If it't not to late, ran across it when just browsing

http://www.morsex.com/dipole/index.htm

Best of luck

--
73,
Chuck
KE4ETH
USA-NA

"Tom DeYoung" <tdeyoung@n0spam.mn.rr.com> wrote in message
news:_yi4a.119931$Gm2.3104259@twister.rdc-kc.rr.com...
> I may just use a chunk of lucite or lexan
>
>
> Question:
>
> If I'm not supposed to twist the wires together, but to solder them, then
> *how* do I make the physical connection so I can solder them?
>
> I'm not visualizing this, LOL.
>
> The problem I'm running into is that the feedline is 18ga and the wire is
> 14ga.....
>
> I don't think I can just solder it, it won't be strong enough...wouldn't I
> have to twist them together first, solder them, then slap a wire nut on
> them???
> All this in addition to a center insulator
>
>
> TD
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E51B35B.9040501@ieee.org...
> > funkbastler wrote:
> > > You need a center insulator to take the strain of the dipole wires.
> >
> > Those things are hard to find nowadays. Radio Shack doesn't carry
> > them any more. The only place I could find center insulators was
> > in the electric fence section at a hardware store.
> > --
> > cheers, CAM http://www.qsl.net/w5dxp

> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>
>

3800. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 18:49:59 UTC
From: richardharrison@webtv.net
Message-ID: <17667-3E53D1D7-19@storefull-2311.public.lawson.webtv.net>
Source record: 124293

Richard Clark wrote:
"Consult your own numbers."

A statement as found on page 5-8 of the 14th edition of the "ARRL Antenna Book" may have triggered dispute in this thread:
"In both the balancing methods shown in Fig.11 the quarter-wave section should be cut to be resonant at exactly the same frequency as the antenna itself. These sections tend to have a beneficial effect on the impedance-frequency characteristics of the system, because their reactance varies in the opposite direction to that of the antenna. For instance, if the operating frequency is slightly below resonance the antenna has a capacitive reactance, but the shorted quarter-wave sections or stubs have inductive reactance."

Now I remember discussing this with Charlie Wright of A.D. Ring & Associates in 1954. We both were a little dubious, and let it drop. If it is true, it is important. Seems some support has been presented.

Best regards, Richard Harrison, KB5WZI

3801. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 18:52:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53D264.3050306@ieee.org>
Source record: 124288

--. .. ... wrote:
> Cecil, Can you take a moment and look at the antenna they are claiming that
> puts all amateur antennas to shame. Look at the matching network, it is
> being touted as the best in the world, proprietary etc etc lowest loss of
> any L matching network, every been know to antennas. well maybe little
> exaggeration but Can you form a honest opinion about the claims and post
> your thoughts?

If you like 5/8WL radiation patterns, this is probably as good an antenna
as any. But the matching network is very old news. Series stub matching
has been around as long as ham radio. It's just one more form of linear
loading and will result in a certain amount of common-mode radiation from
the series stub itself. Theoretically, it's relatively low-Q is not as
efficient as a high-Q multi-turn loading coil.

When the length of a series stub is not negligible compared to a wavelength,
the stub will radiate because the stub currents are not balanced. Thus, the
horizontally polarized radiation will modify the classic 5/8WL radiation
pattern, possibly in undesirable ways.

I have done A/B comparisons of 5/8WL and 1/4WL verticals on 17m. The 1/4WL
vertical had the largest footprint and won the contest more often than not.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3802. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 18:58:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53D3C3.60700@ieee.org>
Source record: 124289

H. Adam Stevens wrote:
> How long does RG8X coax have to be to have a resistance of 300 ohms?
> Answer:
> A whole lot more than 50 feet, which is all the coax available in this case.

Perhaps you missed the fact that the 300 ohm resistor is not in series
but is IN PARALLEL with the radiation resistance of 85 ohms essentially
duplicating the loss in your coaxial antenna and stubs. We know coax is
lossy. Why make an antenna out of it?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3803. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:00:20 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57l4tagsgr604@corp.supernews.com>
Source record: 124290

OK
Bringing the dipole in tune with the stubs:
BW=bandwidth in MHz--

iteration 1 2 3 4
1:1 BW 0.06 0.16 0.17 0.14
1.05:1 BW 0.13 0.21 0.22 0.22
max SWR 1.70 1.40 1.35 1.20

There is a clear effect on the bandwidth as a function of dipole resonant
frequency.
Now, string up the bazooka and a 7.15 MHz dipole end-to-end about 30 feet up
and put a field strength meter in the front pasture: Normalize to the wire
dipole.

MHz SWR RF
7.00 1.2 89
7.03 1.1 93
7.06 1.0 97
7.09 1.0 97
7.12 1.0 97
7.15 1.0 99
7.18 1.0 100
7.21 1.0 97
7.24 1.0 97
7.27 1.1 93
7.30 1.2 89

I measured these numbers. I did not invent them.
I'd have to do it all several times to get realistic error bars.
I described the experimental conditions accurately.
If you want to put some error bars on them, fine.
Seems to me the field strength is pretty flat (>10%) as long as
the SWR is very low, then it falls apart at the ends.
I have a simple-minded excel spreadsheet calculating the reactance.
It's flat near resonance and blows up a hundred KHz or so out from
resonance.
The locations of the singularities are a strong function of the reactance
ratios between the dipole and the stubs.
Do you know the inductance of the dipole and that of the stubs?
Just curious.

Was it a lot of work? You bet!
And I still want to see if I can get 160 meter bazooka to resonate.
H.
NQ5H

PS
Oh, and that's "two part" harmony.
I'm enjoying myself building resonant things, why do you find it necessary
to be rude?

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:m2i75vsq60dkfpuf44vcm68k325lkqf1id@4ax.com...
> On Wed, 19 Feb 2003 12:01:03 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> >I beg your pardon?
> >
> >"Richard Clark" <kb7qhc@attbi.com> wrote in message
> >snip
> >adding digits of resolution,
> >skipping cross correlations that reveal inaccuracies you could drive a
truck
> >through,
> >
>
> Hi OM,
>
> Pardons are not being offered for lossy designs - nor for obtuseness
> for other postings in response to your own readings.
>
> Consult your own numbers - they show quite clearly what Walt has
> pointed out for a number of years. As an alternative to that obvious
> evidence, you could warm up the amusing chorus to
> >("I don't believe your data.")
> with "I don't believe my data" in two-point harmony. ;-)
>
> 73's
> Richard Clark, KB7QHC

3804. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:04:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53D528.2020701@ieee.org>
Source record: 124291

H. Adam Stevens wrote:
> there ya go
> in the real world I can't tell it from a dipole and it is broadband and
> quiet on receive,
> being insulated and shorted at DC.

Nobody has said it is not a good antenna. All anybody has said is that
it is not as efficient as a dipole on their common resonant frequency.

> I still want to understand why it works so well only when everything is
> resonant at the same frequency
> hard to explain with the resistance of 50 feet of coax

Your 50 feet of coax could easily have a loss of half a dB on 40m.
That's enough to reduce your measured SWR by a few tenths.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3805. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:12:49 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57ls82lkmeec7@corp.supernews.com>
Source record: 124292

At resonance the stubs are a very high resistance across the dipole. >>300 ohms
Over the range where the SWR remains 1:1 it's never less than 3 K ohms, I don't think.
The MFJ analyzer stops at 1500 ohms when setting the stub lengths.
Why make a bazooka?
I thought I was having fun making something resonate.
;^)
H.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E53D3C3.60700@ieee.org...
> H. Adam Stevens wrote:
> > How long does RG8X coax have to be to have a resistance of 300 ohms?
> > Answer:
> > A whole lot more than 50 feet, which is all the coax available in this case.
>
> Perhaps you missed the fact that the 300 ohm resistor is not in series
> but is IN PARALLEL with the radiation resistance of 85 ohms essentially
> duplicating the loss in your coaxial antenna and stubs. We know coax is
> lossy. Why make an antenna out of it?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3806. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:13:31 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53D75B.1030809@ieee.org>
Source record: 124294

Richard Clark wrote:
> However, Cecil
> probably does not appreciate how successful an air cooled resistor has
> to be to shed those 300W in the combination of transmission lines.

Actually, that's why I have a bunch of non-inductive 50 watt 600 ohm
resistors in my junkbox. Two of those in parallel across a dipole
feedpoint and I would be fixed for 100 watts. Reckon I can get a
patent on that new revolutionary design?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3807. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:25:45 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E53DA39.2F5DDFA9@uci.edu>
Source record: 124312

I was thinking more along the lines of a Norm Crosby. :-)

"H. Adam Stevens" wrote:
>
> Don Rickles I can put up with.

> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E53DBED.2020108@ieee.org...

> > Richard C. is r.r.a.a's version of Don Rickles. :-)

3808. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:33:01 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57n23dlue8p76@corp.supernews.com>
Source record: 124296

If you will consider that the stubs are two parallel resonant circuits in
series and the antenna is a series resonant circuit in parallel with the
stubs then at resonance X=XpXs/(Xp+Xs) where Xp is the parallel reactance
and Xs the series reactance. Of course at resonance they are both resistive
and sum like any two parallel resistors.
Now Xp = -XLpXCp/(XLp-XCp) and Xs = XLs-XCs where I have introduced parallel
and series L and C representing the stubs and dipole, respectively.
Demanding resonance yields XLpXCs=XLsXCp, a constant. A useful equation for
the algebraically obsessed.
I solved for X in a spreadsheet and found some interesting singularity
behavior depending on the ratio of the reactances in the stubs vs the
dipole.
With the right ratio it's flat and it blows up about where the real antenna
falls apart.
H.
NQ5H

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:17667-3E53D1D7-19@storefull-2311.public.lawson.webtv.net...
> Richard Clark wrote:
> "Consult your own numbers."
>
> A statement as found on page 5-8 of the 14th edition of the "ARRL
> Antenna Book" may have triggered dispute in this thread:
> "In both the balancing methods shown in Fig.11
> the quarter-wave section should be cut to be resonant at exactly the
> same frequency as the antenna itself. These sections tend to have a
> beneficial effect on the impedance-frequency characteristics of the
> system, because their reactance varies in the opposite direction to that
> of the antenna. For instance, if the operating frequency is slightly
> below resonance the antenna has a capacitive reactance, but the shorted
> quarter-wave sections or stubs have inductive reactance."
>
> Now I remember discussing this with Charlie Wright of A.D. Ring &
> Associates in 1954. We both were a little dubious, and let it drop. If
> it is true, it is important. Seems some support has been presented.
>
> Best regards, Richard Harrison, KB5WZI
>

3809. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:33:01 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53DBED.2020108@ieee.org>
Source record: 124297

H. Adam Stevens wrote:
> Now, string up the bazooka and a 7.15 MHz dipole end-to-end about 30 feet up
> and put a field strength meter in the front pasture: Normalize to the wire
> dipole.
>
> MHz SWR RF
> 7.00 1.2 89
> 7.18 1.0 100
> 7.30 1.2 89

How would you like to match the antenna all across 40m and add a couple
of dBD of gain in the process? Here's how I match my 130 ft. dipole on 40m.

http://www.qsl.net/w5dxp/swr13040.gif

> I'm enjoying myself building resonant things, why do you find it necessary
> to be rude?

Richard C. is r.r.a.a's version of Don Rickles. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3810. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:37:09 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57n9s962c4sf9@corp.supernews.com>
Source record: 124298

Why not file?
;^)
H
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53D75B.1030809@ieee.org...
> Richard Clark wrote:
> > However, Cecil
> > probably does not appreciate how successful an air cooled resistor has
> > to be to shed those 300W in the combination of transmission lines.
>
> Actually, that's why I have a bunch of non-inductive 50 watt 600 ohm
> resistors in my junkbox. Two of those in parallel across a dipole
> feedpoint and I would be fixed for 100 watts. Reckon I can get a
> patent on that new revolutionary design?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3811. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:39:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53DD6F.7030207@ieee.org>
Source record: 124299

H. Adam Stevens wrote:
> At resonance the stubs are a very high resistance across the dipole. >>300
> ohms
> Over the range where the SWR remains 1:1 it's never less than 3 K ohms, I
> don't think.

What is the 'Q' of your stubs? What is the SWR on those stubs?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3812. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:42:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53DE14.6050905@ieee.org>
Source record: 124300

H. Adam Stevens wrote:
> If you will consider that the stubs are two parallel resonant circuits in
> series and the antenna is a series resonant circuit in parallel with the
> stubs then at resonance X=XpXs/(Xp+Xs) where Xp is the parallel reactance
> and Xs the series reactance. Of course at resonance they are both resistive
> and sum like any two parallel resistors.

What are the 'Q's of those stubs?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3813. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:44:29 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57nnjlf33r9d0@corp.supernews.com>
Source record: 124302

Don Rickles I can put up with.
Nice plots.
I'll probably end up with a three element dipole (300 feet, 150 feet and 70
feet)
fed with ladder line any way.
The bazooka resonance effects are just so fascinating.
In other news:
I'm waiting for my BiggIR vertical to be delivered today.
That will start a whole new flame war.
<chuckles, gets a cold 807>
H.
NQ5H

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53DBED.2020108@ieee.org...
> H. Adam Stevens wrote:
> > Now, string up the bazooka and a 7.15 MHz dipole end-to-end about 30
feet up
> > and put a field strength meter in the front pasture: Normalize to the
wire
> > dipole.
> >
> > MHz SWR RF
> > 7.00 1.2 89
> > 7.18 1.0 100
> > 7.30 1.2 89
>
> How would you like to match the antenna all across 40m and add a couple
> of dBD of gain in the process? Here's how I match my 130 ft. dipole on
40m.
>
> http://www.qsl.net/w5dxp/swr13040.gif
>
> > I'm enjoying myself building resonant things, why do you find it
necessary
> > to be rude?
>
> Richard C. is r.r.a.a's version of Don Rickles. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----

> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3814. Re: Beam v. Vertical: Which causes more interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:45:18 UTC
From: Gary Rotter <GR120994@ncr.com>
Message-ID: <3e53decf@rpc1284.daytonoh.ncr.com>
Source record: 124301

I have used a beam at 30 feet and a ground mounted vertical. Zero RFI
complaints on the beam. Lot's of RFI complaints on the vertical.

"fch" <na@hle.com> wrote in message news:3E4DADF3.AB68BC25@hle.com...
> Anyone have a beam up around 25 ft
> and a ground mounted vertical?
>
> Is the beam a lot less likely to cause interference
> to household devices (and neighbors) than the
> ground mounted vertical?
>
> Especially at about 400 w?
>

3815. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:47:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53DF58.30605@ieee.org>
Source record: 124303

H. Adam Stevens wrote:
> I'll probably end up with a three element dipole (300 feet, 150 feet and 70
> feet) fed with ladder line any way.

That should make for some interesting radiation patterns.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3816. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:50:07 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57o26pep88t99@corp.supernews.com>
Source record: 124304

The Q is very high. R is just the resistance of the coax.
The SWR is infinite if at all meaningful.
And I am prepared to get the RF ammeter out and measure the current at the
short.
H.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53DD6F.7030207@ieee.org...
> H. Adam Stevens wrote:
> > At resonance the stubs are a very high resistance across the dipole.
>>300
> > ohms
> > Over the range where the SWR remains 1:1 it's never less than 3 K ohms,
I
> > don't think.
>
> What is the 'Q' of your stubs? What is the SWR on those stubs?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3817. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:51:55 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57o5hfssadicc@corp.supernews.com>
Source record: 124306

What's the resistance of 25 feet of RG8X center conductor and 25 feet of shield?

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E53DE14.6050905@ieee.org...
> H. Adam Stevens wrote:
> > If you will consider that the stubs are two parallel resonant circuits in
> > series and the antenna is a series resonant circuit in parallel with the
> > stubs then at resonance X=XpXs/(Xp+Xs) where Xp is the parallel reactance
> > and Xs the series reactance. Of course at resonance they are both resistive
> > and sum like any two parallel resistors.
>
> What are the 'Q's of those stubs?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3818. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:52:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7il75v07ptem4ljk3i7khd6hkb40hmlp3o@4ax.com>
Source record: 124305

On Wed, 19 Feb 2003 13:00:20 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

snip of duplicated data - nothing new.

>
>There is a clear effect on the bandwidth as a function of dipole resonant
>frequency.

Exactly in the manner as has been described for years by Walt, and
those who have quoted his work.

>

snip of duplicated data - nothing new.

>
>I measured these numbers. I did not invent them.

You assume the standard emotional plea in substitution to technical
response. Your numbers are fully accepted and are not in dispute,
however, you do seem to exhibit both motive and opportunity to not
examine them critically. As that has already been done elsewhere to
no response by you, this merely suggests you have no interest, or
don't understand. You have already offered you were looking for an
explanation - Walt's covers that in spades.

The strange part of your search for knowledge includes dismissing
Walt's work with your own data that supports his conclusions.

>I'd have to do it all several times to get realistic error bars.

That begs the observation of obvious errors already visible.

>I described the experimental conditions accurately.

And we had to tease out fundamental, and common particulars like how
high the dipole was mounted. Accuracy can mean 1.0000001 but that
says nothing of what the 1.0000001 measures. You are confusing
resolution with accuracy - a common amateur trap. Your data already
points out there are serious accuracy issues.

You repeated that data to no obvious conclusion of that breach.

>If you want to put some error bars on them, fine.
>Seems to me the field strength is pretty flat (>10%) as long as
>the SWR is very low, then it falls apart at the ends.

I've already shown the math in that regard - also unresponded to by
you. Your data clearly exhibits far more variation than you admit to.
Myself, I accept that data and its compelling agreement with Walt's
long standing treatment of this issue.

>I have a simple-minded excel spreadsheet calculating the reactance.
>It's flat near resonance and blows up a hundred KHz or so out from
>resonance.

And now we enter into the chorus "I don't believe my numbers."

>The locations of the singularities

And now for something completely different - your data shows only ONE
resonance, driving up the count by speculation is not found in your
readings. This, of course, is another point commented on in other
correspondence to no obvious response nor notice by you.

>are a strong function of the reactance
>ratios between the dipole and the stubs.
>Do you know the inductance of the dipole and that of the stubs?
>Just curious.

Yes. I also have far better instrumentation to measure these things,
and a career in measurement techniques that conform to the standards
of NIST. There are several Metrologists here in this forum and you
have managed to dismiss at least one other.

>
>
>Was it a lot of work? You bet!
>And I still want to see if I can get 160 meter bazooka to resonate.
>H.
>NQ5H
>
>PS
>Oh, and that's "two part" harmony.

In the conventional sense, perhaps, you are singing two points and the
harmony isn't there.

>I'm enjoying myself building resonant things, why do you find it necessary
>to be rude?

In this forum, you have a choice to respond to the slight (whatever
you perceive it to be) or respond to the issue, or both. To this
point you have only offered repetition and data that does not support
your hypothesis. The group waits to see your quality of response to
my annoying technicalities and not my annoying behavior (they can
judge that without your help - just ask them).

73's
Richard Clark, KB7QHC

3819. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 19:59:37 UTC
From: "--. .. ..."
Message-ID: <GsqcnUG38923f86jXTWc3Q@comcast.com>
Source record: 124307

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53D264.3050306@ieee.org...
> --. .. ... wrote:
> > Cecil, Can you take a moment and look at the antenna they are claiming
that
> > puts all amateur antennas to shame. Look at the matching network, it is
> > being touted as the best in the world, proprietary etc etc lowest loss
of
> > any L matching network, every been know to antennas. well maybe little
> > exaggeration but Can you form a honest opinion about the claims and post
> > your thoughts?
>
> If you like 5/8WL radiation patterns, this is probably as good an antenna
> as any. But the matching network is very old news. Series stub matching
> has been around as long as ham radio. It's just one more form of linear
> loading and will result in a certain amount of common-mode radiation from
> the series stub itself. Theoretically, it's relatively low-Q is not as
> efficient as a high-Q multi-turn loading coil.
>
> When the length of a series stub is not negligible compared to a
wavelength,
> the stub will radiate because the stub currents are not balanced. Thus,
the
> horizontally polarized radiation will modify the classic 5/8WL radiation
> pattern, possibly in undesirable ways.
>
> I have done A/B comparisons of 5/8WL and 1/4WL verticals on 17m. The 1/4WL
> vertical had the largest footprint and won the contest more often than
not.
> --
> cheers, CAM http://www.qsl.net/w5dxp

Thanks for taking the time to reply Cecil

73

! =-----

3820. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 20:03:02 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57oqclqld8d7e@corp.supernews.com>
Source record: 124308

the singularities in my simplistic reactance model do not correlate to any
resonance,
but to the distance from resonance where the measured SWR and field
strengths begin to change rapidly
H.
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:7il75v07ptem4ljk3i7khd6hkb40hmlp3o@4ax.com...
> On Wed, 19 Feb 2003 13:00:20 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
snip
> >I measured these numbers. I did not invent them.
>
> You assume the standard emotional plea in substitution to technical
> response. Your numbers are fully accepted and are not in dispute,
> however, you do seem to exhibit both motive and opportunity to not
> examine them critically. As that has already been done elsewhere to
> no response by you, this merely suggests you have no interest, or
> don't understand. You have already offered you were looking for an
> explanation - Walt's covers that in spades.
snip
> >The locations of the singularities
>
> And now for something completely different - your data shows only ONE
> resonance, driving up the count by speculation is not found in your
> readings. This, of course, is another point commented on in other
> correspondence to no obvious response nor notice by you.
>
> >are a strong function of the reactance
> >ratios between the dipole and the stubs.
> >Do you know the inductance of the dipole and that of the stubs?
> >Just curious.
>
> Yes. I also have far better instrumentation to measure these things,
> and a career in measurement techniques that conform to the standards
> of NIST. There are several Metrologists here in this forum and you
> have managed to dismiss at least one other.
>

snip
The group waits to see your quality of response to
> my annoying technicalities and not my annoying behavior (they can
> judge that without your help - just ask them).
>
> 73's

> Richard Clark, KB7QHC
>

3821. Re: Beam v. Vertical: Which causes more interference

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 20:04:04 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57os9rj5j4oad@corp.supernews.com>
Source record: 124309

I'll second that. Repeated instances.
H.
NQ5H

"Gary Rotter" <GR120994@ncr.com> wrote in message
news:3e53decf@rpc1284.daytonoh.ncr.com...
> I have used a beam at 30 feet and a ground mounted vertical. Zero RFI
> complaints on the beam. Lot's of RFI complaints on the vertical.
>
> "fch" <na@hle.com> wrote in message news:3E4DADF3.AB68BC25@hle.com...
> > Anyone have a beam up around 25 ft
> > and a ground mounted vertical?
> >
> > Is the beam a lot less likely to cause interference
> > to household devices (and neighbors) than the
> > ground mounted vertical?
> >
> > Especially at about 400 w?
> >
>
>

3822. Re: Protecting Coax from Animals

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 20:13:24 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <6kGdndUZgcr4eM6jXTWcqQ@comcast.com>
Source record: 124310

Wayne,

If you can't bury it, how about going in the air. Tree to tree to house. Also, look at the specs on your LNA (or is there a block downconverter at the antenna?). 175 feet of RG6 is a lot of loss. Short of going to Andrews Heliax, RG11 foam might be your best bet.

Actually, when I think about it, using Heliax might not be that stupid. You can occasionally get lengths less than 200 feet cheap from the cable co. Just don't tell them what it is for. This stuff has a corrugated aluminum shield, which most gritters won't like the taste of. You can also learn a new trade putting connectors on it.

Tam/WQB2TT
"Wayne Watson" <mtnviews@earthlink.net> wrote in message
news:3E5264C9.869552EC@earthlink.net...
> I'm about to stretch out 175 feet of R6 cable between a sat dish and a
building. I probably cannot
> bury too much of it because the ground is very, very rocky. Any cheap way
of protecting it from
> beast like deer, rabbits, racoons, etc.? PVC? Other?
>
> --
> Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada
City, CA
>
> Winter Tip: Now is not a bad time to think about oiling your
doors, tools,
> and the like.
>
> Web Page: <home.earthlink.net/~mtnviews>
> Imaginarium Museum:
<home.earthlink.net/~mtnviews/imaginarium.html>
>
>

3823. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 20:15:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53E5D6.4020102@ieee.org>
Source record: 124311

H. Adam Stevens wrote:
> The Q is very high. R is just the resistance of the coax.

I'm hoping someone knowledgeable of an accurate estimate will
jump in here. I can't find a formula for the 'Q' of a stub.
What does "very high" mean. I would be surprised if the 'Q'
of an RG8x stub is higher than 100.

> The SWR is infinite if at all meaningful.

The I^2*R losses in coax go up drastically with SWR. For instance,
the total losses increase to 5dB for a matched line loss of 1dB
if the SWR is 20:1 (according to the chart in my ARRL Handbook).
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3824. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 20:26:56 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57q77ejgtb6bb@corp.supernews.com>
Source record: 124313

For transmission line.
That's why ladder is better with high SWR, after all.
The stub's short. This in an LC circuit, which may be duplicated with lump components I imagine, as has been pointed out, possibly with higher Q.
Now that would be an interesting comparison;
build a tank circuit resonant with the antenna and hook 'em in parallel.
Measure that side by side with the bazooka in the cow pasture.
Just for fun, of course.
H.
NQ5H

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E53E5D6.4020102@ieee.org...
> H. Adam Stevens wrote:
> > The Q is very high. R is just the resistance of the coax.
>
> I'm hoping someone knowledgeable of an accurate estimate will
> jump in here. I can't find a formula for the 'Q' of a stub.
> What does "very high" mean. I would be surprised if the 'Q'
> of an RG8x stub is higher than 100.
>
> > The SWR is infinite if at all meaningful.
>
> The I^2*R losses in coax go up drastically with SWR. For instance,
> the total losses increase to 5dB for a matched line loss of 1dB
> if the SWR is 20:1 (according to the chart in my ARRL Handbook).
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3825. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 20:34:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nmp75vsrgqai6t3h8nteql1q5astvljkht@4ax.com>
Source record: 124314

On Wed, 19 Feb 2003 14:03:02 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>the singularities in my simplistic reactance model do not correlate to any
>resonance,
>but to the distance from resonance where the measured SWR and field
>strengths begin to change rapidly
>H.

Hi OM,

And this is proof, or an illustration of "what" that goes against the
description of a Bazooka by Walt?

Given your FSM so clearly invalidates your SWR readings below 1.2:1
such measure of the fine structures confined to description by SWR are
over-whelmed by error. Your FSM also offers only one resonance
visible, and any other resonances that contributed to widening the
antenna characteristic would have to be within the scope of
measurement if they are as high Q as you have offered. If they are
low Q such that their peaks are invisible (or so remote from the scope
of measurement) then this could easily be confirmed by enlarging the
scope of measurement (0.1 MHz increments from 6.0 to 8.0 should be
able to catch the slopes of those two stubs to "prove" their
contribution).

In other words, a High Q stub argument can only be carried if you show
me their contributing peaks within the scope of the data you've
offered - it does not exist. Contrariwise, a Low Q stub argument can
be shown only by the antenna exhibiting a flat SWR characteristic far
wider than what is offered - that does not exist.

Your data supports only one conclusion for the vector of a broadened
characteristic: Loss. Exactly as Walt described it and has been
observed through many years by many others.

73's
Richard Clark, KB7QHC

3826. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 20:38:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53EB5A.5050002@ieee.org>
Source record: 124316

H. Adam Stevens wrote:
> What's the resistance of 25 feet of RG8X center conductor and 25 feet of
> shield?

It's a little more complicated than that. What dB loss do you calculate
for a 25 ft. shorted RG8x stub on 40m? I get something in the ballpark
of 2+ dB. 25 ft. of RG8x on 40m has a matched line loss of about 0.2 dB.
Add an infinite SWR to that with a guaranteed current maximum point and
what do you get?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3827. Turning a dual band mobile ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 20:39:21 UTC
From: TC <ng@clarkie.cc>
Message-ID: <ZXR4a.8$MH6.3@nwrdny02.gnilink.net>
Source record: 124315

Hi,

I missed placed the insructions for a mag-mount antenna. I was wondering
if someone can give me a hand on the bast way to tune a 2m - 70cm mag-mount
ant.

Thanks,

TC

3828. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 20:55:41 UTC
From: dino@nomail.com
Message-ID: <hbS4a.10958$YU4.991836@newsread1.prod.itd.earthlink.net>
Source record: 124317

This is just George stirring the pot... Its too bad really.

>"Bert Craig"
>
>> Spoken like a gentleman. Bravo, Dino. I don't think there's any doubt that
>> the I-10K is indeed the best commercially 10/11/12-meter 5/8th-wave ground
>> plane antenna available today. I just think some folks took issue with the
>> degree of superiority that was implied by the marketing.
>>
>> --
>> 73 de Bert
>> WA2SI
>
>
>Bert, is this your opinion or did you do some testing? Are you sucked in
>by the marketing hype? lets bring it out to the real antenna gurus. I mean
>the guy tells you that 6063 aluminum is aircraft grade when it is not, he
>has the best matching network invented, And the Idea is proprietary. how is
>his matching network proprietary.

3829. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:00:33 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57s6940oktu7d@corp.supernews.com>
Source record: 124318

Cecil
Here it's a distributed LC circuit. Current peak at the short, current maximized at resonance, coupling minimized at resonance, current increasing off resonance, resulting in less than a 5% loss as stub currents increase before the resonance effect (1:1 SWR) goes away. Then the losses go up. Now I have built several that looked awful, 30% losses, but the resonance condition was not satisfied.
H.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E53EB5A.5050002@ieee.org...
> H. Adam Stevens wrote:
> > What's the resistance of 25 feet of RG8X center conductor and 25 feet of
> > shield?
>
> It's a little more complicated than that. What dB loss do you calculate
> for a 25 ft. shorted RG8x stub on 40m? I get something in the ballpark
> of 2+ dB. 25 ft. of RG8x on 40m has a matched line loss of about 0.2 dB.
> Add an infinite SWR to that with a guaranteed current maximum point and
> what do you get?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3830. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:08:41 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E53F259.1090504@ieee.org>
Source record: 124319

H. Adam Stevens wrote:
> Cecil
> Here it's a distributed LC circuit. Current peak at the short, current
> maximized at resonance, coupling minimized at resonance, current increasing
> off resonance, resulting in less than a 5% loss ...

What mechanism reduces the losses in a coaxial stub to less than the losses
in a coaxial transmission line?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3831. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:13:01 UTC
From: dino@nomail.com
Message-ID: <xrS4a.10979$YU4.984757@newsread1.prod.itd.earthlink.net>
Source record: 124320

>Here we go with the gain game again.
>
>A 5/8-wave ground plane does not have 3dB gain compared to a ï¿½-wave
>ground plane.

I didn't compare a 5/8 to a 1/4. I am using the published and accepted numbers of 3.x dbi of gain. Nothing more. Please re-read what I wrote. If I was not clear enough, I hope these statements clarify things.

>A 5/8-wave monopole mounted on perfect ground that extends to infinity
>will produce the theoretical 3 dB gain companies to a 1/4-wave
>monopole.
>
>A 5.8-wave monopole will provide a 3 dB gain advantage over a 1/4-wave
>monopole, but only under certain conditions. Witch are:
>
>1) The antenna is to be a thin filament of perfectly conducting wire.
>
>2) It is mounted perpendicular to a plane of infinite extent and
>conductivity.
>
>3) It is base fed with the current amplitude to be a sinusoidal
>function of the distance down from the extremity of the antenna.
>
>Change any of these conditions and all bets are off.
>
>For example, Using NEC modeling both a 5/8 and 1.4 Ground plane
>(using four ï¿½-wavelength radials) in free space. Gives the following
>results: 1/4-wave = 1.31 dBi, 5/8-wave = 1.94 dBi (0.6 dB gain
>difference)
>
>If you prefer "measured results" then check "The 5/8-Wavelength
>Antenna Mystique", ARRL Antenna Compendium, Vol I.

Yea, I read what RNL has on his site too.

3832. Re: Diamond Quad Loops and "pure" polarity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:16:48 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b30s80$a0d$1@knossos.btinternet.com>
Source record: 124321

Scott, when two antennas, Tx and Rx, of the same polarisation are in unobructed sight of each other, and not affected by reflections, then if one of the polarisations is rotated by 45 degrees there will be a loss in received signal strength of 3.0 dB.

Theoretically, if the polaritity is rotated by the full 90 degrees there will be a loss in received signal strength >100 S-units.

This doesn't depend on type of antenna - only on relative polarisations.

There is such a thing as circular polarisation produced by a pair of crossed horizontal dipoles fed with a phase difference of 90 degrees. A similar mobile horizontal receiving antenna, while on the move, will then receive a relatively constant fade-free signal.

I don't understand your mention of ground wave. If an antenna radiates only a horizontally polarised groundwave then at distances beyond a 5 or 10 wavelengths from the transmitter the signal is almost entirely dissipated in the ground. It soon gets lost in the local receiving noise level.

Diagonal polarisation can be considered to consist of two separate components at right angles to each other - one vertical and the other horizontal. But at HF, once a signal has passed through the ionosphere it becomes randomly and eliptically polarised. So polarisation of the receiving antenna doesn't make a lot of difference.

Reg, G4FGQ

3833. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:18:36 UTC
From: dino@nomail.com
Message-ID: <MwS4a.11014$YU4.984757@newsread1.prod.itd.earthlink.net>
Source record: 124322

Yes, no, maybe... Where do you want to put wave front? Straight up...NVIS?
Out towards the horizon...long skip? Up higher...short skip?

BTW, so we are clear, George, is the one who titled this thread. I never
said it was new and I don't make any inflated claims or hype.

George likes to stir the pot. He will comment on those who agree with him
and keep interestingly silent on those who don't.

>Wouldn't a sky-wave antenna be better for hams? :-)

3834. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:20:24 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v57tbdpblkai90@corp.supernews.com>
Source record: 124323

Nothing.
It's just a quarter wave long.
That.s all.
H.
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E53F259.1090504@ieee.org...
> H. Adam Stevens wrote:
> > Cecil
> > Here it's a distributed LC circuit. Current peak at the short, current
> > maximized at resonance, coupling minimized at resonance, current
increasing
> > off resonance, resulting in less than a 5% loss ...
>
> What mechanism reduces the losses in a coaxial stub to less than the
losses
> in a coaxial transmission line?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3835. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:24:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b30sml$h1d$1@venus.btinternet.com>
Source record: 124324

Cecil, you'll have to be careful how you answer this one. Don't forget how low the loss is in those matching sections you introduce in your 450-ohm line. (The poor man's tuner). ;o)

Reg, G4FGQ

3836. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:30:53 UTC
From: dino@nomail.com
Message-ID: <hIS4a.10277$_c6.1062638@newsread2.prod.itd.earthlink.net>
Source record: 124325

>Theoretically, it's relatively low-Q is not as
>efficient as a high-Q multi-turn loading coil.

As I've said elsewhere, I am not the end all of antenna theory. I'm always willing to learn more. My gut says something about your comment isn't right and I would like to educate myself some more on it. If you could point me in the right direction that speaks more about high-Q multi turn loading coil, I would appreciate it.

My thinking is that a coil is used to take up room. No coil is better than having a coil if possible. The antenna in question does not use coil loading. If you NEED a coil, a high-q coil is better than a low-q coil if we want to talk about efficiency. If we talk about bandwidth, than the answer is opposite.

>When the length of a series stub is not negligible compared to a wavelength,
>the stub will radiate because the stub currents are not balanced. Thus, the
>horizontally polarized radiation will modify the classic 5/8WL radiation
>pattern, possibly in undesirable ways.

Ah yes, but the horizontal radiation of this "stub" is far less damaging to the pattern than a vertical stub would be. Yes?

>I have done A/B comparisons of 5/8WL and 1/4WL verticals on 17m. The 1/4WL
>vertical had the largest footprint and won the contest more often than not.

Are we talking about ground mounted verticals or ground planes mounted 1/2 wave above the ground? These are two different antennas!

Thanks for the comments! They are valuable and I appreciate the exchange!

Dino

3837. Re: Diamond Quad Loops and "pure" polarity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:42:08 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E53FA30.32B28599@netscape.net>
Source record: 124326

I think it is you who needs to check the batteries ;) Let me try it again:

I understand the attenuation that results from mismatched polarization. My question is about the polarization that is produced by a quad is the "diamond" position. Say its fed at the bottom corner, for horizontal polarization. Does this produce a purely horizontal signal? Let's say you are talking to another station with a yagi in the horizontal position (with your diamond quad) - is there *any* loss of signal from mismatch polarization between these antennas? I mentioned groundwave, because I wanted to stress there weren't any reflections that altered the polarization in between these two antennas.

My friend is claiming a -3dB drop from mis-matched polarization in the above scenario. I think his belief comes from the fact that no part of the loop is actually in the horizontal plane in the diamond configuration. He seems to imply that the quad in the "X" shape produces a more "true" horizontal or vertical polarization.

Thanks - Scott.

Reg Edwards wrote:

> Scott, when two antennas, Tx and Rx, of the same polarisation are in
> unobructed sight of each other, and not affected by reflections, then if one
> of the polarisations is rotated by 45 degrees there will be a loss in
> received signal strength of 3.0 dB.
>
> Theoretically, if the polaritity is rotated by the full 90 degrees there
> will be a loss in received signal strength >100 S-units.
>
> This doesn't depend on type of antenna - only on relative polarisations.
>
> There is such a thing as circular polarisation produced by a pair of crossed
> horizontal dipoles fed with a phase difference of 90 degrees. A similar
> mobile horizontal receiving antenna, while on the move, will then receive a
> relatively constant fade-free signal.
>
> I don't understand your mention of ground wave. If an antenna radiates only
> a horizontally polarised groundwave then at distances beyond a 5 or 10
> wavelengths from the transmitter the signal is almost entirely dissipated in
> the ground. It soon gets lost in the local receiving noise level.
>
> Diagonal polarisation can be considered to consist of two separate
> components at right angles to each other - one vertical and the other
> horizontal. But at HF, once a signal has passed through the ionosphere it
> becomes randomly and eliptically polarised. So polarisation of the receiving
> antenna doesn't make a lot of difference.

> ---
> Reg, G4FGQ

3838. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 21:44:24 UTC
From: richardharrison@webtv.net
Message-ID: <9317-3E53FAB8-19@storefull-2316.public.lawson.webtv.net>
Source record: 124327

CAM wrote:
"What mechanism reduces the losses in a coax stub to less than the losses in a coaxial transmission line?"

Obviously, length. The stub is stubby. That`s why it`s called a stub.

Were the losses as high as Cecil would imply, the double-stub tuner and quarter-wave metal insulators would be exorbitantly lossy. They are not. Fact is, a shorted 1/4-wave stub doesn`t accept much current as the reflection from its shorted end presents a high impedance at its open end.

Best regards, Richard Harrison, KB5WZI

3839. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 22:23:47 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <pk085vgvgntqfg8m8r47ou5m75tbbf3g8h@4ax.com>
Source record: 124333

Would you be good enough to explain what 3 x dBi means?

Danny

On Wed, 19 Feb 2003 21:13:01 GMT, dino@nomail.com (Dino) wrote:

>>Here we go with the gain game again.
>>
>>A 5/8-wave ground plane does not have 3dB gain compared to a ï¿½-wave
>>ground plane.
>
>I didn't compare a 5/8 to a 1/4. I am using the published and accepted
>numbers of 3.x dbi of gain. Nothing more. Please re-read what I wrote. If
>I was not clear enough, I hope these statements clarify things.
>
It is clear to me. I've never heard nor seen a reference to 3 x dBi.

Danny

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

3840. ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 22:31:18 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <WAT4a.168748$tq4.3553@sccrnsc01>
Source record: 124328
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Does anyone know how to reduce or eliminate the ignition noise in a diesel truck? I'm using a well-grounded system in my 95 Ford F350 7.3L turbodiesel with a 706IIG. Still gets by the Noise Blanker on all HF bands.

73s.....Rudi - WA6RW

3841. the best selected amateur software & many more!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 22:46:51 UTC
From: cor <corholland@wanadoo.nl>
Message-ID: <3e54095a$1$23898$8fcfb86b@news.wanadoo.nl>
Source record: 124329

Hello Everyone,

I made a selection for amateur software.

MMTTY 1.64
AGWE 2002.10
UIVIEW 2.39
WINPSK 212
WINPACK 6.8
MSCAN

Links to all amateur factories, and antenna's

DX cluster from HF to SHF!

many more!!!!!!!!!!!!!!!!!!

Just look at:

http://www.qsl.net/pd0rkc

73's Cor

3842. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 22:49:17 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e5409c0$0$127$edfadb0f@dtext02.news.tele.dk>
Source record: 124330
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Hello Rudi

> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.

Can you please tell me where the ignition noise in a disel truck comes from,
I think you should look for alternator noise instead.

Regards Max

3843. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 22:51:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E540A89.2040609@ieee.org>
Source record: 124332

Dino wrote:
> I didn't compare a 5/8 to a 1/4. I am using the published and accepted
> numbers of 3.x dbi of gain. Nothing more. Please re-read what I wrote. If
> I was not clear enough, I hope these statements clarify things.

It is a commonly accepted rule of thumb that a 1/4WL monopole has about
zero dBi gain.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3844. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 22:53:10 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v582pc9i2l7f4d@corp.supernews.com>
Source record: 124331
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Well if it SOUNDS like ignition noise it may be electronic fuel injection.
H.
NQ5H

"Max" <Max_Jens@post9.tele.dk> wrote in message
news:3e5409c0$0$127$edfadb0f@dtext02.news.tele.dk...
> Hello Rudi
>
> > Does anyone know how to reduce or eliminate the ignition noise in a
diesel
> > truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
> turbodiesel
> > with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> Can you please tell me where the ignition noise in a disel truck comes
from,
> I think you should look for alternator noise instead.
>
> Regards Max
>
>

3845. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:06:08 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302191506.395d1b91@posting.google.com>
Source record: 124334

dino@nomail.com (Dino) wrote in message
news:<JnF4a.10207$YU4.897606@newsread1.prod.itd.earthlink.net>...
> Wow Mark, I see George took a post I put on rec.radio.cb and decided to bring
> it over here. While a few did take some jabs at my comments, I'll equate
> that to the dislike of CB radio in general.
>
> I also see that responses to my comments were incorrect as my original
> comments were not fully understood or explained by me. So let me rebut...
>
>
>
> George said...
> >> The claim of this I10K antenna is his form of matching is much more
> >> efficient than any other, and will provide 2db more than some factory made
> >> antennas. any comments appreciated
>
> The Interceptor antenna has a claimed gain of 3.x dbd of gain.

That claim is overly happy. Should be dbi, not dbd.

This is a
> standard gain rating for a 5/8 wave antenna. Any claims of being 2 db better
> than another antenna is confusing and not meant to be equated to "dbd" or
> "dbi". Its meant to measure the radiating efficiency of one antenna and
> another. It would be like saying a 1/4 mobile antenna has 10db more gain
> than a rubber duck, when we all know a 1/4 wave antenna has no gain.

Sure, a 1/4 wave has gain. About .3 dbi. Only an isotropic radiator
has "no" gain. Gain is gain. But gain means nothing without a
reference. But even taking it the way he is using it, 2 db is less
than 1/2 of an S unit, if the S unit is 6 db which is the normal
theoretical value assumed on average. Of course, real radios vary
greatly.
>
>
> Dino said in another NG...
> >The Penetrator 500 uses a matching hairpin in the VERTICAL PLANE. This
> >affects the radiation patter of the antenna.
>
> Mark said...
> >It wouldn't have that much of an effect on the pattern.
>
> It DOES have an effect on the pattern. You say it wouldn't have "much", but
> we do agree that it does have an effect. I believe it has a larger affect
> than you think.

Maybe, but I kind of doubt it. There is not too much current at the
base of a 5/8 compared to a 1/4 wave. I've tried both single coil
matched 5/8's , and I've tried the normal solenoid type coils. I could
tell no obvious difference at all. But, I don't wind my coils like the
thin wire micky mouse looking things you might see on a cheap CB
antenna.
>
>
> Dino said in another NG...
> >The driven element is also surrounded by the ground plane brackets and
> >radials.
>
> Mark said...
> >That is silly...Do the radials point up? I haven't seen one...
>
> No, it is not silly. No, the ground radials do not point up. I believe you
> HAVE seen one. Have you seen any of the Hy-Gain HF vertical antennas? Same
> thing! If you haven't seen any of the Hy-Gain HF verticals, then you can't
> speak intelligently on this subject, or at least understand what I'm talking
> about.

No, I haven't seen many hygain verticals. Why would I? I make all my
own antennas. I don't pay much attention to commercial verticals. But
that has no bearing on the 5/8's antenna or the thread at hand. I have
seen 5/8 CB antennas where the base of the radiator is slightly below
the level of the radial mounting hardware, but if that had any
noticable effect on performance, I would be very surprised. The
radials were still at the base.
>
>
> Dino said in another NG...
> >The I10K uses TWO trombones. The first is to fine tune the resonant
> >frequency. The second is used for impeadance matching.
>
> Mark said...
> >You only need impedance matching. And a 5/8 is not resonant, so trying
> >to fine tune such a non resonance seems kind of silly.
>
> You don't understand what I'm trying to say, so maybe its my fault for not
> explaining it better. A 5/8 element is NOT resonant and needs to be taken to
> the next 1/4 wave in order to make it resonant. You do not want this extra
> 1/8 to affect the 5/8 element (3/4 wave antennas have a a distorted wave
> pattern) so you coil it or bend it, preferably OUT of the radiation plane of
> the 5/8 element. Did I explain it better this time?

I've never seen any 5/8 vertical where the coil would have any great
effect on the pattern or element length. But I haven't looked at any
"weird" 5/8's antennas. The pattern of a 3/4 wave vertical is not
distorted. It's just different being a longer element is used , and
has a slightly higher average takeoff angle. Not really desirable.
>
>

> Dino said in another NG...
> > The I10K also uses an ELEVATED FEED which lowered the capacitance of the
> >feed system. This equates to more signal getting to the antenna.
>
> Mark said...
> >Sounds kind of "gappish"..
>
> Gappish? Less loss...more signal!

Nope. The current max is already higher than the halfway point of the
radiator.
Raising the feed is not going to change anything. Besides, the logic
gap uses towards their verticals and the "elevated feed" is flawed the
way I see it.
>

>
> Dino said in another NG...
> >A true 5/8 antenna length is near impossible to match to a 50 ohm load.
>
> Mark said...
> >Good grief...All you need a simple coil of a few turns.
>
> Yes! I said that above! When I said this, I was talking about the 5/8
> element WITHOUT the coil (next 1/4 segment).

Who is going to run a 5/8 GP with no matching device? Not me... You or
he, whoever, said it was nearly impossible. Not hardly.
>
>
> Dino said in another NG...
> >The reason for having an antenna length of 5/8 has everything to do with the
> >WAVE RADIATION PATTERN. In order to match it, you need to bring the antenna
> >to a 3/4 wave length (next 1/4 wave length). BUT, adding this length in the
> >vertical plane would RUIN the radiation pattern!
>
> Mark said...
> >Balony. Adding a series coil in the vertical plane, at the base of a
> >5/8 does not ruin the radiation pattern. The coil is not long enough
> >vs wavelength for one thing.
>
> Right, a horizontal wound coil will not hurt the pattern. If that coil was
> stretched out and vertical, then it would affect the pattern.

Why on earth would anyone stretch the coil out? Thats silly. With a
normal sized short coil, you could place it horizontally, or
vertically, and I doubt you are going to see much difference at all. I
have mounted them both ways, and I've never seen a dimes worth of
difference.
>
>

> Dino said in another NG...
> >So by placing this "section" in the horizontal plane eliminates the affects
> >on the vertical plane. You will see this on the Avanti Sigma 5/8 and the
> >Maco V58 as a loop! (for this reason alone, I have always felt the Avanti
> >was better than the Penetrator).
>
> Mark said...
> >There is no real difference. Also, a single turn matching coil might
> >be a little more efficient than a small multi turn wire coil, but the
> >difference should be unnoticeable on the air.
>
> I'm glad we agree about the single turn coil. There is a difference. I
> guess we can discuss what each of us think is "significant". Lets just agree
> that there is a difference and that the single turn coil is better.

How much difference? Numbers please. I have tried both, and I could
not tell any noticable difference. But like I said, I don't wind my
coils with thin wire, or overly close tight windings like many cb
antennas.
>
>
> Dino said in another NG...
> >The I10K also uses top hat loading for improved performance. We already
> >agree on the better construction of the antenna and the materials used.
>
> Mark said...
> >What???? Not a real full length 5/8 wave radiator? Sounds like a
> >"Fisher Price" 5/8 antenna.
>
> If you want to say that a top hat shortens the length of the 5/8 element, I
> would agree...its about 6 inches (educated guess). The advantages of the top
> hat has been sung out here many times! This was just a useless reply from
> you. Do you agree or disagree that there are advantages to top hat loading?

A 5/8 antenna needs no loading at all. It's a full size radiator. Or
should be anyway...You use loading on short verticals. And a loaded
short vertical is never as good as the full size antenna. The way I
see it, if you shorten a 5/8 element, you are shortening the gain
also. The gain comes about from the length of the radiator. If it's
short, there will be less gain. I see it comparable to building a 8 ft
tall vertical for 10m, and using helical windings to make the
electrical length a 1/2 wave. Such an animal will not have the same
gain as a full half wave radiator. Other examples would be the "1/2
wave" type" verticals like the R7, etc. They may call it a "1/2 wave"
, but on 40m , it won't have near the performance of a full size 1/2
wave element. Sure, the "hat" he is using is fairly short, and
probably does not have too great an effect, but I'd rather have the
full size antenna.
>
>
> Dino said in another NG...

> >One other point, Jay's claim of 2db is over the difference of the I10K and
> >the Penetrator...NOT dbi or dbd! Jay only claims 3.x of dbd gain for his
> >antenna based on it being a 5/8 wave ground plane.

And 2 db ain't much on HF. Less than 1/2 of an S unit, using the 6 db
per S unit scale.
>
> Ma
>
>
> Dino said in another NG...
> >Basic antenna theory states that a 5/8 antenna has "x" amount of gain over
> >dbi or dbd. This is true! But then there is the losses in the matching
> >network.

Not enough to notice using normal methods. Now, if some CB antenna
makers use abnormal methods, thats not my fault.
>
> Mark said...
> >Only if you use magnet wire for the coil, and wind the turns right
> >next to each other. Any normally built coil for a 5/8 has very
> >little loss to speak of.
>
> It depends on the matching network. Some are more lossy than others.
> Eliminate these losses and you have more signal getting to the antenna. This
> also changes with the amount of applied power. Do we agree?

The first, but not the second.
>
>
> Dino said in another NG...
> >What Jay has learned is how to eliminate these losses! Less loss, better
> >efficiency! Better efficiency, better performance!
>
> Mark said...
> >I'll alert the media...
>
> GOOD! get the word out! There is a new sheriff in town and he makes one
> heck of an antenna! :-) BTW, this antenna is tuneable from 12 to 10 meters!
> I would like to see someone out here take a SERIOUS look at this antenna for
> 12 meters!

I've already tried 5/8's antennas on 12m. They work well. I don't need
to do it over again.
>
>
> Dino said in another NG...
> >Also, the I10K can take an honest 10,000 watts!
>
> Mark said...
> >Yea, but who runs an honest 10,000 watts? Or should I ask, who the

> >heck would ever need to?
>
> While I don't condone the use of these power output numbers, there are a
> NUMBER of people who regularly run this kind of power on CB and are in need
> of an antenna to handle their big signals. Just count your blessings they
> stay on CB and not light up 10 meters! :-)

Some light up 10m. But Riley will light them up eventually.
>
>
> Dino said in another NG...
> >You don't need to buy that 5KW gamma like some other antennas.
>
> Mark said...
> >Whats a 5KW gamma?
>
> A gamma match that can take 5KW. It would be like a balun that can take 5KW.
> I am NOT saying that a gamma match is the same thing as a balun. A company
> in the south east makes antennas and sells a gamma upgrade that can take 5KW.

But you don't use a gamma match with a 5/8 antenna. Or at least most
normal people don't...
>
>

>
> Mark said...
> >Not mine...I bet my 5/8 vertical will beat his 5/8 vertical. The
> >secret is in the radial system, not the matching coil.
>
> Ah, 5/8 at what frequency? My post was talking about CB antennas centered at
> 27.205Mhz. I will pull out the references, but I'm sure you will agree that
> as you go higher in frequency and the antenna gets shorter, the rules change.

No I don't agree at all. There is no change in in the operation of the
antenna no matter what frequency it is scaled for, providing the
height above ground in wavelength stays the same. There are cases on
higher frequencies "IE: 146 mhz" where the takeoff angle is more
critical, but that is not due to any change in antenna performance.
It just makes the usual deficiencies of the average 5/8 GP with 1/4
wave radials stick out more.

> My reference material says that upper HF frequencies take advantage of a 4
> ground radial system. 3 are good, 4 are better, and there is not a
> significant difference with numbers above 4.

I'm not talking about the number of radials. I'm talking about the
length of them. The amount of radials needed for an elevated vertical
depend on the height above ground in wavelength. 1/4 wave radials used
with 5/8's radiators is a mistake.

Now if we are talking about a
> 20 meter vertical mounted at ground level with a ground radial grid...thats
> different!

We are not talking about that though...

If you could build a better antenna than the Interceptor 10K, I
> would like to see it and offer to market it for you! To date, the I10K is
> the best "upper HF" ground plane 5/8 wave antenna ever built.

That remains to be seen. I haven't even seen one of his yet, except
for the description you give. I'll try to check out his website later.
I'd still have to think my design would outdo his though. But, I'm not
a commercial antenna builder. So no one has ever seen one of mine,
except me. I have good reason to believe this would be true, due to
much testing, and also computer modeling. I'm not just spouting off..
One hint...My versions do not use 1/4 wave radials.
>
> I've appreciated this exchange although its taken me some time to properly
> format this post. May I suggest you try not to blast people on here,
> especially if you don't fully understand the material being discussed.

I think I have a fairly good grip on the operation of 5/8 ground
planes. I've built many of them. I'm sure if I make a blunder on
here, brighter bulbs will correct me. And there are brighter bulbs
here . So far, I see nothing.

>I have the utmost respect for you although I don't necessarily
appreciate the
> way you've communicated your point.

I don't care. I haven't said anything out of line or nasty. Besides,
I'm not here to win popularity contests....You want to see why I think
his antenna is inferior without even looking at it? And why the
radials are the problem? Check out some modeling I did on the subject.
http://web.wt.net/~nm5k/acompari.htm
It's my opinion that if his antenna uses 1/4 wave radials, there is no
way on earth it will ever beat my versions. I don't care how efficient
the matching device is. I know my matching coils are fairly low loss.
There is no doubt in my mind whatsoever. If they were lossy, I would
have noticed it. MK

3846. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:08:54 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E540E86.4030009@ieee.org>
Source record: 124335

Dino wrote:
> Yes, no, maybe... Where do you want to put wave front? Straight up...NVIS?
> Out towards the horizon...long skip? Up higher...short skip?

As a ham, I don't care one iota about ground wave. If I could put all my ground wave energy into a sky wave I would be happy. Personally, I prefer a larger footprint than a 5/8WL yields. It indeed does have gain at the expense of real estate area covered. The first skip zone can be visualized as a flat donut. A 5/8WL yields a skinnier donut than a 1/4WL. To be sure, the mid-range of the donut ring for a 5/8WL yields about 1/2 an S-unit of gain but it is at the expense of coverage area. If I want a small coverage area with lots of gain, I will get a beam.

> BTW, so we are clear, George, is the one who titled this thread. I never
> said it was new and I don't make any inflated claims or hype.

There's no doubt that the antenna design is a good one. But there's nothing new under the sun in its design. I have tried everything associated with that design and don't presently use any of it. I much prefer my rotatable horizontal dipole to any vertical design. And I prefer the larger footprint of a 1/4WL vertical to the 5/8WL vertical. But your mileage may vary. I wouldn't have a Dodge pickup even if I won it for free on The Price Is Right. The only Dodge I ever owned was a vegetable. Exactly which vegetable, I'll leave to your imagination.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3847. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:12:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E540F75.9010501@ieee.org>
Source record: 124336

H. Adam Stevens wrote:
> It's just a quarter wave long.

So we have a quarter wave long shorted stub with an infinite SWR.
How is that different from a shorted quarter wave stub tied directly
to a transmitter? Why does a shorted quarter wave stub used as an
antenna have less losses than a shorted quarter wave stub used as
a transmission line?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3848. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:17:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v584485lr9te73@corp.supernews.com>
Source record: 124337

Here's how I figured it. Begin with the stub length, say an electrical quarter wavelength at 7.15 MHz, which would be about 27.5 feet, assuming a velocity factor of 0.8 for the RG8X. (Adjust as necessary if you've measured the length of a resonant stub or measured the velocity factor of the coax.) Next, you need the matched loss, which you can measure with several techniques. The one piece of RG8X I have measured about 0.7 dB/100 feet at 7 MHz. Then I used a program similar to the program you get with modern versions of the Antenna Book to look at the input impedance of this stub, and adjusted the frequency until R = X. (The program uses hyperbolic trig functions to properly account for cable loss.) These R = X points are the bandwidth limits, where the Z has dropped to very nearly 0.707 times its maximum value. The frequencies were 7.048 and 7.251 MHz, for a bandwidth of 203 kHz. Then Q = center frequency / bandwidth = 35.

I have a lot of confidence that a stub would measure very close to this value. Unfortunately, my MFJ269 doesn't have the resolution to make the measurement, and I don't have time just now to set up the GR bridge to make it. I'd bet a substantial amount, though, that the result would be pretty close to 35.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> H. Adam Stevens wrote:
>
>> The Q is very high. R is just the resistance of the coax.
>
>
> I'm hoping someone knowledgeable of an accurate estimate will
> jump in here. I can't find a formula for the 'Q' of a stub.
> What does "very high" mean. I would be surprised if the 'Q'
> of an RG8x stub is higher than 100.
>
>> The SWR is infinite if at all meaningful.
>
>
> The I^2*R losses in coax go up drastically with SWR. For instance,
> the total losses increase to 5dB for a matched line loss of 1dB
> if the SWR is 20:1 (according to the chart in my ARRL Handbook).

3849. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:18:54 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5410DE.4080501@ieee.org>
Source record: 124339

Reg Edwards wrote:
> Cecil, you'll have to be careful how you answer this one. Don't forget how
> low the loss is in those matching sections you introduce in your 450-ohm
> line. (The poor man's tuner). ;o)

But Reg, you have to remember - I'm not running an infinite SWR on my
series section transformers.

Ladder-line stubs are considerably less lossy than coaxial stubs. In fact,
isn't a Bazooka antenna just a folded dipole using coax instead of twinlead?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3850. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:19:15 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <1o385vcot3om30gk954ed1jpl0pg3ls9lq@4ax.com>
Source record: 124338

On Wed, 19 Feb 2003 22:31:18 GMT, "Rudi" <wiedemann@attbi.com> wrote:

>Does anyone know how to reduce or eliminate the ignition noise in a diesel
>truck? I'm using a well-grounded system in my 95 Ford F350 7.3L turbodiesel
>with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
>73s.....Rudi - WA6RW
>

There's no ignition noise in a diesel engine - but, as suggested, it
might be from EFI. Does the truck have a factory AM/FM radio? Can
you hear the noise on it?

1. Check with the dealer to see if there are any service bulletins
concerning noise problems. You may have to go babysit them while
they do it to make sure it really gets done.

2. Make sure the hood has a good ground path to the rest of the body.
I've had trouble with that before (on a Ford), and adding a ground
strap cured the problem. Note that hinges and latches do not count
as ground paths.

3. Bypass the power lead where it comes through the firewall.

That's all I can think of.

73,
-fb-

3851. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:31:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5413D9.9070007@ieee.org>
Source record: 124340

Dino wrote:
>>Theoretically, it's relatively low-Q is not as
>>efficient as a high-Q multi-turn loading coil.
>
> As I've said elsewhere, I am not the end all of antenna theory. I'm always
> willing to learn more. My gut says something about your comment isn't right
> and I would like to educate myself some more on it. If you could point me in
> the right direction that speaks more about high-Q multi turn loading coil, I
> would appreciate it.

That's pretty old news. The resistance (losses) of a coil goes up linearly with the number of turns. The inductance of a coil goes up as the square of the number of turns. Thus, a coil has an unfair advantage over any form of linear loading.

> My thinking is that a coil is used to take up room. No coil is better than
> having a coil if possible. The antenna in question does not use coil
> loading. If you NEED a coil, a high-q coil is better than a low-q coil if we
> want to talk about efficiency. If we talk about bandwidth, than the answer
> is opposite.

Paraphrasing President Bush: Those who would sacrifice efficiency for bandwidth deserve neither. :-)

>>When the length of a series stub is not negligible compared to a wavelength,
>>the stub will radiate because the stub currents are not balanced. Thus, the
>>horizontally polarized radiation will modify the classic 5/8WL radiation
>>pattern, possibly in undesirable ways.
>
> Ah yes, but the horizontal radiation of this "stub" is far less damaging to
> the pattern than a vertical stub would be. Yes?

Actually, that's not clear until one models it. If the stub is vertical, all you have is fairly close to a J-Pole. If you can keep the stub from radiating, it won't affect the radiation pattern.

> Are we talking about ground mounted verticals or ground planes mounted 1/2
> wave above the ground? These are two different antennas!

To try to keep the comparison fair, I kept the *average* height the same. The 5/8WL on 17m was a 40m 1/4WL vertical with radials elevated at 20 ft.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3852. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:36:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5414E5.8080208@ieee.org>
Source record: 124342

Richard Harrison wrote:
> CAM wrote:
> "What mechanism reduces the losses in a coax stub to less than the
> losses in a coaxial transmission line?"
>
> Obviously, length. The stub is stubby. That`s why it`s called a stub.
>
> Were the losses as high as Cecil would imply, the double-stub tuner and
> quarter-wave metal insulators would be exorbitantly lossy. They are not.
> Fact is, a shorted 1/4-wave stub doesn`t accept much current as the
> reflection from its shorted end presents a high impedance at its open
> end.

I'm not sure you answered my question, Richard. What mechanism reduces
the losses in a coax stub to less than the losses in an equal length
of transmission line? A 25 ft stub is 25 feet long. How can it have
less losses than a 25 ft length of transmission line with an infinite
SWR?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3853. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:40:13 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <v585bab5i46445@corp.supernews.com>
Source record: 124341
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Sure, remove all three PCM computers, simple as that.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Rudi" <wiedemann@attbi.com> wrote in message
news:WAT4a.168748$tq4.3553@sccrnsc01...
> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> 73s........Rudi - WA6RW
>
>

3854. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-19 23:49:32 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v58632cp6g2lff@corp.supernews.com>
Source record: 124343

Move the shorts in for a T match for the 50 ohm coax and you got it.
Think I'll build one with ladder line and see. Might be fun.
H
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E5410DE.4080501@ieee.org...
> Reg Edwards wrote:
> > Cecil, you'll have to be careful how you answer this one. Don't forget
how
> > low the loss is in those matching sections you introduce in your 450-ohm
> > line. (The poor man's tuner). ;o)
>
> But Reg, you have to remember - I'm not running an infinite SWR on my
> series section transformers.
>
> Ladder-line stubs are considerably less lossy than coaxial stubs. In fact,
> isn't a Bazooka antenna just a folded dipole using coax instead of
twinlead?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3855. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 00:16:35 UTC
From: Brian <hamster@atmc.net>
Message-ID: <b316r7$mv8$1@news3.infoave.net>
Source record: 124344
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

There's a nice article that addresses this sort of problem at the League webpage. Check out http://www.arrl.org/members-only/qst/doctor/comments.html?qid=99&nextq=Q2 . I don't know whether it will suit your particular application, but it's a nice place to start.

Brian KG4IJR

"Rudi" <wiedemann@attbi.com> wrote in message news:WAT4a.168748$tq4.3553@sccrnsc01...
> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> 73s........Rudi - WA6RW
>
>

3856. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 00:39:45 UTC
From: dino@nomail.com
Message-ID: <ltV4a.12346$YU4.1023134@newsread1.prod.itd.earthlink.net>
Source record: 124345

OC_CAM's Razor said...

>Dino wrote:
>>I didn't compare a 5/8 to a 1/4. I am using the published and accepted
>>numbers of 3.x dbi of gain. Nothing more. Please re-read what I wrote.
>>If I was not clear enough, I hope these statements clarify things.

>It is a commonly accepted rule of thumb that a 1/4WL monopole has about
>zero dBi gain.

Yes. My statement above was about a 5/8 wave element. How come I feel like
I'm talking about "this" and you're talking about "that". :-)

Dino

3857. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 00:55:05 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E54273F.3AC5992E@attbi.com>
Source record: 124346
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

High voltage injectors!!!

I read a thread regarding this type of noise sometime during the summer
months. Included was a suppression technique for the noise.

Try an archive search.

Deacon Dave, W1MCE
+++

Rudi wrote:
>
> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> 73s........Rudi - WA6RW

3858. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:07:20 UTC
From: tdonaly@aol.com
Message-ID: <20030219200720.11413.00001412@mb-ch.aol.com>
Source record: 124347

Amongst other things, Cecil said,
> A 25 ft stub is 25 feet long.

Who was President during the Harding administration, Cecil? :-)
73,
Tom Donaly, KA6RUH

(P.S. Any shorted stub will dissipate all the power you can
feed it. The question is, how much power is being fed to it in any
given circuit? According to Transmission Line Details, a
quarter wave shorted stub of Belden 9258 at 7.1 Mhz has an
impedance of around 2019 -j32 ohms. If H. measures 50 ohms
into his antenna, that 2019 -j32 ohms doubled isn't going to
dissipate much power. Of course, where he got the 50 ohm
impedance from is another story.)

3859. BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:11:59 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b31a0v$4sq$1@sparta.btinternet.com>
Source record: 124348

Fellow Radio Amateurs and others,

Having read with some amusement a sprinkling of the many contributions to the current argument it seems much is based on the performance of a couple of exact 1/4-wavelengths of common or garden coaxial line which by some means known only to themselves have managed to become inextricably involved with an ordinary centre-fed dipole. It's something to do with weighing the undesirable loss in the coax against the desirable resulting increase in operating bandwidth. But as the song goes, you can't have one without the other.

But, as usual in this newsgroup, useful numbers are conspicuous by their absence ! Remember what Kelvin had to say about arithmetic.

RG-58 type cable . . . .
==========

Frequency = 7.15 MHz.

Zo = 51.8 - j0.9 ohms.

1/4-wavelength = 6.87 metres = 22.54 feet.

Matched attenuation = 0.223 decibels.

Terminated power loss = 5.02 percent.

Short Circuit at one end . . . .
==========

Zin at other end = 2015 - j31.97 ohms.

VSWR at input end = 38.91.

Resonant Q = 30.60

Open Circuit at one end . . . .
==========

Zin at other end = 1.33 - j0.02 ohms.

VSWR and Resonant Q at input end are exacly the same as when short-circuited.

Praps contenders now have a less confused idea of what they've been arguing about and can carry on from here to estimate by how much the swr bandwidth is numerically increased relative to a simple dipole. There was no reply when I asked that question a few days back. My guess is not very much. But there must be dozens of people who have constructed one. As Roy often

implies, the proof of the pudding lies in the eating (measuring).

I beg your forgiveness. ;o)

Data obtained using program COAXPAIR.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

3860. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:21:34 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <y4W4a.180796$HN5.764611@rwcrnsc51.ops.asp.att.net>
Source record: 124349
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Oh, I forgot to mention that the frequency of the pulsing noise is directly proportional to the engine RPM. Therefore, I don't think it's the fuel pump. Maybe the fuel injector solenoids?

"Rudi" <wiedemann@attbi.com> wrote in message news:WAT4a.168748$tq4.3553@sccrnsc01...
> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> 73s........Rudi - WA6RW
>
>

3861. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:21:47 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <L4W4a.183442$vm2.134691@rwcrnsc54>
Source record: 124350
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Oh, I forgot to mention that the frequency of the pulsing noise is directly proportional to the engine RPM. Therefore, I don't think it's the fuel pump. Maybe the fuel injector solenoids?

"Rudi" <wiedemann@attbi.com> wrote in message news:WAT4a.168748$tq4.3553@sccrnsc01...
> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> 73s........Rudi - WA6RW
>
>

3862. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:22:02 UTC
From: Rudi <wiedemann@attbi.com>
Message-ID: <_4W4a.185567$Ec4.185114@rwcrnsc52.ops.asp.att.net>
Source record: 124351
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Oh, I forgot to mention that the frequency of the pulsing noise is directly proportional to the engine RPM. Therefore, I don't think it's the fuel pump. Maybe the fuel injector solenoids?

"Rudi" <wiedemann@attbi.com> wrote in message news:WAT4a.168748$tq4.3553@sccrnsc01...
> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> 73s........Rudi - WA6RW
>
>

3863. Re: Ant DC resistance ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:26:36 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <v1W4a.10880$0q5.4343@fe01.atl2.webusenet.com>
Source record: 124352

5 MILES of this stuff, should male a heck of a long wire, or rhombic (assuming you have the ranch to support it!) but, as stated earlier, should be easy to load (with those resistive loss's), and not be too effecient! (last 4- 1/2 miles of your new longwire (at least!) will be more loss, than antenna, methinks!) 780 kilo-ohms total resistance (+ a bit more)! jim nn7k nn7k@reno.rmci.net

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message news:iJC4a.4141$iu1.441422@news20.bellglobal.com...
> "Henry Kolesnik"
> > 30 ohms per 100 feet
> > 130' dipole for 75 meters
>
> Look at the bright side: the bandwidth and match should be excellent.
>
>

3864. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:35:33 UTC
From: richardharrison@webtv.net
Message-ID: <15497-3E5430E5-103@storefull-2313.public.lawson.webtv.net>
Source record: 124356

CAM wrote:
"It is a commonly accepted rule of thumb that a 1/4WL monopole has about zero dBi gain."

Surely Cecil meant dBd gain.

A ground-plane equals a dipole. Even the tiny elemental dipole is not completely non-directional and so it has gain over an isotropic radiator. Any real antenna has a favored direction and thus it has gain.

See the 1955 Terman edition page 871:
"Directive gain of elemental doublet = 1.5 (not db)---Thus a gain of 4 (or 6db) means that the power intensity in the direction of maximum radiation is four times as great (field intensity twice as great) as would be the case if the radiator were an isotropic antenna radiating the same total power."

Best regards, Richard Harrison, KB5WZI

3865. Re: Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:42:18 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <cgW4a.10918$0q5.7496@fe01.atl2.webusenet.com>
Source record: 124353

Second that, altho some sources are out of print- I..E.. magazine like the old VHF'er which MEASURERED antenna gain, and stated the measurements (one from contest on a cushcraft yagi (this 30 years ago) 432 antenna had 8 dB gain of the BACK , and a loss of -2.2 dB off the front! and other such, also how to build reference dipoles, ect. but the BIG NAME- (expert -you can say "he wrote the book" , as he did was by John Kraus Ph.D. , W8JK, Also Professor of electrical engineering, Ohio State University, "Antennas", printed by McGraw-Hill
ISBN 07-035410-3 WARNING, heck of alot more complicated than my Highschool Algebra, and some calculus- this is a book of PURE MATH, but it is interesting , for the bits and pieces I can FATHOM! Maxwell's tomes are also great references . jim nn7k

"Dean Arthur" <dearthur@silverstar.com> wrote in message
news:3E524016.3962E382@silverstar.com...
> Write/email Worldradio in California. Ask for sample copy with any
> Sturba Antenna review article. Max info, least bulls--t!
>

3866. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:42:31 UTC
From: Dave <dswickATsierratelDOTcom>
Message-ID: <3e543291@news.sti.net>
Source record: 124354
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Hi Rudi,
I've heard that the cause is the injection computer and can be helped
with ferrite beads on the output wires. I haven't had time to try that yet,
but my FT-100D's noise blanker eliminates it on all but 40m, where it is
reduced to the extent that I can hear the 40m swap net on 7240. Hope this
helps.

73
Dave KR6DY
"Rudi" <wiedemann@attbi.com> wrote in message
news:WAT4a.168748$tq4.3553@sccrnsc01...
> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> 73s........Rudi - WA6RW
>
>

3867. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:44:33 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <q7c85v4tnm0iofuouf0aaanpoivha4ejld@4ax.com>
Source record: 124355

On Wed, 19 Feb 2003 13:50:07 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

|The Q is very high.

No, the Q is ~31

3868. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:49:06 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v58d0ip9l5rp76@corp.supernews.com>
Source record: 124357
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

If you have ignition noise, you do not have a diesel truck.

Most likely the noise is coming from the fuel pump and alternator.

"Rudi" <wiedemann@attbi.com> wrote in message
news:WAT4a.168748$tq4.3553@sccrnsc01...
> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> 73s........Rudi - WA6RW
>
>

3869. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:53:44 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v58dbucel70b15@corp.supernews.com>
Source record: 124358

Hey
Make it 85.
I still claim, in a RESONANT configuration, that only the droop in the field strength within the 1:1 passband is due to losses. The flat passband is an additional resonance effect; It is a strong function of the reactance ratios between the two resonant circuits. In an off-resonant bazooka, like my 160 meter first try (That was a lot of walking back and forth! ;^)), it is most certainly losses that account for the broad SWR. Poor thing probably thinks it's shorted. There is no 1:1 passband. The antenna also clearly sucks next to a dipole; It's not a few db debate, it's noticable.
I got 50 KHz flat 1:1 on 80 first try. The resonant 40 meter bazooka is another story, it plays. They're all RG8X.
With "lossless" coax (and I am still playing with my Times Microwave stuff, loath to cut it, trying to do a curve fit for the MFJ measurable numbers to estimate Q for a 2 MHz quarter wave.) the 1:1 bandpass would be nearly flat I think. Or ladder line 1/4 wave sections. Can gold be far away?
I must retract one statement: the loss idea is not "wrong" (when the antenna is not mutually resonant) and mis-tuned bazookas are poor antennas no doubt; but there is also a resonance effect, which requires no loss and will provide a flat passband. My perception of this conception is evolving; it is not that the details are being meted out.
BTW I did 2 semesters of Classical Electrodynamics from J D Jackson in Grad School.
H.
NQ5H
Not being confrontational, just trying to say there's something else here.

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20030219200720.11413.00001412@mb-ch.aol.com...
> Amongst other things, Cecil said,
> > A 25 ft stub is 25 feet long.
>
> Who was President during the Harding administration, Cecil? :-)
> 73,
> Tom Donaly, KA6RUH
>
> (P.S. Any shorted stub will dissipate all the power you can
> feed it. The question is, how much power is being fed to it in any
> given circuit? According to Transmission Line Details, a
> quarter wave shorted stub of Belden 9258 at 7.1 Mhz has an
> impedance of around 2019 -j32 ohms. If H. measures 50 ohms
> into his antenna, that 2019 -j32 ohms doubled isn't going to
> dissipate much power. Of course, where he got the 50 ohm
> impedance from is another story.)

>

3870. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:55:30 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <AsW4a.10951$0q5.3673@fe01.atl2.webusenet.com>
Source record: 124359

And, for tie wraps, the BLACK ones seem more UV resistant than the white (or other colors- yes i know most folks haven't seen those, but are available -normally as cable splicer (telco) supplies). think would be similar for BLACK pvc pipe! jim nn7k

"Roy Lewallen" <w7el@eznec.com> wrote in message <snip> I think there's UV-resistant PVC intended for
> outdoor unburied use. If there is, that would be better.
>
> Roy Lewallen, W7EL
>

3871. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 01:58:57 UTC
From: richardharrison@webtv.net
Message-ID: <15497-3E543661-115@storefull-2313.public.lawson.webtv.net>
Source record: 124362

CAM wrote:
"Why does a shorted quarter wave stub used as an antenna have less losses than a shorted quarter wave stub used as a transmission line?"

The stub used as an antenna is called a folded monopole and its energy loss is desirable. It is desired "radiation".

The stub used as a transmission line is a matching device. It is not supposed to radiate. RF and heat radiated from this transmission line stub are not likely useful. So they are losses.

Best regards, Richard Harrison, KB5WZI

3872. Re: Diamond Quad Loops and "pure" polarity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 02:02:43 UTC
From: k3bu@aol.com
Message-ID: <20030219210243.20514.00000890@mb-fo.aol.com>
Source record: 124360

>So polarisation of the receiving
>antenna doesn't make a lot of difference.
>---
>Reg, G4FGQ
>
>

Not so fast!
Polarization of the antenna and its height contribute to pattern forming. Where horizontal antenna has lobes, vertical antenna has nulls in the pattern. Try antenna 1/2 wave high and see the difference in patterns.
Signals going through the media get polarized all over and at different angles. If antenna matches the best angle that is more important than polarization on "sky" wave signals.

To the question of diamond shape vs. X, it is similar to Inv. Vee situation. Overall signal and corresponding polarization is similar to Inv. Vee and there is stronger vertical component, but in "other" plane. Diamond shows more "stacking gain" due to wider separation of high current points.
The X configuration should have less vertical component, it is more like dipole with "top" loading by bent ends.
Personally I used diamond shape for stronger mechanical properties. I have seen gain of single quad loop, horizontally polarized about 1/4 wave from the vertical mast. So there is appreciable vertical component from the diamond loop.
RL Cebik has good software exploration of quad elements at his web site.

73 Yuri, K3BU

3873. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 02:02:57 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v58dt6hlemmv3b@corp.supernews.com>
Source record: 124361

That's two for 5%.
The last time I attended a meeting of the Royal Society (on 3d imaging in electronic
materials ('96?)) I sat under past-president Newton's portrait. Nice digs.
Please someone elase build resonant antennas and make measurements and contacts.
Any more numbers????/
chuckle
H.

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b31a0v$4sq$1@sparta.btinternet.com...
>
> Fellow Radio Amateurs and others,
>
> Having read with some amusement a sprinkling of the many contributions to
> the current argument it seems much is based on the performance of a couple
> of exact 1/4-wavelengths of common or garden coaxial line which by some
> means known only to themselves have managed to become inextricably involved
> with an ordinary centre-fed dipole. It's something to do with weighing the
> undesirable loss in the coax against the desirable resulting increase in
> operating bandwidth. But as the song goes, you can't have one without the
> other.
>
> But, as usual in this newsgroup, useful numbers are conspicuous by their
> absence ! Remember what Kelvin had to say about arithmetic.
>
>
> RG-58 type cable . . . .
> ==================
>
> Frequency = 7.15 MHz.
>
> Zo = 51.8 - j0.9 ohms.
>
> 1/4-wavelength = 6.87 metres = 22.54 feet.
>
> Matched attenuation = 0.223 decibels.
>
> Terminated power loss = 5.02 percent.
>
>

> Short Circuit at one end . . . .
> ====================
>
> Zin at other end = 2015 - j31.97 ohms.
>
> VSWR at input end = 38.91.
>
> Resonant Q = 30.60
>
>
> Open Circuit at one end . . . .
> ====================
>
> Zin at other end = 1.33 - j0.02 ohms.
>
> VSWR and Resonant Q at input end are exacly the same as when
> short-circuited.
>
> Praps contenders now have a less confused idea of what they've been
arguing
> about and can carry on from here to estimate by how much the swr bandwidth
> is numerically increased relative to a simple dipole. There was no reply
> when I asked that question a few days back. My guess is not very much. But
> there must be dozens of people who have constructed one. As Roy often
> implies, the proof of the pudding lies in the eating (measuring).
>
> I beg your forgiveness. ;o)
>
> Data obtained using program COAXPAIR.
> ---
> ========================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ========================
>
>

3874. Re: lenght of coil ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 02:28:24 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <tXW4a.11016$0q5.3155@fe01.atl2.webusenet.com>
Source record: 124363

one other source, and reasonably priced- is : RFDC, a program , written in dos, by :
Austin Antennas, 10 main St., Gonic, NH, 03839. dont know if they still supply, or at what price (this about 15 years old), but calculates coil winding, 2 band dipole traps, even do indunctances for pc board strip lines, short loaded dipoles, dielectric constants, wiregauge tables, capacitors from pc boards, ect! very versatile program-- jim nn7k

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message news:b2qii3$qc2$1@helle.btinternet.com...
>
> > But now i want to now how do you calculate the lenght of the coil that is
> in
> > the bottom of
> > the antenna
> ============================
>
> Download program BOTLOAD from website below for the answers to all your
> problems.
> ---
> ======================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ======================
>
>
>

3875. Re: FA: Less than 9hrs left Realistic HTX-202 2 Meter Transceiver NR

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 02:32:54 UTC
From: Quahog <quahog@localnet.com>
Message-ID: <v58fimsdqfrf49@corp.supernews.com>
Source record: 124364

"Dennis" <webmaster@show-the-world.com> wrote in
news:6rM4a.2680$cB3.33906@nnrp1.uunet.ca:

> Realistic HTX-202 2 Meter Transceiver NR
>
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4674&item=300784
> 0821
>
> Get it before its gone! Good luck!!!
>
> Dennis
> --

Haw!! Somebody paid over a hunnert bucks fer a unseen ratshack rig? Shoot,
I gotta start putting MY junk on e-pay, in thars that many fools out thar.

Q

3876. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 02:33:06 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <m1qdnYNdpJc50MmjXTWcoQ@ctc.net>
Source record: 124169

> I'm going to try to put up an inverted V for 40m soon and have a
> few questions I was hoping you might be able to answer:
>
> 1. Balun or not? The center insulator is a High Q model with a built in
> lightning arrestor.
>
> 2. Just what the heck is that "lightning arrestor"?
>
> 3. Speaking of which, anything special I should do concerning lightning?
> It's going to be at the top of my chimney (~ 25' up).
>
> 4. With the amp it'll be around 1200W or so max, so what gauge wire
> should I be using for it?
>

1. Does not make any differance if a balun is used or not if fed with coax.

2. Device to help send voltages created by indirect hits. Nothing will
protect most home antennas from a direct hit.

3. Unhook the antenna when not in use.

4. Anywire that will hold up its own weight. # 12 or 14 should be used to
standup under most physical conditions. Electrically it does not mater.

3877. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 02:42:17 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <tof85v0em23aq4d6advue2qivdcs6os3ko@4ax.com>
Source record: 124366

On Wed, 19 Feb 2003 16:51:53 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>It is a commonly accepted rule of thumb that a 1/4WL monopole has about
>zero dBi gain.

Cecil,

I don't think so.

ï¿½-wave monopole over perfect ground = 5.14 dBi

ï¿½-wave ground-plane (free space) = 1.32 dBi

Model 'em for youself.

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

3878. Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 02:49:26 UTC
From: "Pat St. Jean" <stjeanp@pat-st-jean.com>
Message-ID: <B4SncV-i_Cr38mjXTWc2Q@august.net>
Source record: 124365

Hi everyone,
I'm going to try to put up an inverted V for 40m soon and have a
few questions I was hoping you might be able to answer:

1. Balun or not? The center insulator is a High Q model with a built in
lightning arrestor.

2. Just what the heck is that "lightning arrestor"?

3. Speaking of which, anything special I should do concerning lightning?
It's going to be at the top of my chimney (~ 25' up).

4. With the amp it'll be around 1200W or so max, so what gauge wire
should I be using for it?

Thanks!
Pat, K0OOK

--
Pat in Lewisville K0OOK '97 XLH 883 (Rocinante)
BS#140 EKIII rides with me
http://www.pat-st-jean.com/stjeanp All things Pat
http://www.pat-st-jean.com/products.html Software for paper money collectors

3879. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 03:19:52 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E544944.C486B1C1@attbi.com>
Source record: 124367
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

The fuel injectors are an established form of noise, 'just like spark
plugs', in diesels.

Deacon Dave, W1MCE
+ + +

"Dr. Fred Hambrecht Sr" wrote:
>
> If you have ignition noise, you do not have a diesel truck.
>
> Most likely the noise is coming from the fuel pump and alternator.
>
> "Rudi" <wiedemann@attbi.com> wrote in message
> news:WAT4a.168748$tq4.3553@sccrnsc01...
> > Does anyone know how to reduce or eliminate the ignition noise in a diesel
> > truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
> turbodiesel
> > with a 706IIG. Still gets by the Noise Blanker on all HF bands.
> >
> > 73s........Rudi - WA6RW
> >
> >

3880. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 03:20:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b31hhssdc1@helle.btinternet.com>
Source record: 124368

It may be of interest (but not in connection with Bazooka's) -

Zo of any line, of any length, at any frequency = Sqrt(Zoc * Zsc) ohms.

Also, at 1/4-wave resonance,

VSWR = Sqrt(Zsc / Zoc) = Zsc / Zo = Zo / Zoc and,

perhaps surprising,

Q = VSWR* Pi / 4 = 0.7854 * VSWR,

where VSWR is that measured at the input of a 1/4-wave resonant line when
the other end is either open corcuit or short circuit.

Arn't transmission lines fascinating?

Reg, G4FGQ

3881. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 03:39:22 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <c9j85vg3t3ahii6dvkah2gs2esmnkfq481@4ax.com>
Source record: 124170

W8LNA <gwatts@nrao.edu>
shared these priceless pearls of wisdom:

->
->I wish I'd had my flak jacket, helmet and goggles on before
->Jim Weir spewed in an angry tone:
->
->> Aw, not AGAIN. We do this "cantenna oil" thread at least three or four
times a
->> year. Did you do an archive search?

->
->Why, yes Jimmy, I did do an archive search on 'Cantenna,' and after a
->while I only found references to using mineral oil.

Then you'd better get your search engine fixed. Most of the alternatives
suggest transmission fluid or somesuch.

Then I thought,
->"Gee, hams tend to be a friendly lot

That's so, unless some stupid clod can't be bothered to do a decent search
before asking a common question.

Then again, had I seen the "edu" at the end of your addy, I'd not have bothered
to respond.

jw
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

3882. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 03:43:30 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v58jq142btr1eb@corp.supernews.com>
Source record: 124171

Absolutely. ------Much moreso than resistors.

Questions:
1. Q of two 1/4 wave coax stubs in series?
2. Q of dipole? Q of both in parallel at resonance?
3. Is 1:1 bandpass maximized when the two Q's are equal?
4. Solve Fermat's last theorem?
(Pick 3)
H.

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b31hhssdc1@helle.btinternet.com...
> It may be of interest (but not in connection with Bazooka's) -
>
> Zo of any line, of any length, at any frequency = Sqrt(Zoc * Zsc) ohms.
>
> Also, at 1/4-wave resonance,
>
> VSWR = Sqrt(Zsc / Zoc) = Zsc / Zo = Zo / Zoc and,
>
> perhaps surprising,
>
> Q = VSWR* Pi / 4 = 0.7854 * VSWR,
>
> where VSWR is that measured at the input of a 1/4-wave resonant line when
> the other end is either open corcuit or short circuit.
>
> Arn't transmission lines fascinating?
>
> ---
> Reg, G4FGQ
>
>
>
>
>
>

3883. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 03:50:07 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v58k6bmn14oiba@corp.supernews.com>
Source record: 124172

"Pat St. Jean" <stjeanp@pat-st-jean.com> wrote in message
news:B4SncV-i_Cr38mjXTWc2Q@august.net...
> Hi everyone,
> I'm going to try to put up an inverted V for 40m soon and have a
> few questions I was hoping you might be able to answer:
>
> 1. Balun or not? The center insulator is a High Q model with a built in
> lightning arrestor.
If it's resonant and the feedline matches, it won't matter much. Probably
can't hurt.
>
> 2. Just what the heck is that "lightning arrestor"?
A spark gap designed to fail just after your rig's smoked.
Seriously, you need some path to ground for charge carried by dust, salt
air, nearby thunderstorms etc to leak off, but in the presence of lightning
unplug everything and get the coax disconnected outside.
>
> 3. Speaking of which, anything special I should do concerning lightning?
> It's going to be at the top of my chimney (~ 25' up).
see 2
>
> 4. With the amp it'll be around 1200W or so max, so what gauge wire
> should I be using for it?
The bigger the better, but #14 copperweld should do.
>
> Thanks!
> Pat, K0OOK
Have fun.
H.
NQ5H
>
> --
> Pat in Lewisville K0OOK '97 XLH 883
(Rocinante)
> BS#140 EKIII rides
with me
> http://www.pat-st-jean.com/stjeanp All things Pat
> http://www.pat-st-jean.com/products.html Software for paper money
collectors

3884. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 04:20:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E54578E.6090708@ieee.org>
Source record: 124174

Richard Harrison wrote:
> CAM wrote:
> "It is a commonly accepted rule of thumb that a 1/4WL monopole has about
> zero dBi gain."
>
> Surely Cecil meant dBd gain.
>
> A ground-plane equals a dipole.

Ground-mounted 1/4WL monopole, Richard. A ground-mounted 1/4WL monopole
does not equal a dipole over ground. A ground-mounted 1/4WL monopole
has about zero dBi gain while a dipole over ground has about 6dBi gain.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3885. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 04:21:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5457DE.1090103@ieee.org>
Source record: 124175

Wes Stewart wrote:
> On Wed, 19 Feb 2003 13:50:07 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> |The Q is very high.
>
> No, the Q is ~31

Which is much lower than a well-designed coil.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

3886. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 04:22:17 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <vml85vspj0f9301te5pc0voco3nk4hq2c5@4ax.com>
Source record: 124173

On Wed, 19 Feb 2003 21:50:07 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:
>> 2. Just what the heck is that "lightning arrestor"?
>A spark gap designed to fail just after your rig's smoked.
>Seriously, you need some path to ground for charge carried by dust, salt
>air, nearby thunderstorms etc to leak off, but in the presence of lightning
>unplug everything and get the coax disconnected outside.

A properly designed balun will provide the ground path, assuming you
have a good earth ground, and perhaps help the radiation pattern just
a wee little bit.

And yes, always disconnect during thunderstorms, unless you have
really good insurance.

-fb-

3887. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 04:32:14 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E545A4E.8030006@ieee.org>
Source record: 124176

Dan Richardson wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>It is a commonly accepted rule of thumb that a 1/4WL monopole has about
>>zero dBi gain.
>
> Cecil, I don't think so.
>
> ï¿½-wave monopole over perfect ground = 5.14 dBi
>
> ï¿½-wave ground-plane (free space) = 1.32 dBi
>
> Model 'em for youself.

I did, Danny. A 7.2 MHz, 33' ground mounted monopole in
East Texas = 0 dBi. Would you like the EZNEC file?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3888. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 04:45:44 UTC
From: Tom DeYoung <tdeyoung@n0spam.mn.rr.com>
Message-ID: <Y3Z4a.1140$xb.70689@twister.rdc-kc.rr.com>
Source record: 124177

Nope, it's not too late, thanks!

This weekend should be a time to play with it....

TDD

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:DSQ4a.44691$e9.32762@fe04.atl2.webusenet.com...
> Tom,
>
> This link may help. If it't not to late, ran across it when just browsing
>
> http://www.morsex.com/dipole/index.htm
>
> Best of luck
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "Tom DeYoung" <tdeyoung@n0spam.mn.rr.com> wrote in message
> news:_yi4a.119931$Gm2.3104259@twister.rdc-kc.rr.com...
> > I may just use a chunk of lucite or lexan
> >
> >
> > Question:
> >
> > If I'm not supposed to twist the wires together, but to solder them,
then
> > *how* do I make the physical connection so I can solder them?
> >
> > I'm not visualizing this, LOL.
> >
> > The problem I'm running into is that the feedline is 18ga and the wire
is
> > 14ga.....
> >
> > I don't think I can just solder it, it won't be strong enough...wouldn't
I
> > have to twist them together first, solder them, then slap a wire nut on
> > them???
> > All this in addition to a center insulator
> >

> >
> > TD
> > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> > news:3E51B35B.9040501@ieee.org...
> > > funkbastler wrote:
> > > > You need a center insulator to take the strain of the dipole wires.
> > > >
> > > Those things are hard to find nowadays. Radio Shack doesn't carry
> > > them any more. The only place I could find center insulators was
> > > in the electric fence section at a hardware store.
> > > --
> > > cheers, CAM http://www.qsl.net/w5dxp
> > >
> > >
> > >
> > > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > > -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
> >
> >
>
>
>

3889. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 05:10:47 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <lvn85v8b903t9bap3m3rutahsvmoehkjtg@4ax.com>
Source record: 124180

On Wed, 19 Feb 2003 22:32:14 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Dan Richardson wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>It is a commonly accepted rule of thumb that a 1/4WL monopole has about
>>>zero dBi gain.
>>
>> Cecil, I don't think so.
>>
>> ï¿½-wave monopole over perfect ground = 5.14 dBi
>>
>> ï¿½-wave ground-plane (free space) = 1.32 dBi
>>
>> Model 'em for youself.
>
>I did, Danny. A 7.2 MHz, 33' ground mounted monopole in
>East Texas = 0 dBi. Would you like the EZNEC file?

Nope. Don't need it. Gain over real ground can vary from about -3 dBi
(extremely poor ground) to about +1 dBi (very good ground). Over sea
water it would have about 4ï¿½ dBi. So soil in Texas doesn't seem too
bad.

However, I don't feel that 0 dBi is an accepted standard. Usually free
space or perfect ground are use to make standards to which all others
are compared.

Maybe I got off the track here but I thought the discussion was about
5/8-wave ground-planes. Which, by the way do not produce the much
touted 3 dB gain compared to a 1/4-wave ground-plane - in free space
or any height over real ground (assuming both are at the same height
and using the same ground conditions).

73

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

3890. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 05:11:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v58osadit30892@corp.supernews.com>
Source record: 124178

Cecil is talking about a 1/4 wave monopole over real ground (but with an elaborate ground system for essentially 100% efficiency). EZNEC example file Vert1.ez is exactly that. You'll see that the maximum gain is just about zero dBi. But even that gain is at an elevation angle of 26 degrees, fine if you're talking to somebody a few hundred miles away. At the low angles needed for DX, the gain is considerably lower. And most of us can knock off at least another couple of dB for ground system loss.

Danny is talking about a 1/4 wave monopole over perfect ground. This is nothing but an intellectual curiosity except for people on a seagoing boat or living within a few hundred feet of salt water. Actually, Danny probably is in this latter category, and probably does have something pretty close to a perfect-ground pattern to his west. (I once worked JA on 40 meter CW while mobile on highway 101 -- I was running about 8 watts output to an 8 foot CB whip, base loaded with a powdered iron inductor and mounted to the bumper of my VW Squareback. Amazing what you can do when you can get that kind of pattern.) But for most of us, the perfect-ground pattern is something we just can't have.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Dan Richardson wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>> It is a commonly accepted rule of thumb that a 1/4WL monopole has about
>>> zero dBi gain.
>>
>>
>> Cecil, I don't think so.
>>
>> ï¿½-wave monopole over perfect ground = 5.14 dBi
>>
>> ï¿½-wave ground-plane (free space) = 1.32 dBi
>>
>> Model 'em for youself.
>
>
> I did, Danny. A 7.2 MHz, 33' ground mounted monopole in
> East Texas = 0 dBi. Would you like the EZNEC file?

3891. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 05:18:23 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302192118.3aa591c0@posting.google.com>
Source record: 124179

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:<3E540E86.4030009@ieee.org>...
> Dino wrote:
> > Yes, no, maybe... Where do you want to put wave front? Straight up...NVIS?
> > Out towards the horizon...long skip? Up higher...short skip?
>
> As a ham, I don't care one iota about ground wave. If I could put all my
> ground wave energy into a sky wave I would be happy.

Many do though. I know myself, when I run 10m, the ground wave, or
maybe you should really call it "space wave", was very important. In
this town, there are many hams on 10m, and many talk locally, and dx
both. I used to hang out on 10m a whole lot, and have tried all the
various antennas for both ground wave, and sky wave. For me, the
elevated verticals usually had the best sky wave reports over a simple
horizontal dipole at the same height. Locally way better. If I had to
choose a single simple antenna for 10m, it would be a 1/2 wave or 5/8
wave vertical. Of course, a good yagi will eat them for lunch...

Personally, I prefer
> a larger footprint than a 5/8WL yields. It indeed does have gain at the
> expense of real estate area covered. The first skip zone can be visualized
> as a flat donut. A 5/8WL yields a skinnier donut than a 1/4WL. To be sure,
> the mid-range of the donut ring for a 5/8WL yields about 1/2 an S-unit of
> gain but it is at the expense of coverage area. If I want a small coverage
> area with lots of gain, I will get a beam.

I think the "average" 5/8 GP does have a large footprint, due to the
use of 1/4 wave radials. :(The 5/8 with 5/8 sloping radial versions
shouldn't though. :)
Yea, the beam is really the way to go, if you want to brown the food
in a certain direction...

MK

3892. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 05:45:24 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v58qrm94nv8s24@corp.supernews.com>
Source record: 124181
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

That may well be, however it is not "ignition" noise.

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E544944.C486B1C1@attbi.com...
> The fuel injectors are an established form of noise, 'just like spark
> plugs', in diesels.
>
> Deacon Dave, W1MCE
> + + +
>
> "Dr. Fred Hambrecht Sr" wrote:
> >
> > If you have ignition noise, you do not have a diesel truck.
> >
> > Most likely the noise is coming from the fuel pump and alternator.
> >
> > "Rudi" <wiedemann@attbi.com> wrote in message
> > news:WAT4a.168748$tq4.3553@sccrnsc01...
> > > Does anyone know how to reduce or eliminate the ignition noise in a
diesel
> > > truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
> > turbodiesel
> > > with a 706IIG. Still gets by the Noise Blanker on all HF bands.
> > >
> > > 73s........Rudi - WA6RW
> > >
> > >

3893. Re: Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 06:44:31 UTC
From: Barry Lennox <pbarryplennoxp@operamail.com>
Message-ID: <j3u85vctkli4amb9fsckg6jp23abrv839r@4ax.com>
Source record: 124182

On Wed, 19 Feb 2003 17:42:18 -0800, <Jimnn7k@reno.rmci.net> wrote:

>Second that, altho some sources are out of print- I..E.. magazine like the
>old VHF'er which MEASURERED antenna gain, and stated the measurements (one
>from contest on a cushcraft yagi (this 30 years ago) 432 antenna had 8 dB
>gain of the BACK , and a loss of -2.2 dB off the front! and other such, also
>how to build reference dipoles, ect. but the BIG NAME- (expert -you can
>say "he wrote the book" , as he did was by John Kraus Ph.D. , W8JK, Also
>Professor of electrical engineering, Ohio State University, "Antennas",
>printed by McGraw-Hill
>ISBN 07-035410-3

John Krause has also released a new book in 2002, in conjuction with
Ronald Marhefka: "Antennas for all Applications" It's very good, not
quite so much math as "Antennas" and up to date. Not bad for somebody
born in 1910 !

Barry Lennox

3894. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 06:54:10 UTC
From: dino@nomail.com
Message-ID: <mY_4a.12872$YU4.1072749@newsread1.prod.itd.earthlink.net>
Source record: 124183

I took a quick look at the web pages but haven't taken the time to digest it.
Very nice job though! Thanks for the effort, I'm sure I'm going to learn
something when I'm done! Thanks Mark!

Mark Keith said...

>You want to see why I think
>his antenna is inferior without even looking at it? And why the
>radials are the problem? Check out some modeling I did on the subject.
>http://web.wt.net/~nm5k/acompari.htm
>It's my opinion that if his antenna uses 1/4 wave radials, there is no
>way on earth it will ever beat my versions. I don't care how efficient
>the matching device is. I know my matching coils are fairly low loss.
>There is no doubt in my mind whatsoever. If they were lossy, I would
>have noticed it. MK

3895. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 07:30:20 UTC
From: Miss Kitty <Longbranch@Anon.com>
Message-ID: <b3206eubn0@pita.alt.net>
Source record: 124184
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

"Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in message
news:v58qrm94nv8s24@corp.supernews.com...
> That may well be, however it is not "ignition" noise.
>
>
>
> "Dave Shrader" <david.shrader@attbi.com> wrote in message
> news:3E544944.C486B1C1@attbi.com...
> > The fuel injectors are an established form of noise, 'just like spark
> > plugs', in diesels.
> >
> > Deacon Dave, W1MCE
> > + + +
> >
> > "Dr. Fred Hambrecht Sr" wrote:
> > >
> > > If you have ignition noise, you do not have a diesel truck.

If you sign yourself as a "Doctor" in this newsgroup, then you are most
probably a Proctologist.
Or you are nothing at all.

3896. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 09:36:40 UTC
From: richardharrison@webtv.net
Message-ID: <28329-3E54A1A8-230@storefull-2312.public.lawson.webtv.net>
Source record: 124185

CAM wrote:
"A ground-mounted 1/4WL monopole has about zero dBi gain while a dipole over ground has about 6dBi gain."

Cecil is correct that a horizontal dipole very close to the ground can have a gain greater than that of a vertical antenna. That`s the good news. The bad news is that the direction of maximum radiation is straight up.

From page 886 of the 1955 edition of Terman:
"---a (perfect) ground reflection that reinforces the main lobe will double the field strength (volts per meter) of the main lobe, and so will increase the directive gain (power gain) of the antenna system by a factor of 4 (6db). This assumes that the free-space directional pattern of the transmitting antenna has a maximum in the direction in which the ground reflected wave reinforces the direct radiation. Thus, for a vertical doublet close to the ground, the directive gain is twice the free-space value (3 db), since the presence of the ground does not alter the directional pattern and there is no energy radiated in the direction of the hemisphere occupied by the ground. In contrast, the directive gain of a horizontal antenna very close to the ground can be more than 4 (6 db) as compared with the same antenna in free space---."

That`s all fine, but the isotropic reference is just a point in free-space which radiates equally well in all directions. A dipole in space has a dBi gain because it doesn`t radiate equally well in all directions. The power which doesn`t radiate in a null must radiate in some more favored direction. It thus has a gain over the isotropic radiator. In the short dipole it`s broadside gain.

A ground-mounted 1/4WL monopole not only has a dBi gain because it has a null off its tip end, but it also has 3 db more gain from its ground-mounting which blocks off access to the hemisphere beneath the antenna.

Zero dBi is impossible for any real antenna. Every antenna has a dBi gain. There can be offsetting losses but the basic gain is there because an isotropic antenna is impossible. Every directional antenna has inherent gain. Even the elementary doublet which may be only one degree in electrical antenna length has a power gain of 1.5 times (not db) versus the isotropic according to Terman.

The characterization error of zero dBi for a ground-mounted 1/4-wave vertical antenna is much greater than would be calling the elementary doublet a zero dBi antenna, and even that would be wrong. The only zero dBi antenna is the fictional isotropic antenna.

Best regards, Richard Harrison, KB5WZI

3897. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 09:51:37 UTC
From: richardharrison@webtv.net
Message-ID: <28329-3E54A529-231@storefull-2312.public.lawson.webtv.net>
Source record: 124186

Dan Richardson wrote:
"Model `em for yourself."

That seems a good suggestion. A frequent problem seen in this newsgroup is acceptance of modeled results as reality when the model may be in error or misapplied.

You can`t just shove any old meat into the grinder and correctly declare the output the best sausage ever.

Best regards, Richard Harrison, KB5WZI

3898. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 10:53:31 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E54B3AB.3C5CBC2F@cwis.net>
Source record: 124187

funkbastler
>
> A properly designed balun will provide the ground path, assuming you
> have a good earth ground, and perhaps help the radiation pattern just
> a wee little bit.

I've never seen a balun yet that had a 'path' to ground. How
do you do that?
'Doc

3899. Re: dipole part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 11:49:15 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <1M35a.23958$Mr5.23516@fe06.atl2.webusenet.com>
Source record: 124190

Glad to be of help.

Enjoy

--
73,
Chuck
KE4ETH
USA-NA

"Tom DeYoung" <tdeyoung@n0spam.mn.rr.com> wrote in message
news:Y3Z4a.1140$xb.70689@twister.rdc-kc.rr.com...
> Nope, it's not too late, thanks!
>
> This weekend should be a time to play with it....
>
> TDD
>
>
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:DSQ4a.44691$e9.32762@fe04.atl2.webusenet.com...
> > Tom,
> >
> > This link may help. If it't not to late, ran across it when just
browsing
> >
> > http://www.morsex.com/dipole/index.htm
> >
> > Best of luck
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA
> >

3900. dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 12:02:41 UTC
From: normanseifert@webtv.net
Message-ID: <9317-3E54C3E1-48@storefull-2316.public.lawson.webtv.net>
Source record: 124195

Is the dB gain a good indication of an antenna? Is an indoor amplified fm antenna with a higher dB better than an outside fm antenna with a lower dB? Do inline signal boosters really help improve the signal from an outside antenna? I'm planning to buy an fm radio antenna to try to receive better a fm station 60 miles away that I can only faintly hear now. I have a Radio Shack DX-392. Any comments and suggestions would be appreciated. Thanks,

Norman Seifert
Swannanoa, N.C., U.S.A.

3901. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 12:21:05 UTC
From: "--. .. ..."
Message-ID: <TAWdnRkze6avVcmjXTWcoA@comcast.com>
Source record: 124188

"Dino" <dino@nomail.com> wrote in message
news:hbS4a.10958$YU4.991836@newsread1.prod.itd.earthlink.net...
> This is just George stirring the pot... Its too bad really.

Yes it is too bad that your looking like a fool

3902. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 12:25:26 UTC
From: "--. .. ..."
Message-ID: <hpucnZCOhaGqVMmjXTWcpg@comcast.com>
Source record: 124189

"Dino" <dino@nomail.com> wrote in message
news:MwS4a.11014$YU4.984757@newsread1.prod.itd.earthlink.net...

> BTW, so we are clear, George, is the one who titled this thread. I never
> said it was new and I don't make any inflated claims or hype.

Oh Dino your such a liar.

> George likes to stir the pot. He will comment on those who agree with him
> and keep interestingly silent on those who don't.

Call it stirring the pot you don't like that you have been taken to task on
the false claims you made.
So far they all have agreed with me and none with you

3903. dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 12:30:24 UTC
From: normanseifert@webtv.net
Message-ID: <28331-3E54CA60-46@storefull-2312.public.lawson.webtv.net>
Source record: 124194

Is the dB gain of an antenna an indication of the strength of the antenna? Is an outside fm antenna with a lower dB gain better than an inside amplified fm antenna with a higher dB gain? Does an amplified inline signal booster really help an outside antenna? I want to try to receive better a fm station 60 miles away that I can now only recieve very weakly. I have a Radio Shack DX-392 radio. Any comments or suggestions will be appreciated. Thank you,

Norman Seifert
Swannanoa, N.C., U.S.A.

3904. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 12:34:53 UTC
From: "--. .. ..."
Message-ID: <U-ecnW2aCM_wVsmjXTWcrg@comcast.com>
Source record: 124191

"Dino" <dino@nomail.com> wrote in message
news:mY_4a.12872$YU4.1072749@newsread1.prod.itd.earthlink.net...
> I took a quick look at the web pages but haven't taken the time to digest
it.
> Very nice job though! Thanks for the effort, I'm sure I'm going to learn
> something when I'm done! Thanks Mark!

Dino he just shredded your post and all your claims and you don't even reply
to them.

Some advise before you come out spouting about some latest and greatest
antenna be prepared

3905. Re: Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 12:40:41 UTC
From: Helmut Wabnig <hXwabnig@aXon.at>
Message-ID: <a2j95v4eii0ki4iqtpdl1al9hb6o81nppe@4ax.com>
Source record: 124193

On Thu, 20 Feb 2003 19:44:31 +1300, Barry Lennox
<pbarryplennoxp@operamail.com> wrote:

>On Wed, 19 Feb 2003 17:42:18 -0800, <Jimnn7k@reno.rmci.net> wrote:
>
>>Second that, altho some sources are out of print- I..E.. magazine like the
>>old VHF'er which MEASURERED antenna gain, and stated the measurements (one
>>from contest on a cushcraft yagi (this 30 years ago) 432 antenna had 8 dB
>>gain of the BACK , and a loss of -2.2 dB off the front! and other such, also
>>how to build reference dipoles, ect. but the BIG NAME- (expert -you can
>>say "he wrote the book" , as he did was by John Kraus Ph.D. , W8JK, Also
>>Professor of electrical engineering, Ohio State University, "Antennas",
>>printed by McGraw-Hill
>>ISBN 07-035410-3
>
>John Krause has also released a new book in 2002, in conjuction with
>Ronald Marhefka: "Antennas for all Applications" It's very good, not
>quite so much math as "Antennas" and up to date. Not bad for somebody
>born in 1910 !

May I ask if you have actually seen the book?
Am searching for infos on Patch Antennas,
especially those circularly shaped ones.

Thanks.
w.

3906. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 13:47:14 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <eol95vo76kl0pd36m2mm11hblvqldcf6hu@4ax.com>
Source record: 124196

On Thu, 20 Feb 2003 04:53:31 -0600, 'Doc <w5lz@cwis.net> wrote:
>
>funkbastler
>>
>> A properly designed balun will provide the ground path, assuming you
>> have a good earth ground, and perhaps help the radiation pattern just
>> a wee little bit.
>
> I've never seen a balun yet that had a 'path' to ground. How
>do you do that?
> 'Doc

Well, first, I guess I should say I'm talking about a DC ground
path, not an RF path.

Have a look at "Transmission Line Transformers" by Jerry Sevick,
or the ARRL Handbood or Antenna Book.

The balun I'm using is essentially two pieces of 100 ohm parallel
transmission line wound on cores. On the transmitter side, the
lines are connected in parallel, and on the antenna side they're
in series. That ties everything together.

The more well known but less than optimal "bifilar wound" balun
also provides a ground path, since both windings are connected
together.

This assumes of course that the coax shield is grounded.

-fb-

3907. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 13:49:13 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b32mcp$nk1$1@sparta.btinternet.com>
Source record: 124197

"H. Adam Stevens" wrote > Questions:
> 1. Q of two 1/4 wave coax stubs in series?
> 2. Q of dipole? Q of both in parallel at resonance?
> 3. Is 1:1 bandpass maximized when the two Q's are equal?

==========
Insufficient information.

Bandwidth of a pair of coupled tuned circuits depends just as much on the coefficient of coupling as it does on Q - a vital factor not mentioned in the reams of waffle.

Bandwidth is maximised when the Q's are equal.

Critical coupling is given by 1/Sqrt(Q1*Q2).

Over-coupling results in double-humped response. Beware of too-tight a coupling or humps occur outside the required band with little in between. Bazooka's are very tight.

Other necessary info -

(1) Definition of "Bazooka Bandwidth".
(2) Where in the system, antenna + line + tuner, is it measured ?

Reg, G4FGQ

3908. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 14:07:51 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v59ocim8vc1kf0@corp.supernews.com>
Source record: 124198

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b32mcp$nk1$1@sparta.btinternet.com...
> "H. Adam Stevens" wrote > Questions:
> > 1. Q of two 1/4 wave coax stubs in series?
> > 2. Q of dipole? Q of both in parallel at resonance?
> > 3. Is 1:1 bandpass maximized when the two Q's are equal?
>
> ========================
> Insufficient information.
>
> Bandwidth of a pair of coupled tuned circuits depends just as much on the
> coefficient of coupling as it does on Q - a vital factor not mentioned in
> the reams of waffle.
Well I did mention it in a way.
At resonance the antenna is a 50 ohm resistor and the stubs at least 4k ohms
or so.
So it seems to me they're isolated by ~20log(50/4000)=38db at resonance.
The coupling may be part of why it "falls apart" suddenly away from
resonance.
>
> Bandwidth is maximised when the Q's are equal.
BINGO
It dawned on me while I was thinking of the symmetry of the curves for
parallel and series resonant circuits.
With equal Q's they should mirror each other best. They only overlap if
everybody's resonant at the same place.
>
> Critical coupling is given by 1/Sqrt(Q1*Q2).
>
> Over-coupling results in double-humped response. Beware of too-tight a
> coupling or humps occur outside the required band with little in between.
> Bazooka's are very tight.
And intolerant of off resonance construction; My 160 meter attempt is a good
example.
There's no 1:1 region at all and a dipole is noticably better.
>
> Other necessary info -
>
> (1) Definition of "Bazooka Bandwidth".
Bandwidth where SWR is 1:1 (or looks like it).
> (2) Where in the system, antenna + line + tuner, is it measured ?
At the end of a ~1/2 wave transmission line.
> ---
> Reg, G4FGQ

>
>
So did the folks back in the 40's go from the single bazooka sleeve
to the double bazooka to make the stub Q higher and more like the Q of the
dipole,
thus maximizing the bandwidth?
H.
NQ5H

3909. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 14:12:20 UTC
From: No Name <NoName@mycomputer.net>
Message-ID: <a5o95vcnp25iktqjmmj200tun6k3n4bu23@4ax.com>
Source record: 124199
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Most modern light diesel trucks use solenoid injectors they make
lots of noise that sounds just like spark noise. Since the injection
of fuel during the compression cycle causes ignition in a diesel
engine thus it could be considered ignition noise.

You call yourself "Dr." might I ask Dr. of what? Just interested
in the relevance to antenna matters, if any.

On Wed, 19 Feb 2003 20:49:06 -0500, "Dr. Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>If you have ignition noise, you do not have a diesel truck.
>
>Most likely the noise is coming from the fuel pump and alternator.
>
>"Rudi" <wiedemann@attbi.com> wrote in message
>news:WAT4a.168748$tq4.3553@sccrnsc01...
>> Does anyone know how to reduce or eliminate the ignition noise in a diesel
>> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
>turbodiesel
>> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>>
>> 73s........Rudi - WA6RW
>>
>>
>

3910. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 14:26:06 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v59pep546j7k72@corp.supernews.com>
Source record: 124200
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

So, whatever your name is.....;^)
Can you put grounded, steel cans around the solenoids?
I think I've seen similar problems in ignition systems where the coil was
not shielded.
H.
NQ5H

"No Name" <NoName@mycomputer.net> wrote in message
news:a5o95vcnp25iktqjmmj200tun6k3n4bu23@4ax.com...
>
> Most modern light diesel trucks use solenoid injectors they make
> lots of noise that sounds just like spark noise. Since the injection
> of fuel during the compression cycle causes ignition in a diesel
> engine thus it could be considered ignition noise.
>
> You call yourself "Dr." might I ask Dr. of what? Just interested
> in the relevance to antenna matters, if any.
>
>
>
>
> On Wed, 19 Feb 2003 20:49:06 -0500, "Dr. Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> >If you have ignition noise, you do not have a diesel truck.
> >
> >Most likely the noise is coming from the fuel pump and alternator.
> >
> >"Rudi" <wiedemann@attbi.com> wrote in message
> >news:WAT4a.168748$tq4.3553@sccrnsc01...
> >> Does anyone know how to reduce or eliminate the ignition noise in a
diesel
> >> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
> >turbodiesel
> >> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
> >>
> >> 73s........Rudi - WA6RW
> >>
> >>
> >
>

3911. High performance antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 14:33:14 UTC
From: Heinz Bolli <heinz.bolli@hbag.ch>
Message-ID: <3e54e6a8$1_2@news.bluewin.ch>
Source record: 124201

Hi all

We are constructing a new antenna tuner/matchbox especially for symmetric antennas. The most important featueres will be:

- Matching of symmetric antennas
- 1.8 to 30 MHz
- High impedance matching range, capability for compensation of high reactive loads. (50 Ohm to up to 3000 Ohm +/- 3000 Ohm reactive)
- High power handling (up to 2 kW)
- Remotable and/or automatic function
- Working in Transmit- AND Receive-Mode (with ICOM-Transceivers)
- Matching unit for outdoor mounting (near antenna feedpoint)
- Control unit for indoor use (near Transceiver)

We are looking for techincal interested amateurs for broad field tests. We offer a absolute high quality unit from our pre-series for a fair price.

Interested? Then contact immedialtely:

Heinz Bolli HB9KOF

HEINZ BOLLI AG
Ruetihofstrasse 1
CH-9052 Niederteufen / Switzerland

Phone: +41 71 333 4833
Fax: : +41 71 333 4843

3912. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 14:36:22 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b32p55qpc1@sparta.btinternet.com>
Source record: 124202

I'm sure there's others on here much better qualified to answer this than me, but for what it's worth and in the absence of other replies here's my 2c :-

1. An antenna with gain will probably not offset the loss of radio signals going through your property (to an indoor antenna). Outside, and as high as possible, is preferable. Having said that, of course a top quality indoor antenna will probably outperform a rubbish or defective one mounted on the roof! Unless there's a good reason you want an indoor antenna, get one on the roof.

2. An inline signal "booster" or pre-amp will only amplify what it detects from the antenna. In other words, if your antenna is only picking up static noise on the frequency of station you are trying to hear 60 miles away, the pre-amp will simply boost the static noise. Think of it like an audio amplifer - give it hiss on the input, and you'll get louder hiss on the output. A good quality pre-amp will help where there is a signal there, but it's a little quiet. It will also help if the pre-amp you use has a better front end than the one in your radio. I don't know your radio though.

I would advise that you put an antenna with reasonable gain (3 to 6dbd) on your roof as high as possible. If that doesn't pick up the station you're after, try a pre-amp. If you still don't hear it, you probably can't.

Watch out for rash claims on antenna gain. An antenna with 3dbd gain will (as a very general rule of thumb) be twice the size of one with no gain. Be wary of antenna's that are half the size of a regular one and claim 6dbd gain!

There is also a difference between "dbi" and "dbd" which is sometimes taken advantage of by the antenna company's but I won't go into that here. In a nutshell, dbi is less, so an antenna with 3dbd gain has higher gain than one with 3dbi.....

Hope that helps some,

D

"
Norman Seifert" <normanseifert@webtv.net> wrote in message
news:9317-3E54C3E1-48@storefull-2316.public.lawson.webtv.net...
> Is the dB gain a good indication of an antenna? Is an indoor amplified
> fm antenna with a higher dB better than an outside fm antenna with a
> lower dB? Do inline signal boosters really help improve the signal from
> an outside antenna? I'm planning to buy an fm radio antenna to try to
> receive better a fm station 60 miles away that I can only faintly
> hear now. I have a Radio Shack DX-392. Any comments and suggestions

> would be appreciated. Thanks,
>
> Norman Seifert
> Swannanoa, N.C., U.S.A.
>

3913. RX vs. Tx Antenna resistance?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 14:56:40 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v59rovi7m5f697@corp.supernews.com>
Source record: 124204

On transmit the ohmic loss of the antenna wire due I squared R is a function of the wire's resistance at the frequency and can be calculated. On receive very little current flows so would one be able to detect (and show calculations) the difference between receive antennas that had one ohm total resistance versus one that has 50 ohms?
tnx
hank wd5jfr

3914. Re: Diamond Quad Loops and "pure" polarity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 14:59:02 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b32qfmga1@venus.btinternet.com>
Source record: 124203

Dale Parfit's reply is correct.

The signal radiated from a full wave loop, square, diamond, circular, is predominantly horizontal if fed at the bottom, and predominantly vertical if fed from one side. But it also depends on the direction and elevation angle.

And if fed from other angles it will have the characteristics roughly of a sloping antenna.

But this information is not of great use because, in practice, height above ground, disposition of the feedline, your house, your neighbour's house, trees, phone and power cables, other obstructions and reflectors in your back yard will randomly, perhaps seriously distort any theoretical radiation pattern.

Your friend mentions a value of 3dB. Ask him what is the uncertainty in that figure. +/-6dB, +/-10dB ?

Reg, G4FGQ

3915. Re: ignition (No, injector) noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 15:32:16 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3E54F500.14EF1744@crosslink.net>
Source record: 124192
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Rudi wrote:
>
> Maybe the fuel injector solenoids?

There was this same thread over on rec.outdoors.rv-travel a while back.

Noise source is definately the solenoids, or rather the pulses that
drive them.

Don't recall the fix but any of the "outlaw" CB shops found near truck
stops prolly knows what to do. <grin> Ain't that awful!

3916. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 15:34:18 UTC
From: richardharrison@webtv.net
Message-ID: <12139-3E54F57A-167@storefull-2314.public.lawson.webtv.net>
Source record: 124205

Norman Seifert wrote:
"Is the dB gain a good indication of an antenna?"

Yes, if it is accurate. Directivity produces gain. But, different antennas may have the same gain while having differing response patterns. Gain is not the whole story.

An amplifier produces gain but does not discriminate between signals of differing azimuths and elevations. An amplifier also produces noise and distortion. If a signal is too weak or too strong, the amplifier can hurt reception.

Off-the-air reception is a contest between signal and noise. One signal to noise advantage is obtained by limiting reception to the signal`s direction. A directional antenna more or less does this. An amplifier with the same gain does not. Limiting noise with antenna polarization and frequency discrimination is less practical at FM broadcast frequencies, but it doesn`t hurt to try.

When trying to receive a distant station, you find that different spots inthe same area have varying signal to noise ratios. That is, there are good reception spots and there are bad reception spots. It may be worthwhile to survey the area for a good reception spot.

Best regards, Richard Harrison, KB5WZI

3917. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 15:56:29 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <oro95vslsbf7v7vos7oub5a4ripsrtgoun@4ax.com>
Source record: 124206

On Wed, 19 Feb 2003 21:43:30 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

|Absolutely. ------Much moreso than resistors.
|
|Questions:
|1. Q of two 1/4 wave coax stubs in series?

Same as one alone. For RG-8X @ 7 MHZ Q ~ 31. (Calculated 31.8)

|2. Q of dipole?

For a 7.15 MHz dipole, 0.24" diameter, 1/2 wave above ground, Q ~ 8.4.

|Q of both in parallel at resonance?

Q ~ 7.6

|3. Is 1:1 bandpass maximized when the two Q's are equal?

The "1:1" (I assume you mean SWR) BW is maximized when the Q = 0.
Remove the antenna and stub and replace them with a 50 ohm resistor.
:)

|4. Solve Fermat's last theorem?
|(Pick 3)
|H.
|
|"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
|news:b31hhssdc1@helle.btinternet.com...
|> It may be of interest (but not in connection with Bazooka's) -
|>
|> Zo of any line, of any length, at any frequency = Sqrt(Zoc * Zsc) ohms.
|>
|> Also, at 1/4-wave resonance,
|>
|> VSWR = Sqrt(Zsc / Zoc) = Zsc / Zo = Zo / Zoc and,
|>
|> perhaps surprising,
|>
|> Q = VSWR* Pi / 4 = 0.7854 * VSWR,
|>
|> where VSWR is that measured at the input of a 1/4-wave resonant line when
|> the other end is either open corcuit or short circuit.
|>
|> Arn't transmission lines fascinating?
|>

```
|> ---
|> Reg, G4FGQ
|>
|>
|>
|>
|>
|>
|
```

3918. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 15:58:12 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <slu95vk331g3md59dvtn8fqk38cdv45h4r@4ax.com>
Source record: 124207

On Thu, 20 Feb 2003 03:20:28 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

|It may be of interest (but not in connection with Bazooka's) -
|
|Zo of any line, of any length, at any frequency = Sqrt(Zoc * Zsc) ohms.
|
|Also, at 1/4-wave resonance,
|
|VSWR = Sqrt(Zsc / Zoc) = Zsc / Zo = Zo / Zoc and,
|
|perhaps surprising,
|
|Q = VSWR* Pi / 4 = 0.7854 * VSWR,

Spot on! I did it differently but your way is simpler.

|
|where VSWR is that measured at the input of a 1/4-wave resonant line when
|the other end is either open corcuit or short circuit.
|
|Arn't transmission lines fascinating?
|
|---
|Reg, G4FGQ
|
|
|
|
|

3919. bencher skyhawk vs m2 kt36xa

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 16:14:20 UTC
From: lemwnash@aol.com
Message-ID: <20030220111420.14140.00000007@mb-fo.aol.com>
Source record: 124208

anyone have any info on comparing these two antennas?

3920. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 16:26:43 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e550336_4@news1.prserv.net>
Source record: 124209
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

The solenoids are probably already in steel cans to survive the pressure. The noise is not from the solenoids. The noise is generated by the fast semiconductor switch which drives the solenoid, and radiated by the wiring which runs from whichever computer contains the switches over to each solenoid.

If the manufacturers followed good electrical practice by putting all this electronic junk in proper shields with the power connections properly bypassed, there would be no RFI nor problems in the other direction where your transmitter causes automobile malfunction. But, If you modify it, your warranty probably isn't worth a plugged nickel.

--
Crazy George
Remove NO and SPAM from return address
"H. Adam Stevens" <solo@totalaccess.net> wrote in message
news:v59pep546j7k72@corp.supernews.com...
> So, whatever your name is.....;^)
> Can you put grounded, steel cans around the solenoids?
> I think I've seen similar problems in ignition systems where the coil was
> not shielded.
> H.
> NQ5H
>
> "No Name" <NoName@mycomputer.net> wrote in message
> news:a5o95vcnp25iktqjmmj200tun6k3n4bu23@4ax.com...
> >
> > Most modern light diesel trucks use solenoid injectors they make
> > lots of noise that sounds just like spark noise. Since the injection
> > of fuel during the compression cycle causes ignition in a diesel
> > engine thus it could be considered ignition noise.
> >
> > You call yourself "Dr." might I ask Dr. of what? Just interested
> > in the relevance to antenna matters, if any.
> >
> >
> >
> >
> > On Wed, 19 Feb 2003 20:49:06 -0500, "Dr. Fred Hambrecht Sr"
> > <w4jle@charter.net> wrote:
> >
> > >If you have ignition noise, you do not have a diesel truck.
> > >
> > >Most likely the noise is coming from the fuel pump and alternator.

> > >
> > >"Rudi" <wiedemann@attbi.com> wrote in message
> > >news:WAT4a.168748$tq4.3553@sccrnsc01...
> > >> Does anyone know how to reduce or eliminate the ignition noise in a
> diesel
> > >> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
> > >turbodiesel
> > >> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
> > >>
> > >> 73s........Rudi - WA6RW
> > >>
> > >>
> > >
> >
>
>

3921. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 16:41:50 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302200841.5774aa3c@posting.google.com>
Source record: 124210

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<28329-3E54A529-231@storefull-2312.public.lawson.webtv.net>...
> Dan Richardson wrote:
> "Model `em for yourself."
>
> That seems a good suggestion. A frequent problem seen in this newsgroup
> is acceptance of modeled results as reality when the model may be in
> error or misapplied.
>
> You can`t just shove any old meat into the grinder and correctly declare
> the output the best sausage ever.
>
> Best regards, Richard Harrison, KB5WZI

Richard' You know that your previous post coupled with the above shows
that
as yet we have still not got a good solution with respect to antenna
terms.
I also do believe that the popular computorizing of programs is not
helping anything either. I have a program where you can change the
number readout to reflect the "db " term even tho the print outs state
otherwise. I also looked at Tom's page W8TI which is EXCELLENT but
when looking at the computor program he displays (which I believe is
eznec)it gives terms that I am unaware with and thus muddles things
even more. Another publication(made by Force 12) also uses terms
that are not standardised. Even tho the terms used by them and others
may be correct to their way of thinking and to which they proscribe
the required parameters it is a source of real confusion to not only
newcommers to the hobby but also to other more seasoned enthusiasts.
So modeling is not the total answer especially when one tries to
analyse a computor readout that uses terms to which one is unfamiliar
and then proffers it as proof to another who is not familiar with it.
This is also reinforced by the statement that if it is too good to be
true then either you or the program has botched things. So I agree
with you, one always has to make the antenna to prove the point that
programs would suggest as being fact.
Regards
Art

3922. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 16:48:10 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9328598BF85EFpookster@216.168.3.50>
Source record: 124211

Jim Weir <jim@rst-engr.com> wrote in
news:c9j85vg3t3ahii6dvkah2gs2esmnkfq481@4ax.com:

> That's so, unless some stupid clod can't be bothered to do a decent
> search before asking a common question.
>
> Then again, had I seen the "edu" at the end of your addy, I'd not have
> bothered to respond.
>
> jw
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup
>
>

Jim needs a little more fiber in his diet, I'd say.

--
Bill, W7TI

3923. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 17:04:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <er2a5vonv28p78s2uujibruv2vjbf0pbuo@4ax.com>
Source record: 124212
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

On Thu, 20 Feb 2003 10:26:43 -0600, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

> But, If you modify it, your
>warranty probably isn't worth a plugged nickel.

Hi George,

That's if you are lucky. Changing the pulse characteristic to suit
the radio may leave you with dribblers instead of injectors.

73's
Richard Clark, KB7QHC

3924. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 17:11:39 UTC
From: richardharrison@webtv.net
Message-ID: <23661-3E550C4B-209@storefull-2315.public.lawson.webtv.net>
Source record: 124217

Reg wrote:
"---undesirable loss in the coax against the desirable increase in operating bandwidth. But as the song goes, you can`t have one without the other."

That`s true in the case of Q = X / Rloss.

But other low-loss devices don`t need loss for wide bandwidth. An example is coax itself. It can be nearly lossless and have a very wide bandwidth.

Reg says he has read posts here with some amusement. So have I. Lots of numbers spewed from computers haven`t given a clear yes or no to the ARRL Antenna Book assertion:

"---the quarter-wave section (coaxial cable or detuning sleeve used as a bazooka shown in Fig. 11) should be cut to be resonant at exactly the same frequency as the antenna itself. These sections tend to have a beneficial effect on the impedance-frequency characteristic of the system, because their reactance varies in the opposite direction to that of the antenna."

Yes or no?

Best regards, Richard Harrison, KB5WZI

3925. Re: Turning a dual band mobile ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 17:25:07 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <L395a.103$cC3.31622198@news.inreach.com>
Source record: 124213

TC:

First, the fact that it is a mag-mount doesn't affect the way that it is tuned...mag-mount antennas are tuned the same way as other types.

Having said that, the next question is: "What kind of dual band antenna do you have?" If you tell us the brand of antenna, someone on the newsgroup may have the same antenna and the instructions for tuning it. Then you will get the specific info you need.

If you don't know the brand or model of the antenna, then some general concepts may be useful. The usual way an antenna is tuned (but certainly not the only way or even the best way) is to use an SWR (Standing Wave Ratio) meter. You use it to tell when the antenna is "resonant" on the desired frequency. At resonance, the SWR will be minimum, as shown by least reflected power on the meter. You adjust the antenna to get the least (perhaps not quite zero) reflected power. If you don't already have an SWR meter, you need to get one. Perhaps you can borrow one until you can buy or build one of your own. (They are not too difficult to make and plans are on the net). When you check the antenna with an SWR meter for the first time, you may find that it doesn't need any adjustment. If the antenna isn't resonant where you want it to be, then it does need adjustment to bring the SWR down. You then need to examine the antenna for ways to adjust it.

Some antennas have set screws that hold the elements in place. If you can find one or more set screws, loosen them and then slide the elements out or in to make them longer or shorter. Then check to see if the SWR is better or worse. If worse, change the length in the opposite direction and check again with the SWR meter. Keep in mind that you will probably be affecting the SWR on both bands when you make a single change in length...you may need to compromise to have acceptable performance on both bands.

Some antennas come with a "cutting chart" and you need to carefully trim the length of the elements with a hack saw, based on the element lengths shown on the chart. The chart shows how long the element should be for a specific frequency of operation. You need to go slowly and carefully because it is always easier to shorten elements with a hack saw than it is to lengthen them. Remember Norm Abrams' advise: "Measure it twice, cut it once."
Also remember that you shorten an element to move its resonant frequency higher and lengthen it to move the resonant frequency lower.

A third way of tuning an antenna is to look for adjustable capacitors, probably in the base of the antenna. There may be an access hole, but you may also need to disassemble the base to find it. If there is an adjustable capacitor, you may be able to adjust it while feeding some RF power to the antenna on the desired frequency and watching the SWR meter for minimum SWR.

But you may have to make your adjustments and reassemble the antenna before checking it.

There may be other ways of adjusting antennas of a specific manufacturer...

Good luck,

Roger K6XQ

3926. Re: Diamond Quad Loops and "pure" polarity

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 17:28:43 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <x9mdnXtdI7jRjcijXTWcqA@comcast.com>
Source record: 124214

Scott,

The 3db would apply if you had equal amounts of vertical and horizontal signal. You don't. As Dale Parfitt pointed out, the signal is horizontally polarized when fed at the bottom corner. The only vertical components would be due to to dissymmetry and stuff like that. A horizontal dipole fed without a balun will also have vertical components, due to feedline radiation. The 3 db figure seems grossly exagerated; maybe 0.3 db.

Tam/WB2TT
"Scott" <scott2rp789@netscape.net> wrote in message news:3E53FA30.32B28599@netscape.net...
> My friend is claiming a -3dB drop from mis-matched polarization in the above
> scenario. I think his belief comes from the fact that no part of the loop is
> actually in the horizontal plane in the diamond configuration. He seems to imply
> that the quad in the "X" shape produces a more "true" horizontal or vertical
> polarization.
>
> Thanks - Scott.
>
>
>
> Reg Edwards wrote:
>
> > Scott, when two antennas, Tx and Rx, of the same polarisation are in
> > unobructed sight of each other, and not affected by reflections, then if one
> > of the polarisations is rotated by 45 degrees there will be a loss in
> > received signal strength of 3.0 dB.
> >
> > Theoretically, if the polaritity is rotated by the full 90 degrees there
> > will be a loss in received signal strength >100 S-units.
> >
> > This doesn't depend on type of antenna - only on relative polarisations.
> >
> > There is such a thing as circular polarisation produced by a pair of crossed
> > horizontal dipoles fed with a phase difference of 90 degrees. A similar
> > mobile horizontal receiving antenna, while on the move, will then receive a

> > relatively constant fade-free signal.
> >
> > I don't understand your mention of ground wave. If an antenna radiates
only
> > a horizontally polarised groundwave then at distances beyond a 5 or 10
> > wavelengths from the transmitter the signal is almost entirely
dissipated in
> > the ground. It soon gets lost in the local receiving noise level.
> >
> > Diagonal polarisation can be considered to consist of two separate
> > components at right angles to each other - one vertical and the other
> > horizontal. But at HF, once a signal has passed through the ionosphere
it
> > becomes randomly and eliptically polarised. So polarisation of the
receiving
> > antenna doesn't make a lot of difference.
> > ---
> > Reg, G4FGQ
>

3927. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 17:36:47 UTC
From: richardharrison@webtv.net
Message-ID: <23661-3E55122F-214@storefull-2315.public.lawson.webtv.net>
Source record: 124216

Art, KB9MZ wrote:
"So modeling is not the total answer---."

Modeling is a powerful and efficient tool. But, it is only a tool. I am reminded of a statement of Jerry Chinski, Chief Engineer of KXYZ when I worked there in 1949. Jerry said: "You can have the best tools in the world, but if you have a bunch of knuckleheads using them, you get crap."

That was probably not profound nor original, but without a doubt it is still true.

Best regards, Richard Harrison, KB5WZI

3928. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 17:44:35 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302200944.ec6c529@posting.google.com>
Source record: 124215

Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<lvn85v8b903t9bap3m3rutahsvmoehkjtg@4ax.com>...
> On Wed, 19 Feb 2003 22:32:14 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
> >Dan Richardson wrote:

>
> Maybe I got off the track here but I thought the discussion was about
> 5/8-wave ground-planes. Which, by the way do not produce the much
> touted 3 dB gain compared to a 1/4-wave ground-plane - in free space
> or any height over real ground (assuming both are at the same height
> and using the same ground conditions).

I don't know about the 3 db, but I think they do show an improvement over 1/4 and 1/2 wave verticals usually. I compared all three types on 10m local coverage and the 5/8 was always the best antenna time after time. The difference over a 1/2 wave was quite noticable on an S meter. "about 1-1.5 S units" on my radio. I don't know what that actually equates to as far as gain, but to be noticable, it would have to be fairly substantial. I agree with your statement as it applies to the common 5/8 GP with 1/4 wave radials, but I don't agree when the same antenna is used with 5/8 or 3/4 wave radials. According to modeling, the antenna with 5/8 radials does show the theoretical gain. Slope them steeply, and I see a bit more than that as it approaches being a vertical EDZ. BTW, I did use decoupling on the 1/2 wave. So the feedline shouldn't have been radiating too much. MK

3929. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 17:58:45 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <iJKdnU88jryaMMijXTWcpw@comcast.com>
Source record: 124159

"Norman Seifert" <normanseifert@webtv.net> wrote in message
news:9317-3E54C3E1-48@storefull-2316.public.lawson.webtv.net...
> Is the dB gain a good indication of an antenna? Is an indoor amplified
> fm antenna with a higher dB better than an outside fm antenna with a
> lower dB?

Probably not. I assume outside also means higher up.

> Do inline signal boosters really help improve the signal from
> an outside antenna?

The booster will do two things for you. First it will increase the signal so that it overcomes the feedline loss. Second, I believe the DX392 is a multiband radio, and not particularly sensitive on the FM band. So, an amp with a noise figure less than the DX392 will help. You want an FM booster, not a TV booster.

>I'm planning to buy an fm radio antenna to try to
> receive better a fm station 60 miles away that I can only faintly
> hear now. I have a Radio Shack DX-392.

Before you spend a lot of money, you might want to try this: cut a folded dipole resonant to the particular station, and try it up in your attic (The 392 is portable, right? See if it came with a dipole). Orient the dipole at right angles to the station. If it works, run some cable down into the house. If it is not quite enough, then consider an outdoor yagi type antenna on a chimney mount, maybe with an antenna mounted booster.

As you drive around the neighborhood and listen to the car radio, do you get that station well anywhere, for instance on hilltops?

At 60 miles, you may not get good reception all the time, especially if it is a fairly low power station.

Tam/WB2TT

>Any comments and suggestions
> would be appreciated. Thanks,
>
> Norman Seifert
> Swannanoa, N.C., U.S.A.
>

3930. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 18:08:02 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5a6er76ovci65@corp.supernews.com>
Source record: 124119

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:23661-3E550C4B-209@storefull-2315.public.lawson.webtv.net...
> Reg wrote:
> "---undesirable loss in the coax against the desirable increase in
> operating bandwidth. But as the song goes, you can`t have one without
> the other."
>
> That`s true in the case of Q = X / Rloss.
>
> But other low-loss devices don`t need loss for wide bandwidth. An
> example is coax itself. It can be nearly lossless and have a very wide
> bandwidth.
>
> Reg says he has read posts here with some amusement. So have I. Lots of
> numbers spewed from computers haven`t given a clear yes or no to the
> ARRL Antenna Book assertion:
>
> "---the quarter-wave section (coaxial cable or detuning sleeve used as a
> bazooka shown in Fig. 11) should be cut to be resonant at exactly the
> same frequency as the antenna itself. These sections tend to have a
> beneficial effect on the impedance-frequency characteristic of the
> system, because their reactance varies in the opposite direction to that
> of the antenna."
>
> Yes or no?
>
> Best regards, Richard Harrison, KB5WZI
>
All I can say for sure after this fracas is that if they (the stubs and the
dipole) are resonant at exactly
the same frequency, the bouble bazooka works a lot better than if they're
just a little off.
I surmise the bazooka balun may have mutated into two bazookas in series to
more closely match the Q of the dipole. Whether that is the case I don't
know; Either by series connection or increasing the L/D of the dipole, or
maybe just a neat place to hide the tuned circuit.

73
H.
NQ5H

3931. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 18:12:38 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5a6nglrhvctd8@corp.supernews.com>
Source record: 124218

I used a 5/8 on 2 meters with a Gonset Sidewinder in 1964.
Trimmed for best VSWR.
Worked W0HVC in Wichita KS from my mobile in Waco TX.
Can't be too bad. ;^)
H.
NQ5H

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0302200944.ec6c529@posting.google.com...
> Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<lvn85v8b903t9bap3m3rutahsvmoehkjtg@4ax.com>...
> > On Wed, 19 Feb 2003 22:32:14 -0600, OC_CAM's Razor
> > <Cecil.A.Moore@ieee.org> wrote:
> >
> > >Dan Richardson wrote:
>
> >
> > Maybe I got off the track here but I thought the discussion was about
> > 5/8-wave ground-planes. Which, by the way do not produce the much
> > touted 3 dB gain compared to a 1/4-wave ground-plane - in free space
> > or any height over real ground (assuming both are at the same height
> > and using the same ground conditions).
>
> I don't know about the 3 db, but I think they do show an improvement
> over 1/4 and 1/2 wave verticals usually. I compared all three types on
> 10m local coverage and the 5/8 was always the best antenna time after
> time. The difference over a 1/2 wave was quite noticable on an S
> meter. "about 1-1.5 S units" on my radio. I don't know what that
> actually equates to as far as gain, but to be noticable, it would have
> to be fairly substantial. I agree with your statement as it applies to
> the common 5/8 GP with 1/4 wave radials, but I don't agree when the
> same antenna is used with 5/8 or 3/4 wave radials. According to
> modeling, the antenna with 5/8 radials does show the theoretical gain.
> Slope them steeply, and I see a bit more than that as it approaches
> being a vertical EDZ. BTW, I did use decoupling on the 1/2 wave. So
> the feedline shouldn't have been radiating too much. MK

3932. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 18:29:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nl5a5vo5uenm0n2c89sjcib41bcl56m9v1@4ax.com>
Source record: 124120

On Thu, 20 Feb 2003 11:11:39 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>Reg says he has read posts here with some amusement. So have I. Lots of
>numbers spewed from computers haven`t given a clear yes or no to the
>ARRL Antenna Book assertion:
>
>"---the quarter-wave section (coaxial cable or detuning sleeve used as a
>bazooka shown in Fig. 11) should be cut to be resonant at exactly the
>same frequency as the antenna itself. These sections tend to have a
>beneficial effect on the impedance-frequency characteristic of the
>system, because their reactance varies in the opposite direction to that
>of the antenna."
>
>Yes or no?
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Numbers from computers? Where?

As for the statement from the ARRL concerning a bazooka; that is
clearly not shown in the only data provided, and is arguable in the
first place. Common sense says that adding tuned elements increases
Q, the whole point of successive RF stages in a radio, unless another
common technique to broaden a bandpass is used: stagger tuning (which
clearly goes against this same statement above and, again, is entirely
missing in the data).

And for the closing clause of the statement above, Walt demolished
that myth long ago.

Yes or no has long been answered in the negative and that outcome has
been demonstrated in the data provided. It is more than obvious that
no resonance exists in these so-called stubs and they are in fact
air-cooled resistors.

In Bailey's "TV and Other Receiving Antennas," all of those designs
employing tuned transmission line sections as part of the radiating
structure ("Coaxial Antenna," "Shunt Coaxial Antenna") show a
bandwidth of 1/3 (or less) of the equivalent, simple thin wire model.
This confirms the ordinary understanding of adding tuned elements, and
thus raising Q. Simple thick antennas easily show 3 times the
bandwidth compared to their equivalent, thin wire model. It thus

follows that the employment of so-called tuned stub radiators are antithetical to the goal or broadening response - EXCEPT where their thickness lends to the broadening (which requires no tuning, and neither does it demand it in way of explaining such broadening) AND where the loss of such a "tuned" line lends itself to lowering Q (quite obvious in the data).

Needless to say, there are many examples in Bailey that show far superior designs for that same goal, and demonstrate that the Bazooka is another illusion tarted up in quasi-technical descriptions to mask its failure to perform as advertised.

73's
Richard Clark, KB7QHC

3933. Re: RX vs. Tx Antenna resistance?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 18:32:44 UTC
From: richardharrison@webtv.net
Message-ID: <25951-3E551F4C-168@storefull-2317.public.lawson.webtv.net>
Source record: 124122

Hank, WR5JFR wrote:
"---the difference between receive antennas that had one ohm total resistance versus one that had 50 ohms?"

Reciprocity rules in antennas. If the difference in antennas is distinguishable when transmitting, and can be defined, the definition holds for reception. Oscillators are used to excite antennas for measurements regardless of whether the antenna is to be used for transmission or reception.

Best regards, Richard Harrison, KB5WZI

3934. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 18:36:56 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5a828j5086o11@corp.supernews.com>
Source record: 124121
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Thank you for your kind words. It is seldom I run into someone so astute
that from a single message they can glean my occupation.

"Miss Kitty" <Longbranch@Anon.com> wrote in message
news:b3206eubn0@pita.alt.net...
>
> > > "Dr. Fred Hambrecht Sr" wrote:
> > > >
> > > > If you have ignition noise, you do not have a diesel truck.
>
>
> If you sign yourself as a "Doctor" in this newsgroup, then you are most
> probably a Proctologist.
> Or you are nothing at all.
>
>
>
>

3935. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 18:47:04 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5a8l9e2km6h19@corp.supernews.com>
Source record: 124123
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

If you really care to know, rather than post your potshots from Mindspring as No Name, simply ask and I would be pleased to answer your question.

Your remarks border on slander and you have until March 1, 2003 to desist or legal action will follow.

"No Name" <NoName@mycomputer.net> wrote in message news:a5o95vcnp25iktqjmmj200tun6k3n4bu23@4ax.com...

>
> You call yourself "Dr." might I ask Dr. of what? Just interested
> in the relevance to antenna matters, if any.
>
>

3936. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 18:55:21 UTC
From: richardharrison@webtv.net
Message-ID: <25951-3E552499-169@storefull-2317.public.lawson.webtv.net>
Source record: 124124

Mark Keith wrote:
"I don`t know about the 3 dB, but I think they do show an improvement
over 1/4 and 1/2 wave verticals usually."

Thats right.They do better on the level and at low vertical angles.

The improvement of a 5/8 over a 1/4-wave grounded vertical is 2.7 dB,
and you need efficient loading to get it.

Best regards, Richard Harrison, KB5WZI

3937. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 19:28:58 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E552C7A.6050302@ieee.org>
Source record: 124126

Dan Richardson wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>I did, Danny. A 7.2 MHz, 33' ground mounted monopole in
>>East Texas = 0 dBi. Would you like the EZNEC file?
>
> Nope. Don't need it. Gain over real ground can vary from about -3 dBi
> (extremely poor ground) to about +1 dBi (very good ground).

So it sounds like "about zero dBi gain" is a reasonable rule of thumb
for a ground-mounted 1/4WL monopole.
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3938. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 19:31:05 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E552CF9.C397DC3C@cwis.net>
Source record: 124125

funkbastler,
So, in other words, the only ground is through the
shield of the coax. Just like if you were not using
a balun. Same DC path to ground, if the coax is in
fact grounded?
'Doc

3939. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 19:34:24 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <bvaa5vklfko337upp2eippan57e8aj8o3m@4ax.com>
Source record: 124127

On 20 Feb 2003 09:44:35 -0800, nm5k@wt.net (Mark Keith) wrote:

>Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<lvn85v8b903t9bap3m3rutahsvmoehkjtg@4ax.com>...
>> On Wed, 19 Feb 2003 22:32:14 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>> >Dan Richardson wrote:
>
>>
>> Maybe I got off the track here but I thought the discussion was about
>> 5/8-wave ground-planes. Which, by the way do not produce the much
>> touted 3 dB gain compared to a 1/4-wave ground-plane - in free space
>> or any height over real ground (assuming both are at the same height
>> and using the same ground conditions).
>
>I don't know about the 3 db, but I think they do show an improvement
>over 1/4 and 1/2 wave verticals usually. I compared all three types on
>10m local coverage and the 5/8 was always the best antenna time after
>time. The difference over a 1/2 wave was quite noticable on an S
>meter. "about 1-1.5 S units" on my radio. I don't know what that
>actually equates to as far as gain, but to be noticable, it would have
>to be fairly substantial. I agree with your statement as it applies to
>the common 5/8 GP with 1/4 wave radials, but I don't agree when the
>same antenna is used with 5/8 or 3/4 wave radials. According to
>modeling, the antenna with 5/8 radials does show the theoretical gain.
>Slope them steeply, and I see a bit more than that as it approaches
>being a vertical EDZ. BTW, I did use decoupling on the 1/2 wave. So
>the feedline shouldn't have been radiating too much. MK

I don't think so Mark,

I on your suggestion I just model a 5/8 ground-plane using four
5/8-wavelength radials. The antenna's base was placed 1/2-wavelength
above avarage ground comparing it to a 1/4-wave ground-plane using
1/4-wavelength radials at the same height and ground conditions.

Results:

5/8 GP = 3.21 dBi
1/4 GP = 2.09 dBi

Additionally, modeling a 5/8 GP using 1/4-wavelength radials -all
other items the same - gave a gain of 3.25 dBi.

Danny, K6MHE

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

3940. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 19:48:27 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <ojba5vgi6qf0a74gpvqv8kknob0v515l01@4ax.com>
Source record: 124130

On Thu, 20 Feb 2003 12:55:21 -0600 (CST), richardharrison@webtv.net (Richard Harrison) wrote:

>The improvement of a 5/8 over a 1/4-wave grounded vertical is 2.7 dB, >and you need efficient loading to get it.

To active that gain you *must* have the monopoles mounted on a near perfect ground. (perfect ground will yeild the full 3 dB)

Both measurements and computer analysis have substantiated that nether a ground mounted monopole or an elevated grround-plan will not yield the touted 3 dB gain over real earth. (The exception being sea water)

Re: The 5/8-Wavelength Antenna Mystique" , Donald Reynolds, K7DBA, ARRL Antenna Compendium Vol 1.

Danny

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

3941. Re: Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 20:00:05 UTC
From: Barry Lennox <pbarryplennoxp@operamail.com>
Message-ID: <dica5vseb5tpu5tpopo5mkn5p6tq7rfbd1@4ax.com>
Source record: 124128

On Thu, 20 Feb 2003 13:40:41 +0100, Helmut Wabnig <hXwabnig@aXon.at>
wrote:

>On Thu, 20 Feb 2003 19:44:31 +1300, Barry Lennox
><pbarryplennoxp@operamail.com> wrote:
>
snip

>>John Krause has also released a new book in 2002, in conjuction with
>>Ronald Marhefka: "Antennas for all Applications" It's very good, not
>>quite so much math as "Antennas" and up to date. Not bad for somebody
>>born in 1910 !
>
>May I ask if you have actually seen the book?
>Am searching for infos on Patch Antennas,
>especially those circularly shaped ones.

Yes, I have it.It does not have a lot on patch antennas. That's the
problem with books that cover all antennas, it's not possible to
allocate a lot of space to one type. I have another book that has a
lot of info on patch (inc Circular) antennas. It also has a disk of
design software. It's "CAD of Microstrip Antennas for Wireless
Applications" by Robert A Sainati. ISBN 0-89006-562-4 Published by
Artech House.

Barry Lennox

3942. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 20:00:27 UTC
From: AL KA5JGV <ABurzynski@nojunk.satx.rr.com>
Message-ID: <vta5a.16315$DV.604520@twister.austin.rr.com>
Source record: 124129

"Norman Seifert" <normanseifert@webtv.net> wrote in message
news:9317-3E54C3E1-48@storefull-2316.public.lawson.webtv.net...
> Is the dB gain a good indication of an antenna?

Yes, if true, and if all were calculated the same way. Many specifications are distorted to make a product sound good.

Is an indoor amplified fm antenna with a higher dB better than an outside fm antenna with a
> lower dB?

Hard to say but probably not. Inside you are fighting a lot of noise generated within your house. Place your antenna outside and you are further from the noise and therefore better reception.

Do inline signal boosters really help improve the signal from
> an outside antenna?

Generally no. The booster does not separate noise from signal, it amplifies both.

I'm planning to buy an fm radio antenna to try to
> receive better a fm station 60 miles away that I can only faintly
> hear now. I have a Radio Shack DX-392. Any comments and suggestions
> would be appreciated. Thanks,

Get a good quality antenna and place it outside. The further from the house noise and the higher you place it will result in better performance. A rotator might also be something to consider.

Al

3943. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 20:01:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E553429.7090101@ieee.org>
Source record: 124131

Richard Harrison wrote:
> CAM wrote:
> "A ground-mounted 1/4WL monopole has about zero dBi gain while a dipole
> over ground has about 6dBi gain."
>
> Cecil is correct that a horizontal dipole very close to the ground can
> have a gain greater than that of a vertical antenna. That`s the good
> news. The bad news is that the direction of maximum radiation is
> straight up.

Well, it's not all straight up. For a dipole at the same maximum
height as a ground-mounted 1/4WL vertical, it beats the vertical
at all takeoff angles above about 15 degrees.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3944. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 20:05:54 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E553522.3000701@ieee.org>
Source record: 124133

'Doc wrote:
>
> funkbastler
>>A properly designed balun will provide the ground path, assuming you
>>have a good earth ground, and perhaps help the radiation pattern just
>>a wee little bit.
>
> I've never seen a balun yet that had a 'path' to ground. How
> do you do that?

Take a look at the schematic for a 4:1 voltage balun.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3945. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 20:11:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5adkf2n8eai33@corp.supernews.com>
Source record: 124132

I believe the 14th Edition was the last before the total rewriting of the ARRL Antenna Book took place to remove the substantial accumulation of inaccurate and unsupported data that it had collected over the years. If it's about 1/2 - 3/4 inch thick, it's a pre-rewrite edition, and I highly recommend replacing it with a later edition.

The 17th Edition says of the double bazooka that "Not much enhancement is provided by this resonator connection because the impedance of the matching network is too high." But of the "crossed double bazooka", which is connected differently at the feedpoint, it says "In this case, the impedance of the matching network is reduced to one-fourth the impedance of the standard double-bazooka network. The lower impedance provides more reactance correction, and hence increases the bandwidth frequency range noticeably, to 1.55 times that of a simple dipole. Notice however, that the efficiency of the antenna drops to about 80% at the 2:1-SWR points. This amounts to a loss of approximately 1 dB. The broadbanding, in part, is caused by the resistive losses in the coaxial resonator stubs, which have a remarkably low Q (only 20)."

The section following the above quote gives a formula for calculating the Q of coaxial resonators, and there's a chart of Q for various cable types at 3.5 and 1.9 MHz.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Reg wrote:
> "---undesirable loss in the coax against the desirable increase in
> operating bandwidth. But as the song goes, you can`t have one without
> the other."
>
> That`s true in the case of Q = X / Rloss.
>
> But other low-loss devices don`t need loss for wide bandwidth. An
> example is coax itself. It can be nearly lossless and have a very wide
> bandwidth.
>
> Reg says he has read posts here with some amusement. So have I. Lots of
> numbers spewed from computers haven`t given a clear yes or no to the
> ARRL Antenna Book assertion:
>
> "---the quarter-wave section (coaxial cable or detuning sleeve used as a
> bazooka shown in Fig. 11) should be cut to be resonant at exactly the
> same frequency as the antenna itself. These sections tend to have a
> beneficial effect on the impedance-frequency characteristic of the

> system, because their reactance varies in the opposite direction to that
> of the antenna."
>
> Yes or no?
>
> Best regards, Richard Harrison, KB5WZI
>

3946. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 20:25:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5aedfcso6lb47@corp.supernews.com>
Source record: 124134

At least as bad are people who mindlessly quote numbers read from books without paying any attention to the context. For just one example, arguments are made regarding the gains of various antennas without any notice given to the fact that the quoted gain figures depend on a ficticious perfect ground.

You have to understand, textbook analyses are models also. The fact that some poor grad student with a slide rule and mechanical calculator did the grunt work instead of a computer doing it doesn't enhance its accuracy, correctness, or applicability to the task at hand one iota. Textbook quotations are subject to exactly the same knuckleheaded misapplication as computer results, and this is all too often seen.

One more note along this line -- although modeling (whether from textbooks, mathematical analysis, or computers) is rife with traps for the unwary, so is measurement. It can be much more difficult to make decently accurate antenna measurements that to build an accurate model. This sad fact is often underappreciated, particularly by the amateur community.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Art, KB9MZ wrote:
> "So modeling is not the total answer---."
>
> Modeling is a powerful and efficient tool. But, it is only a tool. I am
> reminded of a statement of Jerry Chinski, Chief Engineer of KXYZ when I
> worked there in 1949. Jerry said: "You can have the best tools in the
> world, but if you have a bunch of knuckleheads using them, you get
> crap."
>
> That was probably not profound nor original, but without a doubt it is
> still true.
>
> Best regards, Richard Harrison, KB5WZI
>

3947. Test Message, and hello again to everybody

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 21:03:50 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Ugb5a.12986$0q5.9783@fe01.atl2.webusenet.com>
Source record: 124135

Finally got the news reader to work here at home.

Turns out the news reader uses OutLook Express, even though I use Outlook for everything else. Norton Security had Outlook Express blocked!

Oh, by the way. I was laid off in December. Thats why you haven't seen me on here in a while (previously did news groups only from work).

Jim
N8EE

3948. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 21:07:13 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b33g21$ki1$1@knossos.btinternet.com>
Source record: 124136

Calculated Bandwidth Between SWR = 1.5 : 1 Points for Increases in Conductor Diameter.

7.15 MHz 1/2-wave Dipole
==========

Conductor Diam. mm	1.5 SWR Bandwidth	Percent Bandwidth
1.0 mm	0.208 MHz	2.9 %
2.5	0.226	3.1 %
5.0	0.242	3.4 %
25.4	0.289	4.0 %

Would you bother to increase conductor diameter from 18 gauge to the diameter of RG-58 coax just to improve bandwidth by 34 KHz.

Reg, G4FGQ

3949. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 21:21:23 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5ahpeufdug7c@corp.supernews.com>
Source record: 124137

nope
"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b33g21$ki1$1@knossos.btinternet.com...
>
> Calculated Bandwidth Between SWR = 1.5 : 1 Points for Increases in
Conductor
> Diameter.
>
> 7.15 MHz 1/2-wave Dipole
> ====================
>
> Conductor 1.5 SWR Percent
> Diam. mm Bandwidth Bandwidth
> ======= ======= =======
>
> 1.0 mm 0.208 MHz 2.9 %
> 2.5 0.226 3.1 %
> 5.0 0.242 3.4 %
> 25.4 0.289 4.0 %
>
>
> Would you bother to increase conductor diameter from 18 gauge to the
> diameter of RG-58 coax just to improve bandwidth by 34 KHz.
> ---
> Reg, G4FGQ
>
>
>
>

3950. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 21:25:52 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <qqga5voe52olupgubk438ve7u8d6m55lsd@4ax.com>
Source record: 124138

On Thu, 20 Feb 2003 13:31:05 -0600, 'Doc <w5lz@cwis.net> wrote:

>
>
>funkbastler,
> So, in other words, the only ground is through the
>shield of the coax. Just like if you were not using
>a balun. Same DC path to ground, if the coax is in
>fact grounded?
> 'Doc

Well, hi Paul! Didn't realize that was you.

Not quite - if you're not using a balun, then only half
the antenna is grounded, and the other half is free to
accumulate a static charge. Not too big a problem here,
but I've heard horror stories from folks in drier climates.

Here, I have coax running from the shack out to the balun,
which is mounted on a fence post in the yard. I have a
ground rod there, and another where the coax enters the shack.

-fb- (WA5RRH)

3951. Re: RX vs. Tx Antenna resistance?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 21:29:35 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b33hbv$m6c$1@knossos.btinternet.com>
Source record: 124139

Yes, with a very good receiver and a nice steady signal, you would just about be able to detect the difference between a 1-ohm and 50-ohm wire resistance antenna.

There would be a change in received signal strength of about 1 or 2 dB.

When using the antennas to transmit there would be exactly the same change in signal strength.

Very crudely, Antenna Power Efficiency = Radiation Resistance / (Radiation Resistance + Half Wireloss Resistance).

For a high 1/2-wave dipole, radiation resistance is about 70 ohms.

Reg, G4FGQ

3952. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 22:03:19 UTC
From: richardharrison@webtv.net
Message-ID: <12139-3E5550A7-211@storefull-2314.public.lawson.webtv.net>
Source record: 124141

Cecil, W5DXP wrote:
"So it sounds like "about zero dBi gain" is a reasonable rule of thumb for a ground-mounted 1/4 WL monopole."

I think Cecil is remiss in not saying he is using "power gain figures" and not "directive gain figures" which have indisputable values for common antenna types such as the ground-mounted 1/4-wave vertical over perfect ground.

Directive gain has nothing to do with with efficiencies.The directive gain of an antenna can be used in any situation and the field strengths are then corrected for antenna loss and environmental loss. Maybe Cecil`s modeling program uses "power gain figures".

For grins, Terman gives the "directive gain figure" of a resonant 1/2-wave antenna as compared with an isotropic. The power gain as in free-space, and a simple ratio, not db, is 1.64.

My four-place log tables allow me to convert this to 2.148 db. This means dbd is about 2.15 db gain over dbi.

Many common and some not so common antennas are cataloged by Arnold. B. Bailey in "TV and Other Receiving Antennas. He refers all gain figures to a reference dipole, so the gains given are all dbd. Many commercial antrnna makers do the same. Just add 2.15 to these dbd numbers, and you have the dbi gains.

Power gains have no specific meaning until you specify the losses included. Since the ground-mounted antenna is gaining 3 db from putting all the energy in only one hemisphere and the vertical with its counterpoise has the same gain as a dipole, 2.15 db, It seems to me that Cecil is saying losses for his ground-mounted vertical are about 5.15 db. That makes it on a par with an isotropic in free-space.

Best regards, Richard Harrison, KB5WZI

3953. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 22:06:49 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <8jha5vcsdj56djv21q2a0aslgibfp9nh4d@4ax.com>
Source record: 124140

On Thu, 20 Feb 2003 12:25:20 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

[snip]
|
|One more note along this line -- although modeling (whether from
|textbooks, mathematical analysis, or computers) is rife with traps for
|the unwary, so is measurement. It can be much more difficult to make
|decently accurate antenna measurements that to build an accurate model.
|This sad fact is often underappreciated, particularly by the amateur
|community.
|

You can say that again. Having done radiation and/or impedance
measurements, both in anechoic chambers (L-band, X-band, Ka-band) and
an open field environment, I can attest to the difficulty of getting
accurate data even with the finest instrumentation.

For one test of an adaptive GPS antenna (open field) we used $50,000
worth of microwave absorber on the ground just to control reflections.
We postioned the absorber using an HP8510C Vector Network Analyzer in
the time-domain mode so we could see the reflections.

There are no doubt a few highly skilled amateurs who can do decent
measurements in a home environment, but I'm not counting myself among
them.

I also don't consider myself particularly skilled in modeling;
however, I believe the models more than I do any measurements I might
make. And I have a decent vector ratio meter (HP Vector Voltmeter)
and a couple of Boonton/HP 250 RX meters. I guess I could put A/D
converters on the meters and digitize the readings and display them to
three decimal places and make them more *accurate*. <g>

As to those who poo-poo modeling I ask the following. When
constructing a wire dipole for 40 meters do you:

1) Use the formula L (ft) = 468/F (Mhz) and add a few inches for
pruning?

2) Start with 500 ft of wire with an insulator in the middle and
start pruning the ends a few inches at a time?

If you answered 1, then you must have at least a little faith in a
formula (a "model"), otherwise you would use method 2.

3954. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 22:26:23 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5aljac6o879ca@corp.supernews.com>
Source record: 124142

This leads me to ask a question. I have a FluidMotion BiggIR vertical and I have two choices: on the roof of the house (3500 ft^2 Al roof) or the fencepost at the corner of the yard (I'm on a hill, yard is one acre, outside the yard the cows will eat it.) with a bunch of radials. I have qualms about RFI with my past experience with verticals and am concerned about putting it near the house but that aluminum roof sure looks tempting.
H.
NQ5H

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:12139-3E5550A7-211@storefull-2314.public.lawson.webtv.net...
> Cecil, W5DXP wrote:
> "So it sounds like "about zero dBi gain" is a reasonable rule of thumb
> for a ground-mounted 1/4 WL monopole."
>
> I think Cecil is remiss in not saying he is using "power gain figures"
> and not "directive gain figures" which have indisputable values for
> common antenna types such as the ground-mounted 1/4-wave vertical over
> perfect ground.
>
> Directive gain has nothing to do with with efficiencies.The directive
> gain of an antenna can be used in any situation and the field strengths
> are then corrected for antenna loss and environmental loss. Maybe
> Cecil`s modeling program uses "power gain figures".
>
> For grins, Terman gives the "directive gain figure" of a resonant
> 1/2-wave antenna as compared with an isotropic. The power gain as in
> free-space, and a simple ratio, not db, is 1.64.
>
> My four-place log tables allow me to convert this to 2.148 db. This
> means dbd is about 2.15 db gain over dbi.
>
> Many common and some not so common antennas are cataloged by Arnold. B.
> Bailey in "TV and Other Receiving Antennas. He refers all gain figures
> to a reference dipole, so the gains given are all dbd. Many commercial
> antrnna makers do the same. Just add 2.15 to these dbd numbers, and you
> have the dbi gains.
>
> Power gains have no specific meaning until you specify the losses
> included. Since the ground-mounted antenna is gaining 3 db from putting
> all the energy in only one hemisphere and the vertical with its
> counterpoise has the same gain as a dipole, 2.15 db, It seems to me that
> Cecil is saying losses for his ground-mounted vertical are about 5.15
> db. That makes it on a par with an isotropic in free-space.

>
> Best regards, Richard Harrison, KB5WZI
>
>

3955. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 22:36:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5am3kg26aq9ed@corp.supernews.com>
Source record: 124143

Richard Harrison wrote:

> . . . It seems to me that
> Cecil is saying losses for his ground-mounted vertical are about 5.15
> db. That makes it on a par with an isotropic in free-space.
>
> Best regards, Richard Harrison, KB5WZI
>

Some care has to be taken in making gain comparisons between antennas with different radiation patterns. Cecil's example of an antenna over real ground has a different pattern than the same antenna over perfect ground. So the maximum gain is in a different direction (about 26 degrees above the horizon vs directly at the horizon for the perfect ground antenna).

The gain difference at the horizon is infinite (for sky wave signals), since the real-ground antenna produces no sky wave signal at all at zero elevation angle, and is different at each elevation angle.

It turns out that the overall loss due to ground reflection is about 69% of the total radiated power, and this works out to be just about 5.15 dB. This loss, however, isn't equally distributed at all elevation angles, but is concentrated mostly at the lowest angles. It comes close to Richard's estimate only because the majority of radiation from the perfect-ground model is at those angles.

The numbers used above are from the EZNEC example file vert1.ez, which is a 40 meter quarter wave ground mounted vertical with zero ground system loss but realistic average ground reflection characteristics (MININEC type ground model). The overall power loss is easily determined by changing the plot type to 3D and observing the Average Gain(*). Results will differ somewhat at different frequencies and with different ground characteristics.

Roy Lewallen, W7EL

(*) The Average Gain is the total power in the far field, at all angles, divided by the power being applied to the antenna from the source(s). This model contains no loss except for loss due to ground reflection, so the Average Gain represents the fraction of the power remaining after ground reflection.

3956. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 22:53:19 UTC
From: "--. -. ---"
Message-ID: <I2OdncjjhJ7CwcijXTWcog@comcast.com>
Source record: 124144

"Dan Richardson" <k6mhe@mendolink.com> wrote in message
news:bvaa5vklfko337upp2eippan57e8aj8o3m@4ax.com...
> On 20 Feb 2003 09:44:35 -0800, nm5k@wt.net (Mark Keith) wrote:

> I don't think so Mark,
>
> I on your suggestion I just model a 5/8 ground-plane using four
> 5/8-wavelength radials. The antenna's base was placed 1/2-wavelength
> above avarage ground comparing it to a 1/4-wave ground-plane using
> 1/4-wavelength radials at the same height and ground conditions.
>
> Results:
>
> 5/8 GP = 3.21 dBi
> 1/4 GP = 2.09 dBi
>
> Additionally, modeling a 5/8 GP using 1/4-wavelength radials -all
> other items the same - gave a gain of 3.25 dBi.
>
> Danny, K6MHE

Dan, is there a way for you to model the I-10k 5/8 antenna that was the
start of this topic? I am not sure how you would take into account this
super efficient proprietary matching Network they use. Is there enough info
on the web page for you to model it?

3957. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 22:55:33 UTC
From: "--. -. ---"
Message-ID: <w9-dnVWc9dh4wcijXTWc3w@comcast.com>
Source record: 124145

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:8jha5vcsdj56djv21q2a0aslgibfp9nh4d@4ax.com...
> On Thu, 20 Feb 2003 12:25:20 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
> [snip]
> |
> |One more note along this line -- although modeling (whether from
> |textbooks, mathematical analysis, or computers) is rife with traps for
> |the unwary, so is measurement. It can be much more difficult to make
> |decently accurate antenna measurements that to build an accurate model.
> |This sad fact is often underappreciated, particularly by the amateur
> |community.
> |
>
>
> You can say that again. Having done radiation and/or impedance
> measurements, both in anechoic chambers (L-band, X-band, Ka-band) and
> an open field environment, I can attest to the difficulty of getting
> accurate data even with the finest instrumentation.
>
> For one test of an adaptive GPS antenna (open field) we used $50,000
> worth of microwave absorber on the ground just to control reflections.
> We postioned the absorber using an HP8510C Vector Network Analyzer in
> the time-domain mode so we could see the reflections.

Wes, what do you think of the Interceptor 5/8 antenna and some of the claims
they make?

3958. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 22:58:58 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E555DB2.2000800@ieee.org>
Source record: 124146

Richard Harrison wrote:
> Since the ground-mounted antenna is gaining 3 db from putting
> all the energy in only one hemisphere and the vertical with its
> counterpoise has the same gain as a dipole, 2.15 db, It seems to me that
> Cecil is saying losses for his ground-mounted vertical are about 5.15
> db. That makes it on a par with an isotropic in free-space.

Yep, the demo VERT1.EZ that comes with EZNEC shows -0.03 dBi over
Mininec ground and 5.15 dBi gain over a perfect ground.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3959. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 23:22:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5aop9hu1se308@corp.supernews.com>
Source record: 124147

Purveyors of antennas with extraordinary performance or magical qualities nearly always claim that antenna modeling programs can't accurately model their antennas because they fail to "take into account" whatever amazing property that's responsible for the antenna's wonderful gain. This is of course the only way to explain the inevitable difference between modeled results and their claims.

But don't sell the modeling programs short. EZNEC, at least, is capable of accounting for "critical coupling", independent E and H fields, and super-efficient, gain-producing matching networks.

Here's how to do it. In the main EZNEC window, click "Ref Level". In the "Reference (dBi)" box, enter the gain provided by the magical antenna feature, but as a negative number (since you're comparing the miraculous antenna with a humdrum ordinary antenna). For example, the beam with "critical coupling" is claimed to have about 2 dB greater gain than any normal modeling shows, so simply enter "-2" for this antenna. A CFA or EH might require anywhere from -10 to -20 or so. For the super-efficient matching network, anywhere from -3 to -12 can be used, depending on which advertising claim you want to match. Then in the gain results, simply look at the gains marked "dBref". Presto. EZNEC can indeed model these antennas, and verify the claims made by the manufacturers.

You can even model efficient, broadband antennas with a combination of resistive loads (to increase the bandwidth) and a change in the reference level to make up for the loss -- just like the manufacturer does!

Of course, as this catches on, the manufacturers and salesmen will have to continue to discover ever more wonderful revolutionary properties to explain why their antenna is better than the others, so you might have to increase the reference number from time to time to keep up. But with EZNEC it's easy, and you'll never be left far behind.

Roy Lewallen, W7EL

3960. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 23:49:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E556996.30509@ieee.org>
Source record: 124149

--. -. --- wrote:
> Dan, is there a way for you to model the I-10k 5/8 antenna that was the
> start of this topic? I am not sure how you would take into account this
> super efficient proprietary matching Network they use. Is there enough info
> on the web page for you to model it?

I modeled it and it looks pretty good. Maximum gain about 2.8 dBi
with a vertical beamwidth of 5 degrees to 40 degrees. The only
anomaly is the matching stub seems to cause the radiation pattern
to be asymmetrical by about 1.5 dB. Horizontal radiation from the
stub is about 12 dB down from the vertical radiation.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3961. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 23:55:52 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <6nqa5vsddbguevgktsssou318cooin6i65@4ax.com>
Source record: 124150

Hi,
Fred, ya just couldn't resist could ya. :<}

On Thu, 20 Feb 2003 13:47:04 -0500, "Dr. Fred Hambrecht Sr"
<w4jle@charter.net> sent into the ether:

>If you really care to know, rather than post your potshots from Mindspring
>as No Name, simply ask and I would be pleased to answer your question.
>
>Your remarks border on slander and you have until March 1, 2003 to desist or
>legal action will follow.
>
>
>"No Name" <NoName@mycomputer.net> wrote in message
>news:a5o95vcnp25iktqjmmj200tun6k3n4bu23@4ax.com...
>
>
>>
>> You call yourself "Dr." might I ask Dr. of what? Just interested
>> in the relevance to antenna matters, if any.
>>
>>
>
>

Dan, N9JBF
Amateur radio - What a hobby!
Remove left x for direct reply

3962. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-20 23:56:33 UTC
From: dino@nomail.com
Message-ID: <RWd5a.12194$_c6.1232881@newsread2.prod.itd.earthlink.net>
Source record: 124148

Or you could ask Jay for the file. It has already been modeled.

George, you want to keep stirring that pot, don't you.

Also, why do you keep calling it a "super efficient proprietary matching network"? I never said that; Jay never said that; you are the only person saying that.

Its time for you to keep quiet unless you have something to ADD. Stop asking everyone else to do your bidding. Get off your butt and do some of your own research!

>Dan, is there a way for you to model the I-10k 5/8 antenna that was the
>start of this topic? I am not sure how you would take into account this
>super efficient proprietary matching Network they use. Is there enough info
>on the web page for you to model it?
>
>

3963. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 00:08:52 UTC
From: Ralph Prestros <prestros@agtu.at>
Message-ID: <3E556E14.1040309@agtu.at>
Source record: 124151

AL KA5JGV schrieb:
> "Norman Seifert" <normanseifert@webtv.net> wrote in message
> news:9317-3E54C3E1-48@storefull-2316.public.lawson.webtv.net...
>
>>Is the dB gain a good indication of an antenna?
>
practically yes, but you must have a look which refernce-antenna this
gain is defined. reference-antennas are the thoretical isotropic emitter
[dBi], ther hertz's dipole [dBhd] or the half-wavelength-dipole [dbd].

> Is an indoor amplified fm antenna with a higher dB better than an outside fm
> antenna with a
>

what does a high gain help you, when the signal is buried in high noise?
semiconductor amplifier always bing in additional noise because of the
thermal movement and distortion of the electons in the semiconductor.
so a outside antenne with even lower gain may be better!!!

> Do inline signal boosters really help improve the signal from
>>an outside antenna?
>
> Generally no. The booster does not separate noise from signal, it amplifies
> both.
>
and brings in its own built in noise because of the thermal movement and

the distrotion of the electrons in the semiconductor!!!

3964. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 00:13:12 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5ars11qpnjaec@corp.supernews.com>
Source record: 124152

The devil made me do it... What can I say :>)

"Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
wrote in message news:6nqa5vsddbguevgktsssou318cooin6i65@4ax.com...
> Hi,
> Fred, ya just couldn't resist could ya. :<}
>
> On Thu, 20 Feb 2003 13:47:04 -0500, "Dr. Fred Hambrecht Sr"
> <w4jle@charter.net> sent into the ether:
>
> >If you really care to know, rather than post your potshots from
Mindspring
> >as No Name, simply ask and I would be pleased to answer your question.
> >
> >Your remarks border on slander and you have until March 1, 2003 to desist
or
> >legal action will follow.
> >
> >
> >"No Name" <NoName@mycomputer.net> wrote in message
> >news:a5o95vcnp25iktqjmmj200tun6k3n4bu23@4ax.com...
> >
> >
> >>
> >> You call yourself "Dr." might I ask Dr. of what? Just interested
> >> in the relevance to antenna matters, if any.
> >>
> >>
> >
> >
>
> Dan, N9JBF
> Amateur radio - What a hobby!
> Remove left x for direct reply

3965. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 00:35:26 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <mvsa5vs85jljs4jm8eh50icgecslth10am@4ax.com>
Source record: 124153

On Thu, 20 Feb 2003 15:22:17 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

|Purveyors of antennas with extraordinary performance or magical
|qualities nearly always claim that antenna modeling programs can't
|accurately model their antennas because they fail to "take into account"
|whatever amazing property that's responsible for the antenna's wonderful
|gain. This is of course the only way to explain the inevitable
|difference between modeled results and their claims.

[snip]

|
|Of course, as this catches on, ...

I think they've already figured this out <g>

3966. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 00:52:46 UTC
From: k3bu@aol.com
Message-ID: <20030220195246.27697.00000030@mb-mq.aol.com>
Source record: 124154

>This leads me to ask a question. I have a FluidMotion BiggIR vertical and I
>have two choices: on the roof of the house (3500 ft^2 Al roof) or the
>fencepost at the corner of the yard (I'm on a hill, yard is one acre,
>outside the yard the cows will eat it.) with a bunch of radials. I have
>qualms about RFI with my past experience with verticals and am concerned
>about putting it near the house but that aluminum roof sure looks tempting.
>H.
>NQ5H
>
>

Definitely on the roof, you will have one happy vertical!

Yuri

3967. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 01:02:52 UTC
From: "--. -. ---"
Message-ID: <6YudnYvfefEh58ijXTWcrg@comcast.com>
Source record: 124155

"Dino" <dino@nomail.com> wrote in message
news:RWd5a.12194$_c6.1232881@newsread2.prod.itd.earthlink.net...
> Or you could ask Jay for the file. It has already been modeled.

I prefer an impartial source, not the person who has claimed it is a magic
wand

> George, you want to keep stirring that pot, don't you.

No I want to keep pointing out false claims.

> Also, why do you keep calling it a "super efficient proprietary matching
> network"? I never said that; Jay never said that; you are the only person
> saying that.

Jay certainly said it was a propriatary, and the design is more
efficient(lower losses) matching network, Ill repost it for you

Jay wrote:
Yes the end result is the same to match the coaxes impedance with the
5/8 impedance, but with lower loss's. The lack of loss's are in the
I-10K Design, and how the design is used with all other features. After
that its proprietary.

>
> Its time for you to keep quiet unless you have something to ADD.

I have added pretty much what everyone else has said it is nothing any
better than any antenna out there

>Stop asking everyone else to do your bidding. Get off your butt and do
some of your own research!

I have already done my research, you claimed I was wrong so I enlisted the
help of some guys who you can't call liars like you do with me. I guess they
are all wrong.

> Why do you keep claiming Your antenna uses aircraft grade aluminum tubing
?
> Cause it sounds hi tech? Sounds like fales advertising.

Aircraft grade is refereed to as, close tolerance, (in the wall
thickness and OD) and heat treated for added strength and being rigid.
False Advertising I don't think so. One of the things you will to watch
out for is that the tolerances of aluminum tubing wall thickness will
vary. Most will spec 5% plus or minus wall thickness tolerance. Since
.058 inches of wall thickness is used, .058 + .0029 = .0609, x 2 = .1218
inches.

3968. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 01:03:32 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e55b08a_4@news1.prserv.net>
Source record: 124160
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

When I said all the junk in shielding, I include the wires to the injectors. We have the same problems with Adjustable Speed Drives (ASDs) on air handlers in radio receive sites. ASDs will tolerate no change in impedance at the output which drives the very noisy cables from the controller to the motor. Have to thoroughly bypass the input power, and carefully shield everything else. Fortunately, (knock on wood) so far, no plastic cased motors have shown up, but I expect that next. Really annoys the electricians when we make them go back and replace a fair amount of the PVC and Liquidtite with real EMT with the correct connectors. The oversize Hoffman boxes are no favorites either. That Liquidtite is a real fooler. Steel spiral which looks like an inductor since they have managed to insulate the turns from each other. Fortunately there are still some steel braid alternatives which combine flexibility with an acceptable level of shielding and conductor protection.

--
Crazy George
Remove NO and SPAM from return address
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:er2a5vonv28p78s2uujibruv2vjbf0pbuo@4ax.com...
> On Thu, 20 Feb 2003 10:26:43 -0600, "Crazy George"
> <munschNO@attglobal.net.SPAM> wrote:
>
> > But, If you modify it, your
> >warranty probably isn't worth a plugged nickel.
>
> Hi George,
>
> That's if you are lucky. Changing the pulse characteristic to suit
> the radio may leave you with dribblers instead of injectors.
>
> 73's
> Richard Clark, KB7QHC

3969. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 01:38:24 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v5b0l4o64n1ife@corp.supernews.com>
Source record: 124156

Dear group: I wish to expand (slightly) on Roy's observation about
average gain.

From ongoing work with a variety of (mostly) vertically polarized
antennas, I too have found that average gains of -4+ db to -6+ db are
the norm with average earth (0.005, 13). Some of the antennas were
elevated and most of the antennas that had elements close to the ground
used a modest number of radials. Changing the "earth" characteristics
to those of salt water (5, 80) would, typically, increase the average
gain 3 to 5 db - most of the improvement (just as Roy said) is at the
lower TOAs.
[The actual study is concerned with HF antennas to be used (mostly)
for receiving. Thus the shape of the antenna's gain is the more
important characteristic.]
As a first order approximation, only a quarter of the power put into
the typical vertical is actually radiated. That does not make verticals
bad antennas. As has been said again and again, by many, antennas are
compromises. The discerning of what is the near optimum antenna once
one comprehends the constraints is what has made this field so
interesting to me for about half a century.
73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v5am3kg26aq9ed@corp.supernews.com...

<big snip>

>
> It turns out that the overall loss due to ground reflection is about
69%
> of the total radiated power, and this works out to be just about 5.15
> dB. This loss, however, isn't equally distributed at all elevation
> angles, but is concentrated mostly at the lowest angles. It comes
close
> to Richard's estimate only because the majority of radiation from the
> perfect-ground model is at those angles.
>
> The numbers used above are from the EZNEC example file vert1.ez, which
> is a 40 meter quarter wave ground mounted vertical with zero ground
> system loss but realistic average ground reflection characteristics
> (MININEC type ground model). The overall power loss is easily
determined

> by changing the plot type to 3D and observing the Average Gain(*).
> Results will differ somewhat at different frequencies and with
different
> ground characteristics.
>
> Roy Lewallen, W7EL
>
> (*) The Average Gain is the total power in the far field, at all
angles,
> divided by the power being applied to the antenna from the source(s).
> This model contains no loss except for loss due to ground reflection,
so
> the Average Gain represents the fraction of the power remaining after
> ground reflection.
>

3970. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 01:38:35 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <a4ua5vk562ltdje69st6qkc76vm5menn6p@4ax.com>
Source record: 124157

On Thu, 20 Feb 2003 17:55:33 -0500, "--. -. ---" <.@... .com> wrote:

[snip]

|Wes, what do you think of the Interceptor 5/8 antenna and some of the claims
|they make?

I gotta confess, my eyes glazed over and I dozed off while reading
this thread (which I haven't really been following)

I think that the other correspondents have pretty well trashed most of
the claims to fame; however, (unless I missed something while dozing)
the normally astute members of this group completely missed the real
attribute of this antenna.

I speak of the amazing property of the capacitance top hat. Quoting
directly from the web site:

"A significant Top-Hat is used at the top of the vertical element,
reducing atmospheric noises by 6 to 20 dB."

Now this is truly amazing. Two pieces of aluminum bar stock are able
to separate electromagnetic waves into two categories: 1) signal and
2) noise. (And you thought only "magnetic loop" antennas could do
this)

Clearly the designer is on to something here and I'll bet with further
refinement he can reduce the 6 to 20 dB variation and guarantee 20 dB
reduction all of the time. (Maybe Roy could add a computational
feature for this in EZNEC)

But he missed one important point which I lay claim to here. I believe
that if the aluminum was anodized with the optimum color the noise
reduction could be made to exceed 30 or perhaps even 40 dB.

For a modest retainer and a percentage royalty I would be happy to
perform a study to determine the optimum color.

3971. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 02:42:49 UTC
From: tdonaly@aol.com
Message-ID: <20030220214249.24981.00000041@mb-cd.aol.com>
Source record: 124158

>
>I gotta confess, my eyes glazed over and I dozed off while reading
>this thread (which I haven't really been following)
>
>I think that the other correspondents have pretty well trashed most of
>the claims to fame; however, (unless I missed something while dozing)
>the normally astute members of this group completely missed the real
>attribute of this antenna.
Wes wrote,
>
>I speak of the amazing property of the capacitance top hat. Quoting
>directly from the web site:
>
>"A significant Top-Hat is used at the top of the vertical element,
>reducing atmospheric noises by 6 to 20 dB."
>
>Now this is truly amazing. Two pieces of aluminum bar stock are able
>to separate electromagnetic waves into two categories: 1) signal and
>2) noise. (And you thought only "magnetic loop" antennas could do
>this)
>
>Clearly the designer is on to something here and I'll bet with further
>refinement he can reduce the 6 to 20 dB variation and guarantee 20 dB
>reduction all of the time. (Maybe Roy could add a computational
>feature for this in EZNEC)
>
>But he missed one important point which I lay claim to here. I believe
>that if the aluminum was anodized with the optimum color the noise
>reduction could be made to exceed 30 or perhaps even 40 dB.
>
>For a modest retainer and a percentage royalty I would be happy to
>perform a study to determine the optimum color.
>
Make sure you add the right optical coating so that all the incident
electromagnetic
power is re-reflected back into the antenna.
73,
Tom Donaly, KA6RUH

3972. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 09:33:42 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E55F276.807D3147@cwis.net>
Source record: 124161

Cecil,
And why would you want to use a 4:1 balun on
a typical 40 meter inverted 'V'?
'Doc

3973. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 09:35:22 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E55F2DA.76B41E5D@cwis.net>
Source record: 124162

Jim,
Same question as to Cecil, why would you want to
use a 4:1 balun on a typical 40 meter inverted 'V'?
'Doc

3974. GP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 11:47:42 UTC
From: rw3gu@qsl.net
Message-ID: <9c80cbf5.0302210347.1c97bd32@posting.google.com>
Source record: 124163

Hi.

Does anybody have an experience with using
a tower and trapped tribander on its top
as a ground plane antenna?
I fear for traps.

Thanks in advance.
Larry.

3975. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 11:50:43 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E561293.5090302@ieee.org>
Source record: 124164

'Doc wrote:
> Cecil,
> And why would you want to use a 4:1 balun on
> a typical 40 meter inverted 'V'?

I wouldn't want to but he obviously wasn't talking about
a 1:1 choke. Many hams use 4:1 voltage baluns with ladder-
line even feeding inv-V's. Most of the baluns built into
commercial tuners are 4:1 voltage baluns. They do have the
advantage of discharging static electricity to ground much
like a folded dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3976. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 12:28:15 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E561B5F.81A847B3@cwis.net>
Source record: 124165

Cecil,
So in other words, if you aren't using a tuner
with a 4:1 balun, and a balanced feed line that
would necessitate the balun, then there's really
no need, or reason to use a 4:1 balun. Which means
that if you're using coaxial feedline and a 1:1 or
2:1 balun (that's a stretch, but why not), then
there is no grounding in addition to the 'normal'
grounding you would have with the shield of the coax.
I still can't figure out how a 1:1 balun would add
any additional grounding for the antenna, or at least
none of them that I've had any experience with.
As far as that goes, other than keeping the radiation
pattern 'more' symetrical, why bother using a balun at
all on an HF dipole?
'Doc

3977. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 13:39:44 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E562C20.41C6723A@cwis.net>
Source record: 124166

"... - - - ..."
Considering the claims made by ~all~ antenna manufacturers, and
after applying the usually quantity of 'salt', Jay's claims are
certainly less outrageous than most (CB, amateur, or commercial).
Also considering the difficulty in accurate measurements, and the
other variables associated with testing of antennas by the
nonprofessional, or someone without access to an antenna range and
it's facilities, I think his claims are reasonable. As to the
quibbling over 'aircraft grade' aluminum tubing etc, well, if that's
all you've got to 'quibble' over, who cares? As to the 'proprietary'
nature of the matching device, that's another one of those 'who cares'
things, as far as I'm concerned. It's different enough that I think
he could probably patent it, if he wanted.
'Doc

PS - By the way, what's "... - - - ...", "s, t, t, t, s"?
r did you mean "...---..."?

3978. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 13:53:19 UTC
From: No Name <NoName@mycomputer.net>
Message-ID: <t2bc5vs7foikij944nfcst3dtmkv8cb4ls@4ax.com>
Source record: 124167
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

On Thu, 20 Feb 2003 13:47:04 -0500, "Dr. Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>If you really care to know, rather than post your potshots from Mindspring
>as No Name, simply ask and I would be pleased to answer your question.

Then would you please tell us what sort of Dr. you are. Many of us
formally have that title but don't use it regularly. Normally only
Physicians and Preachers call themselves Dr. us lowly scientists
usually omit the honorific. Chip is the exception not the rule.

>
>Your remarks border on slander and you have until March 1, 2003 to desist or
>legal action will follow.
>

Now stop that or we will have to start calling you Chip Jr.

This is not a pot shot I am interested please tell us what is
the source of the honorific. Thank you very much.

NoName actually from Earthlink

>
>"No Name" <NoName@mycomputer.net> wrote in message
>news:a5o95vcnp25iktqjmmj200tun6k3n4bu23@4ax.com...
>
>
>>
>> You call yourself "Dr." might I ask Dr. of what? Just interested
>> in the relevance to antenna matters, if any.
>>
>>
>
>

3979. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 14:10:02 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <27cc5vgcni6710s484rl5mee1cshsoc82i@4ax.com>
Source record: 124069

On Fri, 21 Feb 2003 06:28:15 -0600, 'Doc <w5lz@cwis.net> wrote:

> As far as that goes, other than keeping the radiation
>pattern 'more' symetrical, why bother using a balun at
>all on an HF dipole?
> 'Doc

In the case of a resonant dipole, I agree.

-fb-

3980. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 14:36:41 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5ceeh74fdt955@corp.supernews.com>
Source record: 124070

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:23661-3E550C4B-209@storefull-2315.public.lawson.webtv.net...
> Reg wrote:
> "---undesirable loss in the coax against the desirable increase in
> operating bandwidth. But as the song goes, you can`t have one without
> the other."
>
> That`s true in the case of Q = X / Rloss.
>
> But other low-loss devices don`t need loss for wide bandwidth. An
> example is coax itself. It can be nearly lossless and have a very wide
> bandwidth.
>
> Reg says he has read posts here with some amusement. So have I. Lots of
> numbers spewed from computers haven`t given a clear yes or no to the
> ARRL Antenna Book assertion:
>
> "---the quarter-wave section (coaxial cable or detuning sleeve used as a
> bazooka shown in Fig. 11) should be cut to be resonant at exactly the
> same frequency as the antenna itself. These sections tend to have a
> beneficial effect on the impedance-frequency characteristic of the
> system, because their reactance varies in the opposite direction to that
> of the antenna."
>
> Yes or no?
>
> Best regards, Richard Harrison, KB5WZI
>
Richard
Build one and see for yourself.
Be sure and nail the resonance of the dipole first.
You might like to put an RF ammeter at the short and adjust the stub length
from
too long to too short while sweeping across the pass band and measuring SWR
(and if you dare, field strength). ;^)
With only two tuned circuits it's easier.
73
H.
NQ5H

3981. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 15:12:44 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5cgi7257p9ma8@corp.supernews.com>
Source record: 124071

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:oro95vslsbf7v7vos7oub5a4ripsrtgoun@4ax.com...
> On Wed, 19 Feb 2003 21:43:30 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> |Absolutely. ------Much moreso than resistors.
> |
> |Questions:
> |1. Q of two 1/4 wave coax stubs in series?
>
> Same as one alone. For RG-8X @ 7 MHZ Q ~ 31. (Calculated 31.8)
>
> |2. Q of dipole?
>
> For a 7.15 MHz dipole, 0.24" diameter, 1/2 wave above ground, Q ~ 8.4.
>
> |Q of both in parallel at resonance?
>
> Q ~ 7.6
>
> |3. Is 1:1 bandpass maximized when the two Q's are equal?
>
> The "1:1" (I assume you mean SWR) BW is maximized when the Q = 0.
> Remove the antenna and stub and replace them with a 50 ohm resistor.
> :)
Wes, that's the trivial solution.
So, next question; what parallel-resonant network has a Q equal to the
dipole?
No resistors allowed, tuned circuits only.
H.
NQ5H
snip>

3982. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 15:48:16 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E564A40.FF3A282C@cwis.net>
Source record: 124072
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Vito,
I like that! And yes I would.
'Doc

3983. Re: GP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:00:41 UTC
From: Allodoxaphobia <nobody@frontier.net>
Message-ID: <slrnb5cj98.7q7.nobody@animas.frontier.net>
Source record: 124073

On 21 Feb 2003 03:47:42 -0800, Larry hath writ:
>
> Does anybody have an experience with using
> a tower and trapped tribander on its top
> as a ground plane antenna?
> I fear for traps.
>
> Thanks in advance.
> Larry.

I'm a little unclear as to what you're asking... But...
I once ran a 14AVQ vertical atop a 2-el HB 15M beam.
It worked.

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

3984. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:01:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E564D4E.7050801@ieee.org>
Source record: 124075

'Doc wrote:
> As far as that goes, other than keeping the radiation
> pattern 'more' symetrical, why bother using a balun at
> all on an HF dipole?

To keep from burning a hole in your lip like I did in 1954? :-)
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3985. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:04:14 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b35ilu$ah4$1@knossos.btinternet.com>
Source record: 124074

Well, you have 5 replies above, all saying exactly the same thing (a first on here??!!).

I think your questions have already been answered, but to recap:-

> Is the dB gain of an antenna an indication of the strength of the
> antenna?

Yes and no. But I think for your purposes you can assume "yes". As I said in my other reply, there are different ways of measuring gain (dbi, dbd etc). Look for an antenna that gives you between 3 and 6 dbD gain yet isn't too large for your application. As a general rule, gain on an FM broadcast receiving antenna *will* help you pick up the distant stations.

Is an outside fm antenna with a lower dB gain better than an
> inside amplified fm antenna with a higher dB gain?

Probably, but without surveying your property impossible to tell. 90% liklihood is an outside antenna will be better - assuming that "outside" also means "higher".

Does an amplified
> inline signal booster really help an outside antenna?

Read my earlier posting. This is subject to the antenna receiving signals to a certain degree of strength already and not just amplifying noise. If your receiver has a weak front end (and someone on here who knew your radio suggested it may do) then it will probably help. But buy a decent one. Test the antenna first - you may not need it.

I want to try to
> receive better a fm station 60 miles away that I can now only recieve
> very weakly.

So you said.

I have a Radio Shack DX-392 radio. Any comments or
> suggestions will be appreciated. Thank you,

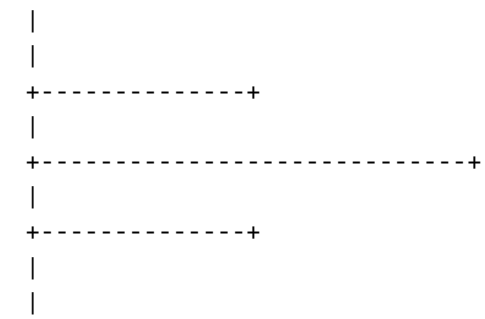
There have been comments on your radio.

>
> Norman Seifert
> Swannanoa, N.C., U.S.A.
>

3986. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:08:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E564EE8.80003@ieee.org>
Source record: 124076

'Doc wrote:
> nature of the matching device, that's another one of those 'who cares'
> things, as far as I'm concerned. It's different enough that I think
> he could probably patent it, if he wanted.



A stub by any other name works the same way it did in 1920.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3987. Re: Cushcraft MA5V

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:11:59 UTC
From: John <jwhughes@bellsouth.net>
Message-ID: <3e565dad@post.newsfeed.com>
Source record: 124085

*** post for FREE via your newsreader at post.newsfeed.com ***

Have you had any tvi issues? How much do they run...I live in a townhouse
and just saw their ad and it may be a solution for me...

"Per Brix" <oz5abo@XXXtdcadsl.dk (remove XXX)> wrote in message
news:3e44a5bc$0$237$edfadb0f@dread14.news.tele.dk...
> Hi Rudi,
>
> Tnx for your info.
>
> Vy 73 de oz5abo, Per
>
>
> "Rudi" <wiedemann@attbi.com> skrev i en meddelelse
> news:LcR0a.19799$2H6.729@sccrnsc04...
> > I and 2 others LOVE our MA5Vs. There are no radials to install on your
> > roof. Just 4 "stingers" sloping down near the base, around 4 ft long
> each.
> > Footprint is about 3 ft. x3 ft. and less than 15 ft tall. We all
mounted
> > ours from a chimney strap. Did fine in winds over 65mph several times!
> > Good SWR (<1.5) on all bands. We're all VERY happy with it. Good
> solution
> > at $209.
> >
> > "Per Brix" <oz5abo@XXXtdcadsl.dk> wrote in message
> > news:3e3612b7$0$201$edfadb0f@dread14.news.tele.dk...
> > > Hi
> > >
> > > I am thinking of buying this antenna since I have limited space in my
> > small
> > > garden for putting up an antenna. Antennas mounted on buildings are
not
> > > allowed.
> > >
> > > So could anyone tell me how long the radials for this antenna are and
> the
> > > diameter of the "foot print" ?
> > >
> > > 73, OZ5ABO, Per
> > >
> > >
> >
> >

>
>

-----= Posted via Newsfeed.Com, Uncensored Usenet News =-----
http://www.newsfeed.com - The #1 Newsgroup Service in the World!
-----== 100,000 Groups! - 19 Servers! - Unlimited Download! =-----

3988. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:28:40 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E5653BB.DBA4E19E@silverstar.com>
Source record: 124077
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

You might have alternator whine or noise from body panels not grounded together; maybe even stastic noise from wheel bearings. Best bet might be a Radio Shack Noise Filter on the power leads to the radio. There are two versions: 10 amp [R-S # 270-051 @ 14.99] and 20-amp [R-S # 270-055 @ 19.99]. I've used both the 10-amp [on Honda Aspencade M/C with Icom/Kenwood/Yaesu 2M rigs and the 20-amp in Dodge Caravan with Yaesu 2M radio. Blocks 99% of noise I hear when I take the filters out of the line.

Rudi wrote:

> Does anyone know how to reduce or eliminate the ignition noise in a diesel
> truck? I'm using a well-grounded system in my 95 Ford F350 7.3L turbodiesel
> with a 706IIG. Still gets by the Noise Blanker on all HF bands.
>
> 73s........Rudi - WA6RW

3989. Re: Inverted V for 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:30:47 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <a1lc5vcvrdl5ko2kcon8s7j22hft6kib7p@4ax.com>
Source record: 124078

On Fri, 21 Feb 2003 08:01:18 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>'Doc wrote:
>> As far as that goes, other than keeping the radiation
>> pattern 'more' symetrical, why bother using a balun at
>> all on an HF dipole?
>
>To keep from burning a hole in your lip like I did in 1954? :-)

ouch!

3990. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:39:51 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E56565A.29F96FE3@silverstar.com>
Source record: 124079

Articles by Kurt Sturba in World Radio news magazine debunks many theories and just plain idiotic ideas about antennas. Ask World Radio for a sample copy with any article by K.S.

Norman Seifert wrote:

> Is the dB gain of an antenna an indication of the strength of the
> antenna? Is an outside fm antenna with a lower dB gain better than an
> inside amplified fm antenna with a higher dB gain? Does an amplified
> inline signal booster really help an outside antenna? I want to try to
> receive better a fm station 60 miles away that I can now only recieve
> very weakly. I have a Radio Shack DX-392 radio. Any comments or
> suggestions will be appreciated. Thank you,
>
> Norman Seifert
> Swannanoa, N.C., U.S.A.

3991. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:45:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <k9lc5vot9r5d6udi4ebjh2imtmcnm1pmou@4ax.com>
Source record: 124080

On Fri, 21 Feb 2003 08:36:41 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>>
>Richard
>Build one and see for yourself.
>Be sure and nail the resonance of the dipole first.
>You might like to put an RF ammeter at the short and adjust the stub length
>from
>too long to too short while sweeping across the pass band and measuring SWR
>(and if you dare, field strength). ;^)
>With only two tuned circuits it's easier.
>73
>H.
>NQ5H
>

Hi OM,

I have (and not restricted to your tinker-toy dimensions).
Measurements (similar to your own), and performance both confirm
Walt's description.

I haven't noted any FSM readings from you since I found the loss they
described in your antenna. It is an odd omission coming from the
source that maintained earlier
>On Thu, 30 Jan 2003 22:17:24 -0600, "H. Adam Stevens" <solo@totalaccess.net> wrote:
>
>>Most useful piece of test equipment: field strength meter.
>>I find it amazing how so many people ignore it in favor of their fantasies.
>>
I am content your omissions confirm the accuracy of your statement
however.

Others,

A lot of this discussion of Q exposes a great deal of inexperience
with the matter of actual application. Myself and my buddy have
assembled many, many stub tuned systems and any suggestion of using
coax is a joke from the beginning. By the way ALL of those stub tuned
elements were based on coaxial design and vastly larger in diameter
than common cable: simple reason, smaller is more loss (and it starts
in the dB's not tenths of dB).

73's
Richard Clark, KB7QHC

3992. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:53:51 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3E56599F.77E2CB15@crosslink.net>
Source record: 124168
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

"Dr. Fred Hambrecht Sr" wrote:
>
> Thank you for your kind words. It is seldom I run into someone so astute
> that from a single message they can glean my occupation.
>
> "Miss Kitty" <Longbranch@Anon.com> wrote i
> >
> > If you sign yourself as a "Doctor" in this newsgroup, then you are most
> > probably a Proctologist.

Are you really a Proctologist, Doc? If so we have much in common. You
see, one of my doctorates in in divinity, I am an ordained minister, and
you won't believe the number of .... (c:

3993. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 16:57:49 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E565A8D.3CE44121@cwis.net>
Source record: 124081

Cecil,
So now it's a 'stub'?
'Doc

3994. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 17:04:29 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5cn3li62ff3ca@corp.supernews.com>
Source record: 124082

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:k9lc5vot9r5d6udi4ebjh2imtmcnm1pmou@4ax.com...
> On Fri, 21 Feb 2003 08:36:41 -0600, "H. Adam Stevens"
> <solo@totalaccess.net> wrote:
>
> >>
> >Richard
> >Build one and see for yourself.
> >Be sure and nail the resonance of the dipole first.
> >You might like to put an RF ammeter at the short and adjust the stub
length
> >from
> >too long to too short while sweeping across the pass band and measuring
SWR
> >(and if you dare, field strength). ;^)
> >With only two tuned circuits it's easier.
> >73
> >H.
> >NQ5H
> >
>
> Hi OM,
>
> I have (and not restricted to your tinker-toy dimensions).
> Measurements (similar to your own), and performance both confirm
> Walt's description.
>
> I haven't noted any FSM readings from you since I found the loss they
> described in your antenna. It is an odd omission coming from the
> source that maintained earlier
Do you mean since you altered and re-posted my data?
Completely omitting the 80 KHz range of frequencies where the SWR is 1:1?
MHz SWR RF
7.00 1.2 89
7.03 1.1 93
7.06 1.0 97
7.09 1.0 97
7.12 1.0 97
7.15 1.0 99
7.18 1.0 100
7.21 1.0 97
7.24 1.0 97
7.27 1.1 93
7.30 1.2 89

The RF is normalized to a dipole. (MFJ remote reading FSM.)
Stub currents (and losses) will be minimized when the stub and dipole are resonant at the SAME frequency.
When this condition is met there will be a range of frequencies about resonance where the SWR is 1:1 and losses much less than any 30%. More like 5% at the most. This is what the data show. If you wish to consider only outside of this range, then so be it. But don't edit the data and repost it.
snip
73
H.
NQ5H

3995. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 17:09:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E565D38.8050709@ieee.org>
Source record: 124084

'Doc wrote:
> Cecil,
> So now it's a 'stub'?

It's obviously an 'S' shaped shorted series stub which
adds inductive reactance.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

3996. Re: Test Message, and hello again to everybody

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 17:11:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <htmc5vsrbdjun4nonjo7hm06amrt4o78ih@4ax.com>
Source record: 124083

On Thu, 20 Feb 2003 16:03:50 -0500, "JLB" <IHateSpam@nospam.net>
wrote:

>Finally got the news reader to work here at home.
>
>Turns out the news reader uses OutLook Express, even though I use Outlook
>for everything else. Norton Security had Outlook Express blocked!
>
>Oh, by the way. I was laid off in December. Thats why you haven't seen me
>on here in a while (previously did news groups only from work).
>
>Jim
>N8EE
>
>

Hi Jim,

Welcome back.

There was a very good reason for Norton to debilitate OE (and I am surprised it allowed the email side to survive): it is the principle vector of computer infection. Twice weekly patches from MS confirm this, even to their patching the security patches last week for their "secure" servers. Anyone here suffering part of the 8,000,000 stolen credit cards that the banks sat on for a month? If you used a Debit Card and they got your number - you pay through the nose while the banks sit back and pretend it is someone else's (your) problem.

While I am on the MS rave, I note how they condescend to their prospective MSN subscribers on TV with that mincing "butterfly." They offer it will make email fun and bring life to it (like its not the fault of your loser friends and dead-beat family who haven't got a life to talk about in the first place). MS obviously got lost on the last turn when the .coms collapsed for lack of content (not glitter). However, with a nod to marketing genius; condescension is what made MS in the first place (with its stock stuck in a rut for 3 years now).

73's
Richard Clark, KB7QHC

3997. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 17:50:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <utnc5vo7td5u23mf26l3321mr7818l4amj@4ax.com>
Source record: 124086

On Fri, 21 Feb 2003 11:04:29 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

>
>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>news:k9lc5vot9r5d6udi4ebjh2imtmcnm1pmou@4ax.com...
>> On Fri, 21 Feb 2003 08:36:41 -0600, "H. Adam Stevens"
>> <solo@totalaccess.net> wrote:
>>
>> >>
>> >Richard
>> >Build one and see for yourself.
>> >Be sure and nail the resonance of the dipole first.
>> >You might like to put an RF ammeter at the short and adjust the stub
>length
>> >from
>> >too long to too short while sweeping across the pass band and measuring
>SWR
>> >(and if you dare, field strength). ;^)
>> >With only two tuned circuits it's easier.
>> >73
>> >H.
>> >NQ5H
>> >
>>
>> Hi OM,
>>
>> I have (and not restricted to your tinker-toy dimensions).
>> Measurements (similar to your own), and performance both confirm
>> Walt's description.
>>
>> I haven't noted any FSM readings from you since I found the loss they
>> described in your antenna. It is an odd omission coming from the
>> source that maintained earlier
>Do you mean since you altered and re-posted my data?
>Completely omitting the 80 KHz range of frequencies where the SWR is 1:1?
>MHz SWR RF
>7.00 1.2 89
>7.03 1.1 93
>7.06 1.0 97
>7.09 1.0 97
>7.12 1.0 97
>7.15 1.0 99
>7.18 1.0 100

>7.21 1.0 97
>7.24 1.0 97
>7.27 1.1 93
>7.30 1.2 89
>The RF is normalized to a dipole. (MFJ remote reading FSM.)
>Stub currents (and losses) will be minimized when the stub and dipole are
>resonant at the SAME frequency.
>When this condition is met there will be a range of frequencies about
>resonance where the SWR is 1:1 and losses much less than any 30%. More like
>5% at the most. This is what the data show. If you wish to consider only
>outside of this range, then so be it. But don't edit the data and repost it.
>snip
>73
>H.
>NQ5H
>

Hi OM,

Claims of tinkering with the data now? Here it is again for others to
compare and judge (your original posting remains intact above if you
would care to expand upon the charges you make above:
>MHz SWR RF
>7.00 1.2 89 -1.01dB (SWR = 1.22)
>7.03 1.1 93 -0.63dB (SWR = 1.17)
>7.06 1.0 97 -0.26dB (SWR = 1.11)
>7.09 1.0 97 -0.26dB (SWR = 1.11)
>7.12 1.0 97 -0.26dB (SWR = 1.11)
>7.15 1.0 99 -.087dB (SWR = 1.06)
>7.18 1.0 100 0dB (SWR = 1.0)
>7.21 1.0 97 -0.26dB (SWR = 1.11)
>7.24 1.0 97 -0.26dB (SWR = 1.11)
>7.27 1.1 93 -0.63dB (SWR = 1.17)
>7.30 1.2 89 -1.01dB (SWR = 1.22)

Let's see, you state that I am guilty of
>Completely omitting the 80 KHz range of frequencies where the SWR is 1:1?
and from a casual glance it can be seen that I in fact reported every
frequency, every SWR reading, and every FSM reading offered.
Obviously there is some element of your embarrassment involved through
these denials of my analysis.

Would you like to offer us the posting header to my correspondence
that
>If you wish to consider only
>outside of this range, then so be it. But don't edit the data and repost it.
Obviously my question was rhetorical because there is no such posting.

As I also pointed out in the past, the quality of your response (you
are responsible for what you choose to respond to) will be judged by
the group and your response above is obviously nothing more than the
repetition of error and unsupportable claims of my tinkering with your

numbers. This falls into the category of you making a statement "I don't trust my own data." In anticipating that, I would have to agree that you have reason to dismiss it - we will let what that reason might be left to other discussion.

I note that editing is a function you have performed (inadmissible for me to perform but wholly within your ethic?). Let us observe the disquieting statement you omitted:

>>I haven't noted any FSM readings from you since I found the loss they
>>described in your antenna. It is an odd omission coming from the
>>source that maintained earlier
>>>On Thu, 30 Jan 2003 22:17:24 -0600, "H. Adam Stevens" <solo@totalaccess.net> wrote:
>>>
>>>>Most useful piece of test equipment: field strength meter.
>>>>I find it amazing how so many people ignore it in favor of their fantasies.
>>>>
>>I am content your omissions confirm the accuracy of your statement
>>however.
>>

I can understand how that snip of the editor's scissors found its way to this pithy observation from you. Fantasy is useful after all and is the first refuge of the bazookoid tendency.

Others,

Take note in ANY of the data found above and observe the complete absence of ANY more than ONE resonance. The only explanation is that if there were any additional resonances, they are wholly overwhelmed by loss exactly as Walt has described for lo these many years. The addition of successive tuned elements has been studied for two centuries and no where in their data does the addition of tuned elements yield a flat curve. The common engineering terms offered by those sources admit such with Passband Ripple being key among them for this purpose. The FSM data easily encompasses enough resolution to reveal this characteristic - if it were present. It is not, but then maybe the data above is trash as our correspondent may suddenly decide.

73's
Richard Clark, KB7QHC

3998. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 18:19:14 UTC
From: Mike Yetsko <joe@user.com>
Message-ID: <v5crfvigf4b54f@corp.supernews.com>
Source record: 124087
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

>
> Your remarks border on slander and you have until March 1, 2003 to desist
or
> legal action will follow.

How to win friends and influence people....

(Not slander, personal opinion, and protected by law...)

Mike

3999. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 18:40:13 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5cskeh2ta50fb@corp.supernews.com>
Source record: 124088
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

As soon as you post with a real name, all will be revealed. Why should I be subjugated to a tirade from a source that hides behind a handle, and then demands I reveal myself.

If you have a problem with that, take note of the mistletoe pinned to my coat tail.

"No Name" <NoName@mycomputer.net> wrote in message news:t2bc5vs7foikij944nfcst3dtmkv8cb4ls@4ax.com...
> On Thu, 20 Feb 2003 13:47:04 -0500, "Dr. Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> >If you really care to know, rather than post your potshots from Mindspring
> >as No Name, simply ask and I would be pleased to answer your question.
>
> Then would you please tell us what sort of Dr. you are. Many of us
> formally have that title but don't use it regularly. Normally only
> Physicians and Preachers call themselves Dr. us lowly scientists
> usually omit the honorific. Chip is the exception not the rule.
>
> >
> >Your remarks border on slander and you have until March 1, 2003 to desist or
> >legal action will follow.
> >
>
> Now stop that or we will have to start calling you Chip Jr.
>
> This is not a pot shot I am interested please tell us what is
> the source of the honorific. Thank you very much.
>
> NoName actually from Earthlink
>
> >
> >"No Name" <NoName@mycomputer.net> wrote in message
> >news:a5o95vcnp25iktqjmmj200tun6k3n4bu23@4ax.com...
> >
> >
> >>
> >> You call yourself "Dr." might I ask Dr. of what? Just interested
> >> in the relevance to antenna matters, if any.
> >>
> >>

> >
> >
>

4000. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 18:55:13 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5ctggcs5s8b43@corp.supernews.com>
Source record: 124089
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

No, I am not a proctologist, nor do I need to be, to recognize "Miss
Kitty" is an anal orifice.

"Vito" <vito@crosslink.net> wrote in message
news:3E56599F.77E2CB15@crosslink.net...
> "Dr. Fred Hambrecht Sr" wrote:
> >
> > Thank you for your kind words. It is seldom I run into someone so astute
> > that from a single message they can glean my occupation.
> >
> > "Miss Kitty" <Longbranch@Anon.com> wrote i
> > >
> > > If you sign yourself as a "Doctor" in this newsgroup, then you are
most
> > > probably a Proctologist.
>
> Are you really a Proctologist, Doc? If so we have much in common. You
> see, one of my doctorates in in divinity, I am an ordained minister, and
> you won't believe the number of .... (c:

4001. Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 18:59:13 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E5676EA.9C148A4F@attbi.com>
Source record: 124090
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

[Excuse the off topic on the antenna group but it has an active readership and I'm looking for an answer.]

Background: A station is operating in the USA on 14150.00 kHz USB and the suppressed sideband, LSB at -50dBc, is detected with a bandwidth to 14147.2 kHz.

Let me ask a question and hope a legal eagle can answer it!!

Since the values of sideband suppression and spurious emissions are specified differently are they different entities in a legal sense?

Years ago I had a friend receive an 'OO' citation that his signals were out of band. He claims he was operating on 3999.0 LSB. That's correct he was advised, and your suppressed USB signal is out of band!

Deacon Dave, W1MCE
+ + +

4002. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 19:04:09 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5cu16h709lc1a@corp.supernews.com>
Source record: 124091

How many percent or dB down does a reading of 89 represent?

Roy Lewallen, W7EL

H. Adam Stevens wrote:
>
> Do you mean since you altered and re-posted my data?
> Completely omitting the 80 KHz range of frequencies where the SWR is 1:1?
> MHz SWR RF
> 7.00 1.2 89
> 7.03 1.1 93
> 7.06 1.0 97
> 7.09 1.0 97
> 7.12 1.0 97
> 7.15 1.0 99
> 7.18 1.0 100
> 7.21 1.0 97
> 7.24 1.0 97
> 7.27 1.1 93
> 7.30 1.2 89
> The RF is normalized to a dipole. (MFJ remote reading FSM.)
> Stub currents (and losses) will be minimized when the stub and dipole are
> resonant at the SAME frequency.
> When this condition is met there will be a range of frequencies about
> resonance where the SWR is 1:1 and losses much less than any 30%. More like
> 5% at the most. This is what the data show. If you wish to consider only
> outside of this range, then so be it. But don't edit the data and repost it.
> snip
> 73
> H.
> NQ5H
>
>

4003. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 19:32:02 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v5cvo9sm80g114@corp.supernews.com>
Source record: 124092

89% of the Dipole reading at resonance.
I just set the zero for 100 with the dipole and read the numbers with the bazooka.

I think I understand what I see when it's all resonant.
Walt says that the two circuits, the stubs and dipole, must be treated as a single, parallel network.
While this is generally true, when both circuits are resonant at the same frequency they are isolated by at least 40 db.
It's a driven 50 ohm resistor in parallel with a ~4kohm resistor.
We have two networks.
Now consider just slightly off resonance (this is a variational method):
The parallel reactance goes like a tangent and the series reactance is linear and opposite.
We have a driven 50 ohm resistor in series with a ~4K ohm resistor in series with a big L and small C, or vice versa. A parallel, driven RLC circuit, running at the driven frequency. To first order the LC product is constant for
the range where the two circuits are sufficiently isolated (near resonance).
If they're not co-resonant Walt's model applies.
If they are co-resonant and you're far enough from resonance, Walt's model applies.
If they're co-resonant, near resonance the efficiency improves nearly an order of magnitude over a range of frequencies.
H.
NQ5H

"Roy Lewallen" <w7el@eznec.com> wrote in message news:v5cu16h709lc1a@corp.supernews.com...
> How many percent or dB down does a reading of 89 represent?
>
> Roy Lewallen, W7EL
>
> H. Adam Stevens wrote:
> >
> > Do you mean since you altered and re-posted my data?
> > Completely omitting the 80 KHz range of frequencies where the SWR is 1:1?
> > MHz SWR RF
> > 7.00 1.2 89
> > 7.03 1.1 93
> > 7.06 1.0 97
> > 7.09 1.0 97
> > 7.12 1.0 97
> > 7.15 1.0 99

> > 7.18 1.0 100
> > 7.21 1.0 97
> > 7.24 1.0 97
> > 7.27 1.1 93
> > 7.30 1.2 89
> > The RF is normalized to a dipole. (MFJ remote reading FSM.)
> > Stub currents (and losses) will be minimized when the stub and dipole
are
> > resonant at the SAME frequency.
> > When this condition is met there will be a range of frequencies about
> > resonance where the SWR is 1:1 and losses much less than any 30%. More
like
> > 5% at the most. This is what the data show. If you wish to consider only
> > outside of this range, then so be it. But don't edit the data and repost
it.
> > snip
> > 73
> > H.
> > NQ5H
> >
> >
>

4004. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 19:33:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E567F10.5010707@ieee.org>
Source record: 124093

H. Adam Stevens wrote:
> We have a driven 50 ohm resistor in series with a ~4K ohm resistor in series
> with a big L and small C, or vice versa. A parallel, driven RLC circuit,
> running at the driven frequency.

With a ~4k ohm stub "resistor" and a 'Q' of ~32, doesn't that mean
there is about ~125 ohms involved in I^2*R losses in the stub?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4005. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 19:40:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5d067cccrri4e@corp.supernews.com>
Source record: 124094
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

"Spurious Emission" is defined in Part 2 of the FCC regulations (Frequency Allocations and Radio Treaty Matters; General Rules and Regulations) as:

"Emission on a frequency or frequencies which are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions."

So "spurious emissions" would presumably include carrier suppression only if the allocated bandwidth included only one sideband. Amateurs are allowed to transmit both sidebands if desired, so the suppressed sideband would be within the allocated bandwidth and by this definition wouldn't be "spurious emission".

Interestingly, a modulation product falling outside the band isn't a "spurious emission" either - it's an "Out-of-band Emission", defined as:

"Emission on a frequency or frequencies immediately outside the necessary bandwidth which results from the modulation process, but excluding spurious emissions."

Fun, huh?

Roy Lewallen, W7EL

Disclaimer: I'm not a lawyer. My interperetations may or may not be correct.

Dave Shrader wrote:
> [Excuse the off topic on the antenna group but it has an active
> readership and I'm looking for an answer.]
>
> Background: A station is operating in the USA on 14150.00 kHz USB and
> the suppressed sideband, LSB at -50dBc, is detected with a bandwidth to
> 14147.2 kHz.
>
> Let me ask a question and hope a legal eagle can answer it!!
>
> Since the values of sideband suppression and spurious emissions are
> specified differently are they different entities in a legal sense?
>
> Years ago I had a friend receive an 'OO' citation that his signals were
> out of band. He claims he was operating on 3999.0 LSB. That's correct he
> was advised, and your suppressed USB signal is out of band!
>

> Deacon Dave, W1MCE
> + + +

4006. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 19:45:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5d0fb4rp0h125@corp.supernews.com>
Source record: 124095

> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v5cu16h709lc1a@corp.supernews.com...
>
>>How many percent or dB down does a reading of 89 represent?
>>
>>Roy Lewallen, W7EL

H. Adam Stevens wrote:
> 89% of the Dipole reading at resonance.
> I just set the zero for 100 with the dipole and read the numbers with the
> bazooka.

So you verified that the meter is linear. Good. Is that 89% of full scale field strength (volts/meter), or power density (watts/meter^2)?

Without calibration, the reading of "89" means nothing except that the efficiency of the antenna drops off at the band edges (just as Walt Maxwell and Frank Witt predicted), but we have no idea how much. So once we know how your meter was calibrated, we can determine just what the efficiency is.

Roy Lewallen, W7EL

4007. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 19:51:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <os0d5v04jegn2tjncl45dhkr23inmco29c@4ax.com>
Source record: 124096

On Fri, 21 Feb 2003 11:33:36 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>H. Adam Stevens wrote:
>> We have a driven 50 ohm resistor in series with a ~4K ohm resistor in series
>> with a big L and small C, or vice versa. A parallel, driven RLC circuit,
>> running at the driven frequency.
>
>With a ~4k ohm stub "resistor" and a 'Q' of ~32, doesn't that mean
>there is about ~125 ohms involved in I^2*R losses in the stub?

Hi Cecil,

The "vice versa" is more of a twist (Maxwell's demon at the switch?).

73's
Richard Clark, KB7QHC

4008. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:10:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jj1d5v4188otv4a65ku2cgtob69ee91egp@4ax.com>
Source record: 124097

On Fri, 21 Feb 2003 11:45:49 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

> > "Roy Lewallen" <w7el@eznec.com> wrote in message
> > news:v5cu16h709lc1a@corp.supernews.com...
> >
> >>How many percent or dB down does a reading of 89 represent?
> >>
> >>Roy Lewallen, W7EL
>
>H. Adam Stevens wrote:
>> 89% of the Dipole reading at resonance.
>> I just set the zero for 100 with the dipole and read the numbers with the
>> bazooka.
>
>So you verified that the meter is linear. Good. Is that 89% of full
>scale field strength (volts/meter), or power density (watts/meter^2)?
>
>Without calibration, the reading of "89" means nothing except that the
>efficiency of the antenna drops off at the band edges (just as Walt
>Maxwell and Frank Witt predicted), but we have no idea how much. So once
>we know how your meter was calibrated, we can determine just what the
>efficiency is.
>
>Roy Lewallen, W7EL

Hi Roy,

Being these measures are absolutes, that would presume their being
made outside of the near field wouldn't it?

Near-Far-Field issues would seem to be immaterial for relative
measurements. And if we were to allow 100% transfer at resonance (no
point in arguing the point), the remaining readings offer other
assessments of relative efficiency, so to speak.

73's
Richard Clark, KB7QHC

4009. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:17:20 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5d2afnd0bev43@corp.supernews.com>
Source record: 124098
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Brother Dave:
Let me make one correction, as an OO., We do not issue citations. We do send advisories to amateurs that they may have a problem, or may be in violation. This is sent to the amateur so he/she may take corrective action. It is not reported to the FCC. It is part of amateurs helping amateurs. While an OO is required to take a test on the regulations prior to appointment, he/she is not an enforcer.

Enforcement is the sole purview of the FCC.

Amateur radio equipment is set to read the sideband frequency not the carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.

That being said, if I observed no signals above the band edge, I would move on.

Without knowing what the reporting OO observed, I can't comment on why your friend received an OO advisory.

Given that he did receive a notice it is likely the OO had reason to believe he had a problem, and was informing him so corrective action could be taken. Legality dos not enter the picture, as the OO has no legal powers as stated earlier.

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E5676EA.9C148A4F@attbi.com...
> [Excuse the off topic on the antenna group but it has an active
> readership and I'm looking for an answer.]
>
> Background: A station is operating in the USA on 14150.00 kHz USB and
> the suppressed sideband, LSB at -50dBc, is detected with a bandwidth to
> 14147.2 kHz.
>
> Let me ask a question and hope a legal eagle can answer it!!
>
> Since the values of sideband suppression and spurious emissions are
> specified differently are they different entities in a legal sense?
>
> Years ago I had a friend receive an 'OO' citation that his signals were
> out of band. He claims he was operating on 3999.0 LSB. That's correct he
> was advised, and your suppressed USB signal is out of band!
>
> Deacon Dave, W1MCE
> + + +

4010. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:23:48 UTC
From: arrow146@aol.com
Message-ID: <20030221152348.20553.00000038@mb-fi.aol.com>
Source record: 124100

What was the start of this thread ?
I must have missed it.
Was there a web site for this antenna?

73 Al Lowe N0IMW

4011. Propagation study

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:24:10 UTC
From: ac6la@arrl.net
Message-ID: <960228f1.0302211224.6c262c8f@posting.google.com>
Source record: 124099

In his ARRL Solar Update column of a few weeks ago, K7VVV mentioned a comparison between March of last year and March of this year for a path from Texas to Brazil. Just out of curiosity I decided to look at the same scenario using VOACAP. One thing led to another and I ended up creating a couple of sample plots and maps for Tad to look at.

If you are interested in such things, surf over to www.qsl.net/ac6la/adhoc/taddemo.html to see the results. You'll find animated comparisons of conditions for March of 2002, with a smoothed sunspot number of 113, versus March of 2003 with a (predicted) SSN of 76.

Dan AC6LA
www.qsl.net/ac6la/

4012. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:26:44 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302211226.27bddf61@posting.google.com>
Source record: 124101

'Doc <w5lz@cwis.net> wrote in message news:<3E562C20.41C6723A@cwis.net>...
> "... - - - ..."
> Considering the claims made by ~all~ antenna manufacturers, and
> after applying the usually quantity of 'salt', Jay's claims are
> certainly less outrageous than most (CB, amateur, or commercial).
> Also considering the difficulty in accurate measurements, and the
> other variables associated with testing of antennas by the
> nonprofessional, or someone without access to an antenna range and
> it's facilities, I think his claims are reasonable. As to the
> quibbling over 'aircraft grade' aluminum tubing etc, well, if that's
> all you've got to 'quibble' over, who cares? As to the 'proprietary'
> nature of the matching device, that's another one of those 'who cares'
> things, as far as I'm concerned. It's different enough that I think
> he could probably patent it, if he wanted.
> 'Doc
>
> PS - By the way, what's "... - - - ...", "s, t, t, t, s"?
> r did you mean "...---..."?

I am beginning to come around to Doc's thinking. If the manufacturer
honestly believes what he is claiming is true then more power to him.
This is really the American way which P.T.Barnum used to perfection
and has been used since then by all manufacturers. In past times I
thought otherwise and thought that aproaching ones peers before hand
was the best moral aproach. Unfortunately
many of our peers are not always led by the logic of technical
advancement but are more prone to 'off the cuff' statements that may
also parallel as well as dispute a manufacturers claims. Without a
standardized industry or hobby with respect to claims we have to live
with the idea that all have an opinion and all opinions are equal when
used in judgement. Caveat emptor is still as always the best way to
go.
By the way, I do not believe a manufacturer can patent a product AFTER
he has commercialised the idea.
Regards
Art

4013. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:34:32 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E568D58.3030506@ieee.org>
Source record: 124103
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

'Doc wrote:
> I don't know about your radio, but on mine, the
> frequency display shows the carrier frequency. If
> my display showed 3.999.00 Mhz, my LSB signal would
> be out of band. As a matter of fact, I don't think
> I've ever seen a commercially made amateur transciever
> that didn't display the 'carrier' frequency.

If your carrier is at 3.999 MHz and your LSB signal
is lower than that carrier frequency (by definition),
why would you be out of band?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4014. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:35:54 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E568DAA.63214D4F@cwis.net>
Source record: 124102
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Fred,
I don't know about your radio, but on mine, the
frequency display shows the carrier frequency. If
my display showed 3.999.00 Mhz, my LSB signal would
be out of band. As a matter of fact, I don't think
I've ever seen a commercially made amateur transciever
that didn't display the 'carrier' frequency.
'Doc

4015. Re: Propagation study

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:51:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <lb4d5vob55objcr1l7qnfq7b3ajt3m3bku@4ax.com>
Source record: 124104

On 21 Feb 2003 12:24:10 -0800, ac6la@arrl.net (Dan) wrote:

>In his ARRL Solar Update column of a few weeks ago, K7VVV mentioned a
>comparison between March of last year and March of this year for a
>path from Texas to Brazil. Just out of curiosity I decided to look at
>the same scenario using VOACAP. One thing led to another and I ended
>up creating a couple of sample plots and maps for Tad to look at.
>
>If you are interested in such things, surf over to
>www.qsl.net/ac6la/adhoc/taddemo.html to see the results. You'll find
>animated comparisons of conditions for March of 2002, with a smoothed
>sunspot number of 113, versus March of 2003 with a (predicted) SSN of
>76.
>
>Dan AC6LA
>www.qsl.net/ac6la/

Hi Dan,

It takes a lot of work. I did something like this a few years ago
(numbers are stale). However from the global perspective I just love
watching the bands follow the sun:
http://www.qsl.net/kb7qhc/propagation/index.htm
with a link to the actual clip if you have the download capacity
(450KB).

73's
Richard Clark, KB7QHC

4016. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:53:43 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b363kf$u17$1@slb2.atl.mindspring.net>
Source record: 124105
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Fred:

[snip]
"'Doc" <w5lz@cwis.net> wrote in message news:3E568DAA.63214D4F@cwis.net...
> Fred,
> I don't know about your radio, but on mine, the
> frequency display shows the carrier frequency. If
> my display showed 3.999.00 Mhz, my LSB signal would
> be out of band. As a matter of fact, I don't think
> I've ever seen a commercially made amateur transciever
> that didn't display the 'carrier' frequency.
> 'Doc
[snip]

Fred is incorrect and Doc is absolutely correct!

Most, in fact I believe all, commercially manufactured amateur radio SSB transmitters indicate the
transmitted carrier frequency on their readout/dial.

[Yaesu, Icom, Kenwood, JRD, Collins, Heathkit, Hallicrafters, TMC, Swan, Atlas, etc. all do so.]

--
Peter K1PO

4017. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 20:58:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5d4n5l9go4190@corp.supernews.com>
Source record: 124106

Witt's article shows essentially 100% efficiency at the center frequency, dropping off at the band edges. His model was used RG-58A at 3.75 MHz, and had a loss of about 30% at the band edges of 3.5 and 4.0 MHz. I'd expect H's 40 meter version to have lower loss, for three reasons:

1. The length is half but the loss per unit length is greater only by a factor of the square root of two,
2. Use of RG-8X instead of RG-58 (which will only make a small difference, and
3. The much narrower percentage bandwidth.

So the remaining question is just how much loss the 40 meter version does have at the band edges. I'm guessing that once the actual value is known, it'll be consistent with Walt's and Frank's analyses.

But of course an ordinary dipole will give you 1.5:1 or less SWR over the whole 40 meter band, although matching at the center frequency might be necessary to do it. (A resonant 40 meter dipole at 40 feet has a feedpoint resistance of around 90 ohms.) So there's really no need for the bazooka on 40 in the first place.

Roy Lewallen, W7EL

Richard Clark wrote:
> On Fri, 21 Feb 2003 11:45:49 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>>"Roy Lewallen" <w7el@eznec.com> wrote in message
>>>news:v5cu16h709lc1a@corp.supernews.com...
>>>
>>>
>>>>How many percent or dB down does a reading of 89 represent?
>>>>
>>>>Roy Lewallen, W7EL
>>>
>>H. Adam Stevens wrote:
>>
>>>89% of the Dipole reading at resonance.
>>>I just set the zero for 100 with the dipole and read the numbers with the
>>>bazooka.
>>
>>So you verified that the meter is linear. Good. Is that 89% of full
>>scale field strength (volts/meter), or power density (watts/meter^2)?
>>
>>Without calibration, the reading of "89" means nothing except that the

>>efficiency of the antenna drops off at the band edges (just as Walt
>>Maxwell and Frank Witt predicted), but we have no idea how much. So once
>>we know how your meter was calibrated, we can determine just what the
>>efficiency is.
>>
>>Roy Lewallen, W7EL
>
>
> Hi Roy,
>
> Being these measures are absolutes, that would presume their being
> made outside of the near field wouldn't it?
>
> Near-Far-Field issues would seem to be immaterial for relative
> measurements. And if we were to allow 100% transfer at resonance (no
> point in arguing the point), the remaining readings offer other
> assessments of relative efficiency, so to speak.
>
> 73's
> Richard Clark, KB7QHC

4018. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 21:03:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5d50qp7svob5e@corp.supernews.com>
Source record: 124107

Art Unwin KB9MZ wrote:
> . . .
> By the way, I do not believe a manufacturer can patent a product AFTER
> he has commercialised the idea.
> Regards
> Art

In the U.S., an inventor has one year in which to file a patent application after the first public disclosure. The public disclosure could consist of offering for sale an object incorporating the invention.

Patent laws in many other countries are quite different from those in the U.S.

Roy Lewallen, W7EL

4019. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 21:20:00 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <yvGdnei7f5VjCsujXTWcpQ@comcast.com>
Source record: 124108
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

"Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in message
news:v5d2afnd0bev43@corp.supernews.com...
> Amateur radio equipment is set to read the sideband frequency not the
> carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is
> at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that....

No way. You can prove that by tuning to WWV, at say 10 MHz, while in SSB
mode. It will tune in at 10.0000 in USB or LSB mode.

Tam/WB2TT

4020. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 21:22:13 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <da4d5vom821mfa17grenrrk6o4i6r8ssh0@4ax.com>
Source record: 124109
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

On Fri, 21 Feb 2003 15:17:20 -0500, "Dr. Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

[snip]

|Amateur radio equipment is set to read the sideband frequency not the
|carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is
|at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.

Wrong.

Proof: When I tune WWV on my TS-870 at say 15.000 MHz and switch
between LSB & USB the dial still reads 15.00000 and the audio is
perfectly readable.

Since it is a transceiver, the transmitter would be tuned identically,
thus the readout is of the suppressed carrier frequency.

On CW, (with this radio anyway) the frequency displayed is that of the
actual emitted frequency. On rigs that generate CW using an audio
tone into the balanced modulator and don't use software correction,
this would not be the case; the emitted frequency would be the dial
reading +/- the audio frequency.

I hope you're not issuing OO reports using this belief.

|
|That being said, if I observed no signals above the band edge, I would move
|on.
|
|Without knowing what the reporting OO observed, I can't comment on why your
|friend received an OO advisory.
|
|Given that he did receive a notice it is likely the OO had reason to believe
|he had a problem, and was informing him so corrective action could be taken.
|Legality dos not enter the picture, as the OO has no legal powers as stated
|earlier.
|
|"Dave Shrader" <david.shrader@attbi.com> wrote in message
|news:3E5676EA.9C148A4F@attbi.com...
|> [Excuse the off topic on the antenna group but it has an active
|> readership and I'm looking for an answer.]
|>
|> Background: A station is operating in the USA on 14150.00 kHz USB and
|> the suppressed sideband, LSB at -50dBc, is detected with a bandwidth to
|> 14147.2 kHz.

|>
|> Let me ask a question and hope a legal eagle can answer it!!
|>
|> Since the values of sideband suppression and spurious emissions are
|> specified differently are they different entities in a legal sense?
|>
|> Years ago I had a friend receive an 'OO' citation that his signals were
|> out of band. He claims he was operating on 3999.0 LSB. That's correct he
|> was advised, and your suppressed USB signal is out of band!
|>
|> Deacon Dave, W1MCE
|> + + +
|

4021. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 21:29:31 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <g86d5vkebrtmld48ic83fnvucp9hed08v0@4ax.com>
Source record: 124110

On Fri, 21 Feb 2003 09:12:44 -0600, "H. Adam Stevens"
<solo@totalaccess.net> wrote:

[snip]
|Wes, that's the trivial solution.
|So, next question; what parallel-resonant network has a Q equal to the
|dipole?

That's a trivial question. You're the physicist, you figure it out.

4022. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 21:37:46 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5d71abm962pc4@corp.supernews.com>
Source record: 124111
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Mea culpa, The remainder of the comments stand.

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:b363kf$u17$1@slb2.atl.mindspring.net...
> Fred:
>
> [snip]
> "'Doc" <w5lz@cwis.net> wrote in message news:3E568DAA.63214D4F@cwis.net...
> > Fred,
> > I don't know about your radio, but on mine, the
> > frequency display shows the carrier frequency. If
> > my display showed 3.999.00 Mhz, my LSB signal would
> > be out of band. As a matter of fact, I don't think
> > I've ever seen a commercially made amateur transciever
> > that didn't display the 'carrier' frequency.
> > 'Doc
> [snip]
>
> Fred is incorrect and Doc is absolutely correct!
>
> Most, in fact I believe all, commercially manufactured amateur radio SSB
> transmitters indicate the
> transmitted carrier frequency on their readout/dial.
>
> [Yaesu, Icom, Kenwood, JRD, Collins, Heathkit, Hallicrafters, TMC, Swan,
> Atlas, etc. all do so.]
>
> --
> Peter K1PO
>
>

4023. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 21:48:42 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5d7lpj4jadpe3@corp.supernews.com>
Source record: 124112
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

My response, while I incorrectly stated "all amateur radio equipment "is incorrect. My statement that if I observed nothing above the band edge I would move on was the operative statement.

The receiver I am using at the moment for casual listening requires the offset (Yupiteru MVT-7100).

Your vitriolic response toward a group of your fellow amateurs ,that serve only to aid you, is somewhat surprising. I am sorry that you feel that way, however nothing I say would sway your opinion. Thank you for your response.

,

"Walt Davidson" <walt99@tiscali.co.uk> wrote in message news:a56d5v8tirvsa4v217f6v2a13skhdrnlt2@4ax.com...
> On Fri, 21 Feb 2003 15:17:20 -0500, "Dr. Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> >Amateur radio equipment is set to read the sideband frequency not the
> >carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is
> >at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.
>
> Garbage!
>
> (1) There is no such thing as "the sideband frequency", unless the
> station is transmitting a single audio tone in SSB. The sideband is
> normally a band of frequencies, so any dial reading of a "sideband
> frequency" would be meaningless.
>
> (2) Present-day amateur radio equipment, in SSB mode, is set to read
> the nominal carrier frequency of the SSB transmission.
>
> (3) If all ARRL OO's think as you do, there is a need for their
> training program to be improved ... urgently.
>
> (4) You have just amply demonstrated why I oppose the RSGB's "Amateur
> Radio Observation Service" idea, which is a clone of the ARRL's OO
> scheme.
>
> >That being said, if I observed no signals above the band edge, I would move
> >on.
>
> Thank heavens for small mercies!

>
> 73 de G3NYY
>
> --
> Walt Davidson Email: g3nyy @freeuk.com

4024. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 22:08:36 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e56a498_2@news1.prserv.net>
Source record: 124113
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Walt:

You missed Roy's point. BY DEFINITION, from the FCC, out of band emissions are considered differently than spurious emissions. Why make the peculiar distinction? Because rule enforcement is different for the two cases. Spurious emissions are anticipated to be equipment malfunctions, while out-of-band emissions are typically operator malfunctions.

If you disagree with these definitions, contact the FCC at www.fcc.gov/ . I'm sure they would like to hear from you.

--
Crazy George
Remove NO and SPAM from return address
"Walt Davidson" <walt99@tiscali.co.uk> wrote in message
news:6k6d5vgcls7k4vgsgamgcfljbh81g2ir67@4ax.com...
> On Fri, 21 Feb 2003 11:40:56 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
> >"Spurious Emission" is defined in Part 2 of the FCC regulations
> >(Frequency Allocations and Radio Treaty Matters; General Rules and
> >Regulations) as:
> >
> >"Emission on a frequency or frequencies which are outside the necessary
> >bandwidth and the level of which may be reduced without affecting the
> >corresponding transmission of information. Spurious emissions include
> >harmonic emissions, parasitic emissions, intermodulation products and
> >frequency conversion products, but exclude out-of-band emissions."
>
> How can out-of-band emissions be excluded? Harmonics, parasitics,
> intermod products and freq conversion products, by their very nature,
> are often "out-of-band"! I suppose what they mean (but do not say)
> is "fundamental transmissions which are out of band".

<snip the rest>

4025. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 22:23:24 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <wFx5a.802$4n4.65733@newsread2.prod.itd.earthlink.net>
Source record: 124114

Hello H.

IMO you are not understanding the effect of parallel circuits with respect to increase in BW. Although the impedances of the dipole and stubs change in opposite directions with frequency, which, in principle, should allow an increase in bandwidth, there can be no increase in dipole bandwidth with parallel stubs when the resonant impedance (resistive) of the dipole is roughly the same as the Zo feed line impedance. My QST article reveals this fact, and I state it clearly there. Contrary to what I've been reading on this thread, the resistance component of dipole impedance does not increase as height is lowered below 1/2 wl above ground--it decreases until reaching around 0.2 wl above ground, when it then increases due to dissipation in the ground. Thus, we're dealing with resonant resistances that are generally less than 60 ohms for the average dipole 30 - 40 feet above ground.

H, I really don't understand why you're experimenting on the 40-m band, where the off-resonance impedance is so close to 50 ohms already. If the dipole is trimmed to resonance at 7.15 MHz the SWR will seldom exeed 2:1, where the effect of BW improvement will be hard to detect. However, the 80-m band is where increased BW is needed most, and this is where you should be experimenting if I can't persuade you that it's a futile effort, even if you are seeing reduced SWR from effects having nothing to do with reactance cancellation.

On 80 m, if the dipole is around 40 ft above average ground, and trimmed for resonance at 3.75 Mz, the resonant impedance will be a pure resistance around 40 to 60 ohms. The SWR will be around 5:1 at 4.0 MHz and around 6.5 to 7:1 at 3.50 MHz. In my well equipped RF lab I have measured dipole impedances extensively, varying lengths and heights above ground, on several ham bands. On 80 m, I have found that the resonant resistance of my 80-m dipole is 55 + j0 ohms, at 3.75 MHz, and at 3.55 MHz the impedance is 50 - j90 ohms. These are the conditions related in my QST article, where, as you can see, the uncompensated SWR at 3.75 MHz is 5.04:1, but compensated (calculating with lossless coax) the impedance changed to 58.4 - j94.7 ohms, reducing the SWR to only 4.9:1. This proves the stub reactance is not effective in increasing the BW when the resonant dipole resistance is nearly the same as the feed line Zo.

If you need more proof that it isn't the stub reactance that provides the increased bandwidth, then I suggest you find a copy of my Ham Radio article that appeared in August 1976 (I can send you a copy of you can't find one). In that article I showed an example of stub action with a feed line having a Zo = 144 ohms (for example two 72-ohm coax in series making a balanced line). However, RG-8 or 58 won't work for the stubs, because their 50-ohm Zo limits the maximum off-frequency reactance to too low a value to be

effective. It would be like a flea attempting to rape an elephant. However, by using stubs having Zo = 19.7 ohms with a feed line of Zo = 144 ohms, we get a double-humped SWR curve with a 1.5:1 SWR at 3.5 and 4.0 MHz, gradually increasing to 2:1 at the center frequency where the stub reactance compensation is zero. In this method, a compromise is required at the center frequency, which is because the higher feed line Zo is required for the parallel stub method to obtain an increase in BW.

I hope this helps to clarify the BAZOOKA question.

Walt, W2DU

> I think I understand what I see when it's all resonant.
> Walt says that the two circuits, the stubs and dipole, must be treated as
a
> single, parallel network.
> While this is generally true, when both circuits are resonant at the same
> frequency they are isolated by at least 40 db.
> It's a driven 50 ohm resistor in parallel with a ~4kohm resistor.
> We have two networks.
> Now consider just slightly off resonance (this is a variational method):
> The parallel reactance goes like a tangent and the series reactance is
> linear and opposite.
> We have a driven 50 ohm resistor in series with a ~4K ohm resistor in
series
> with a big L and small C, or vice versa. A parallel, driven RLC circuit,
> running at the driven frequency. To first order the LC product is constant
> for
> the range where the two circuits are sufficiently isolated (near
resonance).
> If they're not co-resonant Walt's model applies.
> If they are co-resonant and you're far enough from resonance, Walt's model
> applies.
> If they're co-resonant, near resonance the efficiency improves nearly an
> order of magnitude over a range of frequencies.
> H.
> NQ5H

4026. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 22:32:03 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <DNx5a.810$4n4.67136@newsread2.prod.itd.earthlink.net>
Source record: 124115

In my previous post the following paragraph has an error. It should read:

"...the uncompensated SWR at 3.55 MHz is 5.04:1", not at 3.75
MHz.

> These are the conditions related in my QST article, where, as you
> can see, the uncompensated SWR at 3.75 MHz is 5.04:1, but compensated
> (calculating with lossless coax) the impedance changed to 58.4 - j94.7
ohms,
> reducing the SWR to only 4.9:1.

4027. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 23:25:25 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5ddb76d5kln02@corp.supernews.com>
Source record: 124116
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Thank you for your kind words.

With all good wishes
Fred

"Walt Davidson" <walt99@tiscali.co.uk> wrote in message
news:i29d5v45kge1upp3ghej1t61uatp67go8n@4ax.com...
> On Fri, 21 Feb 2003 16:48:42 -0500, "Dr. Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> >Your vitriolic response toward a group of your fellow amateurs ,that
serve
> >only to aid you, is somewhat surprising. I am sorry that you feel that
way,
> >however nothing I say would sway your opinion. Thank you for your
response.
>
> OOs and AROS do not serve to aid us. They serve to inflate and
> promote their own, perceived self-importance by presuming to act as
> both judge and jury over their fellow-amateurs, even when technically
> ill-equipped to do so ... as you have amply demonstrated. You
> resemble the pompous and parochial village-dweller who stands all day
> on the curb-side, shaking his fist and shouting at motorists who, in
> his opinion, are flouting the traffic regulations as they drive
> through his village.
>
> Good day to you.
>
> 73 de G3NYY
>
> --
> Walt Davidson Email: g3nyy @freeuk.com

4028. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 23:46:29 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E56BA55.C9965FF1@cwis.net>
Source record: 124117
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Cecil,
Because the 'normal' SSB signal has a 3 Khz width,
so 3 Khz +3999.0 Khz = 4002Khz. Right? As odd as it
sounds, LSB is on the top side of the carrier (higher
in frequency).
'Doc

4029. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-21 23:55:26 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E56BC6E.9F8DD7F7@uci.edu>
Source record: 124118
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Walt Davidson wrote:
> OOs and AROS do not serve to aid us. They serve to inflate and
> promote their own, perceived self-importance by presuming to act as
> both judge and jury over their fellow-amateurs, even when technically
> ill-equipped to do so ... as you have amply demonstrated.

But !! Just like you, they're entitled to their opinion. The value of
that opinion of course lies in the amount of fact contained therein.
Thankfully in OO reports, as in newsgroup postings, we are allowed to
make that determination for ourselves.

ac6xg

4030. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 00:14:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5dg71iv00j329@corp.supernews.com>
Source record: 124019
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

'Doc wrote:
> Cecil,
> Because the 'normal' SSB signal has a 3 Khz width,
> so 3 Khz +3999.0 Khz = 4002Khz. Right? As odd as it
> sounds, LSB is on the top side of the carrier (higher
> in frequency).
> 'Doc

Huh? LSB is above the carrier in frequency? It sounds odd because it's not true.

Roy Lewallen, W7EL

4031. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 00:41:56 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9329A9DE7A828pookster@216.168.3.50>
Source record: 124020
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

"Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in
news:v5cskeh2ta50fb@corp.supernews.com:

> As soon as you post with a real name, all will be revealed. Why should
> I be subjugated to a tirade from a source that hides behind a handle,
> and then demands I reveal myself.
>

I doubt if he ever will, so allow me to ask the question. That's my real
name and real call below and you can get the full real info at qrz.com.

So, what kind of Dr. are you?

--
Bill, W7TI

4032. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 00:47:01 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5di459igdlo31@corp.supernews.com>
Source record: 124023
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Thank you Mr. Bill, private e-mail has been sent.

"Bill, W7TI" <jamspam@upyours.now> wrote in message
news:Xns9329A9DE7A828pookster@216.168.3.50...
> "Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in
> news:v5cskeh2ta50fb@corp.supernews.com:
>
> > As soon as you post with a real name, all will be revealed. Why should
> > I be subjugated to a tirade from a source that hides behind a handle,
> > and then demands I reveal myself.
> >
>
> ----------
>
> I doubt if he ever will, so allow me to ask the question. That's my real
> name and real call below and you can get the full real info at qrz.com.
>
> So, what kind of Dr. are you?
>
> --
> Bill, W7TI

4033. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 00:47:59 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E56C8C4.A06BDCAE@silverstar.com>
Source record: 124022
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Probably an "amateur" proctologist!

"Bill, W7TI" wrote:

> "Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in
> news:v5cskeh2ta50fb@corp.supernews.com:
>
> > As soon as you post with a real name, all will be revealed. Why should
> > I be subjugated to a tirade from a source that hides behind a handle,
> > and then demands I reveal myself.
> >
>
> ----------
>
> I doubt if he ever will, so allow me to ask the question. That's my real
> name and real call below and you can get the full real info at qrz.com.
>
> So, what kind of Dr. are you?
>
> --
> Bill, W7TI

4034. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 00:53:15 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5difrl5abttd6@corp.supernews.com>
Source record: 124024
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Absolutely, I recognized you as an asshole right away.

"Dean Arthur" <dearthur@silverstar.com> wrote in message
news:3E56C8C4.A06BDCAE@silverstar.com...
> Probably an "amateur" proctologist!
>
> "Bill, W7TI" wrote:
>
> > "Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in
> > news:v5cskeh2ta50fb@corp.supernews.com:
> >
> > > As soon as you post with a real name, all will be revealed. Why should
> > > I be subjugated to a tirade from a source that hides behind a handle,
> > > and then demands I reveal myself.
> > >
> >
> > ____
> >
> > I doubt if he ever will, so allow me to ask the question. That's my
real
> > name and real call below and you can get the full real info at qrz.com.
> >
> > So, what kind of Dr. are you?
> >
> > --
> > Bill, W7TI
>

4035. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 01:17:13 UTC
From: Harold Burton <hwburton@cableone.net>
Message-ID: <v5djsf9tj8ri94@corp.supernews.com>
Source record: 124025
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

"Dean Arthur" <dearthur@silverstar.com> wrote in message
news:3E56C8C4.A06BDCAE@silverstar.com...
> Probably an "amateur" proctologist!
>
> "Bill, W7TI" wrote:
>
> > "Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in
> > news:v5cskeh2ta50fb@corp.supernews.com:
> > So, what kind of Dr. are you?
> >
> > --
> > Bill, W7TI

You guys finally got me to wondering, I'm
a high school drop out with two college degrees(bachelors and masters in
education).
Since any of you of the several disciplines with typical Doctorate degrees
may be identified as Doctor, why is it out of line if we underachievers with
Masters degrees want folks to call us Master. Hunhhhh?(g)

Harold
KD5SAK

4036. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 01:31:19 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E56D2CD.3F3EA925@attbi.com>
Source record: 124026
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Nothing wrong with calling you 'Master'. If you check the development of
the english language usage of 'Mister' you will find that it is a
corruption of 'Master'. Where 'Master' indicated completion of higher
education.

That's the extent of my knowledge of 'Master'.

Any linguists on the reflector?

Deacon Dave, W1MCE

Harold Burton wrote:
>
> "Dean Arthur" <dearthur@silverstar.com> wrote in message
> news:3E56C8C4.A06BDCAE@silverstar.com...
> > Probably an "amateur" proctologist!
> >
> > "Bill, W7TI" wrote:
> >
> > > "Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in
> > > news:v5cskeh2ta50fb@corp.supernews.com:
> > > So, what kind of Dr. are you?
> > >
> > > --
> > > Bill, W7TI
>
> You guys finally got me to wondering, I'm
> a high school drop out with two college degrees(bachelors and masters in
> education).
> Since any of you of the several disciplines with typical Doctorate degrees
> may be identified as Doctor, why is it out of line if we underachievers with
> Masters degrees want folks to call us Master. Hunhhhh?(g)
>
> Harold
> KD5SAK

4037. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 01:32:48 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5dkq12jvn4v92@corp.supernews.com>
Source record: 124027
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Yes Master...

"Harold Burton" <hwburton@cableone.net> wrote in message
news:v5djsf9tj8ri94@corp.supernews.com...
>
>> You guys finally got me to wondering, I'm
> a high school drop out with two college degrees(bachelors and masters in
> education).
> Since any of you of the several disciplines with typical Doctorate degrees
> may be identified as Doctor, why is it out of line if we underachievers
with
> Masters degrees want folks to call us Master. Hunhhhh?(g)
>
> Harold
> KD5SAK
>
>

4038. Newsgroup cops, was Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 01:33:20 UTC
From: W8LNA <gwatts@nrao.edu>
Message-ID: <3E56D360.A61C29BD@nrao.edu>
Source record: 124028

>
> Jim Weir <jim@rst-engr.com> wrote in
> news:c9j85vg3t3ahii6dvkah2gs2esmnkfq481@4ax.com:
>
> > That's so, unless some stupid clod can't be bothered to do a decent
> > search before asking a common question.
> >
> > Then again, had I seen the "edu" at the end of your addy, I'd not have
> > bothered to respond.
>
"Bill, W7TI" wrote:
> Jim needs a little more fiber in his diet, I'd say.
>
> --
> Bill, W7TI

Maybe so, Bill, but Jim also needs to develop a few social skills. I mentioned the Cantenna thread and the ONE negative response to a friend offline. He thought that just about every news group has a 'cop' who simply can't stand to see people actually discussing something without shoving in some kind of ad hominim correction or admonishment to demonstrate his or her apparent superiority. He gave an example of someone who asked a news group for suggestions about microphone connectors for aircraft and how whatever anyone else suggested this person ridiculed the idea, never made any positive comments, etc. on that and just about every other thread he was involved in.

After talking about it a bit more we discovered we were both talking about the very same Jim Weir.

Jim, I sincerely suggest professional help, life's a lot more fun when you don't take yourself so seriously. In general you don't come off superior, just annoying.

If all I'd wanted was strictly an answer I'd have gone out and bought a gallon of mineral oil and not have taken the time to strike up a few conversations with some very nice, polite and helpful people, conversations that continued via email. I suspect there are new people joining the group daily with comments and suggestions that certainly won't be in the all hallowed archives so I'm not going to be intimidated into not asking questions by Jim's bleatings about being a clod with an "edu" in my "addy" and a broken search engine, bringing up a thread again to his great and personal displeasure because as we've all certainly heard: There are no stupid questions, just stupid answers. It's my news group just as much as it is his and I'll talk about what I want to when I want to whether I've searched on the subject or not, although I'll certainly try to keep the

subject on antennas and related subjects in this group.

Jim, there's a function in news readers that allows you to block out postings from chosen individuals, I suggest you apply it to me if I'm going to cause you such tantrums.

Thanks again for the positive responses and suggestions, everyone (except and only except you-all-know-who ;-)

-Galen, W8LNA

4039. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 03:03:11 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E56E86F.3D09A05D@cwis.net>
Source record: 124029
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Walt et al,
Tell me if this sounds familiar. You listen to someone talking at 3.850 Khz on LSB. As you increase frequency, you hear that person's voice going higher pitched until you 'loose' him somewhere around 3.853 Khz or so. Isn't that correct? On the other hand, if that person were using USB, then you could go lower in frequency, his voice would go higher pitched, and you'd loose him around 3.847 Khz, right? So you tell me which 'side' of the carrier frequency that USB and LSB is on. Hmmm?
'Doc

PS - Or did 'they' label them wrong on my radio?

4040. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 03:26:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E56EDCD.20806@ieee.org>
Source record: 124030
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

'Doc wrote:
> Cecil,
> Because the 'normal' SSB signal has a 3 Khz width,
> so 3 Khz +3999.0 Khz = 4002Khz. Right? As odd as it
> sounds, LSB is on the top side of the carrier (higher
> in frequency).

Huh? Why do they call it the "lower" sideband if it is
really the "upper" sideband?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4041. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 03:31:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E56EF20.1070904@ieee.org>
Source record: 124031
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

'Doc wrote:
> Tell me if this sounds familiar. You listen to
> someone talking at 3.850 Khz on LSB. As you increase
> frequency, you hear that person's voice going higher
> pitched until you 'loose' him somewhere around 3.853 Khz
> or so. Isn't that correct?

Exactly! If you increase the frequency and the person's voice
gets higher, it is getting farther away from the center frequency,
i.e. the voice band frequencies are lower than the center frequency.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4042. HyHGAIN Hy Tower - Theory of operation ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 03:48:15 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v5dhsmasutqkce@corp.supernews.com>
Source record: 124021

I have an old manual from a HT and was wondering if there is any info on just how the
stubs are situated, etc. I understand the theory of shorted/open stubs, but it is sort
of difficult to follow how it is set up. There are probably some of the antenna lengths
that are 3/4 or 5/8 wavelength etc. Still looks weird to me.

Doug N4IJ

4043. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 04:04:42 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302212004.3b68b46b@posting.google.com>
Source record: 124032

Roy Lewallen <w7el@eznec.com> wrote in message news:<v5d50qp7svob5e@corp.supernews.com>...
> Art Unwin KB9MZ wrote:
> > . . .
> > By the way, I do not believe a manufacturer can patent a product AFTER
> > he has commercialised the idea.
> > Regards
> > Art
>
> In the U.S., an inventor has one year in which to file a patent
> application after the first public disclosure. The public disclosure
> could consist of offering for sale an object incorporating the invention.
>
> Patent laws in many other countries are quite different from those in
> the U.S.
>
> Roy Lewallen, W7EL

Yes Roy I stand corrected. Apparently the 1 year rule is to allow
time for a commercial feasibility evaluation before going thru the
expense of a patent evaluation. I have been working on a new patent
on the basis that I had a year available for final presentation for
evaluation, it never occurred to me that this also allowed me as
much freedom as full release via manufacturing. Methinks it is time
to write an article in RADCOM describing its contents!!!!
Regards
Art

4044. Re: Propagation study

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 04:31:38 UTC
From: ac6la@arrl.net
Message-ID: <960228f1.0302212031.7c066005@posting.google.com>
Source record: 124033

Richard Clark <kb7qhc@attbi.com> wrote in message
> Hi Dan,
>
> It takes a lot of work. I did something like this a few years ago
> (numbers are stale). However from the global perspective I just love
> watching the bands follow the sun:
> http://www.qsl.net/kb7qhc/propagation/index.htm
> with a link to the actual clip if you have the download capacity
> (450KB).
>
> 73's
> Richard Clark, KB7QHC

Hi Richard,

Slick movie. I find that watching an animation of this stuff really leads to some new insights. You're right that building these things manually takes a lot of work. I know some folks (like Pete Smith) have captured the individual images and then used PowerPoint to create the animation.

Actually, I only use animated gif files for convenient web page demos. The MultiNEC program itself works by automatically creating and capturing all the images in a user-defined set and then "plays them back" under the control of a spin button. You can press and hold the spinner to see a continuous loop or you can single-frame (in either direction) as desired. So, for example, MultiNEC could automatically create and capture 24 MUF maps (one for each hour) and then let you view them as an animation without any manual construction required.

BTW, for anyone interested in building animated gifs (for any reason) I highly recommend a program called GIF Construction Set. There are other freeware programs available but I find this one to be well worth the $20 (shareware) that I paid for it. It has a nice compression feature that can really slim down the size of animated gifs. For example, Richard's 24 frame movie went from 448K to 350K. More info at the bottom of the page at www.qsl.net/ac6la/sqaelani.html , along with links to other sample MultiNEC animations.

And BTW #2, not all browsers handle animated gifs gracefully. If you have any "Ad Blocker" software installed you may not see the animation start (which also means you don't have to put up with those annoying flashing banner ads), and if you are using Netscape 6 I don't think there is a way to stop the animation.

Dan AC6LA
www.qsl.net/ac6la/

4045. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 04:40:30 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5dvpv16in1ib3@corp.supernews.com>
Source record: 124034
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

You guys drive on the wrong side of the road and post on the wrong end of the message.

I personally find it a pain to wade through 10 previously posted messages to get to your words of wisdom. It is more convenient to scroll down to see what was previously said.

For your convenience, I have eliminated all posts below my response. Am I now top or bottom posted?

4046. Re: Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 04:44:54 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5e02gki2f9q4f@corp.supernews.com>
Source record: 124035

For the 27th time I had a brain cramp while posting, at my age I am entitled. You and all the others were absolutely correct and I was wrong. Now may I be forgiven?

<mcduffie@xactcom.net> wrote in message news:ickd5vojs825ti3963t8ufp2tqsb8dtan2@4ax.com...
> On Fri, 21 Feb 2003 15:17:20 -0500, "Dr. Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> > Amateur radio equipment is set to read the sideband frequency not the
> > carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is
> > at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.
>
> I'm really disappointed to see this comment coming from an OO. It
> is incorrect. Where in the world did you come up with this 1.5KHz
> thing? Virtually all ham radio gear displays CARRIER frequency and
> you must calculate or visualize the actual SSB energy frequency.
>
> gm
> --
> There is no x in my ISPs domain name.

4047. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 05:34:42 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v5e2s0hmjm18f4@corp.supernews.com>
Source record: 124036
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

I too wish to see the new information at the top of the message!

That said, the definition of USB, as I recall, speaks of a frequency translation, without inversion, of the base band signal. The energy in an USB signal is (mostly) at higher (larger) frequencies than the nominal (perhaps absent) carrier frequency. 73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

4048. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 05:57:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5e4avnu2k67ff@corp.supernews.com>
Source record: 124037

Art Unwin KB9MZ wrote:
> Roy Lewallen <w7el@eznec.com> wrote in message
news:<v5d50qp7svob5e@corp.supernews.com>...
>
>>Art Unwin KB9MZ wrote:
>> > . . .
>>
>>>By the way, I do not believe a manufacturer can patent a product AFTER
>>>he has commercialised the idea.
>>>Regards
>>>Art
>>
>>In the U.S., an inventor has one year in which to file a patent
>>application after the first public disclosure. The public disclosure
>>could consist of offering for sale an object incorporating the invention.
>>
>>Patent laws in many other countries are quite different from those in
>>the U.S.
>>
>>Roy Lewallen, W7EL
>
>
> Yes Roy I stand corrected. Apparently the 1 year rule is to allow
> time for a commercial feasibility evaluation before going thru the
> expense of a patent evaluation. I have been working on a new patent
> on the basis that I had a year available for final presentation for
> evaluation, it never occurred to me that this also allowed me as
> much freedom as full release via manufacturing. Methinks it is time
> to write an article in RADCOM describing its contents!!!!
> Regards
> Art

There were some fairly substantial changes in the patent laws in 2000 --
for example, the application is now made public after 18 months under
some conditions. I recommend that you consult with a patent attorney to
get accurate and timely information.

Roy Lewallen, W7EL

4049. Re: Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 07:57:30 UTC
From: Helmut Wabnig <hXwabnig@aXon.at>
Message-ID: <p8be5vsjf1cfagh91ituj8o0v5vtgbtrff@4ax.com>
Source record: 124038

On Fri, 21 Feb 2003 09:00:05 +1300, Barry Lennox
<pbarryplennoxp@operamail.com> wrote:

>
>
>Yes, I have it.It does not have a lot on patch antennas. That's the
>problem with books that cover all antennas, it's not possible to
>allocate a lot of space to one type. I have another book that has a
>lot of info on patch (inc Circular) antennas. It also has a disk of
>design software. It's "CAD of Microstrip Antennas for Wireless
>Applications" by Robert A Sainati. ISBN 0-89006-562-4 Published by
>Artech House.
>

Thanks-a-bunch, am already seaching for my Amazon password :-)

73 de
w.

4050. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 09:30:36 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b37fvlgas1@slb2.atl.mindspring.net>
Source record: 124039
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Mac et al:

[snip]
"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:v5e2s0hmjm18f4@corp.supernews.com...
> I too wish to see the new information at the top of the message!
>
> That said, the definition of USB, as I recall, speaks of a frequency
> translation, without inversion, of the base band signal. The energy in
> an USB signal is (mostly) at higher (larger) frequencies than the
> nominal (perhaps absent) carrier frequency. 73, Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
[snip]

True indeed!

As you know, the several hundred year old theory of the Fourier
Integral/Transform
and/or Fourier Series, provides us with the understanding of USB and LSB.

Fourier frequency analysis of a real time signal f(t) results in a frequency
domain companion view
of a signal expressed as a frequency function F(f), which spans all possible
frequencies of support
for f(t) from negative infinity through zero up to positive infinite
frequency.

For "real" voice signals, the baseband spectrum emitted by the human larynx,
voicebox and mouth
itself intrinsically has both an upper and a lower sideband located in
frequency symetrically about zero
frequency. The LSB is always lower in numerical value than the USB. This
relationship does not
change with modulation.

When viewed in the frequency domain, the "real" human voice signal spectrum
is centered on a "carrier"
frequency of zero [0.0 Hz] Hertz and extends over the "audible" range in the
"positive" frequencies which
is its' Upper Side Band. and also over the "negative" frequencies which is
its' Lower Side Band. [e.g.
baseband voice intrinsically has two sidebands which extends over the
frequency range of say

(-3400 Hz, +3400 Hz) which we simply label as (LSB - 0.0Hz - USB)].

As you pointed out in your post above, when the voice baseband with its' intrinsic [LSB - 0.0 - USB]
frequency structure is modulated upon a sinusoidal carrier of frequency fc, the effect on the spectrum F
is simply translation(s) of the existing spectrum [for a "real" carrier both up and down] which moves or
"slides" the zero [0.0 Hz] center or baseband carrier to the new "center" frequency fc. The relationship
of LSB to USB remains the same. e.g. the voice LSB is always numerically less than or lower than the
USB region when expressed in numerical frequency. Negative frequencies being less than positive ones.

--
Peter K1PO
Indialantic By-the-Sea, FL.

4051. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 10:27:07 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <%fI5a.198600$tq4.5077@sccrnsc01>
Source record: 124040

Yes, the DX-392 is portable and has no external FM antenna jack.

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:iJKdnU88jryaMMijXTWcpw@comcast.com...
(The
> 392 is portable, right? See if it came with a dipole). > >
>
>

4052. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 11:13:52 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E575B70.C60E27B1@cwis.net>
Source record: 124041
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Cecil,
You're right! But which 'side' of the 'center'
frequency are you on, as the voice gets higher
pitched? If you did the same thing on the opposite
side of the 'center' frequency while in the same
mode, the pitch deepens and drops off quite rapidly.
That tells me that the majority of the signal is on
the 'high pitched' side, right? Thank you for proving
my point.
'Doc

4053. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 11:15:03 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E575BB7.E761C5A8@cwis.net>
Source record: 124042
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Cecil,
Probably the same reason you go up in frequency
while going down in wavelength.
'Doc

4054. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 11:16:04 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E575BF4.2D4B72C6@cwis.net>
Source record: 124043
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Walt,
I give up. Why?
'Doc

4055. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 11:24:28 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E575DEC.C5A70B15@cwis.net>
Source record: 124044
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

"J. McLaughlin",
Having said all that, can you tell me why my
receiver (and yours too) seems to act just the
opposite? The LSB signal is found above the 'center'
or carrier frequency. The USB signal is found
lower than the 'center' or carrier frequency. Our
receivers say you are wrong...
'Doc

4056. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 11:26:14 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E575E56.DDEC9BC1@cwis.net>
Source record: 124045

You are forgiven. Go and sin no more...
'Doc

4057. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 11:26:51 UTC
From: Ian <cls119@lycos.co.uk>
Message-ID: <L7J5a.103$7f3.59@newsfep3-gui.server.ntli.net>
Source record: 124046

Hello,

What does "Q" stand for? i can't find any reference to it in a book apart
from meaning the word "goodness", and I can't see how that fits in!

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b32mcp$nk1$1@sparta.btinternet.com...
> "H. Adam Stevens" wrote > Questions:
> > 1. Q of two 1/4 wave coax stubs in series?
> > 2. Q of dipole? Q of both in parallel at resonance?
> > 3. Is 1:1 bandpass maximized when the two Q's are equal?
>

4058. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 12:33:32 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <3e576c91_3@newsfeed>
Source record: 124061
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

RE: Below

If the statement below the line is true, then SSB gear is made differently now than when I was an active amateur (40+ years ago). If calibrated right, the tx VFO always indicated the frequency of the suppressed carrier.

The RF spectrum containing the active sideband was defined by chosing either USB or LSB at the tx, and the response limits of the sideband filter in the tx.

But in any case that spectrum would have to begin closer than 1kHz to the suppressed carrier if the recovered modulation was have tolerable fidelity. Good mechanical filters got down to within a few hundred hertz of the suppressed carrier, IIRC.

RF

"Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote
> Amateur radio equipment is set to read the sideband frequency not the
> carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is
> at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.

4059. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 13:02:59 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <_xK5a.10245$iu1.925947@news20.bellglobal.com>
Source record: 124047
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

"'Doc"
> Our receivers say you are wrong...

The *single* sideband filtering in your high quality LSB/USB receiver can make the situation confusing. Things are being hidden from you and your ears due to the steep filtering of the place where the unwanted sideband would be if it were there (that would otherwise be plainly audible).

The overall 'apperance' of the local spectrum is much more obvious if you use a simple, old, non-sideband filtered, BFO-type shortwave receiver.

4060. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 13:06:53 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <EBK5a.10272$iu1.926388@news20.bellglobal.com>
Source record: 124048
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

"'Doc"
> Walt, I give up. Why?

Once upon a time, Xmit IF was done at 9 MHz and then converted to various bands. Conversion down inverts the spectrum and turns the 9 MHz USB Xmit IF into Ham Band LSB. Started with minimzing curcuit complexity and then tradition takes it from there.

4061. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 13:50:56 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E578029.366C1819@attbi.com>
Source record: 124049
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Back in the good ol' sixties the 9.000 MHz was a nice IF to generate phase canceled carrier suppression signals. A 5.00 MHz local oscillator provides two mixing frequencies. One on 80 meters and the second on 20 meters. The two most popular SSB bands in the 60s.

The down conversion provided LSB and the up conversion provided USB!

Amazing when it works out that way <grin>

Deacon DAve, W1MCE

Walt Davidson wrote:
>
> On Fri, 21 Feb 2003 21:26:05 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
> >Huh? Why do they call it the "lower" sideband if it is
> >really the "upper" sideband?
>
> ROTFL! More to the point, why is it the convention for radio amateurs
> to use Lower Sideband on frequencies below 9 MHz and Upper Sideband on
> frequencies above 9 MHz?
>
> ;-)
>
> 73 de G3NYY
>
> --
> Walt Davidson Email: g3nyy @freeuk.com

4062. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 13:57:07 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3E5781B3.7E71@mindspring.com>
Source record: 124050
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Once uppon a time we had 9 mcs carrier generators for ssb. We used surplus ARC-5 aircraft transmitters as a VFO. TWO MOST popular bands were 75 and 20. Subtrace 5 mhz from 9 and there was 75. ADD 5 mhz to 9 and you had 20. The side bands were translated. So there is the rest of the story why 75 was LSB and 20 was USB in general! Sparks W4EAS

4063. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 14:03:14 UTC
From: No Name <NoName@mycomputer.net>
Message-ID: <9djd5vo12in6bt43d9t29vuuul63v26cbp@4ax.com>
Source record: 124051
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

On Fri, 21 Feb 2003 19:47:01 -0500, "Dr. Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>Thank you Mr. Bill, private e-mail has been sent.

Oh pray tell us all Dr. Fraud please please please.

Ooops sorry, my bad, make that Dr. Fred.

I'm thinking you're faking it Fred either not entitled to the
honorific (my personal choice) or Dr. of something totally
irrelevant.

For a long time you didn't use the title then it appeared.
Is it due to your admiration of Chip or simply to impress the folks
in the CB and scanner groups.

>
>"Bill, W7TI" <jamspam@upyours.now> wrote in message
>news:Xns9329A9DE7A828pookster@216.168.3.50...
>> "Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in
>> news:v5cskeh2ta50fb@corp.supernews.com:
>>
>> > As soon as you post with a real name, all will be revealed. Why should
>> > I be subjugated to a tirade from a source that hides behind a handle,
>> > and then demands I reveal myself.
>> >
>>
>> --
>>
>> I doubt if he ever will, so allow me to ask the question. That's my real
>> name and real call below and you can get the full real info at qrz.com.
>>
>> So, what kind of Dr. are you?
>>
>> --
>> Bill, W7TI
>

4064. How do you calculate VelocityOf Propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 14:31:31 UTC
From: Xanax <keepItInTheNewsGroups@news.com>
Message-ID: <3PL5a.11173$V6.14875@news.indigo.ie>
Source record: 124052

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

I'm designing a UHF 250Mhz antenna and would like to know how to get the
value of K for each element where L=K/F

Cheers
Xanax
-----BEGIN PGP SIGNATURE-----
Version: PGP 8.0 (Build 294) Beta

iQA/AwUBPleJwSGakPXr24F/EQKGNgCg/NBiyEsr0sN4u48UnYzStBikh8QAoKs2
lmuhWWioEBmcXMiX5YtAY0Vz
=g1jX
-----END PGP SIGNATURE-----
```

4065. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 14:59:06 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E57903A.151655E3@bloomer.net>
Source record: 124053
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

And I believe that is true (it was a violation). Reference 97.307(a) and 97.307(b).

97.307(a) No amateur station transmission shall occupy more bandwidth than necessary for the information rate and emission type being transmitted, in accordance with good amateur practice.

So, being SSB, it would be against good amateur practice to transmit a second sideband, albeit at a (hopefully) much reduced level of at least 40 dB.

97.307(b) Emissions resulting from modulation must be confined to the band or segment available to the control operator. Emissions outside the necessary bandwidth must not cause splatter or keyclick interference to operations on adjacent frequencies.

Now, if the operators dial indicated 3.999 MHz, this is the frequency of where the carrier would be if it were not suppressed. So, for example, if the gentleman was speaking into the microphone and had a voice frequency of 1500 Hz, his lower sideband would be at 3.9975 MHz (3.999 MHz - 1500 Hz) and his upper sideband would be at 4.0005 MHz (3.999 MHz + 1500 Hz), clearly "out of band".

Since most modern transceivers have an audio response (mic circuitry) of about 300 to 3000 Hz, I recommend always staying at least 3 KHz away from band edges.

Scott
N0EDV

Dave Shrader wrote:
>
> [Excuse the off topic on the antenna group but it has an active
> readership and I'm looking for an answer.]
>
> Background: A station is operating in the USA on 14150.00 kHz USB and
> the suppressed sideband, LSB at -50dBc, is detected with a bandwidth to
> 14147.2 kHz.
>
> Let me ask a question and hope a legal eagle can answer it!!
>
> Since the values of sideband suppression and spurious emissions are
> specified differently are they different entities in a legal sense?
>
> Years ago I had a friend receive an 'OO' citation that his signals were

> out of band. He claims he was operating on 3999.0 LSB. That's correct he
> was advised, and your suppressed USB signal is out of band!
>
> Deacon Dave, W1MCE
> + + +

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4066. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 15:10:02 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E5792CA.B1240D30@bloomer.net>
Source record: 124054
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

WOW! When did they start making radios that shows the sideband frequency instead of the (suppressed) carrier frequency? Both of my Kenwoods show where the carrier would be (520S - old technology, 690S - new technology). How does your radio calulate where the sideband really is in relation to the carrier? Sideband freqeuncy is determined by carrier frequency + modulation frequency for USB and carrier freqeuncy - modulation freqeuncy for LSB). Therefore, the sideband frequency changes for each persons voice freqeuncies...my bassy voice might have the sideband 800 Hz away from the carrier frequency and my wife's voice may put the sideband 2000 Hz away from the carrier frequency (especially when she's cussing me out).

Scott
N0EDV

"Dr. Fred Hambrecht Sr" wrote:
>
> Brother Dave:
> Let me make one correction, as an OO., We do not issue citations. We do send
> advisories to amateurs that they may have a problem, or may be in violation.
> This is sent to the amateur so he/she may take corrective action. It is not
> reported to the FCC. It is part of amateurs helping amateurs. While an OO is
> required to take a test on the regulations prior to appointment, he/she is
> not an enforcer.
>
> Enforcement is the sole purview of the FCC.
>
> Amateur radio equipment is set to read the sideband frequency not the
> carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is
> at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.
>
> That being said, if I observed no signals above the band edge, I would move
> on.
>
> Without knowing what the reporting OO observed, I can't comment on why your
> friend received an OO advisory.
>
> Given that he did receive a notice it is likely the OO had reason to believe
> he had a problem, and was informing him so corrective action could be taken.
> Legality dos not enter the picture, as the OO has no legal powers as stated
> earlier.
>
> "Dave Shrader" <david.shrader@attbi.com> wrote in message
> news:3E5676EA.9C148A4F@attbi.com...

> > [Excuse the off topic on the antenna group but it has an active
> > readership and I'm looking for an answer.]
> >
> > Background: A station is operating in the USA on 14150.00 kHz USB and
> > the suppressed sideband, LSB at -50dBc, is detected with a bandwidth to
> > 14147.2 kHz.
> >
> > Let me ask a question and hope a legal eagle can answer it!!
> >
> > Since the values of sideband suppression and spurious emissions are
> > specified differently are they different entities in a legal sense?
> >
> > Years ago I had a friend receive an 'OO' citation that his signals were
> > out of band. He claims he was operating on 3999.0 LSB. That's correct he
> > was advised, and your suppressed USB signal is out of band!
> >
> > Deacon Dave, W1MCE
> > + + +

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4067. Re: How do you calculate VelocityOf Propagation

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 15:37:26 UTC
From: richardharrison@webtv.net
Message-ID: <7186-3E579936-211@storefull-2311.public.lawson.webtv.net>
Source record: 124056

Xanax wrote:
"I`m designing a UHF 250MHz antenna and would like to know how to get the value of K for each element where L = K / F."

Arnold B. Bailey explains how to get correct antenna element lengths on page 317 of "TV and Other Receiving Antennas". He advises on corrections based on wire shape as well as wire cross-csection.

Bailey`s own empirical formula for velocity along antenna rods in terms of the periphery of the cylinderical rod is:
Velocity along rod = (1-sqrt P+P)(Free-space V)

P = pi D where D is the diameter of the cylindrical rod as a free-space wavelength fraction.

Bailey has graphs and examples which are too tedious to reproduce here.

Best regards, Richard Harrison, KB5WZI

4068. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 15:56:50 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <_4N5a.7907$mZ2.1200246@news20.bellglobal.com>
Source record: 124057
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

> WOW! When did they start making radios that shows
> the sideband frequency instead of the (suppressed)
> carrier frequency?

IIRC, my old TenTec Argosy II with the digital display shows the proper frequency when using the 'proper' sideband, but shows an offset frequency (3kHz ?) when using the 'opposite' (from the usual) sideband. Of course, the digital display in this case was an afterthought to the original design and was also a very 'minimal' design.

4069. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 15:59:13 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E579E51.3E92E3AB@cwis.net>
Source record: 124058
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

"J. Harvey",
Been there, done that, so what?
'Doc

4070. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 16:03:47 UTC
From: richardharrison@webtv.net
Message-ID: <7186-3E579F63-213@storefull-2311.public.lawson.webtv.net>
Source record: 124060

Ian wrote:
"What does Q stand for?"

Q stands for the energy stored per cycle versus the energy lost per cycle in an electrical circuit.

For instance, if your circuit simply consists of a coil of wire, the coil will have inductance which stores energy in its magnetic field, and it has dissipative resistance which loses energy on each cycle.

Energy storage is proportional to 2 pi times F, or the inductive reactance.

Energy loss is proportional to R.

The inherent series-connected Q is: X / R.

Best regards, Richard Harrison, KB5WZI

4071. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 16:10:17 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <q58f5v81vcniq80gb5hd7r6beurhh6pe8p@4ax.com>
Source record: 124059

Careful Dr. Fred, you don't want to rip their lips off with the
hookset :<}

On Fri, 21 Feb 2003 19:53:15 -0500, "Dr. Fred Hambrecht Sr"
<w4jle@charter.net> sent into the ether:

>Absolutely, I recognized you as an asshole right away.
>
>"Dean Arthur" <dearthur@silverstar.com> wrote in message
>news:3E56C8C4.A06BDCAE@silverstar.com...
>> Probably an "amateur" proctologist!
>>
>> "Bill, W7TI" wrote:
>>
>> > "Dr. Fred Hambrecht Sr" <w4jle@charter.net> wrote in
>> > news:v5cskeh2ta50fb@corp.supernews.com:
>> >
>> > > As soon as you post with a real name, all will be revealed. Why should
>> > > I be subjugated to a tirade from a source that hides behind a handle,
>> > > and then demands I reveal myself.
>> > >
>> >
>> > ____
>> >
>> > I doubt if he ever will, so allow me to ask the question. That's my
>real
>> > name and real call below and you can get the full real info at qrz.com.
>> >
>> > So, what kind of Dr. are you?
>> >
>> > --
>> > Bill, W7TI
>>
>

Dan, N9JBF
Amateur radio - What a hobby!
Remove left x for direct reply

4072. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 16:18:40 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <rpN5a.7921$mZ2.1204295@news20.bellglobal.com>
Source record: 124063
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

'J. Mc Laughlin' wrote:
> That said, the definition of USB, as I recall,
> speaks of a frequency translation, without
> inversion, of the base band signal. The energy
> in an USB signal is (mostly) at higher (larger)
> frequencies than the nominal (perhaps absent)
> carrier frequency.

<**NOTE: The above is exactly correct in every detail.**>

"'Doc" responded:
> Our receivers say you are wrong...

<?>

J. Harvey tried to be helpful:
> The overall 'apperance' of the local spectrum is
> much more obvious if you use a simple, old,
> non-sideband filtered, BFO-type shortwave receiver.

"'Doc" snapped back:
> Been there, done that, so what?

Don't worry about it. It's not important.

4073. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 16:20:13 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <FsudnQt5NdehPsqjXTWcoA@comcast.com>
Source record: 124062
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Scott,

To be perfecrly fair, I believe he was thinking of an old 1940s 1950s radio that did not have an SSB position. To listen to upper sideband, you would have switched to CW, tuned slightly above the frequency (not that you could have read the dial that accurately), and then diddled to BFO frequency. BTW every radio I have owned, except one, will cause a pitch change when swithing between SSB and CW. The exception is a Yaesu, where the pitch stays the same, but the displayed frequency changes so that it always displays the carrier frequency - very useful for working cross mode.

Tam/WB2TT
"Scott" <acepilot@bloomer.net> wrote in message
news:3E5792CA.B1240D30@bloomer.net...
> WOW! When did they start making radios that shows the sideband frequency
> instead of the (suppressed) carrier frequency? Both of my Kenwoods show
> where the carrier would be (520S - old technology, 690S - new
> technology). How does your radio calulate where the sideband really is
> in relation to the carrier? Sideband freqeuncy is determined by carrier
> frequency + modulation frequency for USB and carrier freqeuncy -
> modulation freqeuncy for LSB). Therefore, the sideband frequency
> changes for each persons voice freqeuncies...my bassy voice might have
> the sideband 800 Hz away from the carrier frequency and my wife's voice
> may put the sideband 2000 Hz away from the carrier frequency (especially
> when she's cussing me out).
>
> Scott
> N0EDV
>

4074. Re: Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 16:32:29 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <xCN5a.893$se1.517953@newssvr28.news.prodigy.com>
Source record: 124055

You better search for a bank loan, too. The new Krause book costs around
$150.

--
73,
Larry N8LP
www.telepostinc.com

"Helmut Wabnig" <hXwabnig@aXon.at> wrote in message
news:p8be5vsjf1cfagh91ituj8o0v5vtgbtrff@4ax.com...
> On Fri, 21 Feb 2003 09:00:05 +1300, Barry Lennox
> <pbarryplennoxp@operamail.com> wrote:
>
>
>
> > >
> > >
> > >Yes, I have it.It does not have a lot on patch antennas. That's the
> > >problem with books that cover all antennas, it's not possible to
> > >allocate a lot of space to one type. I have another book that has a
> > >lot of info on patch (inc Circular) antennas. It also has a disk of
> > >design software. It's "CAD of Microstrip Antennas for Wireless
> > >Applications" by Robert A Sainati. ISBN 0-89006-562-4 Published by
> > >Artech House.
> > >
>
> Thanks-a-bunch, am already seaching for my Amazon password :-)
>
> 73 de
> w.

4075. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 17:16:29 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E57B056.9F77EDCE@attbi.com>
Source record: 124064

Te Culpa!

"Dr. Fred Hambrecht Sr" wrote:
>
> For the 27th time I had a brain cramp while posting, at my age I am
> entitled. You and all the others were absolutely correct and I was wrong.
> Now may I be forgiven?
>
> <mcduffie@xactcom.net> wrote in message
> news:ickd5vojs825ti3963t8ufp2tqsb8dtan2@4ax.com...
> > On Fri, 21 Feb 2003 15:17:20 -0500, "Dr. Fred Hambrecht Sr"
> > <w4jle@charter.net> wrote:
> >
> > > Amateur radio equipment is set to read the sideband frequency not the
> > > carrier frequency. The actual carrier frequency of a 3999.0 LSB signal
> is
> > > at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.
> >
> > I'm really disappointed to see this comment coming from an OO. It
> > is incorrect. Where in the world did you come up with this 1.5KHz
> > thing? Virtually all ham radio gear displays CARRIER frequency and
> > you must calculate or visualize the actual SSB energy frequency.
> >
> > gm
> > --
> > There is no x in my ISPs domain name.

4076. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 18:05:08 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5ff5onoo2v06c@corp.supernews.com>
Source record: 124066
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Touch&#65533;

"Walt Davidson" <walt99@tiscali.co.uk> wrote in message
news:athe5v8ooeg4fus6raou8c2tl7grr96sqs@4ax.com...
> On Fri, 21 Feb 2003 23:40:30 -0500, "Dr. Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> >You guys drive on the wrong side of the road and post on the wrong end of
> >the message.
> >
> >I personally find it a pain to wade through 10 previously posted messages
to
> >get to your words of wisdom. It is more convenient to scroll down to see
> >what was previously said.
>
> I am sorry that you feel that way, however nothing I say would sway
> your opinion. Thank you for your response.
>
> :-)
> 73 de G3NYY
>
> --
> Walt Davidson Email: g3nyy @freeuk.com

4077. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 18:06:12 UTC
From: "Eric C. Weaver" <weav@sigma.net>
Message-ID: <3e57bc14@news.announcetech.com>
Source record: 124065
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Walt Davidson wrote:
> On Fri, 21 Feb 2003 21:26:05 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Huh? Why do they call it the "lower" sideband if it is
>>really the "upper" sideband?
>
>
> ROTFL! More to the point, why is it the convention for radio amateurs
> to use Lower Sideband on frequencies below 9 MHz and Upper Sideband on
> frequencies above 9 MHz?

Because in the "old days" modulation was done at 9 MHz and then mixed up/down
to the desired frequency. Mixing down to 7 or 3.5 or 1.9 caused an inversion
so you got the LSB.

Innit?

4078. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 18:28:16 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <4jP5a.535$cD5.67485@newsread2.prod.itd.earthlink.net>
Source record: 124067

Hello All,

I think it's about time for some hard numbers obtained by measurements to be inserted into this thread to show the true effect two 1/4 wl RG-58 coax sections have on dipole bandwidth.

I first measured the characteristic impedance Zo of a 1/4 wl section of RG-58 coax, using a General Radio GR-1606A RF impedance bridge.

I then measured the input impedance of the 1/4 wl section, both with the opposite end short circuited and open circuited, using a Hewlett-Packard HP-4815 RF Vector Impedance Meter. The length of the 1/4 wl section was verified using a Hewlett-Packard HP-8405 Vector Voltmeter.

Then, using the measured dipole impedance data, I applied the data from the 1/4 wl section to the dipole impedance, resulting in the new dipole terminal impedance with the reactance compensation.

From the new dipole terminal impedance we find the resulting SWR on the 50-ohm feed line.

Here is the measured data:

Complex characteristic impedance Zo of the 1/4 wl coax section, 53.42 - j1.67 ohms

Attenuation of 1/4 wl coax section at 3.750 MHz, 0.296 dB

Input impedance of short-circuited 1/4 wl coax section at 3.750 MHz, 1400 + j0 ohms

Input impedance of short-circuited 1/4 wl coax section at 3.550 MHz, 254 + j521.3 ohms

Q of coax section at 3.750 MHz, 1400/53.42 = 26.2

Q of coax section at input, 521.3/254 = 2.05

SWR on coax, 24.95:1

Dipole terminal impedance at resonance, 3.750 MHz, 55 + j0 ohms

Dipole terminal impedance off resonance at 3.550 MHz, no reactance compensation, 50 - j90 ohms

Parallel-equivalent R and X components of dipole impedance, Z = 50 - j90 ohms, R = 212 ohms, X = -117.8 ohms

Parallel-equivalent R and X components of short-circuited coax input impedance, R = 1323.9 ohms, X = 645.06 ohms

Total parallel-equivalent R and X components of the two coax sections in series, R = 2647.8 ohms, X = 1290.12 ohms

Parallel-equivalent R and X components of combined dipole and stub impedances at 3.550 MHz, R = 196.28 ohms, X = -129.64 ohms

Parallel R and X components converted to series impedance, Z = 59.62 - j90.26.

SWR of Z = 59.62 - j90.26 on 50-ohm line, 4.54:1

Summary:

SWR at resonance, 3.750 MHz, 1.1:1
SWR at 3.550 MHz without compensation, 5.04:1
SWR at 3.550 MHz with compensation (lossless coax), 4.9:1
SWR at 3.550 MHz with compensation (RG-58 coax), 4.54:1

I hope this data will clarify the performance of the bazooka with reactance compensation when the dipole input impedance is already very close to the characteristic impedance Zo of the feed line.

Walt, W2DU

4079. Re: Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 18:35:46 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932A6BC9B44A8pookster@216.168.3.50>
Source record: 124068

mcduffie@xactcom.net wrote in news:l09f5v8ja01q7g0lpskao5bu57fju9feir@4ax.com:

>> More to the point, why is it the convention for radio amateurs
>> to use Lower Sideband on frequencies below 9 MHz and Upper Sideband on
>> frequencies above 9 MHz?
>
> That question has a very practical answer and is well known by
> non-newbies to HR. It has to do with the ARC-5. Coming back yet?
> If not, do a little research. You'll learn something.
>
> gm
>

The answer is not dependent on the ARC-5. The original rigs generated the sideband signal at 9 MHz and either added 5 MHz to get 14 MHz or subtracted 5 MHz to get 4 MHz. The addition process preserves the sideband (upper or lower) and the subtraction process inverts it. Since nearly all rigs generated the 9 MHz signal as USB, we came to use USB when adding and LSB when subtracting.

Many hams used the ARC-5 as a VFO for the mixer, but *any* 5 MHz VFO would do. ARC-5s were cheap and easy but not required.

--
Bill, W7TI

4080. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 18:36:28 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932A6BE8A1186pookster@216.168.3.50>
Source record: 123919

Dave Shrader <david.shrader@attbi.com> wrote in
news:3E57B056.9F77EDCE@attbi.com:

> Te Culpa!
>

Thanks, but I'll take coffee.

--
Bill, W7TI

4081. Index of Newsgroup threads?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 19:03:09 UTC
From: fazamy@aol.com
Message-ID: <20030222140309.15156.00000049@mb-mg.aol.com>
Source record: 123920

Before I had to reload Windows95 I had a bookmark for a website that was an index for newsgroup threads. Anybody have the url for this website?

Thanks,
Evan
KB2AMY

4082. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 19:35:33 UTC
From: Zoran Brlecic <...WA7AA...@get.lost>
Message-ID: <3E57D101.3010507@get.lost>
Source record: 123921
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Scott wrote:
> And I believe that is true (it was a violation). Reference 97.307(a)
> and 97.307(b).
>
> 97.307(a) No amateur station transmission shall occupy more bandwidth
> than necessary for the information rate and emission type being
> transmitted, in accordance with good amateur practice.
>
> So, being SSB, it would be against good amateur practice to transmit a
> second sideband, albeit at a (hopefully) much reduced level of at least
> 40 dB.

So who's transmitting a second sideband? As long as the suppressed second sideband meets the 60dB or whatever the hell it is suppression, one is perfectly safe to transmit LSB on 4.000 MHz. Your logic would dictate that no transmitter anywhere in the physical world is allowed to transmit since all real world transmitters emit some sort of a harmonic frequency ("more bandwidth than necessary" per your interpretation). So, according to you, SSB should not be used at all, period. The rule above regulates the *bandwidth*, not the legal frequency range.

> 97.307(b) Emissions resulting from modulation must be confined to the
> band or segment available to the control operator. Emissions outside
> the necessary bandwidth must not cause splatter or keyclick interference
> to operations on adjacent frequencies.

Suppressed sideband does not equal splatter or keyclick. These regulations are intended to regulate and prevent faulty and technically substandard emissions, not technically sound and correct emissions.

> Now, if the operators dial indicated 3.999 MHz, this is the frequency of
> where the carrier would be if it were not suppressed. So, for example,
> if the gentleman was speaking into the microphone and had a voice
> frequency of 1500 Hz, his lower sideband would be at 3.9975 MHz (3.999
> MHz - 1500 Hz) and his upper sideband would be at 4.0005 MHz (3.999 MHz
> + 1500 Hz), clearly "out of band".

There is no upper sideband in his transmission, legally speaking, as long as it meets the suppression standard.

> Since most modern transceivers have an audio response (mic circuitry) of
> about 300 to 3000 Hz, I recommend always staying at least 3 KHz away
> from band edges.

How do you feel about harmonic radiation that meets the -60dB standard? After all, if you copy a station at S9+60 on his xmit frequency, you'll copy him S9 on his first harmonic. Should he shut down immediately until he can violate the laws of physics and produce an infinite suppression of the first harmonic?

73 .... WA7AA

--

Anti-spam measure: look me up on qrz.com if you need to reply directly

4083. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 19:53:19 UTC
From: richardharrison@webtv.net
Message-ID: <26355-3E57D52F-22@storefull-2316.public.lawson.webtv.net>
Source record: 123922

Walt, W2DU wrote:
"SWR at resonance, 3.750 MHz, 1:1:1
SWR at 3.550 MHz without compensation 5.04:1

SWR at 3.550 MHz with compensation, 4.9:1"

I asked for a yes or no answer, and Walt gave much more. He showed how much more. The answer is yes. The old ARRL Antenna Book correctly says:

"For instance, if the operating frequency is slightly below resonance, the antenna has capacitive reactance, but the shorted quarter-wave sections or stubs have inductive reactance. Thus the reactances tend to cancel, which prevents the impedance from changing (so) rapidly and helps maintain a low(ish) standing-wave ratio on the line over a band of frequencies."

Walt`s data confirm the old "Antenna Book". Is the bazooka effort worthwhile? That`s another question. Lossy coax may give a better SWR, but the good old "lossless coax" has to give more signal in most cases.

Best regards, Richard Harrison, KB5WZI

4084. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 20:30:58 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ndmf5vor1asu05dtemq6ihbpt5l901rr47@4ax.com>
Source record: 123923

On Fri, 21 Feb 2003 22:23:24 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

[snip]

|Contrary to what I've been reading on
|this thread, the resistance component of dipole impedance does not increase
|as height is lowered below 1/2 wl above ground--it decreases until reaching
|around 0.2 wl above ground, when it then increases due to dissipation in the
|ground. Thus, we're dealing with resonant resistances that are generally
|less than 60 ohms for the average dipole 30 - 40 feet above ground.

Walter old friend,

In a previous message (which perhaps you refer to) I cited Kraus'
(1950 Edition) figure 11-20 which shows the resistance of a horizontal
1/2 wave dipole above perfect ground. (This chart is reproduced in
the ARRL Antenna Books)

The figure shows the the resistance *does* increase below 0.5
wavelength above ground and in fact reaches a maximum (~97 ohm) at
about 0.35 wavelength above ground.

Below that height, the resistance decreases reaching zero at zero
height.

I also modeled a 7.15 MHz horizontal dipole constructed from 12 AWG
copper wire above average (Sommerfield) ground using MultiNEC (EZNEC 3
engine). I varied the height from 0.1 to 1.0 lambda and adjusted the
length at each height for zero reactance. The results of that study
follow:

Height Length R X

0.1 0.4810919 52.57 0.03
0.15 0.4795525 61.09 0.02
0.2 0.4797823 72.81 0.00
0.25 0.4816666 82.84 0.00
0.3 0.4844911 88.40 -0.01
0.35 0.4873186 88.47 0.01
0.4 0.4893003 83.78 -0.01
0.45 0.4899423 76.48 -0.01
0.5 0.4892787 68.49 0.00
0.55 0.4875354 63.94 0.01
0.6 0.4856287 63.17 0.00
0.65 0.4841885 65.83 0.01
0.7 0.4836087 70.58 0.01

0.75 0.4839665 75.61 0.01
0.8 0.4850363 79.22 0.00
0.85 0.4863823 80.35 0.00
0.9 0.4875118 78.83 0.00
0.95 0.4880472 75.46 0.01
1 0.4878539 71.60 0.01

Changing to "Extremely poor" ground yields:

0.1 0.4828948 70.10 0.00
0.15 0.4827034 71.92 0.00
0.2 0.4831888 76.67 0.00
0.25 0.4844368 80.72 0.00
0.3 0.4860284 82.29 0.00
0.35 0.4874326 80.98 0.00
0.4 0.4882302 77.48 0.00
0.45 0.488246 73.16 0.00
0.5 0.487548 68.45 0.00
0.55 0.4863667 66.90 0.00
0.6 0.485309 67.62 0.00
0.65 0.484685 70.04 0.00
0.7 0.4846323 73.17 0.00
0.75 0.4850962 75.89 0.00
0.8 0.4858642 77.37 0.00
0.85 0.486645 77.24 0.00
0.9 0.4871695 75.71 0.00
0.95 0.4872812 73.44 0.00
1 0.4869812 71.30 0.00
0.9 0.4875118 78.83 0.00
0.95 0.4880472 75.46 0.01
1 0.4878539 71.60 0.01

Changing to perfect ground and running the analysis again yields answers that duplicate Kraus' chart within reading error. This to me validates the model.

Examination of the data suggest that, at least as far as a reduction in the impedance variation v. height is concerned, lousy ground is better that perfect ground. This should not surprise; Kraus says that the feedpoint resistance equals the self resistance minus the mutual resistance of an image antenna located below ground, at a distance equal to the antenna height above ground. (I know I'm not telling you anything new)

If I'm not mistaken, for a given height, the mutual impedance will be highest when the "image" antenna is most efficient, i.e. the ground reflection is perfect (rho=-1). A lossy medium between the antenna and its image will reduce the mutual effects.

If "dissipation" in the reflector (ground) is high and lowers the impedance, why do do we measure free space impedances in antennas tested in anechoic chambers where the reflection coefficient is

purposely small?

Am I missing something?

Regards,

Wes

4085. Re: Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 20:36:16 UTC
From: Barry Lennox <pbarryplennoxp@operamail.com>
Message-ID: <jmnf5v456sihuocpq15naikro0l8k87tcv@4ax.com>
Source record: 123924

On Sat, 22 Feb 2003 16:32:29 GMT, "Larry Phipps"
<larry@telepostinc.com> wrote:

>You better search for a bank loan, too. The new Krause book costs around
>$150.

I got it from Powells, I can't recall the exact cost, but they were
significantly less than other sellers, about $112-$118 IIRC.

Barry Lennox

4086. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 20:40:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ftkf5vgkjc58iosupsg9i39qu6b194b73d@4ax.com>
Source record: 123925

On Sat, 22 Feb 2003 18:28:16 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>Hello All,
>
>I think it's about time for some hard numbers obtained by measurements to be
>inserted into this thread to show the true effect two 1/4 wl RG-58 coax
>sections have on dipole bandwidth.
>
>I first measured the characteristic impedance Zo of a 1/4 wl section of
>RG-58 coax, using a General Radio GR-1606A RF impedance bridge.
>
>I then measured the input impedance of the 1/4 wl section, both with the
>opposite end short circuited and open circuited, using a Hewlett-Packard
>HP-4815 RF Vector Impedance Meter. The length of the 1/4 wl section was
>verified using a Hewlett-Packard HP-8405 Vector Voltmeter.
>
>Then, using the measured dipole impedance data, I applied the data from the
>1/4 wl section to the dipole impedance, resulting in the new dipole terminal
>impedance with the reactance compensation.
>
>From the new dipole terminal impedance we find the resulting SWR on the
>50-ohm feed line.
>
>Here is the measured data:
>
>Complex characteristic impedance Zo of the 1/4 wl coax section, 53.42 -
>j1.67 ohms
>
>Attenuation of 1/4 wl coax section at 3.750 MHz, 0.296 dB
>
>Input impedance of short-circuited 1/4 wl coax section at 3.750 MHz, 1400 +
>j0 ohms
>
>Input impedance of short-circuited 1/4 wl coax section at 3.550 MHz, 254 +
>j521.3 ohms
>
>Q of coax section at 3.750 MHz, 1400/53.42 = 26.2
>
>Q of coax section at input, 521.3/254 = 2.05
>
>SWR on coax, 24.95:1
>
>Dipole terminal impedance at resonance, 3.750 MHz, 55 + j0 ohms

>
>Dipole terminal impedance off resonance at 3.550 MHz, no reactance
>compensation, 50 - j90 ohms
>
>Parallel-equivalent R and X components of dipole impedance, Z = 50 - j90
>ohms, R = 212 ohms, X = -117.8 ohms
>
>Parallel-equivalent R and X components of short-circuited coax input
>impedance, R = 1323.9 ohms, X = 645.06 ohms
>
>Total parallel-equivalent R and X components of the two coax sections in
>series, R = 2647.8 ohms, X = 1290.12 ohms
>
>Parallel-equivalent R and X components of combined dipole and stub
>impedances at 3.550 MHz, R = 196.28 ohms, X = -129.64 ohms
>
>Parallel R and X components converted to series impedance, Z = 59.62 -
>j90.26.
>
>SWR of Z = 59.62 - j90.26 on 50-ohm line, 4.54:1
>
>Summary:
>
>SWR at resonance, 3.750 MHz, 1.1:1
>SWR at 3.550 MHz without compensation, 5.04:1
>SWR at 3.550 MHz with compensation (lossless coax), 4.9:1
>SWR at 3.550 MHz with compensation (RG-58 coax), 4.54:1
>
>I hope this data will clarify the performance of the bazooka with reactance
>compensation when the dipole input impedance is already very close to the
>characteristic impedance Zo of the feed line.
>
>Walt, W2DU
>

Hi Walt,

Perhaps it would help to enumerate the benefits of when the dipole input Z is not close to the Z of the feedline to provide closure (or open a new thread).

Hi All,

Take notice of the enormous departure of the assorted measurements made with premium equipment compared to the quality from MFJ. This is not to slight MFJ for being merely adequate, but gear of the quality of MFJ is NOT a source of accuracy. There is no single source of accuracy and all should note that even Walt put several instruments to the chore.

The hardest lesson for "inventors of new technologies" (or those who simply dress like them) is to understand that one result is not an

answer, two results are at best confusion, and it takes at least three to make any claim for an educated guess. This is handily illustrated from the ORIGINAL (as annotated by me):
>MHz SWR RF
>7.00 1.2 89 -1.01dB (SWR = 1.22)
>7.03 1.1 93 -0.63dB (SWR = 1.17)
>7.06 1.0 97 -0.26dB (SWR = 1.11)
>7.09 1.0 97 -0.26dB (SWR = 1.11)
>7.12 1.0 97 -0.26dB (SWR = 1.11)
>7.15 1.0 99 -.087dB (SWR = 1.06)
>7.18 1.0 100 0dB (SWR = 1.0)
>7.21 1.0 97 -0.26dB (SWR = 1.11)
>7.24 1.0 97 -0.26dB (SWR = 1.11)
>7.27 1.1 93 -0.63dB (SWR = 1.17)
>7.30 1.2 89 -1.01dB (SWR = 1.22)
whereby we were shown two measurements. At the time of this posting I commented that the data reveals considerable conflict - and I found this caused no concern nor comment from the reporter. Two readings HAVE lead to confusion. At that time I offered one of two possibilities:
>
>If one is to believe the monitor, then the SWR meter is pretty poor at
>the low end. If one is to believe the SWR meter, the monitor is
>pretty poor at the high end. Choose your poison.
this was obviously a very difficult choice to accept as either choice must necessarily condemn the argument of bazookoidality.

(in general long gusted threads) From denial, most arguments descend into the minutia of tedious math, arguing definition, offering testimonials, and inability to respond to the first principles found even in erroneous math (in other words, the failure to accept failure and put it to useful purpose: Error is data, not trash).

The FSM is truly the more precise, and easily one that could be calibrated to greater accuracy and when offered the prospects of critics (such as myself) allowing to accept relative valuations, the FSM becomes even more the debate buster.

I would also like to comment on the difference of quality in measurement as illustrated by the MFJ analyzer and the GR-1606A RF impedance bridge. I suppose, some day, MFJ will have an instrument of comparable quality (encompassing RF span, and accuracy) - or they have it now. If or when is immaterial when you come to a measurement that defies conventional explanation. When presented a situation that offers conflict in the data, you must resolve through a third method (repetition may serve to resolve the conflict, but not by piling on).

Another such, "third," example is observe the dynamic behavior of the system:
>MHz SWR1 2 3 4
>7.000 1.70 1.18 1.20 1.20

>7.010 1.60 1.16 1.10 1.18
>7.020 1.55 1.05 1.08 1.15
>7.030 1.51 1.03 1.05 1.10
>7.040 1.50 1.01 1.03 1.08
>7.050 1.50 1.00 1.00 1.05
>7.060 1.45 1.00 1.00 1.04
>7.070 1.40 1.00 1.00 1.03
>7.080 1.30 1.00 1.00 1.01
>7.090 1.25 1.00 1.00 1.00
>7.100 1.20 1.00 1.00 1.00
>7.110 1.20 1.00 1.00 1.00
>7.120 1.18 1.00 1.00 1.00
>7.130 1.15 1.00 1.00 1.00
>7.140 1.08 1.00 1.00 1.00
>7.150 1.04 1.00 1.00 1.00
>7.160 1.03 1.00 1.00 1.00
>7.170 1.02 1.00 1.00 1.00
>7.180 1.01 1.00 1.00 1.00
>7.190 1.00 1.00 1.00 1.00
>7.200 1.00 1.00 1.00 1.00
>7.210 1.00 1.00 1.00 1.00
>7.220 1.00 1.03 1.00 1.00
>7.230 1.00 1.05 1.01 1.00
>7.240 1.00 1.10 1.03 1.01
>7.250 1.01 1.15 1.05 1.03
>7.260 1.02 1.20 1.10 1.04
>7.270 1.03 1.25 1.18 1.05
>7.280 1.05 1.30 1.20 1.10
>7.290 1.08 1.35 1.30 1.18
>7.300 1.20 1.40 1.35 1.20

unfortunately, the truly useful data from independent FSM measurements were un reported. Another shortfall of reportage is found in an exact description of the variations; rather than merely stating they were snipped. As such, and lacking corroborative evidence either way, the various curves show only ONE dynamic at work which is indistinguishable from a ONE resonance system. There may be enough data here otherwise to prove bazookoidality, but no effort has been expended in that regard FROM the data. In other words, the arguments to this point treat data as a product, to be meted out to satisfy argument, but otherwise discarded before any other application can test them.

73's
Richard Clark, KB7QHC

4087. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 20:41:18 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <8ZmcnRv6rsXxfcqjXTWcog@comcast.com>
Source record: 123926

"CW" <clinton.magers@attbi.com> wrote in message
news:%fI5a.198600$tq4.5077@sccrnsc01...
> Yes, the DX-392 is portable and has no external FM antenna jack.

In that case it sounds like a losing proposition.

Tam
>
> "Tarmo Tammaru" <t-tammaru@home.com> wrote in message
> news:iJKdnU88jryaMMijXTWcpw@comcast.com...
> (The
> > 392 is portable, right? See if it came with a dipole). > >
> > >
> > >
> >
>

4088. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 20:51:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <trof5vskpl9tneme3nrfh657r9k0ah8f64@4ax.com>
Source record: 123927
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

On Sat, 22 Feb 2003 04:30:36 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>When viewed in the frequency domain, the "real" human voice signal spectrum
>is centered on a "carrier"
>frequency of zero [0.0 Hz] Hertz and extends over the "audible" range in the
>"positive" frequencies which
>is its' Upper Side Band. and also over the "negative" frequencies which is
>its' Lower Side Band. [e.g.
>baseband voice intrinsically has two sidebands which extends over the
>frequency range of say
>(-3400 Hz, +3400 Hz) which we simply label as (LSB - 0.0Hz - USB)].
>

Hi Peter,

Only faster than light arguments are more compelling - jeeze, louise!

Show me a negative frequency source (do you build it with dark matter
and power it with dark energy???).

73's
Richard Clark, KB7QHC

4089. Re: Index of Newsgroup threads?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 21:06:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7rpf5v4cu2o9bv0vdk2m7i35pr48ba3kso@4ax.com>
Source record: 123928

On 22 Feb 2003 19:03:09 GMT, fazamy@aol.com (FAZAMY) wrote:

>Before I had to reload Windows95 I had a bookmark for a website that was an
>index for newsgroup threads. Anybody have the url for this website?
>
>Thanks,
>Evan
>KB2AMY

http://groups.google.com/groups?oi=djq&as_ugroup=rec.radio.amateur.antenna

4090. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 21:06:20 UTC
From: richardharrison@webtv.net
Message-ID: <26354-3E57E64C-94@storefull-2316.public.lawson.webtv.net>
Source record: 123929

I wrote:
"Energy storage is proportional to 2 pi times F, or the inductive
reactance."

That`s incomplete in defining inductive reactance. Energy storage is
also proportional to the inductance (L).

Inductive reactance = 2 pi (F)(L)

Answer is in volts per amp or ohms.

F is in Hertz, or cycles per second.

L is in henries or in volts per amp per second.

Best regards, Richard Harrison, KB5WZI

4091. Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 23:48:16 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E580C25.1F077267@attbi.com>
Source record: 123930

My Old, old, old copy of Kraus, 1950, has died and is buried.

For a replacement should I buy 1950 used, the 1988 edition, or the 2001 edition? Why? What is offered in later editions?

Deacon Dave, W1MCE

4092. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-22 23:54:57 UTC
From: Ed Senior <eseniorsREMOVE@earthlink.net>
Message-ID: <l5U5a.831$vU3.109472@newsread1.prod.itd.earthlink.net>
Source record: 123931
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

It sure would be nice if we could GET RID of this disfunctional
tradition, and standardize on one or the other sideband!

My 1000D can remember to select USB or LSB automatically, based
on band, but it CAN'T change the IF Shift automatically from LSB
position to USB position; so I have to do that manually, every time.
What a pain! What about you 756 ProII guys: Can that rig remember
and auto-select a different IF shift for each band, or for USB vs. LSB?

Yeah, I know: We had to adjust EVERYTHING manually on the old
tube sets. And we walked to school in the snow, uphill both ways, etc.

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote in message
news:EBK5a.10272$iu1.926388@news20.bellglobal.com...
> "'Doc"
> > Walt, I give up. Why?
>
> Once upon a time, Xmit IF was done at 9 MHz and then converted to various
> bands. Conversion down inverts the spectrum and turns the 9 MHz USB Xmit
IF
> into Ham Band LSB. Started with minimzing curcuit complexity and then
> tradition takes it from there.
>
>
>
>
>

4093. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 00:17:31 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <vqU5a.201114$iG3.23639@sccrnsc02>
Source record: 123933

I have both the 1950 edition and the latest, the third edition. The latter
has been heavily revised and includes a lot of new material. For example,
it has a whole chapter on baluns - something hardly covered in the original.
I recommend the latest edition.

Malcolm

"Larry Phipps" <larry@telepostinc.com> wrote in message
news:o7V5a.953$se1.587474@newssvr28.news.prodigy.com...
> I can't address the new one 'cause I don't have it...but I certainly would
> try to find a replacement copy of the original.
>
> --
> 73,
> Larry N8LP
> www.telepostinc.com
>
>
> "Dave Shrader" <david.shrader@attbi.com> wrote in message
> news:3E580C25.1F077267@attbi.com...
> > My Old, old, old copy of Kraus, 1950, has died and is buried.
> >
> > For a replacement should I buy 1950 used, the 1988 edition, or the 2001
> > edition? Why? What is offered in later editions?
> >
> > Deacon Dave, W1MCE
>
>

4094. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 00:24:12 UTC
From: jgboyles@aol.com
Message-ID: <20030222192412.12700.00000020@mb-ca.aol.com>
Source record: 123934

>My Old, old, old copy of Kraus, 1950, has died and is buried.
>

Mine is in medium shape, I understand the math in 25% of what is written. If you understand the math in the 1950 edition, then go for the later edition, maybe gain some knowledge.
My antenna course in 1974 used the 1950's text, but the guy that taught it used a bunch of written lecture notes that he copied on a blackboard. He never fielded questions, or otherwise indicated he knew what he was talking about. I was in a hurry to get out and get a job, so I did not protest
Now I am trying to learn antennas, Kraus is a good place to start.
73 Gary N4AST
73 Gary N4AST

4095. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 00:25:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5g577eq4be61d@corp.supernews.com>
Source record: 123935

I have both the first (1950) and second (1988) editions. So far, I haven't found anything in the first that's missing in the second. The second edition is somewhat reorganized, and has a new chapter on broadband and frequency-independent antennas. It also has sections on modern antennas such as microstrip (patch) antennas that aren't present in the first edition. There's also a very nice, concise explanation of the method of moments in the second edition. There don't seem to be major changes to the original material that's in both editions. You'll definitely get something for your money by buying the second as opposed to the first edition, but it's up to you to decide whether the price difference is worth it.

I haven't seen the third edition, but if the trend continues, it's an improvement over the second.

Roy Lewallen, W7EL

Dave Shrader wrote:
> My Old, old, old copy of Kraus, 1950, has died and is buried.
>
> For a replacement should I buy 1950 used, the 1988 edition, or the 2001
> edition? Why? What is offered in later editions?
>
> Deacon Dave, W1MCE

4096. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 01:04:48 UTC
From: kh2d@my-deja.com
Message-ID: <3e581df5.851286575@newsgroups.bellsouth.net>
Source record: 123936
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

On Sat, 22 Feb 2003 23:54:57 GMT, "Ed Senior"
<eseniorsREMOVE@earthlink.net> wrote:

>It sure would be nice if we could GET RID of this disfunctional
>tradition.....

I agree. Who started crossposting all this stuff to DX anyway?

73, Jim KH2D

4097. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 01:05:24 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <o7V5a.953$se1.587474@newssvr28.news.prodigy.com>
Source record: 123932

I can't address the new one 'cause I don't have it...but I certainly would
try to find a replacement copy of the original.

--
73,
Larry N8LP
www.telepostinc.com

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E580C25.1F077267@attbi.com...
> My Old, old, old copy of Kraus, 1950, has died and is buried.
>
> For a replacement should I buy 1950 used, the 1988 edition, or the 2001
> edition? Why? What is offered in later editions?
>
> Deacon Dave, W1MCE

4098. Re: Antenna books and software

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 01:30:37 UTC
From: dplatt@radagast.org
Message-ID: <v5g91th50mh616@corp.supernews.com>
Source record: 123937

>You better search for a bank loan, too. The new Krause book costs around
>$150.

Several of the online bookstores have the hardcover, new, for around
$125.

It looks as if it's also available in a paperback format, for rather
less, and there seem to be some used copies of the paperback floating
around.

Powell's had a used copy of the hardcover a few days ago for $85... I
grabbed while the grabbing was good.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4099. "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 02:17:54 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302221817.70f6259e@posting.google.com>
Source record: 123938

Somewhere in one of the posts of the last two weeks someone asked what exactly is "Q". When I was active in ham radio many members of the club
was not experienced in mathematical areas so the quoting of mathematical
relationships left him with eyes glazed and a sense of not belonging. In answering such questions I always tried to relate it to the hobbyist
you had chosen to be a fellow ham. Thus I would explain "Q" in a non technical way.

The optimum requirement for a specific 'chat' between two hams is to have an antenna system that maximises the transmit or receipt of the conversation at hand, while at the same time signals that are not part of the conversation and out of the 'pass band' were antennuated. Thus the QUALITY "Q" of the communication at hand is the TOTAL focus of the antenna at that particular frequency which includes not only maximum efficiency but also the ability to retain maximum sensitivity of the receiver by retaining its designed noise floor.
To the user it is has exactly the same function as a pass band filter which one has in the radio except that the filter requirement is used at the ONSET of signal receipt which provides distinct advantages with respect to the specific communication taking place.

Tho one can get into the subject of "Q" rather deeply in terms of theorems or
mathematics,pass band shapes, formulas etc, it is important to allow the questioner the ability to get a 'foothold' in the subject so he can be retained as a fellow ham even tho your reply may be subject to ridicule by fellow and the more knoweledgable newsgroup members.
Sorry I couldn't find the actual question posting but hopefully the questioner is still around so that he can obtain a foothold in what can be a very technical subject.
I know,..... who am I to talk about effective communication!!!!
Regards
Art, a nothing

4100. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 02:23:52 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E5830A0.7A9DE217@attbi.com>
Source record: 123939
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Some rude dude named Deacon Dave, but he apologized right up front as being off topic.

He never expected it to blow up to a thread this size!! This thread surely has a life and twists of it's own though!!

But, you know preachers: "Never say in a sentence what can be said in a paragraph; never say in a paragraph what can be said in a chapter; etc."

Deacon Dave, W1MCE
+ + + [Mea Culpa!]

>
> Who started crossposting all this stuff to DX anyway?
>
> 73, Jim KH2D

4101. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 02:28:14 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302221828.6eb759cd@posting.google.com>
Source record: 123940

"Larry D. Clark" <buddycl@swbell.net> wrote in message
news:<N2g1a.278$F96.186379431@newssvr11.news.prodigy.com>...
> wonder if anyone could comment on the
> sensitivity of a double bazooka antenna
> as opposed to a traditional wirev antenna
> for 80m. i have done some research on
> the internet and have learned that the 2:1
> bandwidth is much greater for a bazooka.
> i don't think that there are many free lunches
> around, what's the tradeoff here?
>
> larry
> kd5foy

Larry,
When ever you broaden the band width of an antenna you reduce the
attenuation
of nearby signals. This reduction not only allows your communications
to be 'swamped' by nearby signals but also changes the noise floor in
your receiver.
When using the 80 metre band both of these drawbacks to a free lunch
can be formidable.
Regards
Art

4102. Re: ignition (No, injector) noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 02:32:18 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302221832.6921c932@posting.google.com>
Source record: 123941
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Vito <vito@crosslink.net> wrote in message news:<3E54F500.14EF1744@crosslink.net>...
> Rudi wrote:
> >
> > Maybe the fuel injector solenoids?
>
> There was this same thread over on rec.outdoors.rv-travel a while back.
>
> Noise source is definately the solenoids, or rather the pulses that
> drive them.
>
> Don't recall the fix but any of the "outlaw" CB shops found near truck
> stops prolly knows what to do. <grin> Ain't that awful!

And to think that I thought that it was the tappets on my Mercedes
that created that awefull noise, even when the wireless was not on!!!
Art

4103. Re: High performance antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 02:38:58 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302221838.70da7cdc@posting.google.com>
Source record: 123942

I presume that the usage can be applied to SOME Icom radios but not
ALL of them. Does a radio with an automatic matching unit built in
tuner qualify or does it have to be more 'high tech'??
Regards
Art

"Heinz Bolli" <heinz.bolli@hbag.ch> wrote in message
news:<3e54e6a8$1_2@news.bluewin.ch>...
> Hi all
>
> We are constructing a new antenna tuner/matchbox especially for symmetric
> antennas. The most important featueres will be:
>
> - Matching of symmetric antennas
> - 1.8 to 30 MHz
> - High impedance matching range, capability for compensation of high
> reactive loads. (50 Ohm to up to 3000 Ohm +/- 3000 Ohm reactive)
> - High power handling (up to 2 kW)
> - Remotable and/or automatic function
> - Working in Transmit- AND Receive-Mode (with ICOM-Transceivers)
> - Matching unit for outdoor mounting (near antenna feedpoint)
> - Control unit for indoor use (near Transceiver)
>
> We are looking for techincal interested amateurs for broad field tests. We
> offer a absolute high quality unit from our pre-series for a fair price.
>
> Interested? Then contact immedialtely:
>
> Heinz Bolli HB9KOF
>
> HEINZ BOLLI AG
> Ruetihofstrasse 1
> CH-9052 Niederteufen / Switzerland
>
> Phone: +41 71 333 4833
> Fax: : +41 71 333 4843

4104. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 02:43:53 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <RrW5a.4479$Xa4.1420@fe01.atl2.webusenet.com>
Source record: 123943

Or, can relate to a comment seen years ago, in reference to "807's" (the liquid type, not the vacuum type), : I.E. "He was behaveing like a high "Q" circuit, a HELL OF A CAPACITY, and DAMN LITTLE RESISTANCE" :>) Jim NN7K

"Art sen

t:
> Somewhere in one of the posts of the last two weeks someone asked
> what exactly is "Q". When I was active in ham radio many members of
> the club
> was not experienced in mathematical areas so the quoting of
> mathematical
> relationships left him with eyes glazed and a sense of not belonging.
> In answering such questions I always tried to relate it to the
> hobbyist
> you had chosen to be a fellow ham. Thus I would explain "Q" in a non
> technical way.
>
> The optimum requirement for a specific 'chat' between two hams is to
> have an antenna system that maximises the transmit or receipt of the
> conversation at hand, while at the same time signals that are not part
> of the conversation and out of the 'pass band' were antennuated. Thus
> the QUALITY "Q" of the communication at hand is the TOTAL focus of
> the antenna at that particular frequency which includes not only
> maximum efficiency but also the ability to retain maximum sensitivity
> of the receiver by retaining its designed noise floor.
> To the user it is has exactly the same function as a pass band filter
> which one has in the radio except that the filter requirement is used
> at the ONSET of signal receipt which provides distinct advantages with
> respect to the specific communication taking place.
>
> Tho one can get into the subject of "Q" rather deeply in terms of
> theorems or
> mathematics,pass band shapes, formulas etc, it is important to allow
> the questioner the ability to get a 'foothold' in the subject so he
> can be retained as a fellow ham even tho your reply may be subject to
> ridicule by fellow and the more knoweledgable newsgroup members.
> Sorry I couldn't find the actual question posting but hopefully the
> questioner is still around so that he can obtain a foothold in what
> can be a very technical subject.
> I know,..... who am I to talk about effective communication!!!!
> Regards
> Art, a nothing

4105. Re: bazooka antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 02:51:37 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <d1dg5v401rp6hd0b5rlqriht9f9cl5uhk1@4ax.com>
Source record: 123944

On 22 Feb 2003 18:28:14 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

|"Larry D. Clark" <buddycl@swbell.net> wrote in message
news:<N2g1a.278$F96.186379431@newssvr11.news.prodigy.com>...
|> wonder if anyone could comment on the
|> sensitivity of a double bazooka antenna
|> as opposed to a traditional wirev antenna
|> for 80m. i have done some research on
|> the internet and have learned that the 2:1
|> bandwidth is much greater for a bazooka.
|> i don't think that there are many free lunches
|> around, what's the tradeoff here?
|>
|> larry
|> kd5foy
|
|Larry,
|When ever you broaden the band width of an antenna you reduce the
|attenuation
|of nearby signals. This reduction not only allows your communications
|to be 'swamped' by nearby signals but also changes the noise floor in
|your receiver.
|When using the 80 metre band both of these drawbacks to a free lunch
|can be formidable.
|Regards
|Art

Come on Art, what a bunch of hooey.

Since it has been generally agree amongst the more adept in this forum
that the alleged bandwidth improvement of the bazooka is achieved via
increased loss at the band edges, by your logic the bazooka must have
a 1 dB *advantage* over a "regular" dipole in the noise floor
department.

Throw some resistors across the feedpoint and get rid of the wire
that's picking up those pesky signals that are messin' up reception
and you can lower the noise floor even more.

4106. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 02:55:48 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <0DW5a.4540$Xa4.2048@fe01.atl2.webusenet.com>
Source record: 123945

Don't know if they still stock it, or which version, but CQ's bookstore had these in their catalog a few years ago (mine was purchased from HAM RADIO, obviously extinct for over 20 years, now). Dont remember the price. might give them a try.- JIM- NN7K

Larry wrote:
> I can't address the new one 'cause I don't have it...but I certainly would
> try to find a replacement copy of the original.
>
> --
> 73,
> Larry N8LP

4107. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 03:08:34 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3E583B41.4090200@adelphia.net>
Source record: 123946

Art Unwin KB9MZ wrote:

> Somewhere in one of the posts of the last two weeks someone asked
> what exactly is "Q".

Q is that all powerful dude on Star Trek - The Next Generation.

Sorry, I just couldn't help it! ;^)

- Mike KB3EIA -

4108. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 03:19:48 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <wZW5a.4648$Xa4.4312@fe01.atl2.webusenet.com>
Source record: 123947

Comments below:

"Norman Seifert" wrote:

> Is the dB gain of an antenna an indication of the strength of the
> antenna?

The answer is "PERHAPS"- what is the gain referenced to? OVER A DIPOLE, OVER AN ISOTROPIC (-2 dB less than a DIPOLE, or like a lot of ads (which is why the ARRL is so picky about allowing gain clams) the statement " dB GAIN (with no reference--to what? a DUMMY LOAD? roll of aluminium foil? WHAT???)

>Is an outside fm antenna with a lower dB gain better than an
> inside amplified fm antenna with a higher dB gain?

Would say "yes" , as, an inside amplifier (irregardless of the gain), can't replace the signal lost in your feed line from your antenna- that signal is LOST-GONE BYE-BYE (as is any extranious noise, except noise from thermal propraties of your feed line (at "X" db loss, where x = the loss /per foot of your feedline at the freq(s) involved)

> Does an amplified
> inline signal booster really help an outside antenna?

See above, and remember: that if the preamp is mounted at the antenna, will overcome your feedline loss's, but NOTHING AT THE TERMINUS (next to the radio) can recover the signal lost in your feedline! ---jim nn7k

> Norman Seifert
> Swannanoa, N.C., U.S.A.
>

4109. Re: GP

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 03:26:06 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <q3X5a.4679$Xa4.2852@fe01.atl2.webusenet.com>
Source record: 123948

sounds like to me , he wants to use it for lower freq, as a top hat loaded verticle!
any comments in that area? and, no, I doubt it would hurt the traps, but it might load kind of wierd.-and, you will need ground radials from the tower, AND , WILL NEED WAY TO GROUND IN LIGHTNING STORM !!!! jim nn7k

"Allodoxaphobia" <nobody@frontier.net> wrote in message news:slrnb5cj98.7q7.nobody@animas.frontier.net...
> On 21 Feb 2003 03:47:42 -0800, Larry hath writ:
> >
> > Does anybody have an experience with using
> > a tower and trapped tribander on its top
> > as a ground plane antenna?
> > I fear for traps.
> >
> > Thanks in advance.
> > Larry.
>
> I'm a little unclear as to what you're asking... But...
> I once ran a 14AVQ vertical atop a 2-el HB 15M beam.
> It worked.
>
> 73
> Jonesy
> --
> | Marvin L Jones | jonz | W3DHJ | OS/2
> | Gunnison, Colorado | @ | Jonesy | linux __
> | 7,703' -- 2,345m | frontier.net | DM68mn SK

4110. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 03:43:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5ggqcfoa500d9@corp.supernews.com>
Source record: 123949

No, buy it from Powell's. Our local economy can use the money.

Roy Lewallen, W7EL

Jimnn7k@reno.rmci.net wrote:
> Don't know if they still stock it, or which version, but CQ's bookstore had
> these in their catalog a few years ago (mine was purchased from HAM RADIO,
> obviously extinct for over 20 years, now). Dont remember the price. might
> give them a try.- JIM- NN7K
>
>
> Larry wrote:
>
>>I can't address the new one 'cause I don't have it...but I certainly would
>>try to find a replacement copy of the original.
>>
>>--
>>73,
>>Larry N8LP
>
>
>
>

4111. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 04:18:53 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932ACEA6624CDpookster@216.168.3.50>
Source record: 123950
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

"Ed Senior" <eseniorsREMOVE@earthlink.net> wrote in news:l5U5a.831
$vU3.109472@newsread1.prod.itd.earthlink.net:

> It sure would be nice if we could GET RID of this disfunctional
> tradition, and standardize on one or the other sideband!
>

Agreed. I vote for USB on all bands.

--
Bill, W7TI

4112. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 04:40:12 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302222040.1825cde6@posting.google.com>
Source record: 123951

Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<4f225v4s1ljrnm97tgocq9vj2a8mi206sk@4ax.com>...
> On Sun, 16 Feb 2003 23:19:23 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
snip

> >there's no need to "bring the antenna to a 3/4 wave length", whatever
> >that means.
> >
> >> Also, the I10K can take an honest 10,000 watts!
> >
> >On the other hand, that's a real selling point! You can forget all the
snip. . .
> >
> >Roy Lewallen, W7EL
>
> Roy,
>
> Do we dare mention that a 5/8-wave ground plane falls short of the 3
> dB claimed gain over a 1/4-wave ground also? Naw, it would open up a
> hornets nest. <g>
>
> Danny, K6MHE
>
Danny, Is this correct regardless of elevation angle chosen
for comparison ?
Regards
Art, a nobody
>
>
>
>
>
> Danny
> K6MHE
>
>
> No trees were destroyed in the sending of this message.
> However, a large number of electrons were terribly inconvenienced.

4113. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 05:26:51 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E585B9B.56C408FE@nettally.com>
Source record: 123952
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Rudi; the wiring diagram for the 1993 7.3L diesel indicates nothing in the way of electronic injection. There is however a Powertrain Control Module (PCM), that has an engine RPM sensor. Perhaps that sensor is the source of the noise. Look for a sensor with dark green and pink/orange wires on the engine block. You might try a clamp-on type ferrite choke (radio shack) over those leads.

Perhaps the 95 model had electronic injectors if so, the same solution might work on those.

Rudi wrote:

> Oh, I forgot to mention that the frequency of the pulsing noise is directly
> proportional to the engine RPM. Therefore, I don't think it's the fuel
> pump. Maybe the fuel injector solenoids?
>
> "Rudi" <wiedemann@attbi.com> wrote in message
> news:WAT4a.168748$tq4.3553@sccrnsc01...
> > Does anyone know how to reduce or eliminate the ignition noise in a diesel
> > truck? I'm using a well-grounded system in my 95 Ford F350 7.3L
> turbodiesel
> > with a 706IIG. Still gets by the Noise Blanker on all HF bands.
> >
> > 73s........Rudi - WA6RW
> >
> >

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4114. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 05:44:39 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <32ng5vcvutm9qa5vralqmf71pd9sh49rut@4ax.com>
Source record: 123953

On 22 Feb 2003 20:40:12 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>> Do we dare mention that a 5/8-wave ground plane falls short of the 3
>> dB claimed gain over a 1/4-wave ground also? Naw, it would open up a
>> hornets nest. <g>
>>
>> Danny, K6MHE
>>
>Danny, Is this correct regardless of elevation angle chosen
>for comparison ?
>Regards
>Art, a nobody

Well Art placing them say at ï¿½-wavelength above average ground NEC
calculates the maximum gain to be:

1/4-Wave GP 1.57 dBi @ 46ï¿½ El

5/8-Wave GP 3.22 dBi @ 32ï¿½ El

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

4115. Re: Turning a dual band mobile ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 06:15:47 UTC
From: TC <ng@clarkie.cc>
Message-ID: <nGZ5a.2870$8f7.2824@nwrdny02.gnilink.net>
Source record: 123954

Okay,

So I forgot to mention the obvious when asking for help :) The antanna is an MFJ I forget the numbers after it. Right now on 2 Meters I get about 1.7 on average and on 440 it's 2 & 4

I know it's tuned with a set screw. I tried tuneing it to get a better reading then what it came with instead i though it out of wack. I did improve the 2 meter side a bit but the 440 on the other hand.

I'd like to get a nice accross the board SWR reading or at least something I won't kill my radio with.

Grrr any thoughts on how to improve readings.
TC

4116. Impedence of a half wave vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 06:28:19 UTC
From: dselwa1@juno.com
Message-ID: <fa160ace.0302222228.6c3ee80a@posting.google.com>
Source record: 123955

I want to make a 20meter half wave vertical fror 20 meters. I have a Wilderness radio SST-20 and also want the MFJ 33ft extendable mast (#1710?).
Since the SST has 50 ohm output, I would like to wind a toroid to match to the half wave vertical. What would be the number of turns for the primary and the secondary?

Dennis W6EH

4117. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 08:49:58 UTC
From: Barry Lennox <pbarryplennoxp@operamail.com>
Message-ID: <u32h5vskt2jdv20pokgp97es6ripv7oab9@4ax.com>
Source record: 123956

On Sat, 22 Feb 2003 23:48:16 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>My Old, old, old copy of Kraus, 1950, has died and is buried.
>
>For a replacement should I buy 1950 used, the 1988 edition, or the 2001
>edition? Why? What is offered in later editions?
>

I have the 1950 and the 2002 editions. The new one has probably a bit
less math in it, and a lot of new material.(including patches, large
antennas, freq-selective surfaces, baluns, THz antennas) Personally,
I like the style of writing in the new one.

The best solution would be the latest (Got mine from Powells online
for less than $120 about 8 months ago) and another copy of the 1950
ed. I have seen it in used bookshops for less than $10.

Barry Lennox

4118. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 09:38:58 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <s5edHsEyaJW+EAWs@ifwtech.co.uk>
Source record: 123973
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Sparks W4EAS wrote:
>Once uppon a time we had 9 mcs carrier generators for ssb. We used
>surplus ARC-5 aircraft transmitters as a VFO. TWO MOST popular bands
>were 75 and 20. Subtrace 5 mhz from 9 and there was 75. ADD 5 mhz to 9
>and you had 20.

Right.

>The side bands were translated.

No, the sidebands remained the *same*

9MHz USB + 5MHz VFO = 14MHz USB

9MHz USB - 5MHz VFO = 4MHz *USB*

If you don't believe that, replace "9MHz USB" with 9.001MHz (the result
of a 1kHz tone input).

To make the sidebands invert, you'd need to have used a 5MHz SSB
generator and a 9MHz VFO - but history didn't happen that way.

The conclusion is that the band/sideband convention was *already* in
place when the 9MHz phasing exciters appeared... so the true history is
even more mysterious.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4119. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 11:37:26 UTC
From: Ian <cls119@lycos.co.uk>
Message-ID: <zn26a.100$zb.89@newsfep3-gui.server.ntli.net>
Source record: 123957

Hello,

Just the answer I wanted - plain language instead of massive calculations.
A lot of the people in this group quotestuff when they don't even know what
it means, and the mention of "Q" was one example.

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0302221817.70f6259e@posting.google.com...
> Somewhere in one of the posts of the last two weeks someone asked
> what exactly is "Q". When I was active in ham radio many members of
> the club
> was not experienced in mathematical areas so the quoting of
> mathematical
> relationships left him with eyes glazed and a sense of not belonging.
> In answering such questions I always tried to relate it to the
> hobbyist
> you had chosen to be a fellow ham. Thus I would explain "Q" in a non
> technical way.
>
> The optimum requirement for a specific 'chat' between two hams is to
> have an antenna system that maximises the transmit or receipt of the
> conversation at hand, while at the same time signals that are not part
> of the conversation and out of the 'pass band' were antennuated. Thus
> the QUALITY "Q" of the communication at hand is the TOTAL focus of
> the antenna at that particular frequency which includes not only
> maximum efficiency but also the ability to retain maximum sensitivity
> of the receiver by retaining its designed noise floor.
> To the user it is has exactly the same function as a pass band filter
> which one has in the radio except that the filter requirement is used
> at the ONSET of signal receipt which provides distinct advantages with
> respect to the specific communication taking place.
>
> Tho one can get into the subject of "Q" rather deeply in terms of
> theorems or
> mathematics,pass band shapes, formulas etc, it is important to allow
> the questioner the ability to get a 'foothold' in the subject so he
> can be retained as a fellow ham even tho your reply may be subject to
> ridicule by fellow and the more knoweledgable newsgroup members.
> Sorry I couldn't find the actual question posting but hopefully the
> questioner is still around so that he can obtain a foothold in what
> can be a very technical subject.
> I know,..... who am I to talk about effective communication!!!!
> Regards
> Art, a nothing

4120. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 12:40:19 UTC
From: ac6la@arrl.net
Message-ID: <960228f1.0302230440.6bd9b631@posting.google.com>
Source record: 123958

Wes Stewart <n7ws@#arrl.net> wrote
> I also modeled a 7.15 MHz horizontal dipole constructed from 12 AWG
> copper wire above average (Sommerfield) ground using MultiNEC (EZNEC 3
> engine). I varied the height from 0.1 to 1.0 lambda and adjusted the
> length at each height for zero reactance. The results of that study
> follow:

<snip>

Want to see some pictures to go along with the numbers given by Wes.
As luck would have it <g> I just happened to have a copy of MultiNEC
handy. I modeled the dipole over Average (0.005, 13), Perfect, and
Extremely Poor (0.001, 3) ground, at various heights, each time
adjusting the length to achieve resonance. Then I took some screen
shots and put them up at www.qsl.net/ac6la/adhoc/dipole.html .

Two things to note: First, my numeric results differ (by
inconsequential amounts) partly because I used a different NEC-2
engine and partly because I may have used a different level of
segmentation. (I used 19 segments, Wes may have used 9 or 11.)

Second, the last chart really shows the (almost) shared values for
source resistance found at quarter-wave increments for antenna height,
no matter what the ground type. I surely can not offer a physical
explanation for this, but looking at the picture makes it crystal
clear what Wes was talking about in his earlier post on this topic.

Dan AC6LA

4121. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 13:24:51 UTC
From: richardharrison@webtv.net
Message-ID: <7187-3E58CBA3-152@storefull-2311.public.lawson.webtv.net>
Source record: 123959

Joe Leikhim wrote:
"Perhaps the `95 model had electronic injectors. If so, the same
solution might work on those."

That`s an idea. Shielded ignition systems were successful in eliminating
sparkplug wire radiation. Shielded wires should easily contain
interference from injector solenoids.

Best regards, Richard Harrison, KB5WZI

4122. Re: Turning a dual band mobile ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 13:50:26 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <68kh5vk9bfb0qda8p04pgobt5cerjafevs@4ax.com>
Source record: 123960

On Sun, 23 Feb 2003 06:15:47 GMT, "TC" <ng@clarkie.cc> wrote:

>Okay,
>
> So I forgot to mention the obvious when asking for help :) The antanna
>is an MFJ I forget the numbers after it. Right now on 2 Meters I get about
>1.7 on average and on 440 it's 2 & 4
>
> I know it's tuned with a set screw. I tried tuneing it to get a better
>reading then what it came with instead i though it out of wack. I did
>improve the 2 meter side a bit but the 440 on the other hand.
>
> I'd like to get a nice accross the board SWR reading or at least
>something I won't kill my radio with.
>
>Grrr any thoughts on how to improve readings.
>TC
>

TC,

an swr ratio of 1.7:1 on 2m is just fine. there is no need to, pardon
the pun, "screw" with it any further (sorry. couldn't resist).
anyway...on 440, is the ratio 2.0:1 or 4.0:1? if 2.0:1 then again
you're ok. is that measurement at the band edges or in the middle of
the band? most dual band antennas are a compromise but swr levels of
something less than 3.0:1 won't harm modern transceivers.

73,
rich, n9dko

4123. Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 14:04:27 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E58D565.14E5315D@earthlink.net>
Source record: 123961

http://www.seds.org/billa/astrosoftware.html

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Consumer Tip: Save your gasoline money if you are buying premium gas. It's
unnecessary to use it unless your engine pings. Use regular instead.
-- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

4124. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 15:02:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E58E28E.1080308@ieee.org>
Source record: 123962
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Bill, W7TI wrote:
> Agreed. I vote for USB on all bands.

Remember inverted audio DSB?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4125. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 15:11:12 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <kw56a.1852$cD5.205226@newsread2.prod.itd.earthlink.net>
Source record: 123963

Walt, W2DU wrote:
> |Contrary to what I've been reading on
> |this thread, the resistance component of dipole impedance does not
increase
> |as height is lowered below 1/2 wl above ground--it decreases until
reaching
> |around 0.2 wl above ground, when it then increases due to dissipation in
the
> |ground. Thus, we're dealing with resonant resistances that are generally
> |less than 60 ohms for the average dipole 30 - 40 feet above ground.

Then Wes replied:
> Walter old friend,
>
> In a previous message (which perhaps you refer to) I cited Kraus'
> (1950 Edition) figure 11-20 which shows the resistance of a horizontal
> 1/2 wave dipole above perfect ground. (This chart is reproduced in
> the ARRL Antenna Books)
>
> The figure shows the the resistance *does* increase below 0.5
> wavelength above ground and in fact reaches a maximum (~97 ohm) at
> about 0.35 wavelength above ground.
>
> Below that height, the resistance decreases reaching zero at zero
> height.

Wes, you are absolutely correct. So if you'll please excuse a senior moment, I said 1/2 wl but what was in my mind at the time was 1/4 wl. I'm sorry I put you through that lengthy exercise to prove your point. However, your data below is very informative to those who aren't familiar with the effect of mutual coupling between the dipole and its ground-reflected image.

> I also modeled a 7.15 MHz horizontal dipole constructed from 12 AWG
> copper wire above average (Sommerfield) ground using MultiNEC (EZNEC 3
> engine). I varied the height from 0.1 to 1.0 lambda and adjusted the
> length at each height for zero reactance. The results of that study
> follow:

> Height Length R X
>
> 0.1 0.4810919 52.57 0.03
> 0.15 0.4795525 61.09 0.02
> 0.2 0.4797823 72.81 0.00
> 0.25 0.4816666 82.84 0.00
> 0.3 0.4844911 88.40 -0.01

> 0.35 0.4873186 88.47 0.01
> 0.4 0.4893003 83.78 -0.01
> 0.45 0.4899423 76.48 -0.01
> 0.5 0.4892787 68.49 0.00
> 0.55 0.4875354 63.94 0.01
> 0.6 0.4856287 63.17 0.00
> 0.65 0.4841885 65.83 0.01
> 0.7 0.4836087 70.58 0.01
> 0.75 0.4839665 75.61 0.01
> 0.8 0.4850363 79.22 0.00
> 0.85 0.4863823 80.35 0.00
> 0.9 0.4875118 78.83 0.00
> 0.95 0.4880472 75.46 0.01
> 1 0.4878539 71.60 0.01
>
> Changing to "Extremely poor" ground yields:
>
> 0.1 0.4828948 70.10 0.00
> 0.15 0.4827034 71.92 0.00
> 0.2 0.4831888 76.67 0.00
> 0.25 0.4844368 80.72 0.00
> 0.3 0.4860284 82.29 0.00
> 0.35 0.4874326 80.98 0.00
> 0.4 0.4882302 77.48 0.00
> 0.45 0.488246 73.16 0.00
> 0.5 0.487548 68.45 0.00
> 0.55 0.4863667 66.90 0.00
> 0.6 0.485309 67.62 0.00
> 0.65 0.484685 70.04 0.00
> 0.7 0.4846323 73.17 0.00
> 0.75 0.4850962 75.89 0.00
> 0.8 0.4858642 77.37 0.00
> 0.85 0.486645 77.24 0.00
> 0.9 0.4871695 75.71 0.00
> 0.95 0.4872812 73.44 0.00
> 1 0.4869812 71.30 0.00
> 0.9 0.4875118 78.83 0.00
> 0.95 0.4880472 75.46 0.01
> 1 0.4878539 71.60 0.01
>
>
> Changing to perfect ground and running the analysis again yields
> answers that duplicate Kraus' chart within reading error. This to me
> validates the model.
>
> Examination of the data suggest that, at least as far as a reduction
> in the impedance variation v. height is concerned, lousy ground is
> better that perfect ground. This should not surprise; Kraus says that
> the feedpoint resistance equals the self resistance minus the mutual
> resistance of an image antenna located below ground, at a distance

> equal to the antenna height above ground. (I know I'm not telling you
> anything new)
>
> If I'm not mistaken, for a given height, the mutual impedance will be
> highest when the "image" antenna is most efficient, i.e. the ground
> reflection is perfect (rho=-1). A lossy medium between the antenna
> and its image will reduce the mutual effects.
>
> If "dissipation" in the reflector (ground) is high and lowers the
> impedance, why do do we measure free space impedances in antennas
> tested in anechoic chambers where the reflection coefficient is
> purposely small?
>
> Am I missing something?
>
> Regards,
>
> Wes
>

4126. Re: Test Message, and hello again to everybody

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 15:13:59 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Tq56a.5933$Xa4.4744@fe01.atl2.webusenet.com>
Source record: 123964

It gets better than that, Dick!

The other day I found that there was a Service pack update for Windows XP, including something having to do with security, so I installed it.

It worked fine for 1 day, then I lost all internet access (I have DSL here). Called my ISP to figure it out. We managed to determine that it was not picking up the IP address.

I rolled back to the last 'bookmark' before the update. Works fine now (obviously)!

The ISP told me "Just between you and me, if you keep up with the weekly updates, you already have the new service pack."

What I find interesting is that, when installing the update, one of the alleged steps was checking to see what parts were already installed.

Thats why I am getting ready to repartition and install Linux---a REAL operating system. (Besides wanting to write Ham Radio software, write magazine articles, and make myself rich and famous like Roy.)

Jim
N8EE

4127. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 15:17:25 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302230717.214917ee@posting.google.com>
Source record: 123965

Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<32ng5vcvutm9qa5vralqmf71pd9sh49rut@4ax.com>...
> On 22 Feb 2003 20:40:12 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >> Do we dare mention that a 5/8-wave ground plane falls short of the 3
> >> dB claimed gain over a 1/4-wave ground also? Naw, it would open up a
> >> hornets nest. <g>
> >>
> >> Danny, K6MHE
> >>
> >Danny, Is this correct regardless of elevation angle chosen
> >for comparison ?
> >Regards
> >Art, a nobody
>
> Well Art placing them say at ï¿½-wavelength above average ground NEC
> calculates the maximum gain to be:
>
> 1/4-Wave GP 1.57 dBi @ 46ï¿½ El
>
> 5/8-Wave GP 3.22 dBi @ 32ï¿½ El
>
>
>
> Danny
> K6MHE
>
>
> No trees were destroyed in the sending of this message.
> However, a large number of electrons were terribly inconvenienced.

Danny,
I was trying to get into the mind of the marketing person and thus
was wondering if at the extreme radiation angles rather than just
comparing max gain one could say that the gain of one exceeds the other.
Regards
Art
Student

4128. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 15:43:48 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <U_56a.1917$cD5.209478@newsread2.prod.itd.earthlink.net>
Source record: 123966

H. Adam Stevens wrote:
Walt
Thank you for posting actual measurements.

You posted.
*SWR at resonance, 3.750 MHz, 1.1:1
*SWR at 3.550 MHz without compensation, 5.04:1
*SWR at 3.550 MHz with compensation (lossless coax), 4.9:1
*SWR at 3.550 MHz with compensation (RG-58 coax), 4.54:1

Please add in the frequencies between 3.55 and 3.75 MHz.
The best I've seen on 80 with RG8x is a 75 KHz wide 1:1 SWR width.
The interesting frequency range would therefore be 3.71 to 3.78 MHz, in at least 10 steps.
73
H.
NQ5H

Well, Adam, there are two ways to add the data you asked for, 1) take measurements for each frequency step, or 2) interpolate from data already obtained from earlier measurements. I'll tell you where to get the data and then let you do the interpolating.

The data appears on my web page, http://home,iag.net/~w2du, in Chapter 15 of Reflections II. I refer you to Tables 15-4 and 15-5, and also to Fig 15-1. The Fig shows R, X and SWR for my 80-m dipole, measured with two different calibrated feed lines, one 1/4 wl and the other 1/2 wl. The measurements were taken with a General Radio GR-1606A RF impedance bridge.

Now to the interpolation. Note that the SWR at 3.550 MHz with no reactance compensation is 5.04:1 and with RG-58 coax compensation the SWR is 4.54:1. The ratio between the two SWR values is 1.11. Therefore, you can interpolate the values you are looking for by dividing each SWR value in Tables 15-4 and 15-5 by 1.11.

You might find the method for measuring the complex characteristic impedance Zo interesting. We measure the input impedance of the coax with first a short circuit termination, and then with an open circuit termination. The most accurate data is obtained when the length of the coax is around 1/8 wl.

Turn now to Table 15-1, where you'll see three sets of SC and OC measurements on the left side of the table. Then, to massage the data we use my computer program 'TRANSCON', for transmission-line constants, where you'll see the pertinent output data spread across the page. You'll find this program in Chapter 15.

To find the complex characteristic impedance of the RG-58 coax I measured it at three different frequencies and then took the average for the final value. The frequencies used were 1.75, 1.815, and 1.90 MHz.

The final dipole impedance with compensation was determined by simply adding the respective R and X values of the parallel-circuits of the dipole and coax impedances, and then converting back to series components of impedance.

The values of SWR were then calculated using a program that appears in the Appendix of Reflections I and II, but I don't believe it appears on my web page.

Adam, I hope this helps in understanding how I come up with the data I presented above.

Walt, W2DU

4129. Re: Test Message, and hello again to everybody

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 16:15:49 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Us66a.307$kf7.34256@news20.bellglobal.com>
Source record: 123967

OT...

"JLB" Jim N8EE
> The ISP told me "Just between you and me, if you
> keep up with the weekly updates, you already have
> the new service pack."

True, but you should have noticed the downloading and installation of Win XP SP1 - it's huge, takes a long time and has plenty of feedback. It's not something that someone would miss.

> What I find interesting is that, when installing the update,
> one of the alleged steps was checking to see what parts
> were already installed.

It does.

BTW - System Properties will tell you if Service Pack 1 is installed or not. Start, Control Panel, Performance and Maintenance, System, General tab, look under System: heading for "Service Pack 1".

4130. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 16:50:55 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932B5A02E46ACpookster@216.168.3.50>
Source record: 123968
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in news:3E58E28E.1080308
@ieee.org:

> Remember inverted audio DSB?
>

In an April QST? :-)

--
Bill, W7TI

4131. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 17:07:10 UTC
From: Herbert Khaury <Herbert@tiptoe.tp>
Message-ID: <8cScnagcG-ojYsWjXTWc3w@comcast.com>
Source record: 123969

No, no, you meant "in the '007 movies".

"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:3E583B41.4090200@adelphia.net...
> Art Unwin KB9MZ wrote:
>
> > Somewhere in one of the posts of the last two weeks someone asked
> > what exactly is "Q".
>
>
>
> Q is that all powerful dude on Star Trek - The Next Generation.
>
>
> Sorry, I just couldn't help it! ;^)
>
> - Mike KB3EIA -
>

4132. E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 17:20:09 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302230920.720d68ce@posting.google.com>
Source record: 123970

As far as I am aware there is only one company left
in the chase for a shorter antenna for the broadcast bands.
The E/H group were succesfull in getting many contracts
around the World and the last I heard was that a broadcast
station on the Isle of Man was undergoing an indepth study.
Did this study produce any figures e.t.c. to confirm any of the
manufactures claims and thus open a new horizon in antenna
studies ?
Best regards
Art

4133. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 17:32:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3b0ka$8rj$1@venus.btinternet.com>
Source record: 123971

Walt, thanks for your labour.

I modelled and computed the performance of an ordinary 80m dipole and compared results with Walt's 80m Bazooka measurements.

Dipole height, soil resistivity and length were adjusted such that feedpoint resistance at resonance was 55 + j0 ohms, the same value as Walt's bazooka. Feedline was 100 feet of RG-58 coax.

Performance was computed with two different wire diameters - 14 AWG and 4mm = 0.157 inches.

4mm is the effective diameter of the outer conductor of RG-58 coax used in the bazooka's construction.

80m Dipole exactly 1/2-wave resonant
==========
Frequency = 3.75 MHz.
Length = 38.774 metres = 127.2 feet.
Height = 10 metres = 32.8 feet.
Wire diameter = 1.64 mm = 14 awg.
Soil resistivity = 218 ohm-metres.
Antenna efficiency including ground loss = 86 %
Overall efficiency including feedline loss = 72 %

Feedpoint input impedance = 55 + j0 ohms,
SWR = 1.1

Now do nothing except change frequency to 3.55 MHz
==========
Antenna efficiency including ground loss = 81.7 %
Overall efficiency including feedline loss = 53.1 %
Feedpoint input impedance = 48 - j10 ohms,
SWR = 5.8

Now change frequency to 3.95 MHz
==========
Antenna efficiency including ground loss = 88.6 %
Overall efficiency including feedline loss = 62.1 %
Feedpoint input impedance 63 + j98 ohms
SWR = 5.1

Now change wire diameter to 4mm and freq to 3.55 MHz
==========
Antenna efficiency including ground loss = 84.8 %
Overall efficiency including feedline loss = 57.9 %
Feedpoint input impedance = 47 - j87 ohms

SWR = 4.8

Keep dia at 4mm and change frequency to 3.95 MHz
==========
Antenna efficiency including ground loss = 89.7 %
Overall efficiency including feedline loss = 63.9 %
Feedpoint input impedance = 62 + j95 ohms
SWR = 4.9

There are no significant differences between the above computed data and
Walt's measured values on an 80m bazooka.

It may be concluded that any increase in bandwidth due to bazooka design is
no more than the insignificant increase which can be achieved simply by
changing antenna wire diameter to the diameter of the coaxial line used in a
bazooka's construction. Which is what happens anyway. Back to the drawing
board !

Data obtained using program DIPOLE3

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========
==========

Walt's measured data below:
>
> Complex characteristic impedance Zo of the 1/4 wl coax section, 53.42 -
> j1.67 ohms
>
> Attenuation of 1/4 wl coax section at 3.750 MHz, 0.296 dB
>
> Input impedance of short-circuited 1/4 wl coax section at 3.750 MHz, 1400
+
> j0 ohms
>
> Input impedance of short-circuited 1/4 wl coax section at 3.550 MHz, 254 +
> j521.3 ohms
>
> Q of coax section at 3.750 MHz, 1400/53.42 = 26.2
>
> Q of coax section at input, 521.3/254 = 2.05
>
> SWR on coax, 24.95:1
>
> Dipole terminal impedance at resonance, 3.750 MHz, 55 + j0 ohms
>
> Dipole terminal impedance off resonance at 3.550 MHz, no reactance
> compensation, 50 - j90 ohms
>

> Parallel-equivalent R and X components of dipole impedance, Z = 50 - j90
> ohms, R = 212 ohms, X = -117.8 ohms
>
> Parallel-equivalent R and X components of short-circuited coax input
> impedance, R = 1323.9 ohms, X = 645.06 ohms
>
> Total parallel-equivalent R and X components of the two coax sections in
> series, R = 2647.8 ohms, X = 1290.12 ohms
>
> Parallel-equivalent R and X components of combined dipole and stub
> impedances at 3.550 MHz, R = 196.28 ohms, X = -129.64 ohms
>
> Parallel R and X components converted to series impedance, Z = 59.62 -
> j90.26.
>
> SWR of Z = 59.62 - j90.26 on 50-ohm line, 4.54:1
>
> Summary:
>
> SWR at resonance, 3.750 MHz, 1.1:1
> SWR at 3.550 MHz without compensation, 5.04:1
> SWR at 3.550 MHz with compensation (lossless coax), 4.9:1
> SWR at 3.550 MHz with compensation (RG-58 coax), 4.54:1
>
> I hope this data will clarify the performance of the bazooka with
reactance
> compensation when the dipole input impedance is already very close to the
> characteristic impedance Zo of the feed line.
>
> Walt, W2DU

4134. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 17:40:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3b12l$m74$1@knossos.btinternet.com>
Source record: 123972

> Just the answer I wanted - plain language instead of massive calculations.
> A lot of the people in this group quotestuff when they don't even know
what
> it means, and the mention of "Q" was one example.

==========

OK, now you know all about it, what is Q ?

4135. Re: Dual band base antenna (VHF/UHF)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 18:17:21 UTC
From: for-sale <nospam@nospam.net>
Message-ID: <e14i5vkrlsqm4ebckedt6sopsdbmm2uje1@4ax.com>
Source record: 123974

On 23 Feb 2003 08:36:13 -0800, Javier Henderson <javier@KJSL.COM>
wrote:
>I'm looking for a 2m/440 base antenna... any recommendations?
>73, jav w6vms

I have the following 2m/440 Diamond models for sale. These are new,
never used antennas.

X-30 (4.2 ft high)..... $65.00
X-300 (10 ft high).....$117.00
X-510 (17 ft high).....$159.00

Shipping is not included in these prices. Direct questions to
forsale(spam)@vnet.net Remove the (spam) from the
address.

73

4136. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 18:22:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8r1i5vcmcv7mct868miuo27ks22ang44b7@4ax.com>
Source record: 123975

On Sun, 23 Feb 2003 15:43:48 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>H. Adam Stevens wrote:
>Walt
>Thank you for posting actual measurements.
>
>You posted.
>*SWR at resonance, 3.750 MHz, 1.1:1
>*SWR at 3.550 MHz without compensation, 5.04:1
>*SWR at 3.550 MHz with compensation (lossless coax), 4.9:1
>*SWR at 3.550 MHz with compensation (RG-58 coax), 4.54:1
>
>Please add in the frequencies between 3.55 and 3.75 MHz.
>The best I've seen on 80 with RG8x is a 75 KHz wide 1:1 SWR width.
>The interesting frequency range would therefore be 3.71 to 3.78 MHz, in at
>least 10 steps.
>73
>H.
>NQ5H
>
>Well, Adam, there are two ways to add the data you asked for, 1) take
>measurements for each frequency step, or 2) interpolate from data already
>obtained from earlier measurements. I'll tell you where to get the data and
>then let you do the interpolating.
>
>The data appears on my web page, http://home,iag.net/~w2du, in Chapter 15 of
>Reflections II. I refer you to Tables 15-4 and 15-5, and also to Fig 15-1.

*1:
>The Fig shows R, X and SWR for my 80-m dipole, measured with two different
>calibrated feed lines, one 1/4 wl and the other 1/2 wl. The measurements
>were taken with a General Radio GR-1606A RF impedance bridge.
>
>Now to the interpolation. Note that the SWR at 3.550 MHz with no reactance
>compensation is 5.04:1 and with RG-58 coax compensation the SWR is 4.54:1.
>The ratio between the two SWR values is 1.11. Therefore, you can interpolate
>the values you are looking for by dividing each SWR value in Tables 15-4 and
>15-5 by 1.11.
>

*2:
>You might find the method for measuring the complex characteristic impedance
>Zo interesting. We measure the input impedance of the coax with first a
>short circuit termination, and then with an open circuit termination. The

>most accurate data is obtained when the length of the coax is around 1/8 wl.
>

*3:
>Turn now to Table 15-1, where you'll see three sets of SC and OC
>measurements on the left side of the table. Then, to massage the data we use
>my computer program 'TRANSCON', for transmission-line constants, where
>you'll see the pertinent output data spread across the page. You'll find
>this program in Chapter 15.
>

*4:
>To find the complex characteristic impedance of the RG-58 coax I measured it
>at three different frequencies and then took the average for the final
>value. The frequencies used were 1.75, 1.815, and 1.90 MHz.
>
>The final dipole impedance with compensation was determined by simply adding
>the respective R and X values of the parallel-circuits of the dipole and
>coax impedances, and then converting back to series components of impedance.
>
>The values of SWR were then calculated using a program that appears in the
>Appendix of Reflections I and II, but I don't believe it appears on my web
>page.
>
>Adam, I hope this helps in understanding how I come up with the data I
>presented above.
>
>Walt, W2DU
>
>

Hi All,

I have marked 4 passages above to illustrate how the Amateur can proceed to make valid measurements of modest complexity and increased accuracy. As I have said often, 1 measurement does not make a case for any argument that relies on fine points resolved near the noise floor of error. Further, 2 measurements only contribute to confusion, not order. At 3 measurements you have a chance to strike an average that could be described as meaningful and as an educated guess.

*1 above clearly states the principle elements outside of the variable being tested (and all should recall the difficulty in coming to terms with dependant and independent variables). This is the common ground work necessary to cast out test induced errors through cross checks (two lengths of cable, electrical or physical or both). The purpose of such activity is to serve as a self-proof of validity in that BOTH cables must lead to the same answer through methods that attend their attributes (being resonant).

*2 describes the method of calibrating those two cables. At this point we now have four pieces of information, and we have yet to

perturb the system to study it. This, again, is ground work that lends to the proof of valid data determination.

*3 delves into the rationale for the preceding ground work: it is also known as the "scientific method."

*4 expands the calibration of the cables through 3 tests at different frequencies. This in combination with the steps above yields a grid of characteristics that HAVE to be self complementary or reveal identical trends.

All should note that not one lick of measurement of the bazooka has been performed without these first steps taken to qualify the cable used in the system. EVEN MORE, it should be noted that these steps that increase resolution, and accuracy are practices and methods NOT fancy shmancy gear with 10 digits of display. ALL who have common bench experience are capable of performing these same steps with ANY form of test instrument to INCREASE the quality of their data.

Insofar as data goes, Walt has not offered any bazooka measurement (but rather has abstracted that through other work that he offers links to); he doesn't need to. The argument that the bazooka depends upon has already been found wanting. This is not to say that it is the end of the matter. There are better ways to measure the bazooka and Walt has offered the first steps and for those who can read fluently, they will notice it is the method that counts most, and that method MUST migrate into the measure of the bazooka to maintain the same quality of data.

In the end, only a field of results in up to several tables will resolve the fine distinctions claimed by those of the bazookoid tendency. That data not only serves to reveal the fine structures of multiple resonances (so obviously missing in the threadbare details), but as to serve as internal consistency cross-checks (which DO reveal severe problems with the SWR determination in the original data). This is the long way of saying the Scientific method works even in the face of error. ALL data is meaningful IFF you have the ability to also record the conditions of your ground work.

73's
Richard Clark, KB7QHC

4137. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 18:25:20 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <tb4i5v0nt3br7gls5ebccu2oqakasmq7mi@4ax.com>
Source record: 123977

On 23 Feb 2003 07:17:25 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<32ng5vcvutm9qa5vralqmf71pd9sh49rut@4ax.com>...
>> On 22 Feb 2003 20:40:12 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>> wrote:
>>
>> >> Do we dare mention that a 5/8-wave ground plane falls short of the 3
>> >> dB claimed gain over a 1/4-wave ground also? Naw, it would open up a
>> >> hornets nest. <g>
>> >>
>> >> Danny, K6MHE
>> >>
>> >Danny, Is this correct regardless of elevation angle chosen
>> >for comparison ?
>> >Regards
>> >Art, a nobody
>>
>> Well Art placing them say at ï¿½-wavelength above average ground NEC
>> calculates the maximum gain to be:
>>
>> 1/4-Wave GP 1.57 dBi @ 46ï¿½ El
>>
>> 5/8-Wave GP 3.22 dBi @ 32ï¿½ El
>>
>>
>>
>> Danny
>> K6MHE
>>
>>
>> No trees were destroyed in the sending of this message.
>> However, a large number of electrons were terribly inconvenienced.
>
>Danny,
>I was trying to get into the mind of the marketing person and thus
>was wondering if at the extreme radiation angles rather than just
>comparing max gain one could say that the gain of one exceeds the other.
>Regards
>Art
>Student

Well, you could compare a 5/8-wave GP over ground to a 1/4-wave GP in
free space. <g>

However if you compare them both in freespace the gain difference is
only 0.6 dB.

Danny
K6MHE

No trees were destroyed in the sending of this message.
However, a large number of electrons were terribly inconvenienced.

4138. Re: Measuring antenna performance

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 18:31:02 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3b416dvf1@venus.btinternet.com>
Source record: 123976

What aspects of receiving performance are you interested in ? Radiation (receiving) directional patterns or shortwave listening or . . . .

One thing to remember is that antenna efficiency is EXACTLY the same whether it is used for receiving or for transmitting. So much can learned from books on transmitting antennas.

Next thing to remember is that the ground electrode and connecting to it is just as important as the antenna.

For starters you need an expensive radio receiver with a built-in signal stength meter, a lot of enamelled copper wire, and a big back yard.

Visit your technical reference library.

Download in a few seconds from website below, small programs ENDFEED, RJELOOP3, HELICAL3, TRAPDIP, EARTHRES, MIDLOAD, GRNDWAV3, BOTLOAD. Run immediately. No training needed.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

4139. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 18:59:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pa6i5vgu3cr3b3oe9onu6h6pc3giimj5di@4ax.com>
Source record: 123978

On 23 Feb 2003 09:20:09 -0800, aunwin@insightbb.com (Art Unwin KB9MZ) wrote:

>As far as I am aware there is only one company left
>in the chase for a shorter antenna for the broadcast bands.
>The E/H group were succesfull in getting many contracts
>around the World and the last I heard was that a broadcast
>station on the Isle of Man was undergoing an indepth study.
>Did this study produce any figures e.t.c. to confirm any of the
>manufactures claims and thus open a new horizon in antenna
>studies ?
>Best regards
>Art

Hi Art,

You seem to be mixing up two designs. Your queries seem to be evoked from very old reports for CFAs. The fact that they have been long dormant is proof enough of their "viability."

Another compelling proof offered by at least one other correspondent is that if they worked so well, they would have replaced every dipole by now. Hence, the only activity TO DATE is the endless rummaging through the junk drawers of old postings for the same poor data. Unlike wine, these nut-fringe antennas, like fractals, do not improve by being bottled up for years in remote and distant lands where conclusive proof is just around the corner (probably the same corner where the administration's plans for the economic recovery will come roaring around).

73's
Richard Clark, KB7QHC

4140. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:04:28 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3b5vk$a73$1@slb9.atl.mindspring.net>
Source record: 123979

Art:

I disagree with your assertions!

Notwithstanding that Stephen Hawking's latest book has only one equation.

Discussions of almost all Science and Engineering subjects with of by persons
who are not Mathematically literate reduces such discussions to a vague and ambiguous shadow of the reality being discussed.

It is similar to discussing the merits of books and libraries with persons who
cannot read and write. Such disucussions will always be somewhat unsatisfactory.

Just as one must be literate to live a full life and make useful contributions in
today's developed societies, one must be mathematically literate to grasp the full significance and meaning and to make useful contributions to most Scientific and Engineering subjects.

Sad but true, as with most things in life there is no easy way...

You just gotta... learn math, study math, learn to like math, learn to read math,
learn to speak math learn to write math, then and only then you can become a full member of the "club".

Otherwise you are doomed to always be an "outsider" looking through a small knothole in the fence of Science and Engineering observing shadows on the wall and wishing to be on the inside.

Art... Come on in, the Math is warm, it won't hurt at all.

If you spent even half the time studying and learning math as you do complaining
about it you would be half-way there by now!

Just do it!
--
Peter K1PO [A former mathaphobe who only scored 16/100 in Algebra.]
Indialantic By-the-Sea, FL.

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0302221817.70f6259e@posting.google.com...
> Somewhere in one of the posts of the last two weeks someone asked
> what exactly is "Q". When I was active in ham radio many members of

> the club
> was not experienced in mathematical areas so the quoting of
> mathematical
> relationships left him with eyes glazed and a sense of not belonging.
> In answering such questions I always tried to relate it to the
> hobbyist
> you had chosen to be a fellow ham. Thus I would explain "Q" in a non
> technical way.
>
> The optimum requirement for a specific 'chat' between two hams is to
> have an antenna system that maximises the transmit or receipt of the
> conversation at hand, while at the same time signals that are not part
> of the conversation and out of the 'pass band' were antennuated. Thus
> the QUALITY "Q" of the communication at hand is the TOTAL focus of
> the antenna at that particular frequency which includes not only
> maximum efficiency but also the ability to retain maximum sensitivity
> of the receiver by retaining its designed noise floor.
> To the user it is has exactly the same function as a pass band filter
> which one has in the radio except that the filter requirement is used
> at the ONSET of signal receipt which provides distinct advantages with
> respect to the specific communication taking place.
>
> Tho one can get into the subject of "Q" rather deeply in terms of
> theorems or
> mathematics,pass band shapes, formulas etc, it is important to allow
> the questioner the ability to get a 'foothold' in the subject so he
> can be retained as a fellow ham even tho your reply may be subject to
> ridicule by fellow and the more knoweledgable newsgroup members.
> Sorry I couldn't find the actual question posting but hopefully the
> questioner is still around so that he can obtain a foothold in what
> can be a very technical subject.
> I know,..... who am I to talk about effective communication!!!!
> Regards
> Art, a nothing

4141. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:13:14 UTC
From: richardharrison@webtv.net
Message-ID: <12047-3E591D4A-375@storefull-2317.public.lawson.webtv.net>
Source record: 123988

The discussion seems to have stuck to widening the matched antenna`s bandwidth by using a bazooka. The conclusion seems to be that it does not hurt to use a bazooka and it may help bandwidth.

The purpose of a bazooka according to King, Mimno, and Wing in "Transmission Lines Antennas and Wave Guides" is to keep r-f off the coax exterior. Their Fig. 27.4, on page 153 shows a coax-fed dipole with a 1/4-wave skirt around the coax. The skirt is open next to the antenna and shorted to the coax back 1/4-wave from the dipole.

The text says:
"When an antenna is fed from a flexible coaxial line, Fig. 27.4, a detuning sleeve is essential; for, if the cable is moved or coiled, its electrical length is altered and its resonance may be established in one position and not in another."

A friend of mine decided to use the W2DU balun method of Amidon cores impaled by his coax. The cores overheated, broke, and fell to the earth. Too much power, too small, or too few cores?

Best regards, KB5WZI

4142. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:15:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3b6l9rar1@helle.btinternet.com>
Source record: 123980
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Ian wrote -
> The conclusion is that the band/sideband convention was *already* in
> place when the 9MHz phasing exciters appeared... so the true history is
> even more mysterious.

==========

Some time before technology was clever enough to manufacture 9MHz xtl filters I vaguely remember reading somewhere about why sidebands conventionally switched from LSB to USB somewhere in the HF band. It was something to do with ship-to-shore communications and could have been for similar or related reasons but at lower frequencies. 465 or around 1600 KHz come to mind.

By the way, what is the precise HF transmit frequency at which the LSB/USB switch takes place ?

Reg.

4143. Re: HyHGAIN Hy Tower - Theory of operation ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:25:59 UTC
From: Doug <doug@ycsi.net>
Message-ID: <b3b787$a6s$0@63.90.193.170>
Source record: 123981

Hi Doug and the Group:
I've got one of the 18 HT's and it is a strange beast.
But, the stubs for the different bands act as different
tower lengths for each, essentially making it an electrical
quarter wave antenna. This, taking into account the
given reactance of the tower itself and all the other
stubs included in the match. If you want to become
confused, just set one of those stubs at the wrong
distance from the bottom plate and watch the fun begin.
Was thinking of adding WARC bands to mine, just for an
experiment, but the wind blows so much here that taking
the antenna down is a pain. May make a fold over base
for it and then the project would be easier.

At any rate, the antenna works well. Low angle of radiation,
and seems to be fairly quiet, but then I live in the sticks.

You could build one using Rohn 25G and the insulated base
unit, set the stubs approximately where the 18HT's are
and work from there. Bet it'd come together just fine.

Antennas are neat: Always something to learn.

73

Doug, K7YD
Livingston, MT

Douglas Snowden wrote:
> I have an old manual from a HT and was wondering if there is any info on
> just how the
> stubs are situated, etc. I understand the theory of shorted/open stubs, but
> it is sort
> of difficult to follow how it is set up. There are probably some of the
> antenna lengths
> that are 3/4 or 5/8 wavelength etc. Still looks weird to me.
>
> Doug N4IJ
>
>
>
>

4144. Re: N-jack assembly?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:26:53 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <1g96a.43424$9i7.2538174@twister.southeast.rr.com>
Source record: 123982

There should be 2 white washers both with a cupped side. The cup is for the center insulation of the coax to fit into. Then the pin fits over the centerconductor and bottoms out against the washer. the other washer fits over the now soldered on pin with the cup facing the point on the pin. When you finish assembling it press your thumb down hard on the end of the connector then look at your thumb. You should see a ring with a dot in the center. NO DOT means the pin is too far recessed. Too far out is indicated by the presence of blood.

"Ken" <cprstn54zz@att.net> wrote in message
news:3e4b2af7.167307515@news-server.optonline.net...
> On Wed, 12 Feb 2003 14:25:00 -0800, <Jimnn7k@reno.rmci.net> wrote:
>
> >Ken, are you sure that you have the RIGHT N connector for your coax
> >impedence?
>
> No, since it was shipped to me in error instead of an in-line SO-239 a
> few years ago and now I finally have a use for it having bought a
> small dummy load on eBay with an N-male connector.
>
> It has the extra 1/8" thick washer that has to make the sandwich with
> the cupped bushing.
>
> I got it to work by shortening the center conductor protrusion,
> including insulation, down to around 3/16". I put some solder into
> the center receptacle, some flux on the center conductor, heated the
> receptacle and pushed the center conductor into the melted solder as
> far as it would go. Then I put a 1/8" length of shrink wrap on the
> center business, assembled and tightened. This time, no shorting.
>
> They say they are called N connectors because there are N ways of
> assembling them. I am still not satisfied that I found the right way
> for this one, but I found a way that works. It doesn't make sense to
> need that 1/8" thick washer in front of the coax shielding when they
> could have shaped the body hole so it was 1/8" less deep -- unless it
> keeps things neater during assembly.
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

4145. Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:32:01 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5i8dodpnbr1b3@corp.supernews.com>
Source record: 123983

Back in the 1950s and 60 car radio antennas used a short peice of special coax to connect a front fender mounted antenna to the radio. This leadin cable was ~1/4" dia. with copper braid over a hollow tube that contained a very thin center conductor, probably smaller than 30 guage as best I can recall, and had a very low per foot capacitance. Rear mounted antennas provided inferior reception and weren't used. Then it must have been in the 1970s that someone figured out how make rear mounted antennas work without a rear mounted preamp. I have two questions. Does anyone recall the characteristic impedance of the thin center conductor lead in and what happened in the 70s to make rear mounted antennas work without preamps?
tnx
hank wd5jfr

4146. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:34:14 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3b7ne$i23$1@slb4.atl.mindspring.net>
Source record: 123984
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Richard:

[snip]
> Hi Peter,
>
> Only faster than light arguments are more compelling - jeeze, louise!
>
> Show me a negative frequency source (do you build it with dark matter
> and power it with dark energy???).
>
> 73's
> Richard Clark, KB7QHC
[snip]

Nope. Negative frequencies are just as "real" as positive frequencies.

Aside from appearing in mathematical notation associated with Fourier and LaPlace,
negative frequencies are used quite extensively in practice. Especially in digital signal
processing systems, but also in analog systems where I have seen them used extensively,
and have often used them myself as well.

Positive frequencies are the frequencies of cisoids [A*exp(jwt)] that rotate counterclockwise
in the complex plane, and negative frequencies are the frequencies of cisoids [A*exp(-jwt)] that
rotate clockwise in the complex plane. ["j" is the "imaginary unit marker" and w = 2*pi*f]

On an oscilloscope to "observe" positive and negative frequencies one has to apply
the real part of the signal to the x-axis [Re (A*exp(jwt)) = A*cos(wt)] and the imaginary part
of the signal [A*sin(wt0 to the y-axis input of the oscilloscope. At sufficiently low frequencies
you can see very clearly the difference between cisoids rotating in opposite directions.

In systems with "one real" signal path, the real signals will be supported over both positive and
negative frequencies as analytic signals where there is a special relationship between the positive
and negative frequencies such that one can be readily known from the other.

The special
relationship is called the Hilbert Integral or Hilbert Transform. Hence
there is no need to calculate
show or display the negative frequencies. However in systems that have
"two" signals paths, one
is named "real" and the other is named "imaginary" even non-analyitic
signals can be supported over
both positive and negative frequency ranges wherein both both negative and
positive frequency
components of the signal have no pre-determined relationship[Hilbert].

In fact filters are often designed to filter out the positive frequencies
from the negative frequencies, etc...
I've got filter design programs here that can real actual filters, either
digital or analog, for which the
filtering is different in the negative frequencies than in the postitive
frequencies, etc...

Been there, done that, designed that, shipped that... customers bought that
from us, in fact
you'r likly using some of that technology even as you type your posts here.
Since your
V. series modem and/or ADSL modem/Cable modem contains circuitry using
positive and
negative frequencies and single sided filters, etc...

Best,

--
Peter K1PO
Indialantic By-the-Sea, FL.

4147. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:36:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3b7r3$2rt$1@knossos.btinternet.com>
Source record: 123985

> It is similar to discussing the merits of books and libraries with persons
> who
> cannot read and write. >
> Just as one must be literate to live a full life and make useful
> contributions in
> today's developed societies, one must be mathematically literate to grasp
> the full significance and meaning and to make useful contributions to most
> Scientific and Engineering subjects.
==========

Arithmetically literate is good enough for most purposes.

I saw somewhere - to an ancient Athenian the description 'Philistine'
applied to anyone who was unable to converse easily in Greek.

4148. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:42:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <c59i5vculgp70ak1tkemubgjmjglqm7g38@4ax.com>
Source record: 123986
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

On Sun, 23 Feb 2003 14:34:14 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>> Hi Peter,
>>
>> Only faster than light arguments are more compelling - jeeze, louise!
>>
>> Show me a negative frequency source (do you build it with dark matter
>> and power it with dark energy???).
>>
>> 73's
>> Richard Clark, KB7QHC
>[snip]
>
>Nope. Negative frequencies are just as "real" as positive frequencies.
>

Hi Peter,

So the "short" answer is that you cannot provide me with a negative
frequency source and the bulk of snipped commentary proves it?

73's
Richard Clark, KB7QHC

4149. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:42:35 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5i91ab3u380af@corp.supernews.com>
Source record: 123987
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

All military communications seem to take place on upper sideband regardless of frequency. I have flown a number of air freight trips (oil drilling equipment from Texas to the middle east) and all the HF comms were USB.

The first sideband rig I saw in the Navy was about 1958. It was an RCA set with several channels controlled by crystals. It was located on the bridge and had a large placard to the effect that caution must be observed as it was not secure do to its extended range. I am not sure, but I think it was intended as a replacement for the low power TBS (talk between ships) equipment.

More power was required as convoys no longer steamed in sight of one another when operating with aircraft carriers in anti submarine patrols.

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message news:b3b6l9rar1@helle.btinternet.com...
> Ian wrote -
> > The conclusion is that the band/sideband convention was *already* in
> > place when the 9MHz phasing exciters appeared... so the true history is
> > even more mysterious.
>
> ==========
>
> Some time before technology was clever enough to manufacture 9MHz xtl
> filters I vaguely remember reading somewhere about why sidebands
> conventionally switched from LSB to USB somewhere in the HF band. It was
> something to do with ship-to-shore communications and could have been for
> similar or related reasons but at lower frequencies. 465 or around 1600 KHz
> come to mind.
>
> By the way, what is the precise HF transmit frequency at which the LSB/USB
> switch takes place ?
> ---
> Reg.
>
>
>
>
>

4150. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:45:31 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5924DB.AF3B11F9@cwis.net>
Source record: 123989
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Reg,
For what it's worth, the 'switch' frequency
is usually quoted as 10 Mhz. Or at least that's
what I've seen in print (don't ask where, I don't
remember). Meaning 80 and 40 meters are LSB, bands
above 10 Mhz are USB. That only applies to the
amateur service. Everybody else (almost) uses USB
exclusively. And when you get down to the bottom
of the bottle, who cares?
'Doc

4151. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:48:15 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E59257F.7DFC7FE6@cwis.net>
Source record: 123990

Art,
The Isle of Man E/H antenna project fizzled.
The only one still in use is the one in Egypt, to
the best of my knowledge which certainly may not
be current... as opposed to voltage.
'Doc

4152. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 19:58:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <fq9i5vo0crtsrrkcke3ijqs80pgoonbpvu@4ax.com>
Source record: 123991

On Sun, 23 Feb 2003 13:13:14 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>
>A friend of mine decided to use the W2DU balun method of Amidon cores
>impaled by his coax. The cores overheated, broke, and fell to the earth.
>Too much power, too small, or too few cores?
>
>Best regards, KB5WZI

Hi Richard,

Certainly a system fault (otherwise the current wouldn't be there in
such quantity in the first place). The system component of choke
BalUn being mismatched to the application could suffer from the system
error, but it is not the cause.

Too much power is a condition of service and must be met by the
system, otherwise failure is designed in from the start. The usual
advice is to use Amidon type #43 in place of the 70 series (or
vice-versa, I'm winging it). This is merely to reduce the heat burden
to any individual core (probably only good to 2-5W of dissipation).
However, if you snub the current in the first place, none can be put
to use in heating the cores. As such, the total Z of the choke may
have been insufficient (I usually work on the principle of 10 times
the feedpoint R).

73's
Richard Clark, KB7QHC

4153. Re: Dual band mobile rig

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:06:02 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E5929AA.8217E196@bloomer.net>
Source record: 123992

Kenwood TM-742A.

Scott
N0EDV

Javier Henderson wrote:
>
> Besides the Alinco DR605T, are there any other mobile VHF/UHF rig that
> will do cross-band repeat?
>
> 73,
> -jav w6vms

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4154. Re: Dual band base antenna (VHF/UHF)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:07:18 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E5929F6.8BD13ABB@bloomer.net>
Source record: 123998

Larsen NMO mount (3/4" hole or mag mount) with the 2/70NMO antenna.

Scott
N0EDV

Javier Henderson wrote:
>
> I'm looking for a 2m/440 base antenna... any recommendations?
>
> 73,
> -jav w6vms

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4155. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:07:41 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3b9m4$k9k$1@slb9.atl.mindspring.net>
Source record: 123994

Reg:

[snip]
> Arithmetically literate is good enough for most purposes.
>
> I saw somewhere - to an ancient Athenian the description 'Philistine'
> applied to anyone who was unable to converse easily in Greek.
[snip]

What is arithmetically literate?

Full knowledge and use of the +-*/ keys on your calculator and
no fractions?

Or full use of the hardwood calculator, i.e. #2 pencil
and paper up to and including square roots and cube roots.

What?

And... for what percentage of purposes is "most"?

Heh, heh... I hope the folks who designed the Golden Gate Bridge
and the Boeing 747 could handle more than that!

One doesn't have to become a mathematician, but...

With math, unlike wine, one can never have too much!

Reg, as you well know, one does not have to learn math all at once.

Like all things in life, math can be learned "as you go along" to help you
to
solve the problems you encounter as you try to design and understand things.

Just don't be afraid to learn math as you need it.

Math... just do it!
--
Peter K1PO
Indialantic By-the-Sea, FL.

4156. Re: Dual band base antenna (VHF/UHF)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:08:25 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E592A39.F333CF97@bloomer.net>
Source record: 123993

Oops, missed the word "base"...The Larsen I suggested is a mobile
antenna. Sorry 'bout that!

Scott
N0EDV

Scott wrote:
>
> Larsen NMO mount (3/4" hole or mag mount) with the 2/70NMO antenna.
>
> Scott
> N0EDV
>
> Javier Henderson wrote:
> >
> > I'm looking for a 2m/440 base antenna... any recommendations?
> >
> > 73,
> > -jav w6vms
>
> --
>
> Scott
> http://corbenflyer.tripod.com
> http://groups.yahoo.com/group/ParasolAirplanes
> Building RV-4
> Gotta Fly or Gonna Die!

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4157. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:09:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5iaj6182fs44a@corp.supernews.com>
Source record: 123995

Richard's right on. The problem is actually one of impedance matching. If the balun impedance is low, there's not much R for I^2*R heating. Of course, the balun doesn't function very well, either. If the balun impedance is high, the best solution as Richard suggests, then there's not much I for I^2*R heating. The heating is worst with some intermediate value of resistance.

It's important to have a fairly high impedance for proper balun operation, and whether the impedance is resistive or reactive doesn't matter from a performance standpoint. If heating is a problem, though, type 43 ferrite will produce less heating that 70-series ferrites because its impedance is more reactive and less resistive in the HF range. The tradeoff is that it doesn't produce as much impedance, so more beads have to be used. In extreme cases, 60 series ferrite might have to be used. However, its impedance is lower yet, so even more cores are required. Some people have reported good results with a compromise mixture of type 43 and 70-series.

Roy Lewallen, W7EL

Richard Clark wrote:
> On Sun, 23 Feb 2003 13:13:14 -0600 (CST), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
>
>>A friend of mine decided to use the W2DU balun method of Amidon cores
>>impaled by his coax. The cores overheated, broke, and fell to the earth.
>>Too much power, too small, or too few cores?
>>
>>Best regards, KB5WZI
>
>
> Hi Richard,
>
> Certainly a system fault (otherwise the current wouldn't be there in
> such quantity in the first place). The system component of choke
> BalUn being mismatched to the application could suffer from the system
> error, but it is not the cause.
>
> Too much power is a condition of service and must be met by the
> system, otherwise failure is designed in from the start. The usual
> advice is to use Amidon type #43 in place of the 70 series (or
> vice-versa, I'm winging it). This is merely to reduce the heat burden
> to any individual core (probably only good to 2-5W of dissipation).
> However, if you snub the current in the first place, none can be put

> to use in heating the cores. As such, the total Z of the choke may
> have been insufficient (I usually work on the principle of 10 times
> the feedpoint R).
>
> 73's
> Richard Clark, KB7QHC

4158. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:15:00 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3ba3r$mk5$1@slb1.atl.mindspring.net>
Source record: 123996
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Doc:

It's true that most commercial SSB systems use only
the USB and do not switch from U to L according
to the amateur radio traditions.

However lot's of commercial HF systems operate also
operate with ISB... i.e. Independent Side Band where
they transmit independent information on both sidebands
simultaneously. e.g. TTY on one and voice on the other,
etc...

The receivers in such systems will have dual
sideband filters to separate out the two sidebands
independently instead of merely switching the demodulated
carrier [BFO] between sides of the one filter as in amateur receivers.

--
Peter K1PO
Indialantic By-the-Sea, FL.

"'Doc" <w5lz@cwis.net> wrote in message news:3E5924DB.AF3B11F9@cwis.net...
>
>
> Reg,
> For what it's worth, the 'switch' frequency
> is usually quoted as 10 Mhz. Or at least that's
> what I've seen in print (don't ask where, I don't
> remember). Meaning 80 and 40 meters are LSB, bands
> above 10 Mhz are USB. That only applies to the
> amateur service. Everybody else (almost) uses USB
> exclusively. And when you get down to the bottom
> of the bottle, who cares?
> 'Doc

4159. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:15:29 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302231215.b147c1c@posting.google.com>
Source record: 123997

Dan Richardson <k6mhe@mendolink.com> wrote in message
news:<32ng5vcvutm9qa5vralqmf71pd9sh49rut@4ax.com>...
> On 22 Feb 2003 20:40:12 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >> Do we dare mention that a 5/8-wave ground plane falls short of the 3
> >> dB claimed gain over a 1/4-wave ground also? Naw, it would open up a
> >> hornets nest. <g>
> >>
> >> Danny, K6MHE
> >>
> >Danny, Is this correct regardless of elevation angle chosen
> >for comparison ?
> >Regards
> >Art, a nobody
>
> Well Art placing them say at ï¿½-wavelength above average ground NEC
> calculates the maximum gain to be:
>
> 1/4-Wave GP 1.57 dBi @ 46ï¿½ El
>
> 5/8-Wave GP 3.22 dBi @ 32ï¿½ El
>
>
>
> Danny
> K6MHE

I tried modeling quite a few of them in different programs. It's true
in most all cases, you won't see the "3db" over a 1/4 GP. I guess I
was contradicting my earlier post where I said the antenna would have
about 1.3 db over the 1/4 wave.
But I had been thinking I had approached that amount with the "steep
angled" 5/8 radialed version. But in comparing different programs, I
find that the NEC4 ?? engine such as used in eznec or eznec demo,
treats 5/8 antennas much differently than the mininec engine. The 45
degree angle antenna modeled ok in eznec demo, but not the steep
radial version.
All the tests I did with elnec are already on my web page. I used the
same exact el files and ran them all in eznec to check. Now, I found
one thing that is peculiar. I'm not sure if it's a bug in the engine,
or if this would be a more accurate model. It strikes me as strange.
Lets say you model a 5/8 GP with 5/8 radials in elnec or any of the
other mininec programs. Varying the lengths of the elements, you find

maximum gain at appx .62-.64 wavelength. In the past, I would have considered this normal operation. If you extend the elements out to 3/4 wave per leg, the angle of max radiation increases quite a bit. Again, I would have thought this normal.
If I take the same file over to eznec demo and run it, I get a lower gain number. But this in itself is not what concerns me. What I found was, if you extend the antenna elements out to nearly 3/4 wave ".71 wave to be exact", the antenna now models almost exactly the same as the .64 wave version in elnec. ??? Good gain and pattern . This had me terribly confused for a while...I can't decide if it's normal, now properly modeled, behavior, or a bug in the engine. My gut reaction is it's a bug, but I don't know anything about that engine, so someone like Roy would have to comment on that.
This behavior would "stunt" the results of a 5/8 antenna modeled with that engine. Or compared to a older mininec program anyway. Is that normal behavior?

Anyway, I'll agree, most all the time you'll never see the whole 3 db over a 1/4 wave, in theory anyway, but I think things do change from band to band. This is something I've pondered for a long time. You would think that being I'm talking to locals using the space wave, that the performance would be appx equal on each band. "10m and 2m" But this is not true here. Not that I'm saying the performance changes from band per band, if you keep the same height in wavelength. But the thing is , most usually use the antenna at a much lower wavelength on 10m, than 2m.
For some reason, the performance is totally different on the two bands when comparing the different height antennas. On 2m, here at this QTH, I tried a 5/8 GP on 2m using a good larson coil, and 4 1/4 wave radials. The antenna was horrible in comparison to a 1/4 wave GP at the same height. At that time, I didn't try any "long radial" versions.
But on 10m, to locals, it's a totally different picture. On that band, you do usually show an "apparent" 3 db gain over a 1/4 GP. Real or not, it's always been there for me, and I've compared a lot of 10m verticals over the years.
The only explanation I can think of is more scattering, reflections, refractions, etc, of the signal between the paths on 10m. Or maybe just having a taller structure in itself, with the current max at a higher point?
Being the height in wavelength is lower on 10m, maybe it matters more? Things to ponder...
One thing, I never made any attempt to accurately measure the gain. I was just interested in which was best. Being my paths were space wave, and very stable from day to day, measurements for that purpose were quite accurate. I could tell who was who just by the signal levels. I could tell if they had an amp on also...
Anyway, the increase I saw on 10m, was quite real to me, whether it exists in theory or not. Going back years and years, observing CB antenna comparisons, and also 10m comparisons, I've never once seen a

5/8 GP not noticeably beat a 1/4 GP at the same height. And the difference on most all types of radios, was usually 1.5-2 S units. I've seen it a gazillion times. Also, here, a 1/2 wave vertical always beats a 1/4 wave GP on 10m. By 1-1.5 S units on average. I'm not explaining it, I'm just telling you what I've seen many times over. Another thought...Maybe it's because we have pretty decent ground here. "Houston- Gulf coast region"

Anyway, overall I think the 5/8 GP with 1/4 radials was a perversion of design from the git-go. It's my view, a 5/8 element should always be paired with another 5/8 element for proper operation. IE: twin 5/8 collinear.
My interest in the antennas is to design a GP that acts more like the collinear instead of a GP. But this may have been a mistake. It's possible the cancellation between the radials may be a problem. The only real answer may be to use the collinear. But then thats a mechanical monster on 10m. "appx 42 ft tall structure", not counting any decoupling devices. And that needs to be elevated. Preferable about 40 ft or more to really brown the food at all the locals houses. :/ In the real world, I had very good results with just the radials at 45 degrees instead of steeply sloped. I still haven't gotten around to testing a steep sloped version. Lazy and too many other irons in the fire...

MK

4160. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:23:45 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3bak8hlr1@slb2.atl.mindspring.net>
Source record: 123999
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Richard:

[snip]
> So the "short" answer is that you cannot provide me with a negative
> frequency source and the bulk of snipped commentary proves it?
>
> 73's
> Richard Clark, KB7QHC
[snip]

Heh, heh... Nope.

I can ship you a negative frequency source next week.

I've got one in my lab right here beside my workstation,
I'm not using it currently.

How do you want it shipped, UPS Ground?

How long do you need it for? I have a consulting job coming
up in a couple of months where I will need it again.

If it's for amateur purposes only I can let you borrow it for free,
you pay the shipping, but if it's for commercial purposes, then it's
$2000 per day rental, you pay shipping.

Need any asymetrical bandpass filters designed? To selectively
separate out negative frequencies from positives. I do this in my
consulting work, and I will do that for you as well but for a price
TBD... commercial applications as per diem $3000/day, or for
royalties if you can convince me of the commercial viability of
your application.

What?

--
Peter K1PO
Indialantic By-the-Sea, FL.

4161. Re: Impedence of a half wave vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:31:07 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302231231.14d51a5f@posting.google.com>
Source record: 124000

dselwa1@juno.com (Dennis Selwa) wrote in message
news:<fa160ace.0302222228.6c3ee80a@posting.google.com>...
> I want to make a 20meter half wave vertical fror 20 meters. I have a
> Wilderness radio SST-20 and also want the MFJ 33ft extendable mast
> (#1710?).
> Since the SST has 50 ohm output, I would like to wind a toroid to
> match to the half wave vertical. What would be the number of turns for
> the primary and the secondary?
>
> Dennis W6EH

This is a case, "base fed 1/2 wave" where a single turn loop will pay
off. :/
I had to stir it....I'd use a single turn "gamma loop " type matching
setup for lack of a better name. Have made many of them. Work well,
and easy to tune. Low loss too which can count with that high Z
feedpoint. Also, they seem to do a passable job of decoupling the
feedline in themselves. Extra decoupling will help, but I've ran many
with no extra decoupling. They act about like a "J-pole" without the
parallel rods, etc . MK

4162. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:33:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <a2ci5vku9h66npq9uh97bccgudluq27rbd@4ax.com>
Source record: 124001
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

On Sun, 23 Feb 2003 15:23:45 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>Richard:
>
>[snip]
>> So the "short" answer is that you cannot provide me with a negative
>> frequency source and the bulk of snipped commentary proves it?
>>
>> 73's
>> Richard Clark, KB7QHC
>[snip]
>
>Heh, heh... Nope.
>
>I can ship you a negative frequency source next week.
>

Hi Peter,

I see, yours is the only one in existence then, but that begs the
reciprocal of negative frequency with negative time. Aren't you sure
that you could have sent it LAST week? Uh, belay that last or I will
be getting a bill this week.

And I thought faster than light was quick.

73's
Richard Clark, KB7QHC

4163. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 20:51:48 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E593464.1060107@ieee.org>
Source record: 124002
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Bill, W7TI wrote:
> OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote:
>>Remember inverted audio DSB?
>>
> In an April QST? :-)

Nope, it was a serious mode. The audio on a DSB signal was inverted so
the BFO had to be tuned either 3+ Khz above or below the transmitted
frequency. There was some logical reason for that but I forget what.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4164. CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 21:09:44 UTC
From: Adam Adkins <no@way.com>
Message-ID: <MPG.18c2f495f8e8ae0c98968b@netnews.attbi.com>
Source record: 124003
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Recently I have been trying to use 1/2" CATV hardline to feed my vertical antenna. The cable is a little larger diameter as LMR-400 or any other .405 OD coax. It has a solid center conductor with foam dialectric that is glued to the center conductor. The jacket is aluminum, and there is no PVC outer jacket. The connector was crafted from a PL-259 and a brass double female 1/2" compression fitting. That experience has taught me a couple of things, and raised some questions. If anyone has any helpful comments about the following, I would really appreciate hearing them.

I discovered very quickly how a kink in the cable is a disaster. Thirty feet from the end of a 200 foot run, the cable kinked and the outer metal jacket ruptured. Bleah. How disappointing.
Can anyone tell me good, cheap and durable ways to splice the cable?

Talking to a friend, I mentioned that I didn't plan to bury the cable but for a short run to make sure it isn't run over with the tractor. He asked me, "Wouldn't that change the impedance?" I had to admit that I don't know, but didn't think it would since the jacket is ground anyway.
I could not find the answer to this question anywhere. Can anyone tell me whether buried / not buried will change the impedance of this feed line? Are there advantages to burying the entire run? Are there any wild aluminum eating creatures that nibble holes in hardline?

Finally, does anyone care to share any hard-won experience, or pointers to complete information, or whatever?

Thanks in advance for any help,

73,

Adam Adkins, KM5N

4165. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 21:14:51 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <fRa6a.2653$cD5.250727@newsread2.prod.itd.earthlink.net>
Source record: 124004

Richard Clark <kb7qhc@attbi.com> wrote in message
news:8r1i5vcmcv7mct868miuo27ks22ang44b7@4ax.com...
> On Sun, 23 Feb 2003 15:43:48 GMT, "Walter Maxwell" <w2du@iag.net>
> wrote:
>
> >H. Adam Stevens wrote:
> >Walt
> >Thank you for posting actual measurements.
> >
> >You posted.
> >*SWR at resonance, 3.750 MHz, 1.1:1
> >*SWR at 3.550 MHz without compensation, 5.04:1
> >*SWR at 3.550 MHz with compensation (lossless coax), 4.9:1
> >*SWR at 3.550 MHz with compensation (RG-58 coax), 4.54:1
> >
> >Please add in the frequencies between 3.55 and 3.75 MHz.
> >The best I've seen on 80 with RG8x is a 75 KHz wide 1:1 SWR width.
> >The interesting frequency range would therefore be 3.71 to 3.78 MHz, in
at
> >least 10 steps.
> >73
> >H.
> >NQ5H
> >
> >Well, Adam, there are two ways to add the data you asked for, 1) take
> >measurements for each frequency step, or 2) interpolate from data already
> >obtained from earlier measurements. I'll tell you where to get the data
and
> >then let you do the interpolating.
> >
> >The data appears on my web page, http://home,iag.net/~w2du, in Chapter 15
of
> >Reflections II. I refer you to Tables 15-4 and 15-5, and also to Fig
15-1.
>
> *1:
> >The Fig shows R, X and SWR for my 80-m dipole, measured with two
different
> >calibrated feed lines, one 1/4 wl and the other 1/2 wl. The measurements
> >were taken with a General Radio GR-1606A RF impedance bridge.
> >
> >Now to the interpolation. Note that the SWR at 3.550 MHz with no
reactance
> >compensation is 5.04:1 and with RG-58 coax compensation the SWR is

4.54:1.
> >The ratio between the two SWR values is 1.11. Therefore, you can
interpolate
> >the values you are looking for by dividing each SWR value in Tables 15-4
and
> >15-5 by 1.11.
> >
>
> *2:
> >You might find the method for measuring the complex characteristic
impedance
> >Zo interesting. We measure the input impedance of the coax with first a
> >short circuit termination, and then with an open circuit termination. The
> >most accurate data is obtained when the length of the coax is around 1/8
wl.
> >
>
> *3:
> >Turn now to Table 15-1, where you'll see three sets of SC and OC
> >measurements on the left side of the table. Then, to massage the data we
use
> >my computer program 'TRANSCON', for transmission-line constants, where
> >you'll see the pertinent output data spread across the page. You'll find
> >this program in Chapter 15.
> >
>
> *4:
> >To find the complex characteristic impedance of the RG-58 coax I measured
it
> >at three different frequencies and then took the average for the final
> >value. The frequencies used were 1.75, 1.815, and 1.90 MHz.
> >
> >The final dipole impedance with compensation was determined by simply
adding
> >the respective R and X values of the parallel-circuits of the dipole and
> >coax impedances, and then converting back to series components of
impedance.
> >
> >The values of SWR were then calculated using a program that appears in
the
> >Appendix of Reflections I and II, but I don't believe it appears on my
web
> >page.
> >
> >Adam, I hope this helps in understanding how I come up with the data I
> >presented above.
> >
> >Walt, W2DU
> >
> >

>
> Hi All,
>
> I have marked 4 passages above to illustrate how the Amateur can
> proceed to make valid measurements of modest complexity and increased
> accuracy. As I have said often, 1 measurement does not make a case
> for any argument that relies on fine points resolved near the noise
> floor of error. Further, 2 measurements only contribute to confusion,
> not order. At 3 measurements you have a chance to strike an average
> that could be described as meaningful and as an educated guess.
>
> *1 above clearly states the principle elements outside of the variable
> being tested (and all should recall the difficulty in coming to terms
> with dependant and independent variables). This is the common ground
> work necessary to cast out test induced errors through cross checks
> (two lengths of cable, electrical or physical or both). The purpose
> of such activity is to serve as a self-proof of validity in that BOTH
> cables must lead to the same answer through methods that attend their
> attributes (being resonant).
>
> *2 describes the method of calibrating those two cables. At this
> point we now have four pieces of information, and we have yet to
> perturb the system to study it. This, again, is ground work that
> lends to the proof of valid data determination.
>
> *3 delves into the rationale for the preceding ground work: it is also
> known as the "scientific method."
>
> *4 expands the calibration of the cables through 3 tests at different
> frequencies. This in combination with the steps above yields a grid
> of characteristics that HAVE to be self complementary or reveal
> identical trends.
>
> All should note that not one lick of measurement of the bazooka has
> been performed without these first steps taken to qualify the cable
> used in the system. EVEN MORE, it should be noted that these steps
> that increase resolution, and accuracy are practices and methods NOT
> fancy shmancy gear with 10 digits of display. ALL who have common
> bench experience are capable of performing these same steps with ANY
> form of test instrument to INCREASE the quality of their data.
>
> Insofar as data goes, Walt has not offered any bazooka measurement
> (but rather has abstracted that through other work that he offers
> links to); he doesn't need to. The argument that the bazooka depends
> upon has already been found wanting. This is not to say that it is
> the end of the matter. There are better ways to measure the bazooka
> and Walt has offered the first steps and for those who can read
> fluently, they will notice it is the method that counts most, and that
> method MUST migrate into the measure of the bazooka to maintain the
> same quality of data.

>
> In the end, only a field of results in up to several tables will
> resolve the fine distinctions claimed by those of the bazookoid
> tendency. That data not only serves to reveal the fine structures of
> multiple resonances (so obviously missing in the threadbare details),
> but as to serve as internal consistency cross-checks (which DO reveal
> severe problems with the SWR determination in the original data).
> This is the long way of saying the Scientific method works even in the
> face of error. ALL data is meaningful IFF you have the ability to
> also record the conditions of your ground work.
>
> 73's
> Richard Clark, KB7QHC

Richard, thank you for the terrific tutorial on the importance of using the scientific method for obtaining vital measurement data. Your observations and comments should be read and understood by all Amateurs who make measurements for the purpose of understanding what is happening in their endeavours.

I especially thank you for using my presentation as an example. I consider it an honor that you chose to use it as the basis for your tutorial.

As for taking more than one measurement, I have always used the policy of taking even more than three, just to make sure. For example, while obtaining my data above I found the data taken at 1.90 MHz was nearly identical to that at 1.815 MHz. Something's wrong here. So I then measured at 1.75 MHz to see where the line lengths were going with the changes in frequency. The 1.815 data was way out of order, so a second measurement at 1.815 showed that I had read the reactance dial of the impedance bridge wrong--with the correct reading the 1.815 data fell correctly in line with the other measurements. The lesson? Taking several measurements allows spotting errors that would otherwise go unknowingly as the truth.

Thanks again, Richard,

Walt, W2DU

4166. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 21:43:31 UTC
From: richardharrison@webtv.net
Message-ID: <10804-3E594083-363@storefull-2315.public.lawson.webtv.net>
Source record: 124011

CAM wrote:
"There was a logical reason for thet (inverted audio) but I forget
what."

Same reason as SSB. It is more difficult to identify the culprit causing
the TVI.

Best regards, Richard Harrison, KB5WZI

4167. optimum element spacings for UHF Yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 21:44:04 UTC
From: Xanax <keepItInTheNewsGroups@news.com>
Message-ID: <teb6a.11410$V6.15491@news.indigo.ie>
Source record: 124005

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Hi all,
Does anyone know the optimum Director elements for a UHF Yagi Fc~255Mhz.

Is it best to set them all to 1/8 Lambda or 1/2 lambda etc...

Cheers
Xanax
-----BEGIN PGP SIGNATURE-----
Version: PGP 8.0 (Build 294) Beta

iQA/AwUBPllAoSGakPXr24F/EQJeUwCffP58S25S9JnnhWAFbqoSksBSZ3cAoJHY
xaTYxpPlnP75PIwd91j8E6Oz
=0vYb
-----END PGP SIGNATURE-----
```

4168. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 21:51:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5igi8q5m5rj3c@corp.supernews.com>
Source record: 124006

There shouldn't be any significant difference between results from MININEC based programs and NEC-2 based programs like EZNEC for ground plane antennas. (And, for that matter, NEC-4 will give the same result also.) But as always, some care has to be taken to insure that the models are correct and equivalent.

When modeling a ground plane antenna with MININEC, you have to make sure that the vertical wire is the highest numbered wire. This is because the "pulse" (segment junction) at the intersection of all the wires "belongs" to the highest numbered wire. When placed at this "pulse", The source will end up delivering its current to the highest numbered wire. If the highest numbered wire is a radial rather than the vertical wire, you'll end up with an odd current distribution. This isn't an issue with NEC based programs.

Also, with MININEC based programs, horizontal wires should be at least 0.2 wavelength above ground. I've found that this rule can be relaxed some with radial systems like on a ground plane, probably due to the fact that the ground plane radiation mostly cancels. The same rule needs to be applied with programs like EZNEC when using the MININEC-type ground model, but not with "High-accuracy" (Sommerfeld) ground.

Finally, there's always some difference in source placement between MININEC and NEC based programs. This can be minimized or eliminated by making short segments in MININEC and moving the source up one "pulse" from the bottom, or in the NEC model by making very short segments, at least in the vicinity of the source. EZNEC's (or ELNEC's) segment length tapering feature allows you to make short segments at one end without having to use a large number of segments overall. Source placement differences become most apparent near anti-resonance, e.g., for a half wavelength vertical.

Roy Lewallen, W7EL

>Mark Keith wrote:

>. . .
> But I had been thinking I had approached that amount with the "steep
> angled" 5/8 radialed version. But in comparing different programs, I
> find that the NEC4 ?? engine such as used in eznec or eznec demo,
> treats 5/8 antennas much differently than the mininec engine. The 45
> degree angle antenna modeled ok in eznec demo, but not the steep
> radial version.
> All the tests I did with elnec are already on my web page. I used the
> same exact el files and ran them all in eznec to check. Now, I found
> one thing that is peculiar. I'm not sure if it's a bug in the engine,

> or if this would be a more accurate model. It strikes me as strange.
> Lets say you model a 5/8 GP with 5/8 radials in elnec or any of the
> other mininec programs. Varying the lengths of the elements, you find
> maximum gain at appx .62-.64 wavelength. In the past, I would have
> considered this normal operation. If you extend the elements out to
> 3/4 wave per leg, the angle of max radiation increases quite a bit.
> Again, I would have thought this normal.
> If I take the same file over to eznec demo and run it, I get a lower
> gain number. But this in itself is not what concerns me. What I found
> was, if you extend the antenna elements out to nearly 3/4 wave ".71
> wave to be exact", the antenna now models almost exactly the same as
> the .64 wave version in elnec. ??? Good gain and pattern . This had me
> terribly confused for a while...I can't decide if it's normal, now
> properly modeled, behavior, or a bug in the engine. My gut reaction is
> it's a bug, but I don't know anything about that engine, so someone
> like Roy would have to comment on that.
> This behavior would "stunt" the results of a 5/8 antenna modeled with
> that engine. Or compared to a older mininec program anyway. Is that
> normal behavior?
> . . .

4169. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 21:55:21 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932B8D9F2FC70pookster@216.168.3.50>
Source record: 124007
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in
news:s5edHsEyaJW+EAWs@ifwtech.co.uk:

> No, the sidebands remained the *same*
>
> 9MHz USB + 5MHz VFO = 14MHz USB
>
> 9MHz USB - 5MHz VFO = 4MHz *USB*
>
> If you don't believe that, replace "9MHz USB" with 9.001MHz (the result
> of a 1kHz tone input).
>
> To make the sidebands invert, you'd need to have used a 5MHz SSB
> generator and a 9MHz VFO - but history didn't happen that way.
>
> The conclusion is that the band/sideband convention was *already* in
> place when the 9MHz phasing exciters appeared... so the true history is
> even more mysterious.
>

Ian is correct, my memory was wrong. I believe it was that the SSB
signal was generated at 5 MHz and the VFO was at 9 MHz. I may not be
right on the exact frequencies, but the principle is correct and it was
the reason for the USB/high and LSB/low custom.

I have a 1959 ARRL handbook which says crystal filters for SSB generation
can be constructed at frequencies as high as 5 Mc, but gives no
construction details.

Does anyone have some old QSTs or a later handbook who could check?

--
Bill, W7TI

4170. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 21:56:56 UTC
From: kh2d@my-deja.com
Message-ID: <3e594339.926362939@newsgroups.bellsouth.net>
Source record: 124008
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

On Sun, 23 Feb 2003 15:23:45 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>Richard:
>
>[snip]
>> So the "short" answer is that you cannot provide me with a negative
>> frequency source and the bulk of snipped commentary proves it?
>>
>> 73's
>> Richard Clark, KB7QHC
>[snip]
>
>Heh, heh... Nope.
>
>I can ship you a negative frequency source next week.
>

Not to be negative about your frequency source, but is
it REALLY necessary for you guys to crosspost this bullshit
to the DX newsgroup?

We're all really impressed by your perceived technical
superiority, but not really interested. We just collect
post cards.

73, Jim KH2D

4171. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 21:59:13 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302231359.4e3fc271@posting.google.com>
Source record: 124009

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<pa6i5vgu3cr3b3oe9onu6h6pc3giimj5di@4ax.com>...
> On 23 Feb 2003 09:20:09 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >As far as I am aware there is only one company left
> >in the chase for a shorter antenna for the broadcast bands.
> >The E/H group were succesfull in getting many contracts
> >around the World and the last I heard was that a broadcast
> >station on the Isle of Man was undergoing an indepth study.
> >Did this study produce any figures e.t.c. to confirm any of the
> >manufactures claims and thus open a new horizon in antenna
> >studies ?
> >Best regards
> >Art
>
> Hi Art,
>
> You seem to be mixing up two designs. Your queries seem to be evoked
> from very old reports for CFAs. The fact that they have been long
> dormant is proof enough of their "viability."
>
> Another compelling proof offered by at least one other correspondent
> is that if they worked so well, they would have replaced every dipole
> by now. Hence, the only activity TO DATE is the endless rummaging
> through the junk drawers of old postings for the same poor data.
> Unlike wine, these nut-fringe antennas, like fractals, do not improve
> by being bottled up for years in remote and distant lands where
> conclusive proof is just around the corner (probably the same corner
> where the administration's plans for the economic recovery will come
> roaring around).
>
> 73's
> Richard Clark, KB7QHC

O.K. Richard, yes, I may be mixing things up but I made sure not to
mention one type. So the field is wide open with no takers at the
present time. Since you point out that there is a pot of gold at
the end of the rainbow (replace all dipoles) maybe some younger
aspiring inventor will devote his life to bringing forth a solution.
I would imagine that all with small lots would jump at the chance
of being a big signal on 160 and push out the few snobs that now
dominate the DX ing to Europe. Ofcourse I would devote considerable
time

myself to provide the solution but then the E mail would pile up against my door so that I couldn't get out and you know I dislike criticism .
Better to solve it and keep it to myself. Since Hately was able to get funds to build several stations around the world it would seem that the broadcast industry has a real need for it, yet for what I understand the only
benefit was reduced height so something else must have been driving the need.
Regards
Art

4172. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 22:10:35 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302231410.466f91f8@posting.google.com>
Source record: 124010

'Doc <w5lz@cwis.net> wrote in message news:<3E59257F.7DFC7FE6@cwis.net>...
> Art,
> The Isle of Man E/H antenna project fizzled.
> The only one still in use is the one in Egypt, to
> the best of my knowledge which certainly may not
> be current... as opposed to voltage.
> 'Doc

Doc, it is no real surprise that it fizzled in the end,
but I am curious as to what the actual findings were
and if just a small smidgeon of information suggested that
the envelope boundaries had been moved outwards in any way.
I know many had forcast its demise but I was looking for a 'gem'
of science that may have been exposed during the investigation.
Is it possible that The Isle of Man did not want a tall tower
incase it pushed the island closer to the U.K. I understand that
the island has an awefull lot of 'fat cats' who would 'turn tail' and
flee if ever that would happen
Regards
Art

4173. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 22:24:02 UTC
From: k3bu@aol.com
Message-ID: <20030223172402.27767.00000221@mb-mq.aol.com>
Source record: 124012

>
>The discussion seems to have stuck to widening the matched antenna`s
>bandwidth by using a bazooka. The conclusion seems to be that it does
>not hurt to use a bazooka and it may help bandwidth.
>
>The purpose of a bazooka according to King, Mimno, and Wing in
>"Transmission Lines Antennas and Wave Guides" is to keep r-f off the
>coax exterior. Their Fig. 27.4, on page 153 shows a coax-fed dipole with
>a 1/4-wave skirt around the coax. The skirt is open next to the antenna
>and shorted to the coax back 1/4-wave from the dipole.
>
>Best regards, KB5WZI
>

Richard,
you have to be carefull to distinguish which "Bazooka" it si considered:

1. Bazooka Dipole is the thing that has two bazookas as a part of the antenna radiator. (That's what arguing has been going on about.)

2. Bazooka Balun is the thing that is put over the coax at the feedpoint to function as a balun to keep the RF off the exterior of the coax. (That is still in all the antenna books, but might be due for "debunking" :-)
This one widens SWR response, has low loss and works as a filter.

I used # 2 but might be proved that I was wrong, that I should have been using ferite based baluns that blow up and stink like hell forever. :-)

Yuri, K3BU

4174. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 22:32:37 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302231432.3aa3b560@posting.google.com>
Source record: 124013

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:<b3b5vk$a73$1@slb9.atl.mindspring.net>...
> Art:
>
> I disagree with your assertions!
>
Doesn't surprise me at all.
>
> Art... Come on in, the Math is warm, it won't hurt at all.
>
> If you spent even half the time studying and learning math as you do
> complaining
> about it you would be half-way there by now!
>
> Just do it!
Halfway where? I do not consider that this hobby should be divided
into different classes, some people who have no interest in
mathematics
are very interesting people --.
Just do it you say, well I taught math and strength of materials
at a junior college for a couple of years and tho some were dunces
I would really enjoy it if I bumped into them again. As for picking up
the desire for mathematics again the idea of memorising standard
integration
equations all over again I find daunting since as one gets older
things do change. No, I will stay a dunce and be happy that conflict
now passes me by,
after all, for one who grew up in the slums of London, never went to
University (well I did go when my son graduated), it is not all that
bad being lower class nor being in areas that I do not belong all over
again. Believe it or not I don't even wear a tie anymore...a real
rebel..
Best regards
Art

> Peter K1PO [A former mathaphobe who only scored 16/100 in Algebra.]
> Indialantic By-the-Sea, FL.
>
>
> "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> news:85ed38d.0302221817.70f6259e@posting.google.com...
> > Somewhere in one of the posts of the last two weeks someone asked
> > what exactly is "Q". When I was active in ham radio many members of
> > the club

> > was not experienced in mathematical areas so the quoting of
> > mathematical
> > relationships left him with eyes glazed and a sense of not belonging.
> > In answering such questions I always tried to relate it to the
> > hobbyist
> > you had chosen to be a fellow ham. Thus I would explain "Q" in a non
> > technical way.
> >
> > The optimum requirement for a specific 'chat' between two hams is to
> > have an antenna system that maximises the transmit or receipt of the
> > conversation at hand, while at the same time signals that are not part
> > of the conversation and out of the 'pass band' were antennuated. Thus
> > the QUALITY "Q" of the communication at hand is the TOTAL focus of
> > the antenna at that particular frequency which includes not only
> > maximum efficiency but also the ability to retain maximum sensitivity
> > of the receiver by retaining its designed noise floor.
> > To the user it is has exactly the same function as a pass band filter
> > which one has in the radio except that the filter requirement is used
> > at the ONSET of signal receipt which provides distinct advantages with
> > respect to the specific communication taking place.
> >
> > Tho one can get into the subject of "Q" rather deeply in terms of
> > theorems or
> > mathematics,pass band shapes, formulas etc, it is important to allow
> > the questioner the ability to get a 'foothold' in the subject so he
> > can be retained as a fellow ham even tho your reply may be subject to
> > ridicule by fellow and the more knoweledgable newsgroup members.
> > Sorry I couldn't find the actual question posting but hopefully the
> > questioner is still around so that he can obtain a foothold in what
> > can be a very technical subject.
> > I know,..... who am I to talk about effective communication!!!!
> > Regards
> > Art, a nothing

4175. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 22:40:34 UTC
From: richardharrison@webtv.net
Message-ID: <10804-3E594DE2-376@storefull-2315.public.lawson.webtv.net>
Source record: 124016

Ian White wrote:
"If you don`t believe that, replace 9MHz USB with 9.001 MHz (the result of a 1 KHz tone input."

You`re on but I`ll choose a grosser tone because I`m accustomed to working with SSB multiplex systems.

Suppose you have a 9 MHz carrier with a 100KHz tone. In carrier multiplex modulation plans, some of the little triangles point to the right (USB) and some of the little triangles point to the left (LSB).

9MHz + 4.1MHz = 13.1MHz (4MHz beat osc.)
9MHz + 4.2MHz = 13.2MHz (USB)

9MHz - 4.1MHz = 4.9MHz (4MHz beat osc.)
9MHz - 4.2MHz = 4.8MHz (LSB)

Best regards, Richard Harrison, KB5WZI

4176. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 22:43:32 UTC
From: unkadean <dnorris@k7no.com>
Message-ID: <ohji5v4tt99a6eamqjfhskngnkm54bo751@4ax.com>
Source record: 124014
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

On Sun, 23 Feb 2003 04:18:53 -0000, "Bill, W7TI" <jamspam@upyours.now>
wrote:

>Agreed. I vote for USB on all bands.

And completely obsolete my CE 20A and 458 VFO? A pox on you, senor!
I am not sure my SX-99 can hear anything else.

unkadean

4177. Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 23:10:03 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E595544.7E2448D5@earthlink.net>
Source record: 124015

Somewhere I recall reading that the potential difference between the earth and points above the
surface increases rather steadily, so that one could actually measure a voltage difference with a
copper wire grounded to the earth and extended upward many feet. Does anyone know what sort of
difference might occur with say a 20-30 foot copper wire strung along an insulated flag pole like
mast?

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Consumer Tip: Save your gasoline money if you are buying premium gas. It's
unnecessary to use it unless your engine pings. Use regular instead.
-- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

4178. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 23:35:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E595AAB.5030401@ieee.org>
Source record: 124017

Richard Harrison wrote:
> CAM wrote:
> "There was a logical reason for thet (inverted audio) but I forget
> what."
>
> Same reason as SSB. It is more difficult to identify the culprit causing
> the TVI.

I just remembered the reason. That was back when there were lots of
AM carriers on the air. Inverted audio DSB allowed one to switch
sidebands and move away from an interfering AM carrier while
continuing to decode the same modulation.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4179. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 23:54:12 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <yE7KYNDk8VW+EAXM@ifwtech.co.uk>
Source record: 124018

Richard Harrison wrote:
>Ian White wrote:
>"If you don`t believe that, replace 9MHz USB with 9.001 MHz (the result
>of a 1 KHz tone input."
>
>You`re on but I`ll choose a grosser tone because I`m accustomed to
>working with SSB multiplex systems.
>
>Suppose you have a 9 MHz carrier with a 100KHz tone. In carrier
>multiplex modulation plans, some of the little triangles point to the
>right (USB) and some of the little triangles point to the left (LSB).
>
>9MHz + 4.1MHz = 13.1MHz (4MHz beat osc.)
>9MHz + 4.2MHz = 13.2MHz (USB)
>
>9MHz - 4.1MHz = 4.9MHz (4MHz beat osc.)
>9MHz - 4.2MHz = 4.8MHz (LSB)

Sorry, I don't understand. What exactly do you think you have proved?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4180. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-23 23:54:45 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <5UDIcnDF9VW+EA2F@ifwtech.co.uk>
Source record: 123869
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Reg Edwards wrote:
>Ian wrote -
>> The conclusion is that the band/sideband convention was *already* in
>> place when the 9MHz phasing exciters appeared... so the true history is
>> even more mysterious.
>
>==========
>
>Some time before technology was clever enough to manufacture 9MHz xtl
>filters I vaguely remember reading somewhere about why sidebands
>conventionally switched from LSB to USB somewhere in the HF band. It was
>something to do with ship-to-shore communications and could have been for
>similar or related reasons but at lower frequencies. 465 or around 1600 KHz
>come to mind.
>
In Europe, USB seems to be used for ship-to-shore on all frequencies
down to Top Band; but we had already been using LSB on the low bands for
several years while they were still using AM.

>By the way, what is the precise HF transmit frequency at which the LSB/USB
>switch takes place ?

I had always understood it to be 10MHz.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4181. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 00:20:48 UTC
From: Allodoxaphobia <nobody@frontier.net>
Message-ID: <slrnb5ipau.bpq.nobody@animas.frontier.net>
Source record: 123870
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sun, 23 Feb 2003 21:09:44 GMT, Adam Adkins hath writ:
> Recently I have been trying to use 1/2" CATV hardline to feed my
> vertical antenna. The cable is a little larger diameter as LMR-400 or
> any other .405 OD coax. It has a solid center conductor with foam
> dialectric that is glued to the center conductor. The jacket is
> aluminum, and there is no PVC outer jacket. The connector was crafted
> from a PL-259 and a brass double female 1/2" compression fitting. That
> experience has taught me a couple of things, and raised some questions.
> If anyone has any helpful comments about the following, I would really
> appreciate hearing them.
>
> I discovered very quickly how a kink in the cable is a disaster.
> Thirty feet from the end of a 200 foot run, the cable kinked and the
> outer metal jacket ruptured. Bleah. How disappointing.
> Can anyone tell me good, cheap and durable ways to splice the
> cable?

Can't help you there. I've only `slightly` kinked either the 1/2"
or the 3/4" stuff but once each -- and it did not burst and I'm
gonna live with it.

> Talking to a friend, I mentioned that I didn't plan to bury the
> cable but for a short run to make sure it isn't run over with the
> tractor. He asked me, "Wouldn't that change the impedance?" I had to
> admit that I don't know, but didn't think it would since the jacket is
> ground anyway.

Mox nix -- being ground. What you'll get is a smashed tube - with
the outer wall much closer to the inner conductor - giving you
(perhaps many - depending on how active the tractor) impedance `bumps`.

[Oh, now that I've re-read the question: No, burying the hardline
directly, or in-directly will *not* alter the impedance. sri]

> I could not find the answer to this question anywhere. Can anyone
> tell me whether buried / not buried will change the impedance of this
> feed line? Are there advantages to burying the entire run? Are there
> any wild aluminum eating creatures that nibble holes in hardline?

Without _any_ poly jacket, you need to worry about electrolysis and/or
the PH of the soil. If it were me: I'd bury it in some black poly pipe.
'Twould be a feat to stuff in a looooooong run of it...

> Finally, does anyone care to share any hard-won experience, or
> pointers to complete information, or whatever?

http://www.jonz.net/W3DHJ/catvhardline.html

...but, none of my CATV HardLine comes even close to the ground.
Out thru the basement window -- along the side of the house --
and up inside of a 40' tower.

HTH es 73,
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

4182. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 00:28:02 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3bov4npj1@slb5.atl.mindspring.net>
Source record: 123871

Art:

[snip]
> after all, for one who grew up in the slums of London, never went to
> University (well I did go when my son graduated), it is not all that
> bad being lower class nor being in areas that I do not belong all over
> again. Believe it or not I don't even wear a tie anymore...a real
> rebel..
> Best regards
> Art
[snip]

Ah, so it's class warfare, not aversion to mathematics that is your problem!

Didn't you know that one does not have to go to University to learn
or master Mathematics. I sure didn't learn the math that I know from
University! Sure attendance at University may accelerate the learning of
Mathematics for the young and affluent, but many of the mathematical
greats never attended any University, and many were/are self taught and
in fact ended up teaching the University Professors. Have you ever
read "Men of Mathematics" by Bell?

Go the library, borrow math books, dig in, and teach yourself what you
need to know to solve antenna problems like all the rest of we
proletariat and, stop your bloody whining!

Ask whatever questions you want of the gurus on the newsgroup, few will
ever put you down for asking either dumb or smart questions. But please
spare us the whining and complaining!

Math, just do it!
--
Peter K1PO
Indialantic By-the-Sea, FL.

4183. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 00:28:10 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3bouq$t5g$1@knossos.btinternet.com>
Source record: 123872

For the benefit of the original enquirer -

Q = X / R,

where, in the case of electrical circuits, X is the reactance of a coil or a capacitor and R is the series resistance associated with it.

Q is only a number. It's not even a constant number. It is merely a convenient but dispensible ratio of one thing compared with another whose importance for many years has been exaggerated beyond all reasonable proportions by plagiarising magazine writers who appear to have little else to write about. Indeed, by the length of this contribution I commit the same folly.

Art, you are too modest. Or perhaps a nice acceptable-to-everybody heretic who disdains ARRL bibles !

Have fun, it's only a hobby.

Reg, G4FGQ

4184. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 00:32:55 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3bp7emtm1@slb4.atl.mindspring.net>
Source record: 123873
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

Jim:

[snip]
> We're all really impressed by your perceived technical
> superiority, but not really interested. We just collect
> post cards.
>
> 73, Jim KH2D
[snip]

Oh, didn't even notice. Blame it on the original poster.

This shall be my last post to the .dx newsgroup, sorry.

--
Peter K1PO
Indialantic By-the-Sea, FL.

4185. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 00:44:28 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3bpt3$5s$1@slb9.atl.mindspring.net>
Source record: 123874

Richard:

[snip]
> I see, yours is the only one in existence then, but that begs the
> reciprocal of negative frequency with negative time. Aren't you sure
> that you could have sent it LAST week? Uh, belay that last or I will
> be getting a bill this week.
>
> And I thought faster than light was quick.
>
> 73's
> Richard Clark, KB7QHC
[snip]

Not true! The one I use is/was made by HP, now Agilent.

A client of mine bought it for a project I was doing for them
and then "gave" it to me as part of my remuneration. Value
approximately $20,000.00.

What's this about negative time? Frequency can "run" backwards
or forwards quite easily, but time? i.e. positive or negative radians
per second is a real thing and quite OK. Radians can be either
positive or negative depending upon the direction of rotation, but time...

Uhhhh, no I don't buy that!

AFAIK, time only runs forwards in *this* Universe at least.

Now, back to antennas...

How does one radiate a circularily polarized signal such that
the field rotates as it progresses through space? What what would
you name the positvively [counter-clockwise] and negatively
[clockwise] rotating fields?

Would fractal antennas be of any benefit in launching rotating
fields?

--
Peter K1PO
Indialantic By-the-Sea, FL.

4186. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 01:02:43 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302231702.7f13a312@posting.google.com>
Source record: 123875

>
> You just gotta... learn math, study math, learn to like math, learn to read
> math,
> learn to speak math learn to write math, then and only then you can become
> a full member of the "club".

Naw, I'll let others do it who enjoy it. I hate math. I've always
hated math, and I'll always hate math. Not that it's too difficult to
learn, it just bores me to tears. I only use enough math to do the job
at hand. If it requires complex math, I'll let the machine or someone
else do it.
>
> Otherwise you are doomed to always be an "outsider" looking through a
> small knothole in the fence of Science and Engineering observing shadows on
> the wall and wishing to be on the inside.

That may bother Art, but I could care less. I only learn what
interests me. Someone else can do complex math who is interested in
it. I'm sure I'll be able to do something they can't . In general, I
know enough math to do what I need to do. If need to know more for a
certain reason, I'll learn it. Otherwise, I don't bother. I'm not an
engineer and have no plans to ever be one. MK

4187. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 01:17:57 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E5972A9.B6420AB@attbi.com>
Source record: 123876

Yes there is an electric and a magnetic field in the atmosphere. The magnetic field is indicated by a compass and has a value of 0.1 to 0.5 Gauss under normal ambient conditions. The corresponding electric field has a value of 100 to 2000 volts/meter under normal ambient conditions. It increases to more than 10,000 volts/meter during thunder storms in the lightning strike vicinity, and up to 20,000 volts/meter in the precursor to a lightning strike.

If you introduce your 20 to 30 foot wire in this field the boundary conditions between the air and the copper, specifically, the conductivity of the air and copper, does not sustain this high a voltage in the wire. A poor model, but one that demonstrates the principle, would be the resistivity of air, example 100 megohms, in series with the resistivity of the wire, example 0.01 ohms, would yield a voltage in the range of 1 to 10 microvolts.

The electric field intensity in air can be measured with an electrometer having an input impedance of more than 1 million megohms.

These fields are basically static as opposed to time varying fields. [Although all fields are time varying to some extent a field that varies very slowly, [tens to hundreds of seconds] can be defined as static].

Deacon Dave, W1MCE

BTW: a high quality moderate capacitance, 4 uF at 3000 VDC, can give you quite a shock after it's been on the bench for several months. I know from first finger experience!!

+ + +

Wayne Watson wrote:
>
> Somewhere I recall reading that the potential difference between the earth and points above the
> surface increases rather steadily, so that one could actually measure a voltage difference with a
> copper wire grounded to the earth and extended upward many feet. Does anyone know what sort of
> difference might occur with say a 20-30 foot copper wire strung along an insulated flag pole like
> mast?
>
>

4188. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 01:22:01 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nhri5vsoiliftifd2pvknfm07sh2v2cqbp@4ax.com>
Source record: 123877

On Sun, 23 Feb 2003 21:14:51 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>
>Richard, thank you for the terrific tutorial on the importance of using the
>scientific method for obtaining vital measurement data. Your observations
>and comments should be read and understood by all Amateurs who make
>measurements for the purpose of understanding what is happening in their
>endeavours.
>
>I especially thank you for using my presentation as an example. I consider
>it an honor that you chose to use it as the basis for your tutorial.
>
>As for taking more than one measurement, I have always used the policy of
>taking even more than three, just to make sure. For example, while obtaining
>my data above I found the data taken at 1.90 MHz was nearly identical to
>that at 1.815 MHz. Something's wrong here. So I then measured at 1.75 MHz to
>see where the line lengths were going with the changes in frequency. The
>1.815 data was way out of order, so a second measurement at 1.815 showed
>that I had read the reactance dial of the impedance bridge wrong--with the
>correct reading the 1.815 data fell correctly in line with the other
>measurements. The lesson? Taking several measurements allows spotting errors
>that would otherwise go unknowingly as the truth.
>
>Thanks again, Richard,
>
>Walt, W2DU

Hi Walt,

The thanks should go to you, the one that expended the greater effort.
Walt, you not only provided the grist for my mill, but also the grunt
labor hanging copper to measure a distinction.

Hi All,

None of this is so simple so as to be shrugged off as not contributing
much to the bottom line - nothing could be further from the truth.
None of this is so difficult that it is to be abandoned due to
insufferable requirements - they don't exist.

ALL of the methods and techniques employed by those skilled in the
craft of Metrology derive from very rude beginnings. Nearly EVERY
measurement with an accuracy out to 6 places could be performed at
YOUR bench WITHOUT burning $100 bills. The Engineers and Scientists
of 100 years ago achieved this with batteries, bridges, and

galvanometers. I walk by priceless gear like that at every ham swap. It is especially hard to see a box full of Standard Cells being sold like flashlight batteries.

Are all these heirlooms discounted because new technology has eclipsed their accuracy? Perhaps at the lab of their original surplussing; but no where else along those aisles of 2nd hand equipment. One fellow with an HP slotted coaxial line wanted to sell it to me for scrap to obtain the vernier probe mount - as if I would bust up a Mercedes for its radiator cap.

Still and all, for the savvy Ham to achieve high accuracy does not demand an HP slotted coaxial line - that savvy Ham could figure out a way to build it from sheet metal and 2X4's to EQUAL quality. There is nothing that demands you go out and spend money for an instrument an engineer designed around three passive components like an RF Bridge.

The precision in both these instrument is not in their price tag for exotic parts. No, the precision is derived from First Principles embodied in attention to detail for simple relationships. If I were faced with saving an HP slotted line, OR its manual, the paper would win over the iron slag every time. Documentation of that gear will teach you more about fundamental electronics than a 5 foot shelf of academic publications.

73's
Richard Clark, KB7QHC

4189. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 01:23:27 UTC
From: Justice Gustine <justicegustine@yahoo.com>
Message-ID: <kpsi5v05gsfnriiaqjea3ka50urjrjdjbc@4ax.com>
Source record: 123878
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Adam Adkins <no@way.com> wrote:

>
>
> I discovered very quickly how a kink in the cable is a disaster.
>Thirty feet from the end of a 200 foot run, the cable kinked and the
>outer metal jacket ruptured. Bleah. How disappointing.
>Can anyone tell me good, cheap and durable ways to splice the
>cable?

There are repair kits that techs use to patch open shields. Some
professional version of foil, contact cement & hose clamps. I don't
have any, but I'll check for any sources I know..

4190. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 01:34:21 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2gti5v0vs5bil2ejj975f12sh5btcdc4up@4ax.com>
Source record: 123879

On 23 Feb 2003 13:59:13 -0800, aunwin@insightbb.com (Art Unwin KB9MZ) wrote:

> Since Hately was able to get
>funds to build several stations around the world it would seem that
>the broadcast industry has a real need for it, yet for what I
>understand the only
>benefit was reduced height so something else must have been driving
>the need.
>Regards
>Art

Hi Art,

It's called a "con game."

The inventor is selling more engineering hours than antennas. Why would a station buy into the con? Look at the localities and tell me if they suggest a very savvy population? Any of them describable as other than third world economically? Want to bet that government subsidies were involved? How often is the inventor photographed with equal numbers of officials and radio owners? (What's in it for these public officials?)

73's
Richard Clark, KB7QHC

4191. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 01:35:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5976E8.2030805@ieee.org>
Source record: 123880

Richard Clark wrote:
> Still and all, for the savvy Ham to achieve high accuracy does not
> demand an HP slotted coaxial line - that savvy Ham could figure out a
> way to build it from sheet metal and 2X4's to EQUAL quality.

Or bypass all the coaxial mechanical problems and do the measurements
with open wire ladder-line. With a simple pickup loop, one can locate
the current maximum and minimum points exactly. It's amazing how much
information can be obtained with that simple pickup loop.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4192. Re: Impedence of a half wave vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 01:54:46 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <EPf6a.280$Nr7.77130877@news.inreach.com>
Source record: 123882

Dennis:

An L-network tuner will give you an impedance match, tuning flexibility and harmonic suppression. Just a thought...

Roger K6XQ

4193. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 02:00:10 UTC
From: Craig Buck <k4ia@cox.net>
Message-ID: <K0f6a.60136$P1.3885508@news1.east.cox.net>
Source record: 123881

Just picked up a softcover 3rd edition for $46. Go to www.half.com
--
Radio K4ia
Craig "Buck"
Fredericksburg, VA USA
FISTS 6702 cc 788 Diamond 64
"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E580C25.1F077267@attbi.com...
> My Old, old, old copy of Kraus, 1950, has died and is buried.
>
> For a replacement should I buy 1950 used, the 1988 edition, or the 2001
> edition? Why? What is offered in later editions?
>
> Deacon Dave, W1MCE

4194. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 02:11:21 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <idvi5v4cj8jcgvf7mhopn67oh8jiumt09a@4ax.com>
Source record: 123883

On Sun, 23 Feb 2003 19:35:36 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Still and all, for the savvy Ham to achieve high accuracy does not
>> demand an HP slotted coaxial line - that savvy Ham could figure out a
>> way to build it from sheet metal and 2X4's to EQUAL quality.
>
>Or bypass all the coaxial mechanical problems and do the measurements
>with open wire ladder-line. With a simple pickup loop, one can locate
>the current maximum and minimum points exactly. It's amazing how much
>information can be obtained with that simple pickup loop.

Hi Cecil,

True, but you missed the point. You have nothing of comparable
quality in documentation. Results, yes, actual attention to First
Principles and their sources of error, no. The "simple pickup loop"
is the first point of failure when it comes to precision and accuracy
and this discussion is entirely embodied in the documentation of that
aforementioned Probe carriage.

Some error may be attributable to loop construction, but far more
error comes from incorrect usage (methods and practices). This sounds
so simple that it is probably dismissed immediately (the common origin
of considerable error).

The first order of business in the determination of a reading is to
remove the observer. Coupling to fields changes them, and with that
change, accuracy flies. The purpose of the calibrated probe and its
craftsmanship in the carriage was to be able to lightly load the
fields REPEATABLY across distances. Casual handwaving of loops can
achieve an answer, more rigor is required for accuracy.

It is METHOD that counts, instrumentation serves it.

73's
Richard Clark, KB7QHC

4195. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 02:20:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3bvi5$mb3$1@sparta.btinternet.com>
Source record: 123884

Mark, if you don't have the ability to work out the number of rolls of wall paper needed to decorate your shack then all is not lost. Download, free of any charge, programs from the following website.

Don't confuse mathematics with arithmetic which everybody with 10 fingers and an IQ greater than 80 can do.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

4196. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 02:28:23 UTC
From: richardharrison@webtv.net
Message-ID: <10804-3E598347-409@storefull-2315.public.lawson.webtv.net>
Source record: 123885

CAM wrote:
"That was back when there were lots of AM carriers on the air."

I worked in a place with shortwave relay of broadcast programs almost 24-7 of many different languages at once.

AM was transmitted but relay reception was only of the cleaner sideband of the pair, and we got it with triple space diversity reception. Three rhombics were used for each program and the signal from the best was automatically selected by the TDR combiner on the receiver outputs.

The programs usually sounded as if they were being received from a good quality wire program line.

We were doing the best that could be done with radio at the time.

Best regards, Richard Harrison, KB5WZI

4197. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 02:44:13 UTC
From: k3bu@aol.com
Message-ID: <20030223214413.25518.00000186@mb-fc.aol.com>
Source record: 123886

>Didn't you know that one does not have to go to University to learn
>or master Mathematics. I sure didn't learn the math that I know from
>University! Sure attendance at University may accelerate the learning of
>Mathematics for the young and affluent, but many of the mathematical
>greats never attended any University, and many were/are self taught and
>in fact ended up teaching the University Professors.

About 80% of stuff learned at University I hardly used in my life.
About 80% of stuff I used in my life I learned on my own.
But you never know which 20% you will end up needing.
The more you know, the more you see how little you know, the less you whine.

Bada I Q BUm

4198. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 02:59:44 UTC
From: richardharrison@webtv.net
Message-ID: <10805-3E598AA0-143@storefull-2315.public.lawson.webtv.net>
Source record: 123887

Ian, G3SEK wrote:
"What exactly do you think you have proved?"

When heterodyning, the difference frequency inverts the frequencies in a signal and thus it produces a lower sideband. The heterodyne sum produces the upper sideband.

In fact, that`s all there is to AM. You mix the signal with a carrier to produce both sidebands.

The earlier poster correctly identified this as the likely historical source of sideband tradition on the bands on either side of 9MHz.

Best regards, Richard Harrison, KB5WZI

4199. Flag pole stealth antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 03:19:56 UTC
From: Darryl <dhirst@direcway.com>
Message-ID: <fcg6a.52079$NV.1129778@news.direcpc.com>
Source record: 123888

Does anyone recall the QST that contained an article on the construction of
a stealth antenna built in conjunction with a
flag pole?

4200. Re: Impedence of a half wave vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 03:20:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3c31sefn1@knossos.btinternet.com>
Source record: 123889

Dennis,

At the bottom end of a 1/2-wave vertical (incidentally a jolly good antenna especially when above a poor ground) there is a high voltage). The worst possible tuning arrangement is a winding on a ferrite toroid.

You need a relatively high-inductance solenoid in shunt with a low-capacitance, high-voltage, variable tuning capacitor. This tuned circuit is connected between the bottom of the antenna and the ground electrode system.

A link coupling of a few turns around the lower end of the coil is connected to a coax feedline. Or the coax braid can be connected to ground and the coax inner conductor tapped directly into the coil a few turns up from the bottom end.

The coil and capacitor with the antenna disconnected should be designed to to resonate at the transmit frequency, ie., the same as the 1/2-wave resonant frequency of the antenna. Adjust number of turns on the link winding and vary tuning capacitor for minimum SWR on the feed line. The antenna can be tuned to operate well on lower frequencies and one higher frequency band with similar LC circuits.

Program SOLNOID2 will assist with coil design and selection of value of the tuning capacitor. Download program from following website.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

4201. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 03:20:47 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <jcg6a.2703$vU3.300458@newsread1.prod.itd.earthlink.net>
Source record: 123890

> >Richard Clark wrote:
> >> Still and all, for the savvy Ham to achieve high accuracy does not
> >> demand an HP slotted coaxial line - that savvy Ham could figure out a
> >> way to build it from sheet metal and 2X4's to EQUAL quality.

Just to add some trivia, I performed all the original measurements in the development of the antenna systems on the World's first weather satellite, TIROS I, using a Hewlett-Packard HP-805 slotted line.

Walt, W2DU

4202. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 03:26:31 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Hhg6a.2712$vU3.301277@newsread1.prod.itd.earthlink.net>
Source record: 123891

Reg Edwards wrote
> Walt, thanks for your labour.
>
> I modelled and computed the performance of an ordinary 80m dipole and
> compared results with Walt's 80m Bazooka measurements.

Likewise, Reg,

Walt

4203. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 03:37:09 UTC
From: DXRRRRR <dxrrrrr@yahoo.com>
Message-ID: <v5j4r9au4u077a@corp.supernews.com>
Source record: 123892
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Sounds more like Alternator noise to me Rudi,

You may try unpluging the modular plug on the side of the alternator (if it has one) the small guage wires, or otherwise disabling it (use a schematic) and see if that makes a difference.
Alternately loading the alternator with the heater, headlights, defroster or other accessories should change the sound in the receiver if the alternator is infact producing the hash.
Alternator noise is usually high in frequency fine random buzzing that follows the engine RPMs. Ignition noise is usually coarser in nature, also following the engine RPM.

Good luck.

Dom

"Joe Leikhim" <jleikhim@nettally.com> wrote in message news:3E585B9B.56C408FE@nettally.com...
> Rudi; the wiring diagram for the 1993 7.3L diesel indicates nothing in the way
> of electronic injection. There is however a Powertrain Control Module (PCM),
> that has an engine RPM sensor. Perhaps that sensor is the source of the noise.
> Look for a sensor with dark green and pink/orange wires on the engine block. You
> might try a clamp-on type ferrite choke (radio shack) over those leads.
>
> Perhaps the 95 model had electronic injectors if so, the same solution might
> work on those.
>
> Rudi wrote:
>
> > Oh, I forgot to mention that the frequency of the pulsing noise is directly
> > proportional to the engine RPM. Therefore, I don't think it's the fuel
> > pump. Maybe the fuel injector solenoids?
> >
> > "Rudi" <wiedemann@attbi.com> wrote in message
> > news:WAT4a.168748$tq4.3553@sccrnsc01...
> > > Does anyone know how to reduce or eliminate the ignition noise in a diesel
> > > truck? I'm using a well-grounded system in my 95 Ford F350 7.3L

> > turbodiesel
> > > with a 706IIG. Still gets by the Noise Blanker on all HF bands.
> > >
> > > 73s........Rudi - WA6RW
> > >
> > >
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.
>
>

4204. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 03:44:52 UTC
From: richardharrison@webtv.net
Message-ID: <9825-3E599534-530@storefull-2318.public.lawson.webtv.net>
Source record: 123893

Reg, G4FGQ wrote:
"Q = X / R

where, in the case of electrical circuits, X is the reactance of a coil or capacitor (or the difference between the two reactances) and R is the series resistance associated with it."

Yes, and Q rises with X and falls with R as seen above.

With a parallel combination of X and R, the expression is turned upside down:
Q = R /X

As R rises, so does Q in the parallel case, or on the other hand, Q falls as X rises.

Best regards, Richard Harrison, KB5WZI

4205. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 04:26:52 UTC
From: richardharrison@webtv.net
Message-ID: <26353-3E599F0C-467@storefull-2316.public.lawson.webtv.net>
Source record: 123894

Yuri, K3BU wrote:
"1. Bazooka Dipole is the thing that has two bazookas as part of the antenna radiator."

King, Mimno, and Wing have that antenna covered too on page 134 of "Transmission Lines, Antennas, and Wave Guides".

"Coaxial sleeves have been substituted for the two-wire (short-circuit phase reversing) stubs (in a 3-section collinear antenna)---.

The Collinear arrangement of Fig. 22.3a does not behave like a single tuned circuit as does the antenna of Fig. 22.1. It consists of five more or less closely coupled resonant circuits and its behavior is correspondingly complex."

Best regards, Richard Harrison, KB5WZI

4206. Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 04:53:42 UTC
From: qutec@excite.com
Message-ID: <d2e33a2f.0302232053.3c5959aa@posting.google.com>
Source record: 123895
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

Hello all,
I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone
(http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden
9913 cable and 30 feet of mast(radioshack)to start listening to the
world.

I would like to build my own preamp with several sets of filters
(10-20)to knock out the high power RF (radio,pagers, ect.) I am
thinking of using a minicircuits ERA-3 monolithic amplifier
(http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
better amp, I'll use it.

My main questions are this:

What frequency bands should I target with the filter sets?
The FCC alocation chart I have shows what is licensed to each band,
but does not mention alotted power.

What software would help me quickly find the component values for the
filters?
The simpler the better!

Would I gain anything from cascading ERA-3s? Could I set them up for
variable gain? or would I have to switch in attenuators to prevent
front end overload?

What type of remote filter switching scheme should I use? I want to be
able to control the preamp from inside the house. I know that relays
tend to be noisy, so those are out. Transitters?

Im sure an RF guru could help me out here.

Thanks for reading,

Jason

4207. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 05:05:35 UTC
From: Ian <cls119@lycos.co.uk>
Message-ID: <8Kh6a.5$Or4.2@newsfep3-gui.server.ntli.net>
Source record: 123896

Hello,

You would be better using a preamp on an outdoor antenna, maybe a 5 element beam pointing straight at the TX.
Those indoor antennas with massive gain figures are useless for picking up stuff from the sort of distance you mention.(unless you live on a hill or tall building) If you could get it outside and on a large pole it might be good, but nowhere near as good as a decent antenna.

I have tried it all in the past and was taken in by advertising. In the end I found that I couldn't beat a "slim jim" antenna for VHF broadcast band 88-108MHz. It's 2.2m tall and is quite strange because it will pick up local and also distant stations, but the ones around 20miles away come in lower than on a dipole. It was distance I was after.

"Norman Seifert" <normanseifert@webtv.net> wrote in message news:28331-3E54CA60-46@storefull-2312.public.lawson.webtv.net...
> Is the dB gain of an antenna an indication of the strength of the
> antenna? Is an outside fm antenna with a lower dB gain better than an
> inside amplified fm antenna with a higher dB gain? Does an amplified
> inline signal booster really help an outside antenna? I want to try to
> receive better a fm station 60 miles away that I can now only recieve
> very weakly. I have a Radio Shack DX-392 radio. Any comments or
> suggestions will be appreciated. Thank you,
>
> Norman Seifert
> Swannanoa, N.C., U.S.A.
>

4208. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 05:44:53 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932BDD3B36A12pookster@216.168.3.50>
Source record: 123897

richardharrison@webtv.net (Richard Harrison) wrote in
news:10805-3E598AA0-143@storefull-2315.public.lawson.webtv.net:

> When heterodyning, the difference frequency inverts the frequencies in
> a signal and thus it produces a lower sideband. The heterodyne sum
> produces the upper sideband.
>

It depends on whether the ssb signal is the higher or lower of the two
mixed frequencies and whether you're adding or subtracting.

When you are mixing the ssb signal to a higher frequency, there is never
an inversion. USB remains USB, LSB remains LSB.

If you are mixing to a lower frequency, there is no inversion if the ssb
signal is the higher of the two frequencies.

The only case where you get an inversion is when the ssb signal is the
lower of the two frequencies and you are subtracting it from the other
frequency.

I think I said all that right. If not, someone will surely correct me.

--
Bill, W7TI

4209. Re: BAZOOKA - some numbers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 05:54:03 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <u8bj5v4ohr1tbraj2fqsl5k1m78s3ml6vv@4ax.com>
Source record: 123898

On Mon, 24 Feb 2003 03:20:47 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

|
|
|> >Richard Clark wrote:
|> >> Still and all, for the savvy Ham to achieve high accuracy does not
|> >> demand an HP slotted coaxial line - that savvy Ham could figure out a
|> >> way to build it from sheet metal and 2X4's to EQUAL quality.
|
|Just to add some trivia, I performed all the original measurements in the
|development of the antenna systems on the World's first weather satellite,
|TIROS I, using a Hewlett-Packard HP-805 slotted line.

More trivia: About 20 years ago a former boss of mine finished his PhD and trying to get his foot in the door as a prof at the U of AZ, began teaching a class in microwave theory and measurements. This was a lab-lecture senior/grad level course (EE400 sumthin or the other) and was limited to 12 carefully selected students.

Because of the abysmal state of the EE lab at the U, and since he had some horsepower at Hughes, the lab work was done in my lab. I got suckered into writing up several of the lab experiments, instructing the kids and grading lab notebooks. (As an aside, I didn't have the prerequisites to *take* the course, but I was qualified to *teach* it. <g>)

For the reflection experiments we made extensive use of waveguide slotted lines. These are a great teaching tool (and you can make some pretty good measurements). Nothing like dialing the carriage back and forth and actually seeing the standing-wave pattern.

Then we progressed to a swept source, directional coupler reflectometer and a scope screen "calibrated" with a grease pencil...but that's another story.

4210. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 06:04:15 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <d1dj5v0khg7t5g9122nut1fbun24ll5fq4@4ax.com>
Source record: 123899

On Mon, 24 Feb 2003 01:17:57 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

[snip]
|Deacon Dave, W1MCE
|
|BTW: a high quality moderate capacitance, 4 uF at 3000 VDC, can give you
|quite a shock after it's been on the bench for several months. I know
|from first finger experience!!

Yep, that's why mine have shorting wires on them while in storage (no
pun intended).

See: http://www.elecdesign.com/Globals/PlanetEE/Content/2461.html

4211. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 06:42:43 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3cetmqmn1@slb5.atl.mindspring.net>
Source record: 123900

Hi Yuri:

My comments interspersed below.

[snip]
> About 80% of stuff learned at University I hardly used in my life.
[snip]

I agree with the direction, but I feel you are too generous, my case I would say 90%.

[snip]
> About 80% of stuff I used in my life I learned on my own.
[snip]

Same as above, but more like 90%, with the proviso that even the stuff I learned at
University I had to learn on my own! Due to the inefficiency/inadequacy/indifference
of most of the faculties. Notwithstanding the "few" great teachers who unfortunately
are few and far between.

[snip]
> But you never know which 20% you will end up needing.
[snip]

Very true. And the great thing about knowledge is that absolutely none of it is too
heavy to carry around!

[snip]
> The more you know, the more you see how little you know, the less you whine.
[snip]

I agree, after each decade of learning, I see that I know even less of what I thought
I needed to know than in the previous decade.

In today's busy world, who but the very young can afford [the time] to go attend
University/College classes?

To remain gainfully employed in technology today, simply means that one has to
dedicate a good part of one's working life to lifelong self-learning. I'd estimate that

about 10-15% of your working hours, either on the job, or on your own time must
be dedicated to learning new things all the time.

That's just what's necessary to keep up, not to progress into entirely new areas.

And... like you... I also hate whining!

When it comes to learning... I say,

"If you can't run with the big dogs then stay on the porch!"

[snip]
> Bada I Q BUm
[snip]

Well said! And... no one says it like you Yuri!

Best,
--
Peter K1PO
Indialantic By-the-Sea, FL.

4212. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 06:51:21 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3cfd0$r04$1@slb6.atl.mindspring.net>
Source record: 123901

Richard, Reg, et al:

Entirely too much math is being used in this thread!

[snip]
"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:9825-3E599534-530@storefull-2318.public.lawson.webtv.net...
> Reg, G4FGQ wrote: "Q = X / R
>
> where, in the case of electrical circuits, X is the reactance of a coil or
capacitor (or the
> difference between the two reactances) and R is the series resistance
associated with it."
>
> Yes, and Q rises with X and falls with R as seen above.
>
> With a parallel combination of X and R, the expression is turned upside
down: Q = R /X
>
> As R rises, so does Q in the parallel case, or on the other hand, Q falls
as X rises.
>
> Best regards, Richard Harrison, KB5WZI
[snip]

Simply eliminate the mathematics and state the definition of Q in English
language form.

Q := (Energy stored per cycle/Energy dissipated per cycle)

And then let folks work out their own specific equation for each of the
various specific
cases that arise. The equation Q = X/R is but one formula for Q in one
specific
circuit configuration. There are numerous others.
--
Peter K1PO
Indialantic By-the-Sea, FL.

4213. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 06:55:37 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3cfkv$l66$1@slb1.atl.mindspring.net>
Source record: 123902

Mark:

[snip]
> In general, I know enough math to do what I need to do. If need to
> know more for a certain reason, I'll learn it. Otherwise, I don't bother.
> I'm not an engineer and have no plans to ever be one. MK
[snip]

Right on! Well said! That also is my philosophy.

And of course... everyone is entitled to go to hell their own way.

And so... you have to make the allowance that perhaps some need to do more things than others!

Best,
--
Peter K1PO
Indialantic By-the-Sea, FL.

4214. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 07:02:12 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3cg1b$dk8$1@slb2.atl.mindspring.net>
Source record: 123903

Reg:

[snip]
"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b3bvi5$mb3$1@sparta.btinternet.com...
> Mark, if you don't have the ability to work out the number of rolls of
wall
> paper needed to decorate your shack then all is not lost. Download, free
of
> any charge, programs from the following website.
>
> Don't confuse mathematics with arithmetic which everybody with 10 fingers
> and an IQ greater than 80 can do.
[snip]

Methinks you doth protest too much. The fingers don't even help!

Heh, heh... many of the checkout clerks I meet at cash registers today
cannot make the
correct change even when the register/computer states the amount to be
returned on the
display in front of them!

In today's world I have noted a continuously decreasing capability for
numeracy among
the young, let alone mathematical ability.

Of course, personally I don't mind this widespread failing, since it places
those of us with
such skills in higher demand.

But... overall this tendency is not a good thing for society.
--
Peter K1PO
Indialantic By-the-Sea, FL.

4215. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 07:07:23 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302232307.5560430@posting.google.com>
Source record: 123904

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b3bvi5$mb3$1@sparta.btinternet.com>...
> Mark, if you don't have the ability to work out the number of rolls of wall
> paper needed to decorate your shack then all is not lost. Download, free of
> any charge, programs from the following website.
>
> Don't confuse mathematics with arithmetic which everybody with 10 fingers
> and an IQ greater than 80 can do.
> ---
> ========================
> Regards from Reg, G4FGQ
> For Free Radio Design Software
> go to http://www.g4fgq.com
> ========================

Arithmetic I have no problem with. But algebra, trig, etc, I'm a
dunce. Never was interested in complex math equations. I'll learn
simple formulas for things I need, but the rest they can keep. Of all
the classes I took in school, I hated math the worst. Absolutely would
put me to sleep. Actually, I hated most all my classes, except for
band...Of all the "basic" courses you learn in school, only history,
science and music are of any real interest to me now. I study quite a
bit of history now, but I didn't much when in school. I was always
interested in science, but not to the point where I wanted to be a
scientist. I'm probably more interested in music than anything. I'd
rather study scales and obtuse chord progressions than I would some
boring old algebra or trig formulas. At least it's something I'll put
to regular use. I play my guitar more than I do my radios. MK

4216. Re: 5/8 wave with New Low Loss Matching section?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 07:13:43 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302232313.41355797@posting.google.com>
Source record: 123905

Roy Lewallen <w7el@eznec.com> wrote in message news:<v5igi8q5m5rj3c@corp.supernews.com>...
> There shouldn't be any significant difference between results from
> MININEC based programs and NEC-2 based programs like EZNEC for ground
> plane antennas. (And, for that matter, NEC-4 will give the same result
> also.) But as always, some care has to be taken to insure that the
> models are correct and equivalent.
>
> When modeling a ground plane antenna with MININEC, you have to make sure
> that the vertical wire is the highest numbered wire. This is because the
> "pulse" (segment junction) at the intersection of all the wires
> "belongs" to the highest numbered wire. When placed at this "pulse", The
> source will end up delivering its current to the highest numbered wire.
> If the highest numbered wire is a radial rather than the vertical wire,
> you'll end up with an odd current distribution. This isn't an issue with
> NEC based programs.
>
> Also, with MININEC based programs, horizontal wires should be at least
> 0.2 wavelength above ground. I've found that this rule can be relaxed
> some with radial systems like on a ground plane, probably due to the
> fact that the ground plane radiation mostly cancels. The same rule needs
> to be applied with programs like EZNEC when using the MININEC-type
> ground model, but not with "High-accuracy" (Sommerfeld) ground.
>
> Finally, there's always some difference in source placement between
> MININEC and NEC based programs. This can be minimized or eliminated by
> making short segments in MININEC and moving the source up one "pulse"
> from the bottom, or in the NEC model by making very short segments, at
> least in the vicinity of the source. EZNEC's (or ELNEC's) segment length
> tapering feature allows you to make short segments at one end without
> having to use a large number of segments overall. Source placement
> differences become most apparent near anti-resonance, e.g., for a half
> wavelength vertical.
>
> Roy Lewallen, W7EL

I was suspecting the source placement as a possible cause. I did
notice it is usually placed at a different position with the NEC
programs. I do use the radiator as the highest numbered wire in the
mininec programs. All were modeled at 40 ft at the base of the
antenna. MK

4217. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 08:15:13 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ic2OO2ARSdW+EAUW@ifwtech.co.uk>
Source record: 123906

Bill, W7TI wrote:
>richardharrison@webtv.net (Richard Harrison) wrote in
>news:10805-3E598AA0-143@storefull-2315.public.lawson.webtv.net:
>
>> When heterodyning, the difference frequency inverts the frequencies in
>> a signal and thus it produces a lower sideband. The heterodyne sum
>> produces the upper sideband.
>>
>
>_____
>
>It depends on whether the ssb signal is the higher or lower of the two
>mixed frequencies and whether you're adding or subtracting.
>
>When you are mixing the ssb signal to a higher frequency, there is never
>an inversion. USB remains USB, LSB remains LSB.
>
>If you are mixing to a lower frequency, there is no inversion if the ssb
>signal is the higher of the two frequencies.
>
>The only case where you get an inversion is when the ssb signal is the
>lower of the two frequencies and you are subtracting it from the other
>frequency.
>
>I think I said all that right. If not, someone will surely correct me.
>

It's exactly right.

Let's look at the signal in more detail. Imagine a 9MHz USB signal with
a 1kHz tone modulation: you have a 9.001MHz signal, 9.000MHz suppressed
carrier and 8.999MHz suppressed lower sideband.

Mix each of these respective components with a 5.000MHz VFO signal, and
in each case take the difference frequency (simply subtract 5.000).

You now have a 4.001MHz signal, 4.000MHz suppressed carrier and 3.999MHz
suppressed lower sideband... and that is a 4.000MHz *USB* signal.

Or in shorthand, 9MHz USB - 5MHz VFO = 4MHz USB. It is exactly as Bill
said.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4218. Re: Flag pole stealth antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 08:36:25 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0302240036.7355633b@posting.google.com>
Source record: 123907

Hi Darryl,
I found two articles on flagpole antennas:
A Disguised Flagpole Antenna, QST May 1993, p. 65

The Flagpole Deluxe, QST March 1978, pp. 29-32

73 de Ivan

4219. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 08:45:15 UTC
From: Michele IZ2EAS <iz2eas@libero.it>
Message-ID: <b3clrh$1kbqtt$1@ID-149021.news.dfncis.de>
Source record: 123908

Actual measurements performed on E/H antennas will be published in the March issue of AntenneX, in few days time.
73,

Michele IZ2EAS

"Art Unwin KB9MZ" <aunwin@insightbb.com> ha scritto nel messaggio news:85ed38d.0302231410.466f91f8@posting.google.com...
> 'Doc <w5lz@cwis.net> wrote in message news:<3E59257F.7DFC7FE6@cwis.net>...
> > Art,
> > The Isle of Man E/H antenna project fizzled.
> > The only one still in use is the one in Egypt, to
> > the best of my knowledge which certainly may not
> > be current... as opposed to voltage.
> > 'Doc
>
> Doc, it is no real surprise that it fizzled in the end,
> but I am curious as to what the actual findings were
> and if just a small smidgeon of information suggested that
> the envelope boundaries had been moved outwards in any way.
> I know many had forcast its demise but I was looking for a 'gem'
> of science that may have been exposed during the investigation.
> Is it possible that The Isle of Man did not want a tall tower
> incase it pushed the island closer to the U.K. I understand that
> the island has an awefull lot of 'fat cats' who would 'turn tail' and
> flee if ever that would happen
> Regards
> Art

4220. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 08:52:29 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <p6ij5vo6sj5t66got5r69lad31200f59mm@4ax.com>
Source record: 123909
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

On 23 Feb 2003 20:53:42 -0800, qutec@excite.com (Jason) wrote:

>Hello all,
>I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone
>(http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden
>9913 cable and 30 feet of mast(radioshack)to start listening to the
>world.

That is a huge frequency range and no antenna is going to work well on that entire frequency range. It might be a good idea to split the frequency range into at least two bands, say 25-250 and 130-1300 MHz and use two separate antennas designed for those ranges.

> I would like to build my own preamp with several sets of filters
>(10-20)to knock out the high power RF (radio,pagers, ect.) I am
>thinking of using a minicircuits ERA-3 monolithic amplifier
>(http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
>better amp, I'll use it.

Those MMICs are cheap, why don't you build a complete preamplifier for each band. Filter switching is nasty at higher frequencies, especially when it must be remotely controlled. You could feed the outputs from the various preamplifiers through some combining filters to a single feed line and only switch the DC supply to the various preamplifiers.

When using multiple amplifiers is the tower, there is not much to gain from a single ultra-wide band antenna. Use multiple antennas designed for each frequency range of interest. Usually there is not much point of using preamplifiers below about 200 MHz, since the band noise is quite high and the cable losses are low.

Stripline filters are nice for the upper UHF frequencies, while at VHF, ordinary coils and capacitors or helical filters (e.g. Toko) are nice.

Those MMICs can be easily overloaded, so make sure that the strong signals from nearby FM or TV transmitters are filtered out prior to running the signal through the ERA amplifier.

>Would I gain anything from cascading ERA-3s? Could I set them up for
>variable gain? or would I have to switch in attenuators to prevent
>front end overload?

The antenna amplifier should only compensate for the feed line loss and mask the receiver noise, so a good rule of thumb is that 10 dB should be added to the cable loss to get the required preamplifier gain. Handheld scanners are very easily overloaded, so there is not much point of using too much gain, even if the input is filtered.

Paul

4221. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 11:25:11 UTC
From: richardharrison@webtv.net
Message-ID: <13982-3E5A0117-592@storefull-2312.public.lawson.webtv.net>
Source record: 123913

Ian wrote:
Ir`s 2.2 meters tall and is quite strange (the Slim Jim antenna) because it will pick up local stations and also distant stations but the ones around 20 miles away come in lower (in signal strength?) than on a dipole."

Maybe not so strange.

An antenna 200 ft (61m) high produces a grazing signal over level earth at 20 miles.

Most FM stations`s antennas are at higher elevations than this to extend range. The elevation angle of reception for a signal originating at 20 miles distance is very nearly zero degrees regardless of antenna height. I know from installing countless microwave dishes. I always used a bubble level on the dish feed to initialize the dish on path, for the vertical adjustment. That was close enough to optimum to receive the signal. Dishes have very narrow beamwidths, both vertical and horizontal. Point is the "Slim Jim" does not have sufficient discrimination to exclude signals from 20 miles versus those from 40 miles away.

My guess is that Ian`s stations 20 miles away are in the wrong azimuth for reception. They are obstructed or simply outside the horizontal beamwidth of the "Slim Jim".

Best regards, Richard Harrison, KB5WZI

4222. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 11:30:18 UTC
From: richardharrison@webtv.net
Message-ID: <13986-3E5A024A-9@storefull-2312.public.lawson.webtv.net>
Source record: 123915

Ian wrote:
Ir`s 2.2 meters tall and is quite strange (the Slim Jim antenna) because it will pick up local stations and also distant stations but the ones around 20 miles away come in lower (in signal strength?) than on a dipole."

Maybe not so strange.

An antenna 200 ft (61m) high produces a grazing signal over level earth at 20 miles.

Most FM stations`s antennas are at higher elevations than this to extend range. The elevation angle of reception for a signal originating at 20 miles distance is very nearly zero degrees regardless of antenna height. I know from installing countless microwave dishes. I always used a bubble level on the dish feed to initialize the dish on path, for the vertical adjustment. That was close enough to optimum to receive the signal. Dishes have very narrow beamwidths, both vertical and horizontal. Point is the "Slim Jim" does not have sufficient discrimination to exclude signals from 20 miles versus those from 40 miles away.

My guess is that Ian`s stations 20 miles away are in the wrong azimuth for reception. They are obstructed or simply outside the horizontal beamwidth of the "Slim Jim".

Best regards, Richard Harrison, KB5WZI

4223. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 11:45:16 UTC
From: richardharrison@webtv.net
Message-ID: <13983-3E5A05CC-233@storefull-2312.public.lawson.webtv.net>
Source record: 123914

Ian wrote:
Ir`s 2.2 meters tall and is quite strange (the Slim Jim antenna) because it will pick up local stations and also distant stations but the ones around 20 miles away come in lower (in signal strength?) than on a dipole."

Maybe not so strange.

An antenna 200 ft (61m) high produces a grazing signal over level earth at 20 miles.

Most FM stations`s antennas are at higher elevations than this to extend range. The elevation angle of reception for a signal originating at 20 miles distance is very nearly zero degrees regardless of antenna height. I know from installing countless microwave dishes. I always used a bubble level on the dish feed to initialize the dish on path, for the vertical adjustment. That was close enough to optimum to receive the signal. Dishes have very narrow beamwidths, both vertical and horizontal. Point is the "Slim Jim" does not have sufficient discrimination to exclude signals from 20 miles versus those from 40 miles away.

My guess is that Ian`s stations 20 miles away are in the wrong azimuth for reception. They are obstructed or simply outside the horizontal beamwidth of the "Slim Jim".

Best regards, Richard Harrison, KB5WZI

4224. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 12:18:54 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Keo6a.247$um.68141@newsfep1-win.server.ntli.net>
Source record: 123911
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

> I would like to build my own preamp with several sets of filters
> (10-20)to knock out the high power RF (radio,pagers, ect.) I am
> thinking of using a minicircuits ERA-3 monolithic amplifier
> (http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
> better amp, I'll use it.
==========
The question is : Do you really need a pre-amplifier ?
Not knowing the frequencies of the high power interfering radio sigs and
whether there are other nearby frequencies you would like to monitor , I
would suggest to initially consider a simple (multiple) quarter wave stub
arrangement , to suppress the most troublesome RF sources.....and
take it from there.

Frank gm0csz.kn6wh@ntlworld.com

4225. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 12:28:13 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Leo6a.248$um.68141@newsfep1-win.server.ntli.net>
Source record: 123910
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> Without _any_ poly jacket, you need to worry about electrolysis and/or
> the PH of the soil. If it were me: I'd bury it in some black poly pipe.
> 'Twould be a feat to stuff in a looooooong run of it...
==========
Suggest you use flexible 'alkathene' (polyethylene) water pipe
In Europe (incl Britain) it is available in 20 , 32 mm diameter and larger
sizes
;colour is blue.
I use this pipe also for coax cable with copper braid and black sheathing ,
ie for underground 75 Ohms coax to a TV satellite dish as well as for RG
316 ,50 Ohms coax to a vertical HF antenna.
It is important that the pipe at the outdoors end is properly sealed to
prevent
water running into it.
Alternatively (that's what I have done) where pipe with coax come above
ground outdoors there is a half circle bend resulting in the pipe opening
pointing downwards ,hence rain water can not enter and the circular opening
between pipe and coax cable is left open for breathing.
I realise the latter method might not be suitable for hardline coax because
of the bend's radius.

Frank gm0csz.kn6wh@ntlworld.com

4226. Re: ignition (No, injector) noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 12:37:49 UTC
From: W <wleake@earthlink.net>
Message-ID: <v5k4gtt3oove52@corp.supernews.com>
Source record: 123912
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

You had noisey lifters in a Mercedes?
Strange, being as I had a 58 180, and the engine was fairly quiet.

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0302221832.6921c932@posting.google.com...
> Vito <vito@crosslink.net> wrote in message
news:<3E54F500.14EF1744@crosslink.net>...
> > Rudi wrote:
> > >
> > > Maybe the fuel injector solenoids?
> >
> > There was this same thread over on rec.outdoors.rv-travel a while back.
> >
> > Noise source is definately the solenoids, or rather the pulses that
> > drive them.
> >
> > Don't recall the fix but any of the "outlaw" CB shops found near truck
> > stops prolly knows what to do. <grin> Ain't that awful!
>
> And to think that I thought that it was the tappets on my Mercedes
> that created that awefull noise, even when the wireless was not on!!!
> Art

4227. Re: Dual band base antenna (VHF/UHF)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 12:43:42 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E5A1379.3040907@tampabay.rr.com>
Source record: 123916

i suggest the comet GP 9 its got the best gain figures for the price

Javier Henderson wrote:
> I'm looking for a 2m/440 base antenna... any recommendations?
>
> 73,
> -jav w6vms

4228. Re: dB gain ????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 13:05:03 UTC
From: richardharrison@webtv.net
Message-ID: <7186-3E5A187F-549@storefull-2311.public.lawson.webtv.net>
Source record: 123917

Ian wrote:
Ir`s 2.2 meters tall and is quite strange (the Slim Jim antenna) because it will pick up local stations and also distant stations but the ones around 20 miles away come in lower (in signal strength?) than on a dipole."

Maybe not so strange.

An antenna 200 ft (61m) high produces a grazing signal over level earth at 20 miles.

Most FM stations`s antennas are at higher elevations than this to extend range. The elevation angle of reception for a signal originating at 20 miles distance is very nearly zero degrees regardless of antenna height. I know from installing countless microwave dishes. I always used a bubble level on the dish feed to initialize the dish on path, for the vertical adjustment. That was close enough to optimum to receive the signal. Dishes have very narrow beamwidths, both vertical and horizontal. Point is the "Slim Jim" does not have sufficient discrimination to exclude signals from 20 miles versus those from 40 miles away.

My guess is that Ian`s stations 20 miles away are in the wrong azimuth for reception. They are obstructed or simply outside the horizontal beamwidth of the "Slim Jim".

Best regards, Richard Harrison, KB5WZI

4229. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 13:54:51 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E5A23CC.9BB0B4AA@gte.net>
Source record: 123918

Adam Adkins wrote:

> Recently I have been trying to use 1/2" CATV hardline to feed my
> vertical antenna. The cable is a little larger diameter as LMR-400 or
> any other .405 OD coax. It has a solid center conductor with foam
> dialectric that is glued to the center conductor. The jacket is
> aluminum, and there is no PVC outer jacket. The connector was crafted
> from a PL-259 and a brass double female 1/2" compression fitting. That
> experience has taught me a couple of things, and raised some questions.
> If anyone has any helpful comments about the following, I would really
> appreciate hearing them.
>
> I discovered very quickly how a kink in the cable is a disaster.
> Thirty feet from the end of a 200 foot run, the cable kinked and the
> outer metal jacket ruptured. Bleah. How disappointing.
> Can anyone tell me good, cheap and durable ways to splice the
> cable?
>
> Talking to a friend, I mentioned that I didn't plan to bury the
> cable but for a short run to make sure it isn't run over with the
> tractor. He asked me, "Wouldn't that change the impedance?" I had to
> admit that I don't know, but didn't think it would since the jacket is
> ground anyway.
> I could not find the answer to this question anywhere. Can anyone
> tell me whether buried / not buried will change the impedance of this
> feed line? Are there advantages to burying the entire run? Are there
> any wild aluminum eating creatures that nibble holes in hardline?
>
> Finally, does anyone care to share any hard-won experience, or
> pointers to complete information, or whatever?
>
> Thanks in advance for any help,
>
> 73,
>
> Adam Adkins, KM5N

4230. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 13:55:29 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E5A23F2.8A0AF9A7@gte.net>
Source record: 123819

All of the CATV hardline I have seen is made for direct burial. A flooding/ self healing "goo" is placed between the poly jacket and aluminum shield. Go to any CATV supplier and they will have both splices and end fittings. The inner threads on the end fitting will allow an N connector to screw directly onto the fitting. The center conductor will, of course, have to be soldered to the N cnter pin. The splices allow for quick filed repairs. The end fittings however do require a coring tool to properly prepare the dielectric- connectors cannot be installed w/o it. Make friends with your local cable company and borrow the tool.

Dale W4OP

4231. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 13:59:43 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E5A24EF.5FA8FE01@gte.net>
Source record: 123820
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

Jason wrote:

> Hello all,
> I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone
> (http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden
> 9913 cable and 30 feet of mast(radioshack)to start listening to the
> world.
>
> I would like to build my own preamp with several sets of filters
> (10-20)to knock out the high power RF (radio,pagers, ect.) I am
> thinking of using a minicircuits ERA-3 monolithic amplifier
> (http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
> better amp, I'll use it.
>
> My main questions are this:
>
> What frequency bands should I target with the filter sets?
> The FCC alocation chart I have shows what is licensed to each band,
> but does not mention alotted power.
>
> What software would help me quickly find the component values for the
> filters?
> The simpler the better!
>

I can tell you from personal experience (we make thoudsands of them) that targeting, say, the 152-153 pagers and not also eliminating or radically reducing signals within many MHZ either side is far from a trivial problem.
The IP3 levels of the MAR and ERA devices make them unsuitable (IMHO) for preamp use.
In almost every case, wideband preamps create problems far worse than they solve. Put a good quality feedline on your antenna and forget the preamps.

Dale W4OP
for PAR Electronics, Inc.

4232. Re: WINDOWS XP LOGGING PROGRAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 14:15:55 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <vOp6a.5834$hj.1656081@nnrp1.ptd.net>
Source record: 123821

I like VQLog http://www.qsl.net/ea6vq/vqlog.html

I tried (and paid $49.00 for) AALog, but had problems and found
the author to be "less than responsive" in dealing with problems/bug
reports. ("Less than responsive" means I couldn't get a response
from him with multiple tries over a couple of months ... so I trashed
AALog and tried VQLog ... I've had no problems and found the
author to be responsive to e-mail questions and willing to consider
adding new features in future versions ...)

73,
Carl - wk3c

"Vince ve3elb" <vcl@sympatico.ca> wrote in message
news:R1j6a.1007$VG.206697@news20.bellglobal.com...
>
> HI ALL, CAN ANYONE LET ME KNOW WHAT IS THE BEST AND EASIEST LOGGING
PROGRAM
> THAT WILL WORK WITH WINDOWS XP PRO. IF ANYONE CAN HELP PLEASE EMAIL ME AT
> ve3elb@rac.ca
>
>
> VINCE VE3ELB
> EMAIL: ve3elb@rac.ca
> WEBPAGE1: www.qsl.net/ve3elb
> WEBPAGE2: http://www3.sympatico.ca/vcl
>
>
>
>
>
>
>
>

4233. Tower Cams?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 14:23:37 UTC
From: Gary <k5jfp@yahoo.com>
Message-ID: <JVp6a.14507$O41.560895@twister.austin.rr.com>
Source record: 123822

Anybody out there successfully done a ham tower cam? I'd like to do something simple and inexpensive that would attach to my antenna mast and provide "decent" downlinked or wired color imagery from up top. There are all the usual considerations, of course, power source, survival in the weather, lightning, etc.

Thanks in advance.

Gary W5ZL

4234. Re: WINDOWS XP LOGGING PROGRAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 14:56:43 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030224095643.23982.00000185@mb-cf.aol.com>
Source record: 123823

>I like VQLog http://www.qsl.net/ea6vq/vqlog.html

I use that with XP home edition and it works great! Probably the best logging program for the price that I've found. It has lots of cool features, like tracking awards, creating charts to show your progress towards awards (shows home states worked, etc..) and will even generate different maps to show grids worked more. Well worth a look.

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

4235. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 15:17:17 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e5a3de6_4@news1.prserv.net>
Source record: 123827

Be sure to post a link here when they appear. Some of us have been waiting
nearly 30 years for some definitive and defensible data.

Sayyy, come to think of it, didn't you say this very same thing about
results being posted somewhere last year? What happened to those?

--
Crazy George
Remove NO and SPAM from return address

"Michele IZ2EAS" <iz2eas@libero.it> wrote in message
news:b3clrh$1kbqtt$1@ID-149021.news.dfncis.de...
> Actual measurements performed on E/H antennas will be published in the
March
> issue of AntenneX, in few days time.
> 73,
>
> Michele IZ2EAS
>

4236. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 15:21:33 UTC
From: Piotr Balcerzak <bpiotrek@yahoo.com>
Message-ID: <dJq6a.10875$cB3.60848@nnrp1.uunet.ca>
Source record: 123824
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

Hi,

"Jason" <qutec@excite.com> wrote in message
news:d2e33a2f.0302232053.3c5959aa@posting.google.com...
>
> I would like to build my own preamp with several sets of filters
> (10-20)to knock out the high power RF (radio,pagers, ect.) I am
> thinking of using a minicircuits ERA-3 monolithic amplifier
> (http://www.minicircuits.com/dg03-168.pdf) but if someone knows of a
> better amp, I'll use it.
>
> My main questions are this:
>
> What frequency bands should I target with the filter sets?

You would probably want to block everything below 25 MHz
(scanner is not real HF radio and overloads easily), 87-108 MHz
(FM is very strong and not interesting), 152-153 MHz (unless
you want to decode pagers), 108-116 MHz (AIR beacons)
and maybe 116-136 (unless you want to listen to airplanes).

Start with high-pass 25 MHz filter and FM 87-108 MHz notch.

>
> Would I gain anything from cascading ERA-3s? Could I set them up for
> variable gain? or would I have to switch in attenuators to prevent
> front end overload?

R2 is extremely sensitive. Amplifier will make things much worse
- especially with additional outdoor antenna. Forget the amp and
prepare few attenuators: 6/12/18 dB. You will probably find them
much more usefull.

Good luck!
Piotr

4237. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 15:29:40 UTC
From: Harris <aharris@bookworm.suffolk.lib.ny.us>
Message-ID: <ETq6a.4565$io.184446@iad-read.news.verio.net>
Source record: 123826
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

In rec.radio.shortwave Jason <qutec@excite.com> wrote:
> Hello all,
> I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone
> (http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden
> 9913 cable and 30 feet of mast(radioshack)to start listening to the
> world.

I hate to say this, but hooking a handheld scanner to an outdoor antenna
and then addind a preamp is a BAD idea.

Handheld scanners have poor intermod immunity for several reasons. They
are designed to minimize current draw (which drains the battery). That
precludes the use of high IP3 mixers. They usually do not provide
pre-selector filters either due to space constraints. Basically, they are
meant to be used as handheld radios with a small rubber duck antenna.

A good desktop scanner like the Radio Shack PRO-2004 series incorporates a
series of bandpass filters (about 10 as I recall) in the front end to
reject unwanted frequencies. The appropriate filter is selected as the
radio scans through each programmed frequency.

Art Harris N2AH

4238. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 15:30:44 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302240730.eec499@posting.google.com>
Source record: 123825

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<2gti5v0vs5bil2ejj975f12sh5btcdc4up@4ax.com>...
> On 23 Feb 2003 13:59:13 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> > Since Hately was able to get
snip
>
> Hi Art,
>
> It's called a "con game."
snip)
>
> 73's
> Richard Clark, KB7QHC

O.K Richard let us continue in this serious vein of thought
The E/H antenna is something that all amatuers would want if
it came up to expoectations. All will then have the ability
to operate on 160M regardless of garden size.
The fact is that even tho all desire it, it is also a fact that
people are predisposed with the thought that it is impossible.
So to be different to Hately ,when and if I decide to disclose
the solution to this problem, what is the correct way to do it?
There are plenty of glib answers that could be presented but
frankly it is a nye impossible task unless you are as successfull
at beating a drum as P.T.Barnum was. The fact is that talk is cheap
and every one has a pre thought out response to those who aspire to
reach the mountain top.
So in a serious vein, what is the best way for an ' outside of the
fence person' (to quote a member of this group) to get dislcosure
accepted without being assailed as a crook ?
Regards
Art

4239. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 15:47:52 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E5A3EBB.A8F74B14@earthlink.net>
Source record: 123828

A good pun nevertheless. :-)

Wes Stewart wrote:

> On Mon, 24 Feb 2003 01:17:57 GMT, Dave Shrader
> <david.shrader@attbi.com> wrote:
>
> [snip]
> |Deacon Dave, W1MCE
> |
> |BTW: a high quality moderate capacitance, 4 uF at 3000 VDC, can give you
> |quite a shock after it's been on the bench for several months. I know
> |from first finger experience!!
>
> Yep, that's why mine have shorting wires on them while in storage (no
> pun intended).
>
> See: http://www.elecdesign.com/Globals/PlanetEE/Content/2461.html

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Consumer Tip: Save your gasoline money if you are buying premium gas. It's
unnecessary to use it unless your engine pings. Use regular instead.
-- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

4240. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 15:52:10 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E5A3FB3.890D7B82@earthlink.net>
Source record: 123829

A good pun nevertheless. :-)

I seem to get a lot of posting errors trying to post to this group with a "Reply". I just removed
rec... from the list. .

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Consumer Tip: Save your gasoline money if you are buying premium gas. It's
unnecessary to use it unless your engine pings. Use regular instead.
-- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

4241. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 15:52:40 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E5A3FDB.586FE36E@earthlink.net>
Source record: 123830

A good pun nevertheless. :-)

I seem to get a lot of posting errors trying to post to this group with a "Reply". I just removed
rec... from the list.

Wes Stewart wrote:

> On Mon, 24 Feb 2003 01:17:57 GMT, Dave Shrader
> <david.shrader@attbi.com> wrote:
>
> [snip]
> |Deacon Dave, W1MCE
> |
> |BTW: a high quality moderate capacitance, 4 uF at 3000 VDC, can give you
> |quite a shock after it's been on the bench for several months. I know
> |from first finger experience!!
>
> Yep, that's why mine have shorting wires on them while in storage (no
> pun intended).
>
> See: http://www.elecdesign.com/Globals/PlanetEE/Content/2461.html

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Consumer Tip: Save your gasoline money if you are buying premium gas. It's unnecessary to use it unless your engine pings. Use regular instead.
-- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

4242. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 15:57:26 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E5A4152.11943448@earthlink.net>
Source record: 123832

Thanks. I believe one of the old Amateur Science columns contains instructions on building a device to
measure the voltage, but the article is no longer on line, July 1999. A Field Mill. I found <http://www.izzy.net/~jc/FieldMill/FieldMill.html> with a Google search.

Is the difficulty here that the impedance of air is so great that the charge cannot attach itself to
the copper surface readily?

Dave Shrader wrote:

> Yes there is an electric and a magnetic field in the atmosphere. The
> magnetic field is indicated by a compass and has a value of 0.1 to 0.5
> Gauss under normal ambient conditions. The corresponding electric field
> has a value of 100 to 2000 volts/meter under normal ambient conditions.
> It increases to more than 10,000 volts/meter during thunder storms in
> the lightning strike vicinity, and up to 20,000 volts/meter in the
> precursor to a lightning strike.
>
> If you introduce your 20 to 30 foot wire in this field the boundary
> conditions between the air and the copper, specifically, the
> conductivity of the air and copper, does not sustain this high a voltage
> in the wire. A poor model, but one that demonstrates the principle,
> would be the resistivity of air, example 100 megohms, in series with the
> resistivity of the wire, example 0.01 ohms, would yield a voltage in the
> range of 1 to 10 microvolts.
>
> The electric field intensity in air can be measured with an electrometer
> having an input impedance of more than 1 million megohms.
>
> These fields are basically static as opposed to time varying fields.
> [Although all fields are time varying to some extent a field that varies
> very slowly, [tens to hundreds of seconds] can be defined as static].
>
> Deacon Dave, W1MCE
>
> BTW: a high quality moderate capacitance, 4 uF at 3000 VDC, can give you
> quite a shock after it's been on the bench for several months. I know
> from first finger experience!!
>
> + + +
>
> Wayne Watson wrote:
> >
> > Somewhere I recall reading that the potential difference between the earth and points

above the
> > surface increases rather steadily, so that one could actually measure a voltage difference with a
> > copper wire grounded to the earth and extended upward many feet. Does anyone know what sort of
> > difference might occur with say a 20-30 foot copper wire strung along an insulated flag pole like
> > mast?
> >
> >

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Consumer Tip: Save your gasoline money if you are buying premium gas. It's
unnecessary to use it unless your engine pings. Use regular instead.
-- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

4243. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 15:57:55 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns932C51058BE47pookster@216.168.3.50>
Source record: 123831

Wayne Watson <mtnviews@earthlink.net> wrote in
news:3E5A3FB3.890D7B82@earthlink.net:

> Consumer Tip: Save your gasoline money if you are buying premium gas.
> It's unnecessary to use it unless your engine pings. Use regular
> instead.
> -- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.
>

I hope Dr. Wattenberg gave a more complete explanation than the above.

Before switching grades, see what is required in your owner's manual. It is possible for an engine to ping using its proper grade if the timing is wrong.

--
Bill, W7TI

4244. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 16:12:53 UTC
From: Michele IZ2EAS <iz2eas@libero.it>
Message-ID: <b3dg2r$1kvp7q$1@ID-149021.news.dfncis.de>
Source record: 123833

The first part of the test is already available; you can find them at

http://www.antennex.com/preview/Feb503/eh1.pdf

> Sayyy, come to think of it, didn't you say this very same thing about
> results being posted somewhere last year? What happened to those?

I have no idea... I have no connections with EH antenna people, nor I am a supporter of their theory (on the contrary, actually....)
Enjoy the reading..

Michele IZ2EAS

4245. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 16:52:26 UTC
From: k3bu@aol.com
Message-ID: <20030224115226.11350.00000298@mb-bd.aol.com>
Source record: 123834

>I agree with the direction, but I feel you are too generous, my case I >would say 90%.
....
>When it comes to learning... I say,
>"If you can't run with the big dogs then stay on the porch!"
>[snip]
>> Bada I Q BUm
>[snip]
>Well said! And... no one says it like you Yuri!
>Best,
>Peter K1PO
>Indialantic By-the-Sea, FL.
>

Woooow!
Thanks for "complicament", this should be good enough to continue this thread to eternity and for some debunking :-)

I was generous with 80% due to (in my opinion) higher standard and loading at eEu (Czechoslovakian) Universities (Tesla studied there). When I compare curriculum and workload we had there, compare to what it is here, big difference. That goes from grade 1, all the way to Universities. Must be the unionized dumming down of America. America's greatness in the past was due to freedom and fresh, educated immigrants from Eu. I was amazed to see about 66.50% of names in IBM phone book to be of Slavic origin.
Now the USA is being "built" by welfare sucking, democRATS voting illegales from "developing" nations and more and more shackling regulations and stupid laws (and blood sucking trial lawyers).

73 Yuri, oK3BU

4246. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 17:32:32 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ealk5vcj1bbtvvgefed6kd8c8hr69s5pe3@4ax.com>
Source record: 123835

On Mon, 24 Feb 2003 15:57:55 -0000, "Bill, W7TI" <jamspam@upyours.now>
wrote:

|Wayne Watson <mtnviews@earthlink.net> wrote in
|news:3E5A3FB3.890D7B82@earthlink.net:
|
|> Consumer Tip: Save your gasoline money if you are buying premium gas.
|> It's unnecessary to use it unless your engine pings. Use regular
|> instead.
|> -- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.
|>
|
|_____
|
|I hope Dr. Wattenberg gave a more complete explanation than the above.
|
|Before switching grades, see what is required in your owner's manual. It
|is possible for an engine to ping using its proper grade if the timing is
|wrong.

With modern engines and electronics, knock sensors detect the onset of
pinging and retard the spark. (This is less than 100% successful with
my Camaro LS-1). So in theory, even a bad load of fuel is compensated
for although performance suffers.

4247. Re: "Q"

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 17:48:10 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E5A5AA6.A148DF74@attbi.com>
Source record: 123836

But MARK! Math and Physics will fully explain why the scales are the scales and why obtuse chord progressions are obtuse chord progressions. It is the Physics of tension, mass, length, density that establishes middle 'C', scales, and obtuse chord progression [whatever that is ...]. It is the mathematics of physics that established the interrelationships among these parameters to establish middle 'C'. It is Physics and math that determine the 'Q' [how long a chord is held, energy and damping factors] of the strings. How can you tune your guitar properly if you can't appreciate the Physics and Math?

<grin>

My wife's a guitar player and I drive her crazy with this type of statement. She says 'I know it's tuned when it sounds right'. Poor woman just doesn't understand that how it sounds is not accurate :-(

Deacon Dave, W1MCE
PS: Everything is Physics! Math is the language of everything!
+ + +

Mark Keith wrote:

BIG SNIP

I'm probably more interested in music than anything. I'd
> rather study scales and obtuse chord progressions than I would some
> boring old algebra or trig formulas. At least it's something I'll put
> to regular use. I play my guitar more than I do my radios. MK

4248. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 17:55:00 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E5A5C3F.ADE8FAC8@attbi.com>
Source record: 123837

In simple terms YES.

The field equations solve it as a boundary layer with one path in air
and the second path in copper. The mathematics is called a path
integration.

But basically, high resistance in air and low resistance in copper
limits voltage in copper.

Deacon Dave, W1MCE

Wayne Watson wrote:
>
> Thanks. I believe one of the old Amateur Science columns contains instructions on
building a device to
> measure the voltage, but the article is no longer on line, July 1999. A Field Mill. I
found
> <http://www.izzy.net/~jc/FieldMill/FieldMill.html> with a Google search.
>
> Is the difficulty here that the impedance of air is so great that the charge cannot
attach itself to
> the copper surface readily?
>
> Dave Shrader wrote:
>
> > Yes there is an electric and a magnetic field in the atmosphere. The
> > magnetic field is indicated by a compass and has a value of 0.1 to 0.5
> > Gauss under normal ambient conditions. The corresponding electric field
> > has a value of 100 to 2000 volts/meter under normal ambient conditions.
> > It increases to more than 10,000 volts/meter during thunder storms in
> > the lightning strike vicinity, and up to 20,000 volts/meter in the
> > precursor to a lightning strike.
> >
> > If you introduce your 20 to 30 foot wire in this field the boundary
> > conditions between the air and the copper, specifically, the
> > conductivity of the air and copper, does not sustain this high a voltage
> > in the wire. A poor model, but one that demonstrates the principle,
> > would be the resistivity of air, example 100 megohms, in series with the
> > resistivity of the wire, example 0.01 ohms, would yield a voltage in the
> > range of 1 to 10 microvolts.
> >
> > The electric field intensity in air can be measured with an electrometer
> > having an input impedance of more than 1 million megohms.
> >
> > These fields are basically static as opposed to time varying fields.

> > [Although all fields are time varying to some extent a field that varies
> > very slowly, [tens to hundreds of seconds] can be defined as static].
> >
> > Deacon Dave, W1MCE
> >
> > BTW: a high quality moderate capacitance, 4 uF at 3000 VDC, can give you
> > quite a shock after it's been on the bench for several months. I know
> > from first finger experience!!
> >
> > + + +
> >
> > Wayne Watson wrote:
> > >
> > > Somewhere I recall reading that the potential difference between the earth and points above the
> > > surface increases rather steadily, so that one could actually measure a voltage difference with a
> > > copper wire grounded to the earth and extended upward many feet. Does anyone know what sort of
> > > difference might occur with say a 20-30 foot copper wire strung along an insulated flag pole like
> > > mast?
> > >
> > >
>
> --
> Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA
>
> Consumer Tip: Save your gasoline money if you are buying premium gas. It's
> unnecessary to use it unless your engine pings. Use regular instead.
> -- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.
>
> Web Page: <home.earthlink.net/~mtnviews>
> Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

4249. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 18:04:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <iomk5vckvbs5cdl038ks6o19bau1v893vr@4ax.com>
Source record: 123838

On 24 Feb 2003 07:30:44 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in message
news:<2gti5v0vs5bil2ejj975f12sh5btcdc4up@4ax.com>...
>> On 23 Feb 2003 13:59:13 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>> wrote:
>>
>> > Since Hately was able to get
>snip
>>
>> Hi Art,
>>
>> It's called a "con game."
>snip)
>>
>> 73's
>> Richard Clark, KB7QHC
>
>O.K Richard let us continue in this serious vein of thought
>The E/H antenna is something that all amatuers would want if
>it came up to expoectations. All will then have the ability
>to operate on 160M regardless of garden size.
>The fact is that even tho all desire it, it is also a fact that
>people are predisposed with the thought that it is impossible.
>So to be different to Hately ,when and if I decide to disclose
>the solution to this problem, what is the correct way to do it?
>There are plenty of glib answers that could be presented but
>frankly it is a nye impossible task unless you are as successfull
> at beating a drum as P.T.Barnum was. The fact is that talk is cheap
>and every one has a pre thought out response to those who aspire to
>reach the mountain top.
>So in a serious vein, what is the best way for an ' outside of the
>fence person' (to quote a member of this group) to get dislcosure
>accepted without being assailed as a crook ?
>Regards
>Art

Hi Art,

As the old adage goes, "build a better mousetrap and the world will
beat a path way to your door." THAT is serious, the rest is simply
misty-eyed hopes and dreams substituting for "better" or "build."

If you HAVE TO convince people that you have something better, you must be a republican trying to convince Greenspan that tax cuts would help the economy (he ain't buyin' that either).

If you wannabe serious, you will have to convince a nation of broadcast sites that their antennas, paid for years and years ago, should be replaced for a smaller one of equal performance. This of course presumes that you look forward to the chilling response or bland indifference which you can get here without leaving the comfort of your home.

Why would any broadcaster give these novel inventions a single thought in the first place - even if they were building a brand new site? The antenna itself probably represents one of the cheapest budget line items they have to consider over a 20 year span (or 10 year, or 5 year). Electrical power probably comes in as the second most cheap cost for operation. I haven't the slightest idea how much those costs are, but experience has taught me that personnel and advertising probably eclipses technical costs 10:1.

The inventors problem is to bring money with him to make the sale; thus the introduction of government subsidies (and I bet the owners probably grumble about the time - read money - lost to the photo-sessions for the guv'mint folks).

Simple fact of the matter is you have to be a good crook to catch a capitalist's attention. You have to have a good lobbyist with wads of cash in his pocket to find the key to the treasure chest. The long and short of it is: it is NOT a technical issue!

73's
Richard Clark, KB7QHC

4250. Re: Tower Cams?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 18:55:36 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <IUt6a.40922$Se4.5438634@twister.southeast.rr.com>
Source record: 123839

I had one installed for the past two years but ended up donating it to a sailing club. It worked great! Mine just wasn't being utilized enough. http://www.wincam.com is the site. The total cost was about 600 dollars, but I think they have a cheaper model now. Mine was mounted on a pole in my backyard. It endured some pretty harsh weather, including major humidity and heat for days on end during the summer. Never had any problem. Very easy software and easy to set the timer....3 seconds to once a year if you want.

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org

"Gary" <k5jfp@yahoo.com> wrote in message
news:JVp6a.14507$O41.560895@twister.austin.rr.com...
> Anybody out there successfully done a ham tower cam? I'd like to do
> something simple and inexpensive that would attach to my antenna mast and
> provide "decent" downlinked or wired color imagery from up top. There are
> all the usual considerations, of course, power source, survival in the
> weather, lightning, etc.
>
> Thanks in advance.
>
> Gary W5ZL
>
>

4251. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 18:59:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gbqk5v86d8lk5s2vif0276kaaq50fqsuup@4ax.com>
Source record: 123840

On Mon, 24 Feb 2003 08:15:13 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Let's look at the signal in more detail. Imagine a 9MHz USB signal with
>a 1kHz tone modulation: you have a 9.001MHz signal, 9.000MHz suppressed
>carrier and 8.999MHz suppressed lower sideband.
>
>Mix each of these respective components with a 5.000MHz VFO signal, and
>in each case take the difference frequency (simply subtract 5.000).
>

Hi Ian,

You've made this mistake twice now. Sparks, W4EAS, introduced the
notion of using an ARC-5 as a 9 MHz VFO not as the sideband generator.
In my experience with these WWII surplus items, nary a syllable in
documentation suggests any were originally put to use for sideband.
His discussion had the modulation products originated with a 5 MHz
source. Hence the inversion, as he explained it, is correctly
portrayed.

Extensive coverage of ARC-5 equipment may be found at:
http://www.nj7p.org/manuals/arcug/arcug.html

73's
Richard Clark, KB7QHC

4252. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 19:07:11 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302241107.62a4efec@posting.google.com>
Source record: 123841

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:<3e5a3de6_4@news1.prserv.net>...
> Be sure to post a link here when they appear. Some of us have been waiting
> nearly 30 years for some definitive and defensible data.
>
> Sayyy, come to think of it, didn't you say this very same thing about
> results being posted somewhere last year? What happened to those?
>
> --
> Crazy George
> Remove NO and SPAM from return address
>
>
> "Michele IZ2EAS" <iz2eas@libero.it> wrote in message
> news:b3clrh$1kbqtt$1@ID-149021.news.dfncis.de...
> > Actual measurements performed on E/H antennas will be published in the
> March
> > issue of AntenneX, in few days time.
> > 73,
> >
> > Michele IZ2EAS
> >

Thank you Michele, I am not a subscriber but I will find a way
to get hold of a copy.

George
My former claims were patented some 8 years ago and I have brought
forth the
design for discussion every year with this group who are my peers.
Not one gave the thumbs up such that anybody really paid attention
even tho
I had made many of these antennas. One has to accept the fact that
people are not really interested and thus I have moved on.One person
in the initial stages pretty much denounced the whole thing because he
had used a 'computor program'
and every thing went down hill from there. Many others tried to
analyse it by computor but it would appear they are unable to analyse
it fully because of preconceived ideas. No big deal, I tried to share
and I lost out so I have put it behind me. Now I have finished on
this last project, written a lot of it up, collected pre known data
from various technical books and all that
and have done all those things that any former G.E.engineer would do
to protect himself and then I have just sat on it. I have to decide
whether to pay money at the Patent office and continue for myself

alone, i.e. get the patent and then let it sit without promotion or to repeat again what I did last time and that was to share it with my peers. That can be catastrophe. Even after all these years I still have to deal with the label as a whiner, an idiot and all round nincompoop. I except that as an immigrant I am to be viewed as 'different'
but I am not about to boast of what I have achieved except to say that to get
into this country on academic grounds and mentored by a large company should say a lot.
Yes, that was a long time ago and many things have happened since but I am enjoying life and bear no ill will. Now we are at a new stage, what do amatueur
radio members really want and what process do they suggest that would not penalise any attempt to share?
I don't need money so I am not going to beat a drum,whine (Note that Peter), argue anymore but to just sit back and enjoy my hobby until I can be sure that I will not be put in harms way. I am responding too much George, so let us just leave it at that, I am a dunce, can't possibly know anything about mathematics and everything that I have come up with in the past I have either been lucky, stolen it from somebody, or presenting just a bunch of rubbish
wrapped up in a fancy ribbon. Find me a way around all these obstructions where I am allowed to retain my dignity and I will be willing to share with all.

Best regards to all
And remember Richard C, and Roy, I did not bring up this subject, it was brought up by George and if by responding I have offended some then I apologise but I will always respond since a member has stated about 'a light under a bushel' so there should be no reason for me to hide.
Art,
the rotten alien,slimey limey and all around nobody, talks and writes funny,a dumb shit, comes from the slum docklands,didn't go to University so can't possibly be one of the group on this side of the fence.His son invented
the Biology Workbench computor program which apparently is now used in most Universities and does research work at Southern Cal, so he is taking over from his Dad, he must have stolen the idea because he was born in London also!

4253. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 19:29:15 UTC
From: richardharrison@webtv.net
Message-ID: <3401-3E5A728B-526@storefull-2313.public.lawson.webtv.net>
Source record: 123843

Yuri, K3BU wrote:
"Bazooka Dipole is the thing that has two bazookas as part of the
antenna radiator."

There is a potpourri called the "Heil Ham Radio Handbook" which contains
a
"Coaxial Double Bazooka" antenna. This may be the topic identified by
Yuri. It`s on page 35.

Each half of the double bazooka antenna consists of a piece of ladder
line driven by the shield of a single piece of RG-58/U which
interconnects the two end pieces of ladder line which complete the
dipole. The RG-58/U is shorted at its outer ends and these shorted ends
connect with their pieces of shorted ladder line to complete a dipole.

The shield of the interconnecting RG-58/U is separated at the middle of
the antenna for attachment of the feedline, more RG-58/U.

Heil, K9EID says:
"---M.I.T. folks figured out how to make the balun---work as part of the
radiator--- For this and other reasons, the antenna is more efficient
than a wire dipole.

Best regards, Richard Harrison, KB5WZI

4254. Re: Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 19:44:00 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <y3SdnV3CtdVg6MejXTWc3Q@comcast.com>
Source record: 123842

Henry,

Since nobody else has answered, let me take a guess. First, prior to 1970 we had strickly AM radios. The antenna cable was only about 4 feet long, an insignificant part of a wavelength, and probably treated as a shielded low capacitance wire rather than a transmission line. What happened next was FM and transistors. The shielded wire approach was not going to work at FM frequencies, so they rethought the whole issue of input coupling, which they had to anyhow because of the low input impedance of transistor amplifiers. Also, ferrite had been invented.

I don't have a schematic of a tube type car radio, but some WW2 surplus receivers had a paralel tuned circuit from the grid of the RF amp to ground (tunable), and the antenna was connected to the grid of the amp through a small (8.5 PF in the SCR274) capacitor. This put the capacitance of the antenna cable in parallel with the input tuned circuit.

Tam/WB2TT
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v5i8dodpnbr1b3@corp.supernews.com...
> Back in the 1950s and 60 car radio antennas used a short peice of special
> coax to connect a front fender mounted antenna to the radio. This leadin
> cable was ~1/4" dia. with copper braid over a hollow tube that contained a
> very thin center conductor, probably smaller than 30 guage as best I can
> recall, and had a very low per foot capacitance. Rear mounted antennas
> provided inferior reception and weren't used. Then it must have been in
the
> 1970s that someone figured out how make rear mounted antennas work without
a
> rear mounted preamp. I have two questions. Does anyone recall the
> characteristic impedance of the thin center conductor lead in and what
> happened in the 70s to make rear mounted antennas work without preamps?
> tnx
> hank wd5jfr
>
>

4255. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 20:02:46 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5A7A66.EBEC1749@cwis.net>
Source record: 123844

Peter,
Only if the fractal antenna is used as the stationary
point from which the signal is launched by rubber bands...
'Doc

4256. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 20:10:39 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5kv1s8sm4gm6c@corp.supernews.com>
Source record: 123845

If you wanted to sell a miracle antenna (one that seemingly defies known laws) to broadcasters, what you absolutely have to do is to find a test site with an unused broadcast antenna and ground system set up according to current practice, or set one up yourself. Next, hire several people to make measurements of field strength. These people should be professionals well known in the community. Ground rules should include their ability to fully inspect the site, measure transmitter power output, and investigate anything else that might affect field strength. They should get the feeling that you're as interested in getting good quantitative results as they are. Next, remove the existing antenna and ground system, replace it with your antenna, and repeat the measurements under the same set of rules and procedures. The results, with complete details of equipment, methods, etc., should then be published in a professional journal, with any comments the people doing the measurements would want to make.

This is the level of proof that will be required to convince broadcasters to adopt your invention. But if you do as I said above, I'm sure that the orders will pour in like gangbusters. The full measurement process will be expensive, but if you were to make very careful measurements, with the oversight and assistance of at least one good professional, of even a wire vertical with known ground system followed by your antenna in the same spot, favorable results should be adequate to convince the professional community and venture capitalists that you're on to something. Even the expense of the full tests would be paid back almost immediately if your antenna met the claims of the EH or CFA.

I've heard that some professionals were invited to measure the CFA in Egypt and did so, but weren't allowed to do things like measure the transmitter output power or current on the outside of the feedline. Also, there was no comparative measurement from a standard installation, leaving the possibility that the ground conductivity is much greater than has been assumed and alleged. If anyone has information to the contrary, please correct me. Half-baked measurements work fine for selling to amateurs and late-night TV watchers. But they're simply a waste of time and money, if you're trying to convince real engineers that you have something.

Scale model measurements in a certified antenna test lab would be another way to get preliminary data to convince people to invest in full scale tests. Again, at least one good and impartial consultant should be hired who is familiar with the ways tests can be fooled (intentionally and unintentionally), and who would be willing to add his name to the professional paper in which the results are published. This could probably be done at little more expense than obtaining a patent, and

published results would alert the professional community that you really have what you say you do. Having these results in hand, you might be able to talk some professionals into helping with the full tests for an outlay only of expenses, a modest honorarium, and the opportunity to participate in some historic tests.

I fully expect to hear a number of objections about why this isn't possible, realistic, practical, or some such. Of course the inventors of these miracle antennas avoid making bulletproof, professional, solid, measurements. If they did, I'm sure that the results would show how poor these antennas are. Because positive results would result in an incredible amount of interest and sales, there's no other conceivable reason for its not having been done already.

Roy Lewallen, W7EL

Art Unwin KB9MZ wrote:
>
> O.K Richard let us continue in this serious vein of thought
> The E/H antenna is something that all amatuers would want if
> it came up to expoectations. All will then have the ability
> to operate on 160M regardless of garden size.
> The fact is that even tho all desire it, it is also a fact that
> people are predisposed with the thought that it is impossible.
> So to be different to Hately ,when and if I decide to disclose
> the solution to this problem, what is the correct way to do it?
> There are plenty of glib answers that could be presented but
> frankly it is a nye impossible task unless you are as successfull
> at beating a drum as P.T.Barnum was. The fact is that talk is cheap
> and every one has a pre thought out response to those who aspire to
> reach the mountain top.
> So in a serious vein, what is the best way for an ' outside of the
> fence person' (to quote a member of this group) to get dislcosure
> accepted without being assailed as a crook ?
> Regards
> Art

4257. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 20:34:08 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <W5yTHzCAHoW+EAgI@ifwtech.co.uk>
Source record: 123847

Richard Clark wrote:
>On Mon, 24 Feb 2003 08:15:13 +0000, "Ian White, G3SEK"
><G3SEK@ifwtech.co.uk> wrote:
>
>>Let's look at the signal in more detail. Imagine a 9MHz USB signal with
>>a 1kHz tone modulation: you have a 9.001MHz signal, 9.000MHz suppressed
>>carrier and 8.999MHz suppressed lower sideband.
>>
>>Mix each of these respective components with a 5.000MHz VFO signal, and
>>in each case take the difference frequency (simply subtract 5.000).
>>
>
>Hi Ian,
>
>You've made this mistake twice now. Sparks, W4EAS, introduced the
>notion of using an ARC-5 as a 9 MHz VFO not as the sideband generator.
>His discussion had the modulation products originated with a 5 MHz
>source. Hence the inversion, as he explained it, is correctly
>portrayed.

No, that is *not* what Sparks said:

>>>>Once uppon a time we had 9 mcs carrier generators for ssb. We used
>>>>surplus ARC-5 aircraft transmitters as a VFO. TWO MOST popular
bands
>>>>were 75 and 20. Subtrace 5 mhz from 9 and there was 75. ADD 5 mhz
to 9
>>>>and you had 20.
>>>>>The side bands were translated.

Interpreting "9 mcs carrier generators for ssb" as "9MHz SSB generator",
I agreed entirely with Sparks, except for that one point about sideband
inversion.

The two most-copied phasing exciters - "SSB Jr" (G-E Ham News, Nov-Dec
1950) and "Cheap and Easy SSB" (QST, March 1956) - both used 9MHz
phasing SSB generators, and heterodyned 9MHz SSB up to 14.0-14.5MHz or
down to 4.0-3.5MHz.

"Cheap and Easy SSB" was the design based on the 5.3-7.0MHz ARC-5
transmitter, using the 5.0-5.5MHz portion of its VFO coverage, and its
2x1625 PA.

Like Sparks, I was there and doing it. I built "Cheap and Easy SSB" from
the 1962 edition of ARRL's "Single Sideband for the Radio Amateur"...
and yes, I used an ARC-5 (which wasn't so easy to find over here).

You claim that the ARC-5 was used as a 9MHz VFO, with a phasing SSB generator around 5MHz. Can you supply any reference for that approach, or any evidence that it was widely used?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4258. Re: Bandwidth of not a Bazooka.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 20:35:34 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <qmv6a.4343$cD5.412173@newsread2.prod.itd.earthlink.net>
Source record: 123846

Richard Harrison <richardharrison@webtv.net> wrote in message
news:3401-3E5A728B-526@storefull-2313.public.lawson.webtv.net...
> Yuri, K3BU wrote:
> "Bazooka Dipole is the thing that has two bazookas as part of the
> antenna radiator."
>
> There is a potpourri called the "Heil Ham Radio Handbook" which contains
> a
> "Coaxial Double Bazooka" antenna. This may be the topic identified by
> Yuri. It`s on page 35.
>
> Each half of the double bazooka antenna consists of a piece of ladder
> line driven by the shield of a single piece of RG-58/U which
> interconnects the two end pieces of ladder line which complete the
> dipole. The RG-58/U is shorted at its outer ends and these shorted ends
> connect with their pieces of shorted ladder line to complete a dipole.
>
> The shield of the interconnecting RG-58/U is separated at the middle of
> the antenna for attachment of the feedline, more RG-58/U.
>
> Heil, K9EID says:
> "---M.I.T. folks figured out how to make the balun---work as part of the
> radiator--- For this and other reasons, the antenna is more efficient
> than a wire dipole.
>
> Best regards, Richard Harrison, KB5WZI
>
>
Yeah, but the MIT folks engineered the reactance-compensated antenna with a feed line Zo higher than the resonant resistance of the antenna. But the guys who stole (?) the idea didn't understand the principle of BW improvement by parallel reactance cancellation. They simply applied it to the simple dipole without knowing what they were doing--the MIT guys didn't explain the principles in the article I saw. It's been many years since I saw the MIT paper, so I can't remember what the feed line Zo was.

In addition, Kraus shows the same principle of reactance cancellation on Pages 435-437 in his 1950 ed. Kraus shows the results with feed lines of 50, and 500 ohms. However, his Fig 14-44 on page 437 shows that the improvement in BW is still quite small.

In my Ham Radio article of Aug 1976 I show a 2:1 SWR bandwidth of 440 KHz in the 80-m band with a 100-ohm feed line, and a 2:1 SWR BW of 565 KHz with a 144-ohm feed line and a 72-ohm resonant dipole resistance. In that article I show the BW situations using graphs of admittance in X-Y plots, and graphs

of impedance in X-Y and Smith Chart formats.

I have scanned the article, 14 pages, into jpg and pdf formats, which I can email to anyone who'd like a copy. Each page runs slightly over 1 KB. I think you'll find the article interesting, because I hit a number of issues that haven't been raised so far in this thread. Let me know if you'd like a copy and I'll send it.

Walt, W2DU

4259. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 20:43:27 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <KJ5U7hDvPoW+EAgZ@ifwtech.co.uk>
Source record: 123848

Roy Lewallen wrote:
>If you wanted to sell a miracle antenna (one that seemingly defies
>known laws) to broadcasters, what you absolutely have to do is to find
>a test site with an unused broadcast antenna and ground system set up
>according to current practice, or set one up yourself. Next, hire
>several people to make measurements of field strength. These people
>should be professionals well known in the community. Ground rules
>should include their ability to fully inspect the site, measure
>transmitter power output, and investigate anything else that might
>affect field strength. They should get the feeling that you're as
>interested in getting good quantitative results as they are. Next,
>remove the existing antenna and ground system, replace it with your
>antenna, and repeat the measurements under the same set of rules and
>procedures. The results, with complete details of equipment, methods,
>etc., should then be published in a professional journal, with any
>comments the people doing the measurements would want to make.
>
>This is the level of proof that will be required to convince
>broadcasters to adopt your invention. But if you do as I said above,
>I'm sure that the orders will pour in like gangbusters.

The CFA has been tested by a large broadcasting organisation in the UK. The results have not been published - and may not ever be - because this was a strictly commercial exercise, not an academic one.

Therefore we can only look for indirect clues about the results. Two such clues are that the organisation has not changed its existing antennas, and no fanfares of trumpets have been heard.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4260. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 21:18:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5l30ecnrh5pee@corp.supernews.com>
Source record: 123849

My whole point is that publication is an essential part of the *commercial* exercise of selling the antenna. It's by publication in a refereed journal, along with full disclosure of people, methods, and equipment, that would enable them -- indeed, make it simple for them -- to sell their invention to the otherwise skeptical potential buyers.

If I had a miracle antenna which had been carefully measured and shown to be, indeed, all that I claimed, what possible reason would I have for not broadcasting the information to as large an audience as I possibly could? There is no reason. On the other hand, if the measurements showed that the antenna *doesn't* work as I claim, then there's every reason to keep the results under wraps.

Roy Lewallen, W7EL

Ian White, G3SEK wrote:
>
> The CFA has been tested by a large broadcasting organisation in the UK.
> The results have not been published - and may not ever be - because this
> was a strictly commercial exercise, not an academic one.
>
> Therefore we can only look for indirect clues about the results. Two
> such clues are that the organisation has not changed its existing
> antennas, and no fanfares of trumpets have been heard.
>
>

4261. Re: WINDOWS XP LOGGING PROGRAM

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 22:03:16 UTC
From: John <my-call-here@qsl.net>
Message-ID: <DGw6a.4327$zu4.2229@newsfep1-gui.server.ntli.net>
Source record: 123850

www.dx4win.com is the one for me.

"Vince ve3elb" <vcl@sympatico.ca> wrote in message
news:R1j6a.1007$VG.206697@news20.bellglobal.com...
>
> HI ALL, CAN ANYONE LET ME KNOW WHAT IS THE BEST AND EASIEST LOGGING
PROGRAM
> THAT WILL WORK WITH WINDOWS XP PRO. IF ANYONE CAN HELP PLEASE EMAIL ME AT
> ve3elb@rac.ca
>
>
> VINCE VE3ELB
> EMAIL: ve3elb@rac.ca
> WEBPAGE1: www.qsl.net/ve3elb
> WEBPAGE2: http://www3.sympatico.ca/vcl
>
>
>
>
>
>
>
>

4262. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-24 22:46:58 UTC
From: tdonaly@aol.com
Message-ID: <20030224174658.29693.00000212@mb-ch.aol.com>
Source record: 123851

Deacon Dave wrote,
>
>In simple terms YES.
>
>The field equations solve it as a boundary layer with one path in air
>and the second path in copper. The mathematics is called a path
>integration.
>
>But basically, high resistance in air and low resistance in copper
>limits voltage in copper.
>
>Deacon Dave, W1MCE
>

You can get The Complete Collection of The Amateur Scientist
on CD ROM. There are some experiments in there that deal with
what you're discussing here. They do suggest taking precautions
against a potential shock hazard, however.
73,
Tom Donaly

4263. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 00:21:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <tedl5vo1g1247p74j3kiirlgm6t9u9eoce@4ax.com>
Source record: 123852

On Mon, 24 Feb 2003 20:34:08 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>
>"Cheap and Easy SSB" was the design based on the 5.3-7.0MHz ARC-5
>transmitter, using the 5.0-5.5MHz portion of its VFO coverage, and its
>2x1625 PA.
>
>Like Sparks, I was there and doing it. I built "Cheap and Easy SSB" from
>the 1962 edition of ARRL's "Single Sideband for the Radio Amateur"...
>and yes, I used an ARC-5 (which wasn't so easy to find over here).
>
>
>You claim that the ARC-5 was used as a 9MHz VFO, with a phasing SSB
>generator around 5MHz. Can you supply any reference for that approach,
>or any evidence that it was widely used?

Hi Ian,

I merely responded to the point provided by Sparks which made perfect
sense. In this correspondence you spent more time with the math than
this explanation above. I can do the math.

73's
Richard Clark, KB7QHC

4264. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 00:39:21 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <YqcgjkA5srW+EAxs@ifwtech.co.uk>
Source record: 123853

Roy Lewallen wrote:
>My whole point is that publication is an essential part of the
>*commercial* exercise of selling the antenna. It's by publication in a
>refereed journal, along with full disclosure of people, methods, and
>equipment, that would enable them -- indeed, make it simple for them --
>to sell their invention to the otherwise skeptical potential buyers.
>
>If I had a miracle antenna which had been carefully measured and shown
>to be, indeed, all that I claimed, what possible reason would I have
>for not broadcasting the information to as large an audience as I
>possibly could? There is no reason. On the other hand, if the
>measurements showed that the antenna *doesn't* work as I claim, then
>there's every reason to keep the results under wraps.

Sorry, I may have misled you there. I believe that the measurements were made by the broadcasting company, so that (at least initially) the report would be their property. The antenna manufacturer may not have any rights to decide whether to publish.

On the other hand, if everything had gone well, both parties would have had lots of incentive to publish... and that hasn't happened.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4265. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 00:43:00 UTC
From: John Siegel <JohnASiegel@worldnet.att.net>
Message-ID: <3E5ABC12.C35DCDBB@worldnet.att.net>
Source record: 123854

Not sure when the standard arrangement moved to 5-5.5MHz VFO and 9MHz sideband generator. VFO + Generator gives 14-14.5. Generator - VFO gives 4-3.5 with reverse tuning but same sideband. Therefore to select the sideband you needed the 9MHz generator to be able to generate either sideband. One way was to have 2 separate filters - relatively expensive. ANother way was to have 2 separate carrier oscillators - one at each side of the filter passband. Let you use one filter; audio response on the two sidebands depended on the symmetry of the filter.

If I recall correctly, the Hallicrafters HT32B had a novel scheme for sideband selection. The SSB signal was initally generated at 5MHz USB with one filter. Mixing it with a 4MHz xtal oscillator gave 9MHz SSB still at USB. Subtracting it from a 14MHx XTAl oscillator gave 9MHz LSB. From there mixing with the usual 5 -5.5 MHz VFO gave 80 and 20 M with selectable sideband but reverse tuning. An additional mixer stage with a bank of crystals converted to the remaining bands.
By detuning one of the 4 or 14MHz oscillators, FSK was accomplished by switching between the two

BTW The balanced modulator was a 7360 beam tube. FInal balance could be improved using a properly placed magnet.
73
John

Richard Clark wrote:
>
> On Mon, 24 Feb 2003 20:34:08 +0000, "Ian White, G3SEK"
> <G3SEK@ifwtech.co.uk> wrote:
>
> >
> >"Cheap and Easy SSB" was the design based on the 5.3-7.0MHz ARC-5
> >transmitter, using the 5.0-5.5MHz portion of its VFO coverage, and its
> >2x1625 PA.
> >
> >Like Sparks, I was there and doing it. I built "Cheap and Easy SSB" from
> >the 1962 edition of ARRL's "Single Sideband for the Radio Amateur"...
> >and yes, I used an ARC-5 (which wasn't so easy to find over here).
> >
> >
> >You claim that the ARC-5 was used as a 9MHz VFO, with a phasing SSB
> >generator around 5MHz. Can you supply any reference for that approach,
> >or any evidence that it was widely used?
>
> Hi Ian,
>

> I merely responded to the point provided by Sparks which made perfect
> sense. In this correspondence you spent more time with the math than
> this explanation above. I can do the math.
>
> 73's
> Richard Clark, KB7QHC

4266. How to make a simple AM antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 00:45:25 UTC
From: josephmartines@yahoo.com
Message-ID: <bb5888b.0302241645.5f6dda7a@posting.google.com>
Source record: 123855

Any suggestions to improve my AM radio reception would be greatly appreciated. I'm interested in a home-made solution. E-mail would be appreciated. Thank-you.

Joe Martines

4267. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 01:20:37 UTC
From: starsekr@aol.com
Message-ID: <f2828edc.0302241720.69f3eb3f@posting.google.com>
Source record: 123856
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

qutec@excite.com (Jason) wrote in message
news:<d2e33a2f.0302232053.3c5959aa@posting.google.com>...
> Hello all,
> I just picked up a Icom IC-R2 handheld scanner, 25-1300Mhz discone
> (http://users.cis.net/kingpop/Superdiscone.htm), 40 feet of Belden
> 9913 cable and 30 feet of mast(radioshack)to start listening to the
> world.
>
> I would like to build my own preamp with several sets of filters

Jason,
I have two radio shack scanners, an RS-2045 (a base) and RS-64 (a handheld).
The 2045 gets a lot more use at home because it allows attenuation to be individually selected for each channel. Adding a preamp will probably just overload your scanner, especially if you live anywhere but out in the country.
But a cheap test might be to put a TV preamp inline with your discone. The discone doesn't have gain to speak of, and you will lose a little of what you receive on your coax, so something like 10 db of gain might not bother you. You will probably want to switch in the FM filter if it has one. Of course using this set up you won't be able to scan all bands, but it will give you a feeling for how much help a preamp can be in your situation.
If you locate something distant you really want to hear, you might investigate a second antenna such as a log periodic, it has gain, bandwidth and is directional.

Good luck, Jim

4268. Re: How to make a simple AM antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 01:25:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3egmi$2qr$1@helle.btinternet.com>
Source record: 123857

What sort of antenna do you have at present?

The only way to improve it is to make it higher and perhaps longer.

Remember, if it's an end fed wire then the ground connection is just as important as the antenna wire.

It is most unlikely that an inveted-L general-purpose receiving antenna for AM medium-wave reception can be improved upon except, as I said, by making it higher.

Different shapes will get you nowhere.

Reg, G4FGQ

4269. Tuning a J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 01:39:03 UTC
From: Benny Miller <bennymiller@core.com>
Message-ID: <v5licea5spvme1@corp.supernews.com>
Source record: 123859

Ok. I am grateful for the previous suggestions and have used many of them. I now have a new problem. Here is some background. The J i made is 1/2 inch copper tubing that i had the shop teacher help me solder together. the long section is 58" and the short section is 19.5" the short piece is about 2". I have it mounted on a broom handle tied to a wooden post on my back porch (2nd floor). I am feeding it with about 40 ft of RG-58 to the room where i am able to operate. On the J, i read that it is a good idea to use a 4-turn choke to decouple the line so I have one of those in place with hose clamps to attach the cable. I currently have the braid going to the short section and the center going to the longer section. I am using a RadioShack HTX 252.

Now, on to the problem. I am trying to tune my J but cannot get anywhere close to 1:1. I am using a correctly callibrated SWR meter and when i press my PTT, the needle goes into the red all the way up to the infinity sign. I have tried moving the connections up and down but that does not bring the reading down. I have also tried at both ends of the spectrum. this didn't work either.
Any and all suggestions will be considered and if possible ($ and timewise) i will try to implement them.

Thank you
Benny
KC8TRN

4270. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 01:42:02 UTC
From: AGRAY6 <AGRAY6@neo.rr.com>
Message-ID: <KRz6a.253891$i73.48354970@twister.neo.rr.com>
Source record: 123858
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

His call is W4JLE.....

"Mike Yetsko" <joe@user.com> wrote in message
news:v5crfvigf4b54f@corp.supernews.com...
> >
> > Your remarks border on slander and you have until March 1, 2003 to
desist
> or
> > legal action will follow.
>
> How to win friends and influence people....
>
> (Not slander, personal opinion, and protected by law...)
>
> Mike
>
>
>

4271. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 01:55:53 UTC
From: Justice Gustine <justicegustine@yahoo.com>
Message-ID: <v5jl5vskkom9ld6o48vm8tpnqavbgh2q2m@4ax.com>
Source record: 123860

Adam

Check you email

JG

4272. Re: Tuning a J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 02:00:45 UTC
From: Benny Miller <bennymiller@core.com>
Message-ID: <v5ljl77rp5v18d@corp.supernews.com>
Source record: 123861

After a few more tests, I moved the hose clamps right to the bottom of the posts, right next to the L and the T. when the connections were higher up on the posts, the SWR meter pinned out immediately. Now that I moved them down, the meter does not pin out, however, it still sits at the infinity mark for 144.000, 146.000 and 147.950.

Help ?!?! :)
KC8TRN

"Benny Miller" <bennymiller@core.com> wrote in message
news:v5licea5spvme1@corp.supernews.com...
> Ok. I am grateful for the previous suggestions and have used many of them.
> I now have a new problem. Here is some background. The J i made is 1/2
inch
> copper tubing that i had the shop teacher help me solder together. the
long
> section is 58" and the short section is 19.5" the short piece is about
2".
> I have it mounted on a broom handle tied to a wooden post on my back porch
> (2nd floor). I am feeding it with about 40 ft of RG-58 to the room where i
> am able to operate. On the J, i read that it is a good idea to use a
4-turn
> choke to decouple the line so I have one of those in place with hose
clamps
> to attach the cable. I currently have the braid going to the short
section
> and the center going to the longer section. I am using a RadioShack HTX
252.
>
> Now, on to the problem. I am trying to tune my J but cannot get anywhere
> close to 1:1. I am using a correctly callibrated SWR meter and when i
press
> my PTT, the needle goes into the red all the way up to the infinity sign.
I
> have tried moving the connections up and down but that does not bring the
> reading down. I have also tried at both ends of the spectrum. this
didn't
> work either.
> Any and all suggestions will be considered and if possible ($ and
timewise)
> i will try to implement them.
>
> Thank you
> Benny
> KC8TRN

>
>

4273. Re: Tuning a J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 02:22:51 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5lkrpt7q85va6@corp.supernews.com>
Source record: 123862

19 1/2" is too long, I would first cut it to about 19 1/4" then start about
2" up from the bottom and come down 1/16" at a time.

Better yet, see if you can borrow an analyzer such as the MFJ to make your
life easier.

Even a noise bridge would be better than a transmitter. It is tough on
finals as well as causing possible interference.

"Benny Miller" <bennymiller@core.com> wrote in message
news:v5ljl77rp5v18d@corp.supernews.com...
> After a few more tests, I moved the hose clamps right to the bottom of the
> posts, right next to the L and the T. when the connections were higher up
> on the posts, the SWR meter pinned out immediately. Now that I moved them
> down, the meter does not pin out, however, it still sits at the infinity
> mark for 144.000, 146.000 and 147.950.
>
> Help ?!?! :)
> KC8TRN
>
>
> "Benny Miller" <bennymiller@core.com> wrote in message
> news:v5licea5spvme1@corp.supernews.com...
> > Ok. I am grateful for the previous suggestions and have used many of
them.
> > I now have a new problem. Here is some background. The J i made is 1/2
> inch
> > copper tubing that i had the shop teacher help me solder together. the
> long
> > section is 58" and the short section is 19.5" the short piece is about
> 2".
> > I have it mounted on a broom handle tied to a wooden post on my back
porch
> > (2nd floor). I am feeding it with about 40 ft of RG-58 to the room where
i
> > am able to operate. On the J, i read that it is a good idea to use a
> 4-turn
> > choke to decouple the line so I have one of those in place with hose
> clamps
> > to attach the cable. I currently have the braid going to the short
> section
> > and the center going to the longer section. I am using a RadioShack HTX
> 252.
> >
> > Now, on to the problem. I am trying to tune my J but cannot get anywhere

> > close to 1:1. I am using a correctly callibrated SWR meter and when i
> press
> > my PTT, the needle goes into the red all the way up to the infinity
sign.
> I
> > have tried moving the connections up and down but that does not bring
the
> > reading down. I have also tried at both ends of the spectrum. this
> didn't
> > work either.
> > Any and all suggestions will be considered and if possible ($ and
> timewise)
> > i will try to implement them.
> >
> > Thank you
> > Benny
> > KC8TRN
> >
> >
>
>

4274. Re: ignition noise on HF in diesel truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 02:24:51 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5lkvhsg4sdue1@corp.supernews.com>
Source record: 123863
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

What a genius, as it is part of my e-mail address, how long did it take you
to figure it out...

"AGRAY6" <AGRAY6@neo.rr.com> wrote in message
news:KRz6a.253891$i73.48354970@twister.neo.rr.com...
> His call is W4JLE.....................
>
>

4275. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 02:55:13 UTC
From: richardharrison@webtv.net
Message-ID: <3402-3E5ADB11-250@storefull-2313.public.lawson.webtv.net>
Source record: 123864

Ian, G3SEK wrote:
"No. The sidebands remained the "same"."

Richard Clark has already protested against posting the math. So, I`ll try to minimize the numbers.

Were we to try beating 5 MHz against 8.9 MHz to reach 14 MHz, it falls short.

So, we must use the USB of a 9 MHz SSB generator to reach 14 MHz.

Were we to try beating 5 MHz against 9.1 MHz to reach 4 MHz, it falls short.

So, we must use the LSB of a 9 MHz SSB generator to reach 4 MHz.

Conclusion: Sparks, W4EAB was likely correct in saying----"Subtract 5 MHz from 9 and there was 75. ADD 5 MHz to 9 and you had 20. (Ian agreed)

Ian erred in sating: "No, (the sidebands were translated) the side bands remained the same."

Yes, the sidebands were translated by choice. The lower sideband was selected to reach 4 MHz and lower.

Yes, the upper sideband was selected to reach 14 MHz and higher.

Best regards, Richard Harrison, KB5WZI

4276. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 02:58:58 UTC
From: richardharrison@webtv.net
Message-ID: <3401-3E5ADBF2-607@storefull-2313.public.lawson.webtv.net>
Source record: 123865

If I Gave Sparks the wrong call sign in a recent posting, I am sorry. I believe the correct call sign is W4EAS.

Best regards, Richard Harrison, KB5WZI

4277. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 03:22:31 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E5AE177.D619D488@bloomer.net>
Source record: 123866
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

First, I assumed the OO noted a possible violation. By that assumption, I assume he has a spectrum analyzer or some visual indication that there was what I'd call significant signal above 4.000 MHz.

Re-read the very first sentence of 97.307(b). It says "Emissions resulting from modulation must be confined to the band or segment available to the control operator." Sidebands ARE emissions resulting from modulation, therefore they had better be In-band.

Who's transmitting a second sideband? Anyone CAN in the USA (DSBSC, AM). Depending on alignment of your rig, YOU may be transmitting a little carrier and the sideband you don't have selected. Granted, they should be down by 40 dB or more, but they are still there. Since they are not spurious emissions, the first sentence of 97.307(b) covers them. It doesn't specify an adequate level of suppression...it says "MUST be confined to the band or segment..."

And the last thing I'll address is the second harmonic. I do not believe the FCC considers that to be a product of modulation. That would fall under the spurious emissions and FCC stated supression levels apply.

Scott
N0EDV

Zoran Brlecic wrote:
>
> Scott wrote:
> > And I believe that is true (it was a violation). Reference 97.307(a)
> > and 97.307(b).
> >
> > 97.307(a) No amateur station transmission shall occupy more bandwidth
> > than necessary for the information rate and emission type being
> > transmitted, in accordance with good amateur practice.
> >
> > So, being SSB, it would be against good amateur practice to transmit a
> > second sideband, albeit at a (hopefully) much reduced level of at least
> > 40 dB.
>
> So who's transmitting a second sideband? As long as the suppressed
> second sideband meets the 60dB or whatever the hell it is suppression,
> one is perfectly safe to transmit LSB on 4.000 MHz. Your logic would
> dictate that no transmitter anywhere in the physical world is allowed to
> transmit since all real world transmitters emit some sort of a harmonic

> frequency ("more bandwidth than necessary" per your interpretation). So,
> according to you, SSB should not be used at all, period. The rule above
> regulates the *bandwidth*, not the legal frequency range.
>
> > 97.307(b) Emissions resulting from modulation must be confined to the
> > band or segment available to the control operator. Emissions outside
> > the necessary bandwidth must not cause splatter or keyclick interference
> > to operations on adjacent frequencies.
>
> Suppressed sideband does not equal splatter or keyclick. These
> regulations are intended to regulate and prevent faulty and technically
> substandard emissions, not technically sound and correct emissions.
>
> > Now, if the operators dial indicated 3.999 MHz, this is the frequency of
> > where the carrier would be if it were not suppressed. So, for example,
> > if the gentleman was speaking into the microphone and had a voice
> > frequency of 1500 Hz, his lower sideband would be at 3.9975 MHz (3.999
> > MHz - 1500 Hz) and his upper sideband would be at 4.0005 MHz (3.999 MHz
> > + 1500 Hz), clearly "out of band".
>
> There is no upper sideband in his transmission, legally speaking, as
> long as it meets the suppression standard.
>
> > Since most modern transceivers have an audio response (mic circuitry) of
> > about 300 to 3000 Hz, I recommend always staying at least 3 KHz away
> > from band edges.
>
> How do you feel about harmonic radiation that meets the -60dB standard?
> After all, if you copy a station at S9+60 on his xmit frequency, you'll
> copy him S9 on his first harmonic. Should he shut down immediately until
> he can violate the laws of physics and produce an infinite suppression
> of the first harmonic?
>
> 73 .... WA7AA
>
> --
>
> Anti-spam measure: look me up on qrz.com if you need to reply directly

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4278. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 03:28:46 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3ent7$i1b$1@slb6.atl.mindspring.net>
Source record: 123867

Art:

[snip]
> the rotten alien,slimey limey and all around nobody, talks and writes
> funny,a dumb shit, comes from the slum docklands,didn't go to
> University so can't possibly be one of the group on this side of the
> fence.His son invented
> the Biology Workbench computor program which apparently is now used in
> most Universities and does research work at Southern Cal, so he is
> taking over from his Dad, he must have stolen the idea because he was
> born in London also!
[snip]

Above sure sounds like whining to me! What would you call it?

Art, what you are attempting to do [commercialize an invention] has nothing whatsoever to do with Science or Engineering or Technology. Your problem is strictly a business problem and issue. You need to seek advice from the "right" quarters not from a News Group populated by technology jocks!

Incidently, Science, Engineering and Technology folks are notorious for having
little interest and/or expertise in business problems and issues. There are a few
who have an interest in and who have succeeded at both Technology and Business,
but not many. Which is why you get very little support for your approach from this
august antenna technology News Group.

If your antenna does what you claim and it has a potentially business case with an attractive return [Which you certainly have not shown here!] then you
should have no problem raising venture capital to pursue it further.

If I were you, I would stop working on the technology and whining immediately
because you still have a whole lot more work to do, and start to put in a similar effort developing a compelling business case. [Most "inventions", including about 98% of all US Patents, do *not* have a worthwhile business case!]

Developing your business case will require, that you, or someone you trust, do a market study including estimated unit volumes, average selling prices, manufacturing and installation costs, margins, pro-forma customer lists, etc...

etc...

Then when you have completed your business case study, print up a few copies and take your market study along with your "invention" paperwork and "shop" the plan among the venture capitalists. I have done this myself and I can attest that it does work, having raised millions in the venture markets for a couple of ventures.

But you gotta "sell", "sell", and "sell"! And not to a bunch of hams on a USENET NG! The ham radio market for antennas is simply not a "compelling" marketplace. Most are in that market for the love of the hobby not for profit!

Art, getting an invention commercialized is only 1% invention but 99% selling. Invention is the smallest part of the overall effort! Live with it, deal with it. You gotta stop inventing and start selling. Selling begins
with marketing, and as near as I can tell you have done neither market studies nor selling!

All you seem to be doing is whining to this technical group who don't give a whit about your business success. All this group desires is to enhance their own technical expertise. Incidently, no technical group be it commercial or amateur is likely to be sympathetic to your business problem, and that is as it should be, as you have found out.

Unfortunately for you, the timing may not be right for raising venture money today, since the venture capital community has recently been completely decimated and is in very sad shape these past three years.

For instance see, write up below from John McQuillan and Co's NGN Ventures Conference...

[snip]

> we are facing the most
> challenging environment in the history of financing startup
> companies. The coming year or two will be a real test for young
> firms, and will separate the winners from the losers. For more
> information on NGN Ventures, visit our web site at
> http://www.ngnventures.com/ngnv/about.asp
>
> Here is a short recap of the statistics behind the collapse in
> the financial backing for telecom and networking. It begins with
> the public markets, which suffered three consecutive years of
> negative results from 2000 to 2002. This has not happened for 60
> years. The S&P 500 index dropped to half of its level at the
> high--only the second time in history that this has happened.
> The lowest interest rates in 40 years have not been enough to
> counteract widespread concerns about the poor performance of
> equities, not to mention scandal and abuses.
>
> 2002 was an awful year for initial public offerings (IPOs), and

> 2003 has been worse. IPOs in the first half of 2002 totaled only
> $266M, and there were none in the second half of 2002 until
> Seagate, which is not a startup. By contrast, IPOs raised $18.7B
> in 2000. There were only $1.5B worth of IPOs in 2002, less than
> 10% of the peak. There were eight weeks without an IPO in early
> 2003, one of the longest droughts for new issues since 1975.
> Performance after IPO has been negative for the class of 2002/2003.
>
> The other avenue for liquidity for private equities is mergers
> and acquisitions (M&A), which raised $101B in 2000. It dropped
> to $21.5B in 2001, 20% of the peak. It dropped further to $9.6B
> in 2002. So both IPOs and acquisitions are now at 10% of the rate
> at the top of the market. IPOs and M&As combined to $11B in
> 2002. This is a huge liquidity crunch for venture capital.
>
> The slowdown in successful outcomes has naturally led venture
> investors to be more cautious about new investments. There was
> $106B of venture money invested in 2000. It dropped to $41B in
> 2001. It dropped again to $21B in 2002, or 20% of the amount in
> 2000. In the last quarter of 2002, VC investment was only $4B.
> There have been 11 consecutive quarters of decreasing investment.
> 80% of the money is going into follow-on rounds. Only $800M went
> into new deals in Q4 2002.
>
> By many measures, venture capital in 2002 has been set back 7 or
> 8 years, to the mid 1990s. Investment rates in 2002 dropped to
> that of 1995. Only 20% of investments in 2002 were seed or first
> rounds, equal to level of 1994. 3,000 companies were financed in
> 2002, the lowest number since 1996. Median pre-money valuations
> dropped from $24M in 2002 to $10M in 2002--back to 1994-1995 levels.
>
> The pace of venture capital investment in telecommunications has
> slowed dramatically since peaking in 2000. Q2 2000 was the peak
> for telecom, with almost $5.3 billion invested. In Q4 2002,
> $561.8 million went into 79 telecommunications startups, or about
> 10% of the peak. That was the lowest level since the Q1 1998,
> when $430 million in private equity went to telecommunications.
>
> Unfortunately, it looks like things will get worse before they
> get better because of the huge overhang of money in venture
> funds, that is, money that has yet to be invested. There was an
> overhang of $105B of venture capital to be invested at the end of
> 2001. In 2002, only $6B of new VC was raised, and there was $6B
> of fund reductions - virtually no new money came in. $21B was
> invested in VC in 2002. There is still an overhang of $75B, which
> is at least 2 years worth of new investments. There is still too
> much money going in to ventures, and not enough money coming out
> in IPOs and M&As. Clearly, the cash flow in 2002 was negative,
> with over $20B going in to startups and only $11B coming out in
> liquidity events. Even if the IPO and M&A markets recover to

> their levels of 2001, it would be barely enough to return the
> capital invested last year, much less the far larger amount
> invested in 2001.
>
> The future outlook is not too good. For the broad economy, we
> can expect modest recovery. For the financial markets, few
> analysts expect a strong bull market soon. For private equities
> and venture capital, the overhang is much greater than the level
> of IPOs and M&A, so returns will be negative. There appears to be
> little or no growth in enterprise IT spending, and continued
> contraction in service provider spending.
>
> Clearly, this environment will not be friendly to all but the
> very best of the next generation of network companies. We have
> carefully selected what we consider to be the young firms most
> likely to succeed and invited them to tell their stories at NGN
> Ventures this April.
>
> For more information or to register please visit
> http://www.ngnventures.com/ngnv/register.asp
[snip]

Incidently, I have attended this conference often and I have
used the contacts I found there as an opportunity to "sell" my
ideas and to raise angel, seed, and first round money to carry
businesses further forward. But it's a tough sell.

Be prepared for more naysayers! That's the lot of the
entrepreneur. The Venture Capitalists are a whole
lot tougher than the group of tecnology jocks here on
the rraa News Group.

Good luck, and "please stop the whining"!
--
Peter K1PO
Indialantic By-the-Sea, FL.

4279. Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 04:15:05 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0302242015.c2dbb8c@posting.google.com>
Source record: 123868

I'm having bad time coming up with the proper cookbook design equations for designing/building coaxial antennas. I'm not a newbie to the things, I've offhandedly put together a number of them for yakking the 2m machines. But I never bothered with any of the numbers beyond the fact that a quarter wave on 2m is well known to be a nominal 19". And that's as far as I ever took the "engineering". I peeled two feet off the jacket of the RG58 and rolled the exposed braid back over the remaining jacket (south end). Annoying process. After "firming up" the braid over the jacket I nipped both the braid and the center conductor (north end, still encased in it's dielectric material) to 19" lengths. From there I laid a length of nylon cord alongside the north end, slid heat shrink tubing over the whole shebang and sealed it. Net result has been a number of <$2 very compact hang-anywhere vertical 2m dipoles which worked.

I suspect that getting away with my sloppy "antenna engineering" on 2m is allowable. Hitting the machines with a spoon soldered to the center thingy of a PL-259 would probably work around here too so I didn't bother cranking the numbers.

So now I'm in a situation where I'd like to build & put up a 14 Mhz. version. Has to do with my installation options, an end-fed coax-fed dipole would be *much* easier to put up than the usual center-fed variety. Wrong time for sloppy engineering.

Issues like conductor diameters/lengths/freq ratios, VFs, etc., come into play. Does anybody out there know where I might find disussions and/or the equations for coaxial antennas in some reasonable depth? I haven't had any luck at all by searching the Web.

Tnx!

w3rv

4280. Re: Tuning a J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 04:34:08 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <5fD6a.330$Of4.96710679@news.inreach.com>
Source record: 123719

Benny:

If your dimensions are off, they are not so far off that you shouldn't be able to find an SWR minimum on some frequency. The usual feed point is between 2 and 2.5 inches up from the bottom...try leaving the coax feed there and see if you can find if there is a resonant frequency where SWR is minimum (even if not 1:1). If you can't find resonance anywhere near 2 meters, then you should look at your coax, connectors and other possible problems.

And on a more basic (and I hope not insulting) note, you are setting the SWR meter in the forward direction before switching to reverse aren't you? I have often pinned my SWR meter because the calibration knob was incorrectly set.

Good luck,

Roger K6XQ

4281. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 04:45:42 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E5AF56B.E71E33A0@earthlink.net>
Source record: 123720

Yes, I have the CD and the magazine. Why they pulled the pages, I do not know.

Tdonaly wrote:

> Deacon Dave wrote,
> >
> >In simple terms YES.
> >
> >The field equations solve it as a boundary layer with one path in air
> >and the second path in copper. The mathematics is called a path
> >integration.
> >
> >But basically, high resistance in air and low resistance in copper
> >limits voltage in copper.
> >
> >Deacon Dave, W1MCE
> >
>
> You can get The Complete Collection of The Amateur Scientist
> on CD ROM. There are some experiments in there that deal with
> what you're discussing here. They do suggest taking precautions
> against a potential shock hazard, however.
> 73,
> Tom Donaly

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Consumer Tip: Save your gasoline money if you are buying premium gas. It's
unnecessary to use it unless your engine pings. Use regular instead.
-- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

4282. Re: How to make a simple AM antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 04:48:09 UTC
From: richardharrison@webtv.net
Message-ID: <7187-3E5AF589-268@storefull-2311.public.lawson.webtv.net>
Source record: 123721

Reg, G4FGQ wrote:
"It is most unlikely that the inverted-L general-purpose antenna can be improved upon except, as I said, by making it higher."

I agree with Reg that millions have been erected and proved most popular because they worked best at the time. The arrival of the internal loop antenna as a standard item with receivers changed what was best in many cases. That`s because the loop rejects a certain amount of noise in many cases and this results in an improved signal to noise ratio. What`s more, the radio is ready to play immediately without requiring any antenna erection. But for weak signals, an external antenna may well excel.

If you have acres, a Beverage antenna may be the best for a given direction.

Large external tunable loops are an enhancement to reception from a built-in loop antenna. These are offered for sale, or they may be home-built. An external loop can be used even when a radio has no internal "loop", only an antenna coil.

External antennas can improve reception as Reg said. Many radios have a connector for an external aerial.

Best regards, Richard Harrison, KB5WZI

4283. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 06:15:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <oh0m5vc1trdktkqldnvvueguu5ao5n7jhl@4ax.com>
Source record: 123722

On 24 Feb 2003 20:15:05 -0800, kelly@dvol.com (Brian Kelly) wrote:

>I'm having bad time coming up with the proper cookbook design
>equations for designing/building coaxial antennas. I'm not a newbie to
>the things, I've offhandedly put together a number of them for yakking
>the 2m machines. But I never bothered with any of the numbers beyond
>the fact that a quarter wave on 2m is well known to be a nominal 19".
>And that's as far as I ever took the "engineering". I peeled two feet
>off the jacket of the RG58 and rolled the exposed braid back over the
>remaining jacket (south end). Annoying process. After "firming up" the
>braid over the jacket I nipped both the braid and the center conductor
>(north end, still encased in it's dielectric material) to 19" lengths.
>From there I laid a length of nylon cord alongside the north end, slid
>heat shrink tubing over the whole shebang and sealed it. Net result
>has been a number of <$2 very compact hang-anywhere vertical 2m
>dipoles which worked.
>
>I suspect that getting away with my sloppy "antenna engineering" on 2m
>is allowable. Hitting the machines with a spoon soldered to the center
>thingy of a PL-259 would probably work around here too so I didn't
>bother cranking the numbers.
>
>So now I'm in a situation where I'd like to build & put up a 14 Mhz.
>version. Has to do with my installation options, an end-fed coax-fed
>dipole would be *much* easier to put up than the usual center-fed
>variety. Wrong time for sloppy engineering.
>
>Issues like conductor diameters/lengths/freq ratios, VFs, etc., come
>into play. Does anybody out there know where I might find disussions
>and/or the equations for coaxial antennas in some reasonable depth? I
>haven't had any luck at all by searching the Web.
>
>Tnx!
>
>w3rv

Hi Brian,

2M - 20M
Make it the same, only 10 times bigger. Being larger, and lower
wavelength mean that more things in nature intrude into the fields of
this and disturb its tune (where are you going to hang it? What will
it be near? ...). You might be able to trim it to tune for most
ocassions - I would plan on a tuner.

One variant antenna I play with is a simple coax (separate and distinct from the driveline, however). It is connectored at both ends and the cable has several external taps to the shield along its length. As my whim dictates, I select a length of top radiator wire (connectored) and mate it to the far end and pull it and the cable beneath it up until one tap or another in the cable is at ground level, and I then tie the cable shield tap into my ground field. I then apply the transmission line to the near end connector.

With the right combination of tap, length and wavelength, this could be called a JPole. I still have a tuner nearby.

73's
Richard Clark, KB7QHC

4284. Finally The Delta Loop Flew

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 06:34:26 UTC
From: g4vgo <rmread@attglobal.net>
Message-ID: <3e5b1218_1@news2.prserv.net>
Source record: 123723

Wind conditions have been very stable and just the right strength in the
east of England. The full sized Delta Loop for 160 flew over the weekend in
the CQWW SSB contest and was AWSOME.

Pictures and details coming up on the G4VGO website.

73

Bob G4VGO
www.qsl.net/g4vgo

4285. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 07:26:15 UTC
From: marcje01@yahoo.com
Message-ID: <ca10ea14.0302242326.5ecea056@posting.google.com>
Source record: 123724
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

"Piotr Balcerzak" <bpiotrek@yahoo.com> wrote in message
news:<dJq6a.10875$cB3.60848@nnrp1.uunet.ca>...
> Hi,
>
<cut article>

>
> You would probably want to block everything below 25 MHz
> (scanner is not real HF radio and overloads easily), 87-108 MHz
> (FM is very strong and not interesting), 152-153 MHz (unless
> you want to decode pagers), 108-116 MHz (AIR beacons)
> and maybe 116-136 (unless you want to listen to airplanes).
>
> Start with high-pass 25 MHz filter and FM 87-108 MHz notch.
>

Hi Piotr,

I am planning to do exactly the same like you describe above, i.e.
build a High pass filter that filters out anything < 30 MHz and
and in series with that a band reject filter 88-108 MHz (in future
depending on the need maybe even some more filters).

Do you have any experience with this?
I mean: Is it possible to cascade the filters just like that?
At least they should have a 'load' of 50 Ohms at the input and
output. If I would have one filter, it's no problem:
Antenna is 50 Ohm (input) and receiver is 50 Ohms (output).

But what if I want to cascade the filters? I reckon that I need
to put a 50 Ohms resitir in series with the separate filters...
Do you have any plans or schematics?

Cheers,
/Marc

4286. OT: What are IP2 and IP3?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 07:34:32 UTC
From: Toni - ec3dds <ec3dds@hotmail.com>
Message-ID: <o17m5vcgtrod525oqoedif901p7jh3jiap@4ax.com>
Source record: 123725

Hi,

Could anyone please explain in simple words what are IP2 and IP3? I know a bit about electronics and I understand what saturation and intermodulation products are, but I had never heard before the term "Interception point". I have already looked at Google, and I don't find any explanation, just many spec sheets or unrelated things.

Thanks

ec3dds - Toni

4287. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 08:03:01 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <VqF6a.46900$Se4.5620419@twister.southeast.rr.com>
Source record: 123726

The can didnt rust from the mineral oil on the inside, it rusted from the outside. I had this happen to a 55gal drum of the stuff. What a mess.

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message news:b2p2mtltu1@slb6.atl.mindspring.net...
> Dear Mr. Watts:
>
> [snip]
> "G. Watts" <gwatts@gb.nrao.edu> wrote in message
> news:3E4F0341.4B3C24BF@gb.nrao.edu...
> > Greetings,
> > My Heathkit Cantenna rusted through the bottom of the can and dumped the
> oil
> > all over the floor of the shack. I was using mineral oil so it wasn't
as
> bad
> > as it could have been, in the future I'll be putting the replacement can
> in a
> > 2 gallon plastic bucket or something similar. I plan to get a
replacement
> > can from my friendly paint dealer.
> [snip]
>
> Well you certainly didn't have mineral oil in that "cantenna", cuz nothing
> emersed
> in mineral oil ever rusts!
>
> My mineral own mineral oil filled cantenna has never leaked in over 50
> years!
>
> When you went to the druggist to buy your mineral oil, you were sold
> something
> else! Did you ever smell or taste that stuff? They sold you a "bill of
> goods"!
>
> BTW... I set my cantenna in one of my wife's turkey roasting pans, simply
> because
> the rust inhibiting mineral oil in the can tends to migrate and coat
> everything around
> it, but.... It never rusts!
>
> --
> Peter K1PO
> Indialantic By-the-Sea, FL.

> [Where everything rusts because the Atlantic ocean is only a few feet from
> my door!]
>
>
>

4288. Re: Dual band base antenna (VHF/UHF)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 08:57:07 UTC
From: F8BOE Olivier <f8boeNOSPAM@free.fr>
Message-ID: <3e5b2fe2$0$7899$626a54ce@news.free.fr>
Source record: 123727

Hello Javier,

A good dual band antenna would be a double bazooka.

Plans and formulas for home brewing are in the ARRL antenna book.

Best price: 10$ homebrewed

Broadband 144-146 MHz with SWR less than 1.5:1
works also on 3rd harmonic 430-436 MHz with SWR less than 1.5:1
Gain a little bit more than 0 dBd(ipole)
For out door use you can protect it with PCV tubing.

73 de F8BOE Olivier ...-.-

"Javier Henderson" <javier@KJSL.COM> a crit dans le message de news:
m1ptpjnede.fsf@prozac.kjsl.com...
> I'm looking for a 2m/440 base antenna... any recommendations?
>
> 73,
> -jav w6vms

4289. Re: What are IP2 and IP3?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 12:43:06 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <qxJ6a.2193$x_5.355410@news20.bellglobal.com>
Source record: 123728

"Toni - ec3dds"
> Could anyone please explain in simple words
> what are IP2 and IP3? ... I have already looked
> at Google, and I don't find any explanation...

It helps if you know the key words:
www.google.com/search?q=third+order+intercept+point
There's lots...

The 2nd hit on Google is really very good and clear.
www.matrixtest.com/Literat/MTN109.htm

4290. Re: OT: What are IP2 and IP3?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 12:45:39 UTC
From: wood@itd.nrl.navy.mil
Message-ID: <wood-2502030745390001@jbw-mac.itd.nrl.navy.mil>
Source record: 123729

In article <o17m5vcgtrod525oqoedif901p7jh3jiap@4ax.com>, Toni - ec3dds <ec3dds@hotmail.com> wrote:

> Hi,
>
> Could anyone please explain in simple words what are IP2 and IP3? I
> know a bit about electronics and I understand what saturation and
> intermodulation products are, but I had never heard before the term
> "Interception point". I have already looked at Google, and I don't
> find any explanation, just many spec sheets or unrelated things.
>
> Thanks

Hello. IP2 and IP3 refer to the second and third order "intercept points" of a device (e.g. an amplifier). The intercept point is a figure of merit that is a guide to the linearity of the device. Many active (as well as passive) devices exhibit "well-behaved" distortion and in the case of third order intermodulation products and third harmonics, for example, we observe that for each 1 dB increase in fundamental signal powers (usually done with two equal-amplitude test tones) at device input we obtain an increase of 3 dB in third order products at the output. For this same 1 dB increase at the input we also see that the fundamental signals at the output increase by the expected amount of 1 dB. The third-order intercept (IP3) point is an output power level (measured in units of dBm for example) defined as the intersection of the straight lines representing the input vs. output power level of the fundamental and third-order products. IOW, if we graph input power in dBm along the horizontal axis and output power in dBm along the vertical axis, these lines have slopes of 1 and 3, respectively. The higher the value of IP3, the more linear is the device.

For IP2 the same definition as above applies except the increase is 2 dB vice 3 dB and the line slope is 2 rather than 3. For most practical devices IP3 is generally more important than IP2 since even-order distortion reduction techniques are more readily implemented than odd-order. Sincerely,

John Wood (Code 5551) e-mail: wood@itd.nrl.navy.mil
Naval Research Laboratory
4555 Overlook Avenue, SW
Washington, DC 20375-5337

4291. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 14:19:01 UTC
From: richardharrison@webtv.net
Message-ID: <13982-3E5B7B55-810@storefull-2312.public.lawson.webtv.net>
Source record: 123732

Peter, K1PO wrote:
"The Venture Capitalists are a whole lot tougher than the group of technology jocks here on the rraa newsgroup."

Yes, and adversity is making them tougher all the time. Many have found themselves operators of the hot shot tech companies that the VC companies truly did not want to foreclose upon. They are sated with telecom.

Best regards, Richard Harrison, KB5WZI

4292. Re: Building a broadband scanner preamp with filters (also a good excuse to solder)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 14:26:17 UTC
From: Piotr Balcerzak <bpiotrek@yahoo.com>
Message-ID: <m%K6a.11304$cB3.66473@nnrp1.uunet.ca>
Source record: 123730
Cross-posted to:
rec.radio.scanner,rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.amateur.dx,rec.radio.amateur.antenna

"Marc" <marcje01@yahoo.com> wrote in message
news:ca10ea14.0302242326.5ecea056@posting.google.com...
> "Piotr Balcerzak" <bpiotrek@yahoo.com> wrote in message
news:<dJq6a.10875$cB3.60848@nnrp1.uunet.ca>...
> > Hi,
> >
> <cut article>
>
> >
> > You would probably want to block everything below 25 MHz
> > (scanner is not real HF radio and overloads easily), 87-108 MHz
> > (FM is very strong and not interesting), 152-153 MHz (unless
> > you want to decode pagers), 108-116 MHz (AIR beacons)
> > and maybe 116-136 (unless you want to listen to airplanes).
> >
> > Start with high-pass 25 MHz filter and FM 87-108 MHz notch.
> >
>
> Hi Piotr,
>
> I am planning to do exactly the same like you describe above, i.e.
> build a High pass filter that filters out anything < 30 MHz and
> and in series with that a band reject filter 88-108 MHz (in future
> depending on the need maybe even some more filters).
>
> Do you have any experience with this?
> I mean: Is it possible to cascade the filters just like that?
> At least they should have a 'load' of 50 Ohms at the input and
> output. If I would have one filter, it's no problem:
> Antenna is 50 Ohm (input) and receiver is 50 Ohms (output).
>
> But what if I want to cascade the filters? I reckon that I need
> to put a 50 Ohms resitir in series with the separate filters...
> Do you have any plans or schematics?
>
> Cheers,
> /Marc

Hi Marc,

I built high-pass 25 MHz filter because I had problems
with MVT9000 in low-VHF band (intermodulation).

After adding this filter between outdoor discone and
the scanner, the problems were gone.

You can find my design on:
http://www.geocities.com/bpiotrek/hpf25_e.html

I haven't try FM notch yet because I want to try building
my own circuit before spending money at store (building
circuits is a part of the hobby for me).

As for cascading the filters: it is possible but the resulting
characteristics will be a bit different than simple superposition
of the characteristics of both filters. I don't know how much
it could affect receiving.

I think it is very good idea to separate both filters with small
attenuator. The primary purpose of the device here is not
attenuating the signal but 'terminating' both filters so they can
work 'normally' (similar approach is very often used, for example,
in antenna amplifiers to suppress the results of variable load
impedance). Simple 3...6 dB attenuator in 'pi' or 'T' configuration
should do the job (50 ohm resistor put in series is not a good
solution because both filters should 'see' 50 ohms and not 50+50).

Cheers,
Piotr

4293. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 14:29:25 UTC
From: k3bu@aol.com
Message-ID: <20030225092925.20997.00000260@mb-fh.aol.com>
Source record: 123731

W3RV writes:
>
>So now I'm in a situation where I'd like to build & put up a 14 Mhz.
>version. Has to do with my installation options, an end-fed coax-fed
>dipole would be *much* easier to put up than the usual center-fed
>variety. Wrong time for sloppy engineering.

Discover Inverted Vee.
If you have one point to hang the antenna this is the simplest solution, all you need is wire, rope and coax to feed it. It gives 50 ohm impedance, no things to strip, nothing to match, etc. If you need low angle radiation, hang it as a sloper.

Yuri, K3BU

4294. Re: Tuning a J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 14:50:46 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e5b8055.349729703@news.galilei.com>
Source record: 123733

Hi Benny

The long section should measure 58.09 inches from the centerline of the T-Fitting.
You can add a pipe cap that is tapped to hold a 2 or 3 inch long brass machine screw for tuning the center frequency more precisely.

The stub length should measure 19.36 inches from the centerline of the T-Fitting.
You need to cut a little off of the stub.

Your connect point should be approximately 2-1/4 inches above the horizontal member, measured from the top of the horizontal member, not from the centerline.

It is sometimes tricky to find that sweet spot of 52 ohms, moving the coax down toward the horizontal member jumps the impedance to 300 ohms and moving it upward jumps to 750 ohms.
So the best place to start is at 2-1/4 inches and move downward in 1/16 increments.

If this is a single band J-Pole, it sometimes helps to feed the stub rather than the vertical, and your coax should be INSIDE of the mast section, exiting through a hole in the T-Fitting.

RG-58 is not the best choice for VHF operation, very lossy, but should still work. We use 9913 for almost everything above HF.

TTUL
Gary

4295. Re: Dual band base antenna (VHF/UHF)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 15:22:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5B8A44.10601@ieee.org>
Source record: 123734

F8BOE Olivier wrote:
> A good dual band antenna would be a double bazooka.
> Broadband 144-146 MHz with SWR less than 1.5:1
> works also on 3rd harmonic 430-436 MHz with SWR less than 1.5:1

A 3rd harmonic vertical is undesirable as a ground wave antenna
because most of the radiation takes off at an angle of about 50
degrees which gets wasted in space. For *ground wave operation*,
a 3rd harmonic vertical is a low gain antenna. If it hits all
the desired repeaters, then it is functional, but a 1/4WL or 5/8WL
vertical will certainly outperform a 1.5WL vertical in the ground
wave category.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4296. double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 15:25:19 UTC
From: "J. Sun" <jsun@lucent.com>
Message-ID: <b3g1t2$gtp@netnews.proxy.lucent.com>
Source record: 123735

Hi !

Some times ago, I read an artucle about boosting low signal (SNR) by
using two outdoor TV antennas together. Unfiortunately I forget about
the details, can some one help me on this and tell me the details about
how to do it. I lived in a town about 60 miles from new york city where
the tv broadcasting tower is located. I bought a antenna 2 years ago with
range about 60 miles and the reception is pretty good until the 911. I just
ordered a longer one and hope to improve the reception. I vaguely remember
reading the story about placing 2 antennas, that's why I ask this question.

Thanks !

Rus

4297. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 16:03:18 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <1gsl5v4bsqs7jbivla6bhceajcdabefika@4ax.com>
Source record: 123737

On Fri, 21 Feb 2003 18:30:50 -0700, mcduffie@xactcom.net wrote:

>On Fri, 21 Feb 2003 15:17:20 -0500, "Dr. Fred Hambrecht Sr"
><w4jle@charter.net> wrote:
>
>> Amateur radio equipment is set to read the sideband frequency not the
>> carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is
>> at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.
>
>I'm really disappointed to see this comment coming from an OO. It
>is incorrect. Where in the world did you come up with this 1.5KHz
>thing? Virtually all ham radio gear displays CARRIER frequency and
>you must calculate or visualize the actual SSB energy frequency.
>
>gm

Well, he is right if you go by the old FCC designations of side band frequencies for commercial use. In the U.S. marine bands the SSB frequency allocations used to be designated by the center frequency of the allotted bandwidth. You had to subtract 1.5 kHZ (if I remember right) to find the carrier frequency. An assigned frequency of 6230.5 had a carrier frequency of 6229.

That has since ben changed by the FCC and they now refer to them by carrier frequency.

But of course all ham frequencies are usually designated or referred to as carrier frequency when discussing them.

73
Gary K4FMX

4298. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 16:03:19 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <u0ul5vsbi3ttiqomnhonf6lb3dddihilh8@4ax.com>
Source record: 123736

A common error made by many when looking at how wide a signal is or what spectrum it covers is not considering the width of the receiver filter and where it lies.

Example: A lower SSB signal on 3999 kHZ will have most of its energy between 3999 and 3996 kHZ, assuming a 3 kHZ bandwidth of the transmitter signal.

However, when tuning across it with a receiver (with a 3 kHZ filter) the signal will appear to have energy up to 4.002 kHZ! Even if the signal is perfectly clean and has adequate upper side band suppression. This is because the receiver filter is offset lower in frequency by a little more than 3 kHZ in order to accommodate the lower side band signal.

You must keep this in mind when looking at "how wide someone's signal is". In order to see if there is any energy outside of the band you should switch the receiver to the opposite side band. Setting the dial at 4.000 mHZ with the receiver in the upper side band mode will let you listen to frequencies between 4000 and 4003 kHZ. If significant signal is heard in this mode then there may be "out of band" concerns. This of course would depend on how strong the wanted signal was at your location and how far down the "out of band" products were.

If you keep your receiver in the lower side band position you must raise the frequency as indicated on the dial by the width of the filter in order to determine any spurious or out of band products. Also the slope of the filter needs to be considered as to how much the signal is or is not attenuated at the edge of the filter you are using.

Most people do not consider that the filter in the receiver is not on the same frequency that the dial of the receiver is on.

73
Gary K4FMX

On Fri, 21 Feb 2003 16:48:42 -0500, "Dr. Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

>My response, while I incorrectly stated "all amateur radio equipment "is
>incorrect. My statement that if I observed nothing above the band edge I
>would move on was the operative statement.
>
>The receiver I am using at the moment for casual listening requires the
>offset (Yupiteru MVT-7100).

>
>Your vitriolic response toward a group of your fellow amateurs ,that serve
>only to aid you, is somewhat surprising. I am sorry that you feel that way,
>however nothing I say would sway your opinion. Thank you for your response.
>
>
>,
>
>"Walt Davidson" <walt99@tiscali.co.uk> wrote in message
>news:a56d5v8tirvsa4v217f6v2a13skhdrnlt2@4ax.com...
>> On Fri, 21 Feb 2003 15:17:20 -0500, "Dr. Fred Hambrecht Sr"
>> <w4jle@charter.net> wrote:
>>
>> >Amateur radio equipment is set to read the sideband frequency not the
>> >carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is
>> >at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.
>>
>> Garbage!
>>
>> (1) There is no such thing as "the sideband frequency", unless the
>> station is transmitting a single audio tone in SSB. The sideband is
>> normally a band of frequencies, so any dial reading of a "sideband
>> frequency" would be meaningless.
>>
>> (2) Present-day amateur radio equipment, in SSB mode, is set to read
>> the nominal carrier frequency of the SSB transmission.
>>
>> (3) If all ARRL OO's think as you do, there is a need for their
>> training program to be improved ... urgently.
>>
>> (4) You have just amply demonstrated why I oppose the RSGB's "Amateur
>> Radio Observation Service" idea, which is a clone of the ARRL's OO
>> scheme.
>>
>> >That being said, if I observed no signals above the band edge, I would
>move
>> >on.
>>
>> Thank heavens for small mercies!
>>
>> 73 de G3NYY
>>
>> --
>> Walt Davidson Email: g3nyy @freeuk.com
>

4299. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 16:03:19 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <u60m5v8i05jropm8nbr74daup1fspv7pq8@4ax.com>
Source record: 123738

On Sat, 22 Feb 2003 05:24:28 -0600, 'Doc <w5lz@cwis.net> wrote:

>
>
>"J. McLaughlin",
> Having said all that, can you tell me why my
>receiver (and yours too) seems to act just the
>opposite? The LSB signal is found above the 'center'
>or carrier frequency. The USB signal is found
>lower than the 'center' or carrier frequency. Our
>receivers say you are wrong...
> 'Doc

Hi Doc,

The reason that it appears "backwards" is because the filter in your receiver is not on the same frequency as your dial. In the lower side band mode your filter is actually 3 kc lower (2.1 kc + a little if using a 2.1 filter). So when you tune from a higher to lower frequency you start hearing the signal before your dial says you are on frequency. Because the filter gets there first.

If the lower side band signal was to transmit a 1 kHZ tone and your receiver was tuned 2 kHz higher than carrier frequency, you would hear a 3 kHZ note. (assuming you had a wide enough filter. Have to clarify that on this group) :>)

The reason that you are able to hear it is because your filter is lower in frequency than your dial says you are. Your receiver is actually listening between the dial frequency and 3 kHZ lower in frequency in the lower side band mode.

Example: Your dial says 3910. The SSB signal with the tone has a carrier frequency of 3908. Because he is transmitting a 1 kHZ tone on lower side band, the tone signal will be 1 kHZ below his carrier frequency (3908 - 1 = 3907). Or 3 kHZ below your dial (your carrier frequency)

On lower side band audio frequencies subtract from the carrier. On upper side band audio frequencies add to the carrier frequency.

If you switched your receiver to upper side band with out moving your dial you would no longer hear the 3 kHZ note. Your filter would now be listening from your carrier frequency and 3 kHz above.

With your dial set at 3910, in the lower side band mode you listen
between 3907 and 3910 kHZ. In the upper side band mode you listen
between 3910 and 3913 kHZ. (assuming 3 kHZ band width filter)

73
Gary K4FMX

4300. Need 2m. Isopole data sheet or measurements for hamband 147.000

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 16:09:50 UTC
From: David <davidaanderson@shaw.ca>
Message-ID: <izM6a.333119$Yo4.12054070@news1.calgary.shaw.ca>
Source record: 123739
Cross-posted to: alt.ham-radio,alt.ham-radio.eme,alt.ham-radio.vhf-uhf,alt.radio.antennas,rec.radio.amateur.antenna

I've somehow misplaced my data sheet for my 2 m. AEA Isopole, the last time it was used it was set for a Municipal frequency for an Emergency Exercise, so I know it's not adjusted to where I want it now. Does anyone out there have a data sheet they can scan and email me, or at least give me the settings for a centre frequency of 147.000?
Thanks; David VE7IFD

v e 7 i f d @ r a c . c a (remove spaces in email address)

--

David Anderson VE7IFD / VA7DA Lat.49deg 08min 06sec N Long.122deg 17min 45sec W. Mission Search & Rescue #31
Member: Mission ARC, Abbotsford ARC, FAVERESS (VE7RVA) Repeater Group.

4301. Re: What are IP2 and IP3?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 16:40:56 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <hUM6a.11718$Xa4.1798@fe01.atl2.webusenet.com>
Source record: 123740

I would have said that 'IP' stood for Intermodulation Product, not Intercept Point.

IP would then represent the requslting frequencies when two signals mix in an undesired manner.

If the two signals are on frequencies A and B, then IP2 would be at A+B and A-B. IP3 would be at 2A+B, 2A-B, 2B+A, and/or 2B-A.

Other higher order products can also be produced. The ones of primary concern are the odd numbers as they will be closer to the operating frequency.

Jim
N8EE

4302. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 16:47:43 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0302250847.7a148013@posting.google.com>
Source record: 123741

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<oh0m5vc1trdktkqldnvvueguu5ao5n7jhl@4ax.com>...
> On 24 Feb 2003 20:15:05 -0800, kelly@dvol.com (Brian Kelly) wrote:
>

> >Issues like conductor diameters/lengths/freq ratios, VFs, etc., come
> >into play. Does anybody out there know where I might find disussions
> >and/or the equations for coaxial antennas in some reasonable depth? I
> >haven't had any luck at all by searching the Web.
> >
> >Tnx!
> >
> >w3rv
>
> Hi Brian,
>
> 2M - 20M
> Make it the same, only 10 times bigger. Being larger, and lower
> wavelength mean that more things in nature intrude into the fields of
> this and disturb its tune (where are you going to hang it? What will
> it be near? ...).

I need a quickie 20m antenna I can run more or less horizontally from
a second-story window to a tree yonder just to get on the air and
familiarize myself with a new xcvr and to see if I can work a bit of
dx. A coaxial antenna would not need the second support a dipole would
require and I wouldn't have to run coax around the property. Which
would be a problem in this case. I'm not particulaly concerned about
field disturbances, I wish I had a field, any field to disturb and I
need to get past that fundamental problem first. A coaxial antenna
would meet the installation limtations almost ideally and I'll takes
what I gets as far as disturbances, patterns and the rest go.

> You might be able to trim it to tune for most
> ocassions - I would plan on a tuner.

The trimming part is the problem. I'd like to cut the element lengths
based on at least a bit of physics rather than just with the cutters.
The element lengths should be different because they would be
considerbly different diameters. I remember seeing the design
equations somewhere a long time ago, maybe in an old ARRL antenna
book. They seem to have dropped out the lore.

>
> One variant antenna I play with is a simple coax (separate and
> distinct from the driveline, however). It is connectored at both ends

> and the cable has several external taps to the shield along its
> length. As my whim dictates, I select a length of top radiator wire
> (connectored) and mate it to the far end and pull it and the cable
> beneath it up until one tap or another in the cable is at ground
> level, and I then tie the cable shield tap into my ground field. I
> then apply the transmission line to the near end connector.
>
> With the right combination of tap, length and wavelength, this could
> be called a JPole. I still have a tuner nearby.

Clever. But overkill for my very limited purposes.

I have a couple tuners right which are greased and ready to roll . . .

>
> 73's
> Richard Clark, KB7QHC

Tnx Richard,

w3rv

4303. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 16:48:55 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <N%M6a.11724$Xa4.7056@fe01.atl2.webusenet.com>
Source record: 123742

Try rotating the antenna. The station that you are trying to pick up is probably using a temporary tower somewhere in a different direction. You might also try getting it higher if you can.

Remember, when the twin towers came down a number of TV stations lost their transmitters. They had to scramble to find other towers in order to get back on the air. They may also be running lower power.

As for a more direct answer to you question, I question how well stacking TV antennas will work unless they are the single channel type (or you are interested in only one channel anyway). Remember that the stacking distance is dependent on frequency. The most you can expect from stacking two antennas is 3 dB, which may be noticeable but getting it up higher can have a bigger effect. A small preamplifier would also help.

Jim
N8EE

4304. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 17:01:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <188n5v0eeic2nktkefop1qvbap3tvnoa2e@4ax.com>
Source record: 123743

On 25 Feb 2003 08:47:43 -0800, kelly@dvol.com (Brian Kelly) wrote:

>
>The trimming part is the problem. I'd like to cut the element lengths
>based on at least a bit of physics rather than just with the cutters.
>The element lengths should be different because they would be
>considerbly different diameters. I remember seeing the design
>equations somewhere a long time ago, maybe in an old ARRL antenna
>book. They seem to have dropped out the lore.
>

Hi Brian,

The thicker part will lend itself to broadening the bandwidth (a lot of that has been discussed in the Bazooka thread). As for formulas, they are, and have always been, approximations that include the ordinary dictum to be prepared to trim to resonance. Cut both the conductor and the shield long (it would be more the pain to trim), and trim the conductor. It is unlikely that an imbalance will come to any grief.

>
>I have a couple tuners right which are greased and ready to roll . . .

Then you are in analysis paralysis if you simply want to test a rig. Having the "exact" dimensions will do nothing remarkable.

73's
Richard Clark, KB7QHC

4305. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 18:27:09 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302251027.7d7c520e@posting.google.com>
Source record: 123744
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b3b6l9rar1@helle.btinternet.com>...
> Ian wrote -
> > The conclusion is that the band/sideband convention was *already* in
> > place when the 9MHz phasing exciters appeared... so the true history is
> > even more mysterious.
>
> ==========

>
> By the way, what is the precise HF transmit frequency at which the LSB/USB
> switch takes place ?
> ---
> Reg.

I don't know really, but just as a stabbing guess, I'd say 10 mhz/30
meters. Like one mentioned almost all commercial comms are USB no
matter the freq. IE: aircraft for one example. Only we hams seem to
switch. MK

4306. How do you Extend the TX on a IC-756 PRO2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 18:36:02 UTC
From: fch <na@hle.com>
Message-ID: <3E5BB792.2D06EF53@hle.com>
Source record: 123757

.

4307. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 18:48:07 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <iudn5v418a70kkngc4tbtplceqgt3e9rqj@4ax.com>
Source record: 123745

On Mon, 24 Feb 2003 13:55:29 GMT, Dale Parfitt <parinc@gte.net> wrote:

>
>
>
>All of the CATV hardline I have seen is made for direct burial. A flooding/

Not around here.
The stuff is all bare aluminum with the overhead distribution lines
being 3/4 inch. The half inch stuff is rarely used "around here".
Other areas use different *stuff*

>self healing "goo" is placed between the poly jacket and aluminum shield.
>Go to any CATV supplier and they will have both splices and end fittings. The
>inner threads on the end fitting will allow an N connector to screw directly
>onto the fitting. The center conductor will, of course, have to be soldered to
>the N cnter pin. The splices allow for quick filed repairs. The end fittings
>however do require a coring tool to properly prepare the dielectric-
>connectors cannot be installed w/o it. Make friends with your local cable
>company and borrow the tool.

This sure sounds different than what they use around here.

What the cable company uses here is kinda sorta similar to a barrel
connector, but uses compression over the outside of the cable. No
soldering, You trim the outer jacket back, just as when installing a
PL259, leave the center connector sticking out the required distance.
When you insert the splice the inner conductor slides into the center
fitting (just like the barrel connector). They are easy to use and
quickly installed. With practice you can install one in well less
than a minute.

The big job is finding them.

As with cable sizes, YMMV with different companies using different
sizes as their own standards.

A tubing cutter, and either 3/4, or 1/2 inch compression fittings also
work quite well. (on those respective cables) When using brass
connectors, use a little Pentrox if you can find it.

Here's an example of the 3/4 inch fitting going to UHF fitting.
http://www.rogerhalstead.com/conn.htm
>

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com

N833R World's oldest Debonair? (S# CD-2)
>Dale W4OP
>

4308. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 19:51:45 UTC
From: dplatt@radagast.org
Message-ID: <v5niahf29f1fd@corp.supernews.com>
Source record: 123746

In article <3E5AF56B.E71E33A0@earthlink.net>,
Wayne Watson <mtnviews@earthlink.net> wrote:

>Yes, I have the CD and the magazine. Why they pulled the pages, I do not know.

I've read that it was pulled, because it wasn't actually being read all that much. The magazine's owners felt that other uses of the available pages would be of greater interest to the magazine's readers (i.e. greater readership -> more sales -> higher advertising revenue, I suppose).

Sad, really, that interest in actually _doing_ science on an amateur/homebrew basis has sunk so low.

It might also be due to the whole craze for a "risk free" universe, and the "sue everybody if anything goes wrong" mentality. If you look back through the CD-ROM contents, you'll find quite a lot of experiments which I think would never be suggested today, as they involve the use of chemicals, voltages, physical processes, etc. which could pose a risk to the experimenter if not handled properly. [The CD tags these with a warning notice.] This trend may have limited the quality of the experiments which could be proposed in The Amateur Scientist to some degree.

[From what I've heard, it seems that kids' introductory chemistry sets are far less interesting than they were back when I was a sprout, as the selection of chemicals included has been trimmed back to those which are at the "nontoxic, harmless as mice" end of the scale.]

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

4309. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 20:19:21 UTC
From: dplatt@radagast.org
Message-ID: <v5nju9d2s1b6ef@corp.supernews.com>
Source record: 123747

>Hi !
>
>Some times ago, I read an artucle about boosting low signal (SNR) by
>using two outdoor TV antennas together. Unfiortunately I forget about
>the details, can some one help me on this and tell me the details about
>how to do it. I lived in a town about 60 miles from new york city where
>the tv broadcasting tower is located. I bought a antenna 2 years ago with
>range about 60 miles and the reception is pretty good until the 911. I just
>ordered a longer one and hope to improve the reception. I vaguely remember
>reading the story about placing 2 antennas, that's why I ask this question.

I first read about this technique in an article in Audio Magazine,
back in the early part of the 1970s. A decent library might have back
issues, either on paper or microfilm - check the December issue of
each year for the annual index. The Audio article was oriented
towards the use of FM antennas, but most of the information would
apply to television antennas.

The basic technique is to use two or more antennas (usually
directional ones) which are "stacked" either horizontally or
vertically. You place the antennas, and adjust the lengths of the
feedlines to them, so that the signals from the desired station are
combined in-phase.

If your only problem is too weak a signal, you can stack the antennas
vertically on a single mast for additional gain. Using a higher
mast may very well help matters a lot, even with just one antenna...
that's one of the first things I'd suggest trying.

If there's a specific source of interference which is hurting
reception (e.g. another transmitter on the same or an adjacent
channel, a multipath reflection from a nearby building or hill), you
can place and phase the antennas so that the signals from the
interference source are 180 degrees out of phase when combined, and
thus cancel out. This usually requires placing the antennas on two
separate masts (separated horizontally) with the antenna placement,
and the feedline lengths calculated and tweaked to achieve the proper
phasing of the desired and undesired signals. Figuring out the proper
placement of the antennas, and the selection of the feedline lengths
is an exercise in geometry - there are multiple solutions available.
You'll need to know the directions from which the desired, and
undesired signals arrive.

You'll need to pay a bit of attention to the impedances of the
feedlines, in order to avoid reflections at the point where you
combine the two feedlines from the antennas into a single downfeed to

your receiver... these reflections might cause ghosting. Most TV antennas have 300-ohm feedpoint impedances, usually stepped down to 75 ohms via a balun, and use RG-6 or RG-59 75-ohm feedline. If you combine the two feedlines with a BNC T connector (or just solder 'em together) you'll end up with 37.5 ohms. A quarter-wavelength section of RG-58 could then be used to transform this up to around 72 ohms, which would be a good match to an RG-6 feedline to your TV set.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

4310. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 20:23:32 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <09Q6a.11874$Xa4.5480@fe01.atl2.webusenet.com>
Source record: 123748

I didn't know the third edition was out yet. I will certainly want to get one myself, and would recommend it.

Mostly I use my second edition, as my first edition is signed by the author and stays on the shelf. How much do you think it would be worth?

By the way, it probably isn't known much outside the local area, but the XYL of W8JK died last summer. They had been married over 60 years.

Jim
N8EE
"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E580C25.1F077267@attbi.com...
> My Old, old, old copy of Kraus, 1950, has died and is buried.
>
> For a replacement should I buy 1950 used, the 1988 edition, or the 2001
> edition? Why? What is offered in later editions?
>
> Deacon Dave, W1MCE

4311. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 20:28:03 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5BD1D3.C9BFAAEF@cwis.net>
Source record: 123749

Brian,
Your 'sloppy' method of making 'coaxial' dipoles
should work as well on 20 meters as it does on 2 meters.
The only 'magic' number needed is for a 1/4 wave length,
234 / f (in Mhz) = feet. 'Crank' the numbers through the
formula, and just do as you did for the 2 meter antenna.
The required length of heat-shrink is going to be quite
a bit more than for 2 meters (as if you didn't know that),
so you might just consider sealing the center where you
roll the braid back...
'Doc

4312. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 20:40:30 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <kjen5v8jo1pcicakken5jtrb3lngep91v4@4ax.com>
Source record: 123750
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Mon, 24 Feb 2003 12:28:13 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> Without _any_ poly jacket, you need to worry about electrolysis and/or
>> the PH of the soil. If it were me: I'd bury it in some black poly pipe.
>> 'Twould be a feat to stuff in a looooooong run of it...

Tain't all that bad. Just use a large enough pipe and don't forget to
get some "wire soap" which is available at most electrical supply
stores. The ugly looking yellow soap makes the cable slippery and
allows pulling far more through a pipe or conduit that seems possible.
You just slop the stuff on, don't use sparingly.
I had two 350 foot runs plus a smaller quasi air core cable and two
runs of 9913.

Then again, at one location where we had dry sandy soil I just buried
the stuff with no extra protection.

>================
>Suggest you use flexible 'alkathene' (polyethylene) water pipe
>In Europe (incl Britain) it is available in 20 , 32 mm diameter and larger
>sizes
>;colour is blue.

My favorite is either the larger sizes of plastic conduit (1/4 inch
wall for mechanical protection and sweep "L"s for corners.

I've also used 5 inch plastic sewer pipe with good results.

>I use this pipe also for coax cable with copper braid and black sheathing ,
>ie for underground 75 Ohms coax to a TV satellite dish as well as for RG

For my two C-band dishes I just bury the cable direct.

>316 ,50 Ohms coax to a vertical HF antenna.
>It is important that the pipe at the outdoors end is properly sealed to
>prevent
>water running into it.

Water was/is the least of my worries. I use a water trap/drain just
before the pipe goes through the basement wall.
The trap is a 45 degree fitting with a cap over the bottom. The cap
has a bunch of 1/8th inch holes drilled in it to allow the water to
drain. The 45 is on the bottom of the pipe and in the sandy backfill
for the basement.

>Alternatively (that's what I have done) where pipe with coax come above
>ground outdoors there is a half circle bend resulting in the pipe opening
>pointing downwards ,hence rain water can not enter and the circular opening
>between pipe and coax cable is left open for breathing.
You don't have problems with varmints, bees and bugs, do you? <:-))
I removed 14 Yellow Jacket nests from the one satellite dish alone
last summer. The things got into the vent for the kitchen range, under
the sewer pipe vent flange, in electrical boxes, In the eaves, in to
soffit, and under the siding near the peak of the roof on the south
end. That particular nest was so large it pulled the siding away from
the house and had to be renailed. I used 14 cans of Wasp and Hornet
killer. As I recall I removed over 40 nests...only got stung4 times.
Three by Yellow Jackest and one by a wasp.

I had a TV tower stacked in the back yard. They built nests in the
legs. The things even built nests in the vertical mast at the top of
my tower, making it more than a little difficult and hazardous to work
on the antennas.

I use a " 20 X 20 Hoffman box" at the end of the pipe.
http://www.rogerhalstead.com/cablebox.htm
The conduit fitting is mounted right on the bottom of the box. All
outside openings are *sealed* with the expanding insulating foam.

NOTE, I am no longer using the 3/4 inch hard line.

Cables come down the tower, form a loop and then enter the box through
a 8 inch long conduit stub. The Yellow Jackets went up the cables and
built a nest in the box., but due to the seal they couldn't get into
the house. Prior to sealing I even had mice crawl up the cables into
the box and then follow the 75 foot run of conduit into the house.

>I realise the latter method might not be suitable for hardline coax because
>of the bend's radius.

Use a Sweep L, or in the case of the flexible plastic pipe, just bend
the whole works over about a 1.5 foot radius. (half meter radius)
If the plastic pipe/tube is a relatively close fit it will help
prevent the aluminum jacket from collapsing. OTOH not much can be
done about the thin jacket on half inch hard line except a wide radius
bend and being very careful..

I'd still seal the outside end, but leave the inside end open. The
thing only needs one end open for breathing and I prefer it not breath
in high humidity and critters.

BTW, the Tower project and station are shown at
http://www.rogerhalstead.com/tower.htm . NOTE, this is a large page
with lots of photos and runs on the order of 2 to 3 megs so unless you
have a fast connection it will take forever to load.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>Frank gm0csz.kn6wh@ntlworld.com
>
>
>
>

4313. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 21:06:33 UTC
From: "J. Sun" <jsun@lucent.com>
Message-ID: <b3glss$lk1@netnews.proxy.lucent.com>
Source record: 123751

Thanks for the responses !
After raeding the responses about stacking, I guess it seems
impossible to take care of the phase problem for every channels.
How about a pre-amp or amplifier ? what is the difference between
pre-amp and amp, i.e. in what condition pre-amp or amp will help ?

Thanks !

Rus

"J. Sun" <jsun@lucent.com> wrote in message
news:b3g1t2$gtp@netnews.proxy.lucent.com...
> Hi !
>
> Some times ago, I read an artucle about boosting low signal (SNR) by
> using two outdoor TV antennas together. Unfiortunately I forget about
> the details, can some one help me on this and tell me the details about
> how to do it. I lived in a town about 60 miles from new york city where
> the tv broadcasting tower is located. I bought a antenna 2 years ago with
> range about 60 miles and the reception is pretty good until the 911. I
just
> ordered a longer one and hope to improve the reception. I vaguely remember
> reading the story about placing 2 antennas, that's why I ask this
question.
>
> Thanks !
>
> Rus
>
>

4314. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 21:24:36 UTC
From: dplatt@radagast.org
Message-ID: <v5nnokj6sugv0d@corp.supernews.com>
Source record: 123752

In article <b3glss$lk1@netnews.proxy.lucent.com>,
J. Sun <jsun@lucent.com> wrote:

>Thanks for the responses !

>After raeding the responses about stacking, I guess it seems
>impossible to take care of the phase problem for every channels.

You probably can't do it with a single set of feedlines.

You could probably do it pretty well with a relay-switching system of some sort, which would let you switch in, or out, some additional lengths of feedline for one antenna or the other. You'd need to switch the phasing around, remotely, when you changed channels.

It's possible, maybe even practical, but almost certainly a lot of bother.

>How about a pre-amp or amplifier ? what is the difference between
>pre-amp and amp, i.e. in what condition pre-amp or amp will help ?

A preamp mounted as close as possible to the antenna itself can help overcome signal losses in the feedline. In cases where you're getting a tolerable signal at the antenna itself, but are losing too much signal in the coax (long run or bad coax or trying to feed multiple TVs through a splitter), an antenna-mounted amp may help...

... if you aren't already getting a really strong signal from a local station. If you are, then the amp may be overdriven by the strong input, and you can end up with harmonic and intermodulation products in the signal. This can cause the strong signal to wipe out weaker signals at other frequencies.

If the signal at the antenna itself is already so noisy and weak that you don't get a decent picture there (with only a few feet of feedline), then an amplifier will probably not help.

An indoor amplifier (mounted near the TV set) is almost certainly useless, or worse than useless.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4315. Re: Heathkit Cantenna Oil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 21:35:58 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3gnjj$61e$1@slb3.atl.mindspring.net>
Source record: 123753

Heath Cantenna leaking?

I justt set mine in one of my wife's old roaster pans. That way if
the bottom ever does give out I'm safe. But... I've had my Heath
Cantenna full of pure mineral oil now for over 25 years and still
no sign of rust or leaking.
--
Peter K1PO
Indialantic By-the-Sea, FL

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:VqF6a.46900$Se4.5620419@twister.southeast.rr.com...
> The can didnt rust from the mineral oil on the inside, it rusted from the
> outside. I had this happen to a 55gal drum of the stuff. What a mess.
>
> "Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
> news:b2p2mtltu1@slb6.atl.mindspring.net...
> > Dear Mr. Watts:
> >
> > [snip]
> > "G. Watts" <gwatts@gb.nrao.edu> wrote in message
> > news:3E4F0341.4B3C24BF@gb.nrao.edu...
> > > Greetings,
> > > My Heathkit Cantenna rusted through the bottom of the can and dumped
the
> > oil
> > > all over the floor of the shack. I was using mineral oil so it wasn't
> as
> > bad
> > > as it could have been, in the future I'll be putting the replacement
can
> > in a
> > > 2 gallon plastic bucket or something similar. I plan to get a
> replacement
> > > can from my friendly paint dealer.
> > [snip]
> >
> > Well you certainly didn't have mineral oil in that "cantenna", cuz
nothing
> > emersed
> > in mineral oil ever rusts!
> >
> > My mineral own mineral oil filled cantenna has never leaked in over 50
> > years!
> >

> > When you went to the druggist to buy your mineral oil, you were sold
> > something
> > else! Did you ever smell or taste that stuff? They sold you a "bill of
> > goods"!
> >
> > BTW... I set my cantenna in one of my wife's turkey roasting pans,
simply
> > because
> > the rust inhibiting mineral oil in the can tends to migrate and coat
> > everything around
> > it, but.... It never rusts!
> >
> > --
> > Peter K1PO
> > Indialantic By-the-Sea, FL.
> > [Where everything rusts because the Atlantic ocean is only a few feet
from
> > my door!]
> >
> >
> >
>
>

4316. Re: Tuning a J-Pole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 21:38:42 UTC
From: Benny Miller <bennymiller@core.com>
Message-ID: <v5nolqf6nddk75@corp.supernews.com>
Source record: 123754

Update. I found my error. Thank you Roger for pointing that out to me :)
I had picked up the wrong SWR meter. I was using my HF meter instead of the
VHF/UHF meter.
Thanks for your advice.
Benny
KC8TRN

4317. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 22:02:15 UTC
From: richardharrison@webtv.net
Message-ID: <10804-3E5BE7E7-705@storefull-2315.public.lawson.webtv.net>
Source record: 123755

Brian Kelly wrote:
"I need a quickie 20m antenna."

A coaxial antenna is a vertical dipole with a hollow tube skirt providing access to the drivepoint at its center.

Formulas are used at VHF to use large rods and skirts to make the antenna so that it has more bandwidth and so its drivepoint impedance is brought down to better match the 50-ohm coax commonly used. Using these, I scale the rod to about 10 inches dia.and the skirt at 30 in dia with their lengths shortened to account for reduced velocity with the large diameters. This is not likely practical at 20m.

At 20m, the skirt diameter is likely to be little larger than the coax and the lengths of the skirt (braid) and vertical rod (wire) placed above it are each likely to be about 1/4-wave, less 5%, at 14.25 MHz. I calculate about 16 ft and 5 in, for each.
You might trim the skirt for a match as it will appear electrically a little longer than the upper antenna section as it is fatter. This will trend to a better balance also, perhaps. But it`s no big deal. You should be close enough without trimming anything. Surroundings will likely detune the antenna more than length error, unless I made a mistake.

Best regards, Richard Harrison, KB5WZI

4318. Cushcraft VS Force12

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 22:29:17 UTC
From: John <jwhughes@bellsouth.net>
Message-ID: <3e5be90a$1@post.newsfeed.com>
Source record: 123756

*** post for FREE via your newsreader at post.newsfeed.com ***

Considerig the Cushcraft mav5 and the Force 12 Sigma 5. Any user comments on either of these? Their appeal is no radials, and use in a townhome type environment.

Thanks

John, ks4xn

-----= Posted via Newsfeed.Com, Uncensored Usenet News =-----
http://www.newsfeed.com - The #1 Newsgroup Service in the World!
------== 100,000 Groups! - 19 Servers! - Unlimited Download! =-----

4319. Re: How do you Extend the TX on a IC-756 PRO2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-25 23:44:35 UTC
From: jgboyles@aol.com
Message-ID: <20030225184435.27764.00000153@mb-ms.aol.com>
Source record: 123758

>How do you Extend the TX on a IC-756 PRO2?

Throw it out the window while you are transmitting. This brings up an actual antenna question: how do you keep the transmission line hooked to the rig while it is flying out the window?
I guess he means how to modify the rig, I have no idea, is that legal?
73 Gary N4AST

4320. Re: How do you Extend the TX on a IC-756 PRO2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 00:30:29 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <Vg2dnfQ5nZo-l8GjXTWc2Q@crocker.com>
Source record: 123759

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20030225184435.27764.00000153@mb-ms.aol.com...
> >How do you Extend the TX on a IC-756 PRO2?
>
> Throw it out the window while you are transmitting. This brings up an
actual
> antenna question: how do you keep the transmission line hooked to the rig
while
> it is flying out the window?
> I guess he means how to modify the rig, I have no idea, is that legal?
> 73 Gary N4AST

actually, yes. the question should be, if he operates it outside the amateur bands does he have a license to do so? this answer may also be yes if he belongs to an organization like MARS. now if he belongs to alfa-tango or something like that, then no, the use of the modified rig is not legal.

the best way on the internet to find modifications for rigs is to do a search on your favorite engine for the model number with added words like 'modification' or 'mods'.... just expect to find a bunch of them in japanese.

4321. Re: Cushcraft VS Force12

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 00:38:40 UTC
From: paulfriedman@attbi.com
Message-ID: <k0U6a.236051$2H6.4339@sccrnsc04>
Source record: 123760

Comments on the Sigma 5:

Yes, it is vertical dipole, so no radials -- it needs to be isolated from the ground.

Needs a control cable and low amp power to the control box (which is very cheaply constructed -- unusual for Force 12)

Very easy to assemble and disassemble: takes about 10 minutes or less for either.

Very portable. Light weight, breaks down into small units. Can easily be supported in a large bucket with concrete or even sand.

Decent performance. About as good (or bad) as my Butternut -- a little better on the WARC bands and a little worse on 10m. About the same on 15 and 20) -- no science here, just S-meter readings and reports. Broader bandwidth than the Butternut -- particularly on 20m.

Everyone I have heard of finds the 20m coil set too low in frequency. If you are mostly a SSB operator, you will want to open the protective box and futz the 20m coil. Instructions are provided, but an unnecessary PITA (note: even if you are primarily a CW operator, you will probably want to move the center frequency up a bit).

I hope that helps.

Paul

"John" <jwhughes@bellsouth.net> wrote in message
news:3e5be90a$1@post.newsfeed.com...
> *** post for FREE via your newsreader at post.newsfeed.com ***
>
> Considerig the Cushcraft mav5 and the Force 12 Sigma 5. Any user comments
on
> either of these? Their appeal is no radials, and use in a townhome type
> environment.
>
> Thanks
>
> John, ks4xn
>
>
>
>
> -----= Posted via Newsfeed.Com, Uncensored Usenet News =-----
> http://www.newsfeed.com - The #1 Newsgroup Service in the World!

> -----== 100,000 Groups! - 19 Servers! - Unlimited Download! =-----
>

4322. Re: How do you Extend the TX on a IC-756 PRO2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 00:39:04 UTC
From: dplatt@radagast.org
Message-ID: <v5o3587kvru65d@corp.supernews.com>
Source record: 123761

In article <20030225184435.27764.00000153@mb-ms.aol.com>,
JGBOYLES <jgboyles@aol.com> wrote:

> I guess he means how to modify the rig, I have no idea, is that legal?

Yup. It's legal to modify your own equipment.

Using it to transmit outside the amateur bands wouldn't be, most
likely. Most other bands either require a licence, or require that the
equipment be certificated for transmission on those bands... and very
little amateur-band equipment is so certificated.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4323. Re: How do you Extend the TX on a IC-756 PRO2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 00:42:46 UTC
From: paulfriedman@attbi.com
Message-ID: <a4U6a.234670$SD6.11700@sccrnsc03>
Source record: 123762

It is legal for MARS and such.

The transmission line answer: Belden 9914 Bungee Coax. The core is red Kryptonite which expands and contracts nicely. The shield is made from the stuff used for the Federal budget projections: it is any size you want it to be.

Paul AB0SI

"JGBOYLES" <jgboyles@aol.com> wrote in message news:20030225184435.27764.00000153@mb-ms.aol.com...
> >How do you Extend the TX on a IC-756 PRO2?
>
> Throw it out the window while you are transmitting. This brings up an actual
> antenna question: how do you keep the transmission line hooked to the rig while
> it is flying out the window?
> I guess he means how to modify the rig, I have no idea, is that legal?
> 73 Gary N4AST

4324. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 00:42:49 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <sc1o5vstjnufl2ev9mkne3vib4gd5bhbed@4ax.com>
Source record: 123763

On Tue, 25 Feb 2003 11:48:55 -0500, "JLB" <IHateSpam@nospam.net>
wrote:

>Try rotating the antenna. The station that you are trying to pick up is
>probably using a temporary tower somewhere in a different direction. You
>might also try getting it higher if you can.
>
>Remember, when the twin towers came down a number of TV stations lost their
>transmitters. They had to scramble to find other towers in order to get
>back on the air. They may also be running lower power.
>
>As for a more direct answer to you question, I question how well stacking TV
>antennas will work unless they are the single channel type (or you are
>interested in only one channel anyway). Remember that the stacking distance
>is dependent on frequency. The most you can expect from stacking two
>antennas is 3 dB, which may be noticeable but getting it up higher can have
>a bigger effect. A small preamplifier would also help.
>
Stacking works very well both vertically and horizontally and 3 db is
twice as much signal, which can be well worth the effort in cases
where the signal is marginal to start.

I have used both vertically and horizontally stacked UHF TV antennas
as well as quadrature arrays with good results. However even at UHF
the quadrature array is pretty large and the gain (6 db at best) is no
where near what you would get from an antenna, or combiner mounted pre
amp..
.
Spacing is not critical, BUT... <add a few weasel words for just in
case> If you get the two antennas too close there is very little gain.
Then as you move out, secondary (and many other) side lobes appear.
I use either 1.6 wave length (think that's what it was) spacing, or
about 3/4 to one boom length spacing.

Side by side stacking as in the quadrature array, can result in some
very strong side lobes. I ended up getting some UHF antennas a bit
close and there were three lobes either side of the main lobe that
were so strong it made it difficult to point the antenna.Opening the
spacing by just a couple of feet broadened the main lobe a bit and
eliminated, or weakened the side lobes.

Vertically stacking the antennas is a bit easier from the side lobe
standpoint. Surprisingly, I have found installations where I had to
lower the antenna(s) a few feet for the best signal from a particular
station. I put the antennas as high as I can get them in a practical

manner. Then I adjust the height a bit for the weakest station (if need be) If all the desired stations come in well...don't try and tweak it for a little more. The old motto of, "If it ain't broke, don't fix it" really holds true.

I cut all coax cables to equal lengths with no effort to make them a multiple of a quarter wave (useless when trying to cover the entire UHF TV band). Then I use a signal combiner with a very short lead from there to a pre amp.

Antenna mounted pre amps work great. Those mounted inside are't worth the time to install, unless you have a very short run of coax. If you run 2-meters, be sure to set the FM filter to ON.

With 228 feet of feed line and the remote pre amps I receive UHF stations easily out to 125 miles over the flat lands of lower Michigan.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>Jim
>N8EE
>
>

4325. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 01:24:57 UTC
From: richardharrison@webtv.net
Message-ID: <26353-3E5C1769-738@storefull-2316.public.lawson.webtv.net>
Source record: 123764

Ian, G3SEK wrote:
"The CFA has been tested by a large broadcasting organisation in the U.K.."

An honest scale model test would satisfy many as a first proof. It`s a lot cheaper and conditions are more closely controlled.

Fvery full sized implementation of a scaled precursor antenna that I`ve known of has worked full-size as the smaller model indicated it would.

Best regards, Richard Harrison, KB5WZI

4326. Re: How do you Extend the TX on a IC-756 PRO2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 02:27:20 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3E5C2608.ED7E47B6@bloomer.net>
Source record: 123765

Yes, as hams we can work on and modify our equipment. As long as it
meets technical specs of the FCC (in the USA) and he only transmits in
bands authorized to him, all legal.

Scott
N0EDV

JGBOYLES wrote:
>
> >How do you Extend the TX on a IC-756 PRO2?
>
> Throw it out the window while you are transmitting. This brings up an actual
> antenna question: how do you keep the transmission line hooked to the rig while
> it is flying out the window?
> I guess he means how to modify the rig, I have no idea, is that legal?
> 73 Gary N4AST

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4327. Re: Cushcraft VS Force12

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 02:58:53 UTC
From: "Pat St. Jean" <stjeanp@pat-st-jean.com>
Message-ID: <Jy6dnaYI2oDwsMGjXTWcpw@august.net>
Source record: 123766

John <jwhughes@bellsouth.net> wrote:
> Considerig the Cushcraft mav5 and the Force 12 Sigma 5. Any user comments on
> either of these? Their appeal is no radials, and use in a townhome type
> environment.

Hi John,
I can't speak for the MAV5, but I've had a Sigma-5 for about 5 months
or so now and love it. I've had a little problem with RF feedback,
especially on 20m, but I'm chalking that up to operator error and cheap
coax.
Here's a few of the QSOs I've had with it:

10m: 6Y, 9A, D4
12m: 8P, CO, J3
15m: JA
17m: P4, TI, YV
20m: HR, CT3, EA8

Most of my contacts have been on 10m, but that's a personal thing, not
any indication of the antenna.

Pat
--
Pat in Lewisville K0OOK '97 XLH 883 (Rocinante)
BS#140 EKIII rides with me
http://www.pat-st-jean.com/stjeanp All things Pat
http://www.pat-st-jean.com/products.html Software for paper money collectors

4328. Re: Tower Cams?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 03:58:23 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <zXW6a.51758$9i7.3440392@twister.southeast.rr.com>
Source record: 123767

I had one in my backyard for 2 years. The neighbors all agreed it as a good for security then a couple moved in that did not aprove of it(they had a hot tub)Never had it on the internet though. Camera was a "come by" so I dont have any idea what it was worth. I would like to put it back up, enjoyed watching the squirrels.

4.5438634@twister.southeast.rr.com...
> I had one installed for the past two years but ended up donating it to a
> sailing club. It worked great! Mine just wasn't being utilized enough.
> http://www.wincam.com is the site. The total cost was about 600 dollars,
> but I think they have a cheaper model now. Mine was mounted on a pole in
my
> backyard. It endured some pretty harsh weather, including major humidity
and
> heat for days on end during the summer. Never had any problem. Very easy
> software and easy to set the timer....3 seconds to once a year if you
want.
>
> Alan
> WN4HOG
>
> --
> Windsurfing Club: http://www.ibscc.org
>
>
> "Gary" <k5jfp@yahoo.com> wrote in message
> news:JVp6a.14507$O41.560895@twister.austin.rr.com...
> > Anybody out there successfully done a ham tower cam? I'd like to do
> > something simple and inexpensive that would attach to my antenna mast
and
> > provide "decent" downlinked or wired color imagery from up top. There
are
> > all the usual considerations, of course, power source, survival in the
> > weather, lightning, etc.
> >
> > Thanks in advance.
> >
> > Gary W5ZL
> >
> >
>
>

4329. Re: What are IP2 and IP3?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 04:07:31 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e5c410e_3@news1.prserv.net>
Source record: 123769

No, Jim;

IP is used in a pretty standard test and specification meaning intercept point. Goes back many, many years. I believe there is an IEEE publication which explains the concept, how to perform the tests, and pitfalls to watch out for, but I don't have the number at hand.

--
Crazy George
Remove NO and SPAM from return address

"JLB" <IHateSpam@nospam.net> wrote in message news:hUM6a.11718$Xa4.1798@fe01.atl2.webusenet.com...
> I would have said that 'IP' stood for Intermodulation Product, not Intercept
> Point.
>
> IP would then represent the requslting frequencies when two signals mix in
> an undesired manner.
>
> If the two signals are on frequencies A and B, then IP2 would be at A+B and
> A-B. IP3 would be at 2A+B, 2A-B, 2B+A, and/or 2B-A.
>
> Other higher order products can also be produced. The ones of primary
> concern are the odd numbers as they will be closer to the operating
> frequency.
>
> Jim
> N8EE
>
>
>

4330. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 04:16:34 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e5c410f_3@news1.prserv.net>
Source record: 123770

Kraus, 2nd edition, P. 735, paragraph 16-6 "Sleeve Antennas".
Johnson and Jasik, 2nd edition, page 4-18, paragraph 4-5 "Sleeve Dipoles".

--
Crazy George
Remove NO and SPAM from return address
"Brian Kelly" <kelly@dvol.com> wrote in message
news:d22b54c3.0302242015.c2dbb8c@posting.google.com...
> I'm having bad time coming up with the proper cookbook design
> equations for designing/building coaxial antennas. I'm not a newbie to
> the things, I've offhandedly put together a number of them for yakking
> the 2m machines. But I never bothered with any of the numbers beyond
> the fact that a quarter wave on 2m is well known to be a nominal 19".
> And that's as far as I ever took the "engineering". I peeled two feet
> off the jacket of the RG58 and rolled the exposed braid back over the
> remaining jacket (south end). Annoying process. After "firming up" the
> braid over the jacket I nipped both the braid and the center conductor
> (north end, still encased in it's dielectric material) to 19" lengths.
> From there I laid a length of nylon cord alongside the north end, slid
> heat shrink tubing over the whole shebang and sealed it. Net result
> has been a number of <$2 very compact hang-anywhere vertical 2m
> dipoles which worked.
>
> I suspect that getting away with my sloppy "antenna engineering" on 2m
> is allowable. Hitting the machines with a spoon soldered to the center
> thingy of a PL-259 would probably work around here too so I didn't
> bother cranking the numbers.
>
> So now I'm in a situation where I'd like to build & put up a 14 Mhz.
> version. Has to do with my installation options, an end-fed coax-fed
> dipole would be *much* easier to put up than the usual center-fed
> variety. Wrong time for sloppy engineering.
>
> Issues like conductor diameters/lengths/freq ratios, VFs, etc., come
> into play. Does anybody out there know where I might find disussions
> and/or the equations for coaxial antennas in some reasonable depth? I
> haven't had any luck at all by searching the Web.
>
> Tnx!
>
> w3rv

4331. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 04:21:22 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <ttfo5vcagggh303vidn29463ce6k4cna4e@4ax.com>
Source record: 123768

On Tue, 25 Feb 2003 16:06:33 -0500, "J. Sun" <jsun@lucent.com> wrote:

>Thanks for the responses !
>After raeding the responses about stacking, I guess it seems
>impossible to take care of the phase problem for every channels.

If you use a combiner instead of a coax matching harness "matching" is
not a problem.

Yes there are phase differences that affect the gain, but in vertical
stacking you just use the ideal spacing (between antennas)for the
lowest frequency you are going to use, or for that matter, a
compromise spacing a few channels above the lowest channel you will be
using.

OTOH, it's easier and cheaper to put the largest antenna you can use
as high as you can get it and use the antenna mounted preamp.

>How about a pre-amp or amplifier ? what is the difference between
>pre-amp and amp, i.e. in what condition pre-amp or amp will help ?

I use a plain old RadioShack remote amp with the FM trap. Works great
for me. Course the antenna is about 90 feet up, side mounted on the
tower.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>Thanks !
>
> Rus
>
>"J. Sun" <jsun@lucent.com> wrote in message
>news:b3g1t2$gtp@netnews.proxy.lucent.com...
>> Hi !
>>
>> Some times ago, I read an artucle about boosting low signal (SNR) by
>> using two outdoor TV antennas together. Unfiortunately I forget about
>> the details, can some one help me on this and tell me the details about
>> how to do it. I lived in a town about 60 miles from new york city where
>> the tv broadcasting tower is located. I bought a antenna 2 years ago with
>> range about 60 miles and the reception is pretty good until the 911. I
>just
>> ordered a longer one and hope to improve the reception. I vaguely remember
>> reading the story about placing 2 antennas, that's why I ask this

>question.
>>
>> Thanks !
>>
>> Rus
>>
>>
>

4332. Re: Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 05:10:19 UTC
From: The Simpsons <grant@simtronics.co.nz>
Message-ID: <6%X6a.107442$F63.2316881@news.xtra.co.nz>
Source record: 123771

The reason was that very low capacitance was required. The front end input circuit was a parallel tuned circuit with the antenna connected to the top of the circuit. This meant a very high input impedance. To reduce the losses, as the antenna / coax combination became part of the tuned circuit, very low capacitance was required, hence the design of the cable. If the capacitance was high, the tuned input circuit 'Q' lowered because of the poor L:C ratio. The input of the car receiver had to be tuned as well, to peak the input circuit due to the varitaion of antenna / coax etc. A small trimmer was provided to do this essential installation task.
Modern receivers use a low impedance input as they don't need the effective gain provided by the older high impedance type. The modern input stage has much greater sensitivity than the older designs. Plus it makes matching to a 100MHz FM band input stage easier as well.

Grant, ZL2BK.

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v5i8dodpnbr1b3@corp.supernews.com...
> Back in the 1950s and 60 car radio antennas used a short peice of special
> coax to connect a front fender mounted antenna to the radio. This leadin
> cable was ~1/4" dia. with copper braid over a hollow tube that contained a
> very thin center conductor, probably smaller than 30 guage as best I can
> recall, and had a very low per foot capacitance. Rear mounted antennas
> provided inferior reception and weren't used. Then it must have been in
the
> 1970s that someone figured out how make rear mounted antennas work without
a
> rear mounted preamp. I have two questions. Does anyone recall the
> characteristic impedance of the thin center conductor lead in and what
> happened in the 70s to make rear mounted antennas work without preamps?
> tnx
> hank wd5jfr
>
>

4333. Telrex TB6EM specs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 06:13:10 UTC
From: el34guy@aol.com
Message-ID: <20030226011310.00721.00000541@mb-de.aol.com>
Source record: 123772

Hello,

Can someone tell me what the specifications on this antenna are? Im considering getting one and dont have access to the literature and/or instructions. Forward gain, front to back, weight, and sq ft windload would all be great to know.
Thanks and 73

Mark
W0NCL

4334. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 07:47:17 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302252347.17dc3eb7@posting.google.com>
Source record: 123773

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:<b3ent7$i1b$1@slb6.atl.mindspring.net>...
> Art:
>
> [snip]
> > the rotten alien,slimey limey and all around nobody, talks and writes
> > funny,a dumb shit, comes from the slum docklands,didn't go to
> > University so can't possibly be one of the group on this side of the
> > fence.His son invented
> > the Biology Workbench computor program which apparently is now used in
> > most Universities and does research work at Southern Cal, so he is
> > taking over from his Dad, he must have stolen the idea because he was
> > born in London also!
> [snip]
>
> Above sure sounds like whining to me! What would you call it?

Dunno, sad to read though. I really don't think it's an accurate
viewpoint of the group towards him. I really don't think anyone cares
where anyone is from, or presently at either. A 100 year or so blip,
and I would have been born in Scotland or England myself instead of
Dallas. The Keith family in Scotland is well known. Do a web search.
Loads of stuff. And not all is exactly good either...:/ A bunch of
heathens they were at times...They had a few bright points though I
guess. My great grandfather on my mothers side was born in
Southhampton. He came over here in the later 1800's. I doubt I would
be any different except for the influences of my environment. About
the only difference I can see from being born in Texas is you end up
being a redneck and eat too much hot sauce. :/
http://web.wt.net/~nm5k/tbf.jpg

MK

4335. Re: Tower Cams?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 08:01:00 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302260001.3633ea5c@posting.google.com>
Source record: 123774

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:<zXW6a.51758$9i7.3440392@twister.southeast.rr.com>...
> I had one in my backyard for 2 years. The neighbors all agreed it as a good
> for security then a couple moved in that did not aprove of it(they had a hot
> tub)

I would have told em to build a fence. Either that, or don't molest each other in the hot tub in the daylight. Maybe point it away from their house. You were there first. I'd never let a "newbie" neighbor run over me like that. I'm a redneck. Have a reputation to uphold...I'd like to have one myself, but I think I'm going to aim it at my vehicles so I can watch them from the shack. A local here had one on a tower and used to run shots on ATV at times. My favorite is the local that straps one to his huge model airplanes and flies it around. He makes movies and used to play them on the ATV rptr. I think he runs ATV from the plane to ground also. Also have had a few rockets with cameras go up in the area. They had one out west of Houston one time. I was able to see the video from here. It was at a pretty high altitude. MK

4336. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 10:49:47 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E5C9BD0.E4080472@earthlink.net>
Source record: 123775

Yes, unfortunate if that's the case about the withdrawal. Particularly unfortunate for me, since I
have an index of about 4 years of article into it from my web page. I was getting a lot of hits on
the use. Looks like I'd better pull it or update the story.

Actually amateur science is still alive. See <www.sas.org>. It's called the Society for Amateur
Science, or, alternatively, Citizen Scientists. I actually have warmed up to the later name. I think
the nature of the organization serves both ideas well. SAS is run by Shawn Carlson who was the last
editor of the Amateur Science column. SAS produces the CD. In June or July they will have their
second national meeting. It'll be at Cal Tech. Last year it was in Phila.

The old notion of building projects may have succumb to a lot of companies providing almost all the
building fun by providing either a kit or a completed unit. There was an article in Sci Am a year or
so about the demise of amateur science, particularly amateur radio. Well, there's hope. A student is
working with us to assemble a special exhibit titled household science. We will need to build 35
exhibits accommodate her needs. Several of us old guys are helping and she has several brothers who
are pitching in too. She's doing it to fulfill a girl scout eagle-scout-like badge.

Dave Platt wrote:

> In article <3E5AF56B.E71E33A0@earthlink.net>,
> Wayne Watson <mtnviews@earthlink.net> wrote:
>
> >Yes, I have the CD and the magazine. Why they pulled the pages, I do not know.
>
> I've read that it was pulled, because it wasn't actually being read
> all that much. The magazine's owners felt that other uses of the
> available pages would be of greater interest to the magazine's
> readers (i.e. greater readership -> more sales -> higher advertising
> revenue, I suppose).
>
> Sad, really, that interest in actually _doing_ science on an
> amateur/homebrew basis has sunk so low.
>
> It might also be due to the whole craze for a "risk free" universe,

> and the "sue everybody if anything goes wrong" mentality. If you look
> back through the CD-ROM contents, you'll find quite a lot of
> experiments which I think would never be suggested today, as they
> involve the use of chemicals, voltages, physical processes, etc. which
> could pose a risk to the experimenter if not handled properly. [The
> CD tags these with a warning notice.] This trend may have limited the
> quality of the experiments which could be proposed in The Amateur
> Scientist to some degree.
>
> [From what I've heard, it seems that kids' introductory chemistry sets
> are far less interesting than they were back when I was a sprout,
> as the selection of chemicals included has been trimmed back to those
> which are at the "nontoxic, harmless as mice" end of the scale.]
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Consumer Tip: Save your gasoline money if you are buying premium gas. It's
unnecessary to use it unless your engine pings. Use regular instead.
-- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

4337. Wireless Keyboard and Mouse

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 11:20:33 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b3i7u0$ar6$1@helle.btinternet.com>
Source record: 123776

Right, finally got my PC moved into a cupboard where I think they should be! Up until sometime as someone designs one (not a Mac) which is a piece of furniture anyway.....

Problem is the wireless keyboard and mouse are *just* out of range (little intermittent even with new batteries). I've tried everything I can, getting the receiver on the PC end up as high as possible etc etc. Not quite right.

I want to try sticking a decent antenna on this thing to fix my problem.

Anyone know what frequency these run at? I assume there is a European standard licence exempt frequency for wireless data stuff that's not 802.11?

Many thanks,

Dean

4338. Re: How do you Extend the TX on a IC-756 PRO2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 11:37:44 UTC
From: Markus Baertschi <markus@markus.org>
Message-ID: <MPG.18c6c56eef997d2c98968f@News.CIS.DFN.DE>
Source record: 123777

Point your browser at www.mods.dk and you'll find instructions.

Markus

4339. Re: What are IP2 and IP3?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 12:35:25 UTC
From: Toni - ec3dds <ec3dds@hotmail.com>
Message-ID: <0vbp5v0rocje4b1i67vi63ikd2q8c1uh9p@4ax.com>
Source record: 123778

Hi,

Thanks for your answers. With those and a direct mail I have also
received I have understood the concept (and learned I should try
harder at Google).

Toni - ec3dds

4340. Re: Wireless Keyboard and Mouse

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 12:37:56 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E5CB521.4020709@tampabay.rr.com>
Source record: 123779

why dont you try mounting the reciever outside the cupboard where ytou
have the PC hiding
most of these wireless keyboards use infared light just like your TV
remote to send data back and forth not RF so an antenna wouldnt do you
any good

Dean Elwood wrote:
> Right, finally got my PC moved into a cupboard where I think they should be!
> Up until sometime as someone designs one (not a Mac) which is a piece of
> furniture anyway.....
>
> Problem is the wireless keyboard and mouse are *just* out of range (little
> intermittent even with new batteries). I've tried everything I can, getting
> the receiver on the PC end up as high as possible etc etc. Not quite right.
>
> I want to try sticking a decent antenna on this thing to fix my problem.
>
> Anyone know what frequency these run at? I assume there is a European
> standard licence exempt frequency for wireless data stuff that's not 802.11?
>
> Many thanks,
>
> Dean
>
>

4341. Re: What are IP2 and IP3?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 12:40:49 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <IB27a.6079$hj.1892755@nnrp1.ptd.net>
Source record: 123780

There has been in 2 recent QSTs very good article
by Dr. Ulrich Rhode on receiver performance.

IIRC, there's a good explaination (with charts to
illustrate) of the concept of IP2 and IP3.

IP2 is the 2nd order IM intercept point.
IP3 is the 3rd order IM intercept point.

Note that, in practice, these are theoretical points
and you won't get there, as amplifier compression
will prevent that. However, once you know the
IP2 and IP3 of an amplifier, you can predict with
good accuracy the level of IM products produced
by any given level of input signals.

Carl - wk3c

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3e5c410e_3@news1.prserv.net...
> No, Jim;
>
> IP is used in a pretty standard test and specification meaning intercept
> point. Goes back many, many years. I believe there is an IEEE
publication
> which explains the concept, how to perform the tests, and pitfalls to
watch
> out for, but I don't have the number at hand.
>
> --
> Crazy George
> Remove NO and SPAM from return address
>
> "JLB" <IHateSpam@nospam.net> wrote in message
> news:hUM6a.11718$Xa4.1798@fe01.atl2.webusenet.com...
> > I would have said that 'IP' stood for Intermodulation Product, not
> Intercept
> > Point.
> >
> > IP would then represent the requslting frequencies when two signals mix
in
> > an undesired manner.
> >
> > If the two signals are on frequencies A and B, then IP2 would be at A+B
> and
> > A-B. IP3 would be at 2A+B, 2A-B, 2B+A, and/or 2B-A.

> >
> > Other higher order products can also be produced. The ones of primary
> > concern are the odd numbers as they will be closer to the operating
> > frequency.
> >
> > Jim
> > N8EE
> >
> >
> >
>
>

4342. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 13:04:56 UTC
From: richardharrison@webtv.net
Message-ID: <15956-3E5CBB78-12@storefull-2316.public.lawson.webtv.net>
Source record: 123781

Crazy George has already indicated Kraus as a source of coaxial antenna information. Another source is King, Mimno, and Wing in "Transmission Lines, Antennas, and Wave Guides". They have a lot to say about sleeves around transmission lines. See page 153:

"A 1/4-wave detuning sleeve is provided with its open end a 1/4 wavelength from the end of the line."

It`s shown in Fig. 27.3 as the lower section of a 1/2-wave coaxial antenna.

Best regards, Richard Harrison, KB5WZI

4343. Re: Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 13:38:20 UTC
From: k3bu@aol.com
Message-ID: <20030226083820.11044.00000377@mb-md.aol.com>
Source record: 123782

>Modern receivers use a low impedance input as they don't need the effective
>gain provided by the older high impedance type. The modern input stage has
>much greater sensitivity than the older designs. Plus it makes matching to a
>100MHz FM band input stage easier as well.
>
>Grant, ZL2BK.

With older receivers you could actually peak the antenna for your favorite DX station on the AM dial, it was more sensitive on that segment.

"Modern" recivers in today's cars are inferior to their older cousins in front end design - broad as a barn door. You drive by the broadcast station or good buddy with "big shoes" they come through. Lack of RF proofing in automotive electronics is bordering on criminal and dangerous. You key the ham rig 100W and speedometer jumps to 180 or car dies, or .... kinda scary. With ABS brakes, collision avoidance systems and electrospying (oops, recording) one has to very carefull and test it before you call that CQ at 65 mph.
I love them old cars, easy to fix, no electronic crap and SAFE. Just finishing arming up my 1972 Buick LeSabre with all band kW system.

Yuri, K3BU

4344. Re: Wireless Keyboard and Mouse

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 13:43:49 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030226084349.01945.00000188@mb-mp.aol.com>
Source record: 123783

>Anyone know what frequency these run at? I assume there is a European
>standard licence exempt frequency for wireless data stuff that's not 802.11?

Mine operates in the CB band, just between "channel" 13 + 14 (27.145 or
something around that). Only suggestion is to put the receiver in "line of
sight" (or buy a CB amp on Yahoo auctions.. ;))

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

4345. Re: Wireless Keyboard and Mouse

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 14:11:54 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5CCB2A.8070603@ieee.org>
Source record: 123784

Dean Elwood wrote:
> Anyone know what frequency these run at? I assume there is a European
> standard licence exempt frequency for wireless data stuff that's not 802.11?

Mine runs at about 100,000 GHz. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4346. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 14:36:05 UTC
From: conconemail@libero.it
Message-ID: <bcd1b798.0302260636.1a3506a3@posting.google.com>
Source record: 123785

you can find some more info on EH antennas here as well

http://www.dxzone.com/cgi-bin/search/search.cgi?Category=---&query=EH+antenna&search=+Find+&type=phrase&bool=and

73 max

4347. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 15:10:22 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0302260710.3685dd29@posting.google.com>
Source record: 123786

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<188n5v0eeic2nktkefop1qvbap3tvnoa2e@4ax.com>...
> On 25 Feb 2003 08:47:43 -0800, kelly@dvol.com (Brian Kelly) wrote:
>
> >
> >The trimming part is the problem. I'd like to cut the element lengths
> >based on at least a bit of physics rather than just with the cutters.
> >The element lengths should be different because they would be
> >considerbly different diameters. I remember seeing the design
> >equations somewhere a long time ago, maybe in an old ARRL antenna
> >book. They seem to have dropped out the lore.
> >
>
> Hi Brian,
>
> The thicker part will lend itself to broadening the bandwidth (a lot
> of that has been discussed in the Bazooka thread). As for formulas,
> they are, and have always been, approximations that include the
> ordinary dictum to be prepared to trim to resonance. Cut both the
> conductor and the shield long (it would be more the pain to trim), and
> trim the conductor. It is unlikely that an imbalance will come to any
> grief.

In the end that's obviously what i'll wind up doing.

>
> >
> >I have a couple tuners right which are greased and ready to roll . . .
>
> Then you are in analysis paralysis if you simply want to test a rig.
> Having the "exact" dimensions will do nothing remarkable.

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<188n5v0eeic2nktkefop1qvbap3tvnoa2e@4ax.com>...

> >I have a couple tuners right which are greased and ready to roll . . .
>
> Then you are in analysis paralysis if you simply want to test a rig.
> Having the "exact" dimensions will do nothing remarkable.

I plead guilty as charged. I'm just surprised that there doesn't seem
to be any readily available info on this ancient & very practical
design. Besides I'm allowed to be academically anal.

Tnx!

>
> 73's
> Richard Clark, KB7QHC

w3rv

>
> 73's
> Richard Clark, KB7QHC

4348. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 15:19:12 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0302260719.12c2f690@posting.google.com>
Source record: 123787

'Doc <w5lz@cwis.net> wrote in message news:<3E5BD1D3.C9BFAAEF@cwis.net>...
> Brian,
> Your 'sloppy' method of making 'coaxial' dipoles
> should work as well on 20 meters as it does on 2 meters.
> The only 'magic' number needed is for a 1/4 wave length,
> 234 / f (in Mhz) = feet. 'Crank' the numbers through the
> formula, and just do as you did for the 2 meter antenna.
> The required length of heat-shrink is going to be quite
> a bit more than for 2 meters (as if you didn't know that),
> so you might just consider sealing the center where you
> roll the braid back...

I'm afraid of water traveling inside the dielectric. Another feature
shrink tubing offers is the ability to seal lengths of small diameter
nylon cord into the assembly which makes the antenna very easy to hang
anywhere. McMaster-Carr sells 3/8" diameter 4:1 shrink ratio
polyolefin tubing for $.31 per foot in 100t. rolls. That'll work
nicely with 8X

>

'Doc

w3rv

4349. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 15:24:29 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0302260724.6f07f87c@posting.google.com>
Source record: 123788

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:<3e5c410f_3@news1.prserv.net>...
> Kraus, 2nd edition, P. 735, paragraph 16-6 "Sleeve Antennas".
> Johnson and Jasik, 2nd edition, page 4-18, paragraph 4-5 "Sleeve Dipoles".

Finally. Back to the library . . but AFTER I get the thing up this time.

Tnx George.

w3rv

4350. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 15:31:15 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5CDDC3.35396713@cwis.net>
Source record: 123789

Brian,
If you've got the heat-shrink, sure, why not.
If you don't, then a match held under the dialectric
at the end of the antenna is sure cheaper. Solder
a loop in the end of the center conductor and tie
the cord there. Which only shows that there's almost
always more than one way to do things...
'Doc

4351. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 15:31:49 UTC
From: "J. Sun" <jsun@lucent.com>
Message-ID: <b3iml7$p7@netnews.proxy.lucent.com>
Source record: 123790

Now I have chosen the largest (I mean ups deliverable) antenna and can not
install
any higher so I'll try mast-mount pre-amp based on the responses. I have the
following
candidates: Winegard 8275, ChannelMaster 0064 or Rado Shack 15-1109.
Which one you would recommend ?
Thanks !

Rus

4352. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 15:39:42 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5CDFBE.A8676574@cwis.net>
Source record: 123791

Just as a matter of curiosity, do any of the
'squids' in here remember a coaxial antenna that
was used aboard ship. A large diameter structure
with a vertical element rising out of the center
of it. It used to be used as an examle in one of
the Navy Institutes course books, no idea which
one now.
'Doc

There used to be 'black shoes', 'brown shoes',
then them 'other guys'...

4353. Re: Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 16:01:58 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <9IKdnWQjYN1uecGjXTWc3Q@comcast.com>
Source record: 123792

"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030226083820.11044.00000377@mb-md.aol.com...
> "Modern" recivers in today's cars are inferior to their older cousins in
front
> end design - broad as a barn door. You drive by the broadcast station or
good
> buddy with "big shoes" they come through. Lack of RF proofing in
automotive
> electronics is bordering on criminal and dangerous. You key the ham rig
100W
> and speedometer jumps to 180 or car dies, or .... kinda scary. With ABS
brakes,
> collision avoidance systems and electrospying (oops, recording) one has to
very
> carefull and test it before you call that CQ at 65 mph.
> I love them old cars, easy to fix, no electronic crap and SAFE. Just
finishing
> arming up my 1972 Buick LeSabre with all band kW system.
>
> Yuri, K3BU

I don't think I buy that. I remember with a 1960s vintage car, when the whole band got wiped out while driving past a BC transmitter. This has not happened with modern receivers (same place). They may be wide, but have more signal handling capability. At very close range a 64 Delco radio also picked up radar.

Tam/WB2TT

4354. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 16:59:32 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302260859.7954b7f2@posting.google.com>
Source record: 123793

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<iomk5vckvbs5cdl038ks6o19bau1v893vr@4ax.com>...
> On 24 Feb 2003 07:30:44 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >Richard Clark <kb7qhc@attbi.com> wrote in message
news:<2gti5v0vs5bil2ejj975f12sh5btcdc4up@4ax.com>...
> >> On 23 Feb 2003 13:59:13 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> >> wrote:
> >>
> >> > Since Hately was able to get
> snip
> >>
> >> Hi Art,
> >>
> >> It's called a "con game."
> snip)
> >>
> >> 73's
> >> Richard Clark, KB7QHC
> >
> >O.K Richard let us continue in this serious vein of thought
> >The E/H antenna is something that all amatuers would want if
> >it came up to expoectations. All will then have the ability
> >to operate on 160M regardless of garden size.
> >The fact is that even tho all desire it, it is also a fact that
> >people are predisposed with the thought that it is impossible.
> >So to be different to Hately ,when and if I decide to disclose
> >the solution to this problem, what is the correct way to do it?
> >There are plenty of glib answers that could be presented but
> >frankly it is a nye impossible task unless you are as successfull
> > at beating a drum as P.T.Barnum was. The fact is that talk is cheap
> >and every one has a pre thought out response to those who aspire to
> >reach the mountain top.
> >So in a serious vein, what is the best way for an ' outside of the
> >fence person' (to quote a member of this group) to get dislcosure
> >accepted without being assailed as a crook ?
> >Regards
> >Art
>
> Hi Art,
>
> As the old adage goes, "build a better mousetrap and the world will
> beat a path way to your door." THAT is serious, the rest is simply

> misty-eyed hopes and dreams substituting for "better" or "build."
>
> If you HAVE TO convince people that you have something better, you
> must be a republican trying to convince Greenspan that tax cuts would
> help the economy (he ain't buyin' that either).
>
> If you wannabe serious, you will have to convince a nation of
> broadcast sites that their antennas, paid for years and years ago,
> should be replaced for a smaller one of equal performance. This of
> course presumes that you look forward to the chilling response or
> bland indifference which you can get here without leaving the comfort
> of your home.
>
> Why would any broadcaster give these novel inventions a single thought
> in the first place - even if they were building a brand new site? The
> antenna itself probably represents one of the cheapest budget line
> items they have to consider over a 20 year span (or 10 year, or 5
> year). Electrical power probably comes in as the second most cheap
> cost for operation. I haven't the slightest idea how much those costs
> are, but experience has taught me that personnel and advertising
> probably eclipses technical costs 10:1.
>
> The inventors problem is to bring money with him to make the sale;
> thus the introduction of government subsidies (and I bet the owners
> probably grumble about the time - read money - lost to the
> photo-sessions for the guv'mint folks).
>
> Simple fact of the matter is you have to be a good crook to catch a
> capitalist's attention. You have to have a good lobbyist with wads of
> cash in his pocket to find the key to the treasure chest. The long
> and short of it is: it is NOT a technical issue!
>
> 73's
> Richard Clark, KB7QHC

Thankyou for that Richard.
Frankly I believe the situation to be exactly as you state tho it is
very hard to digest. But we have to accept that and move on with ones
life so that is the end of it. Thankyou for your patience and dealing
with my question in a serious manner, I appreciate that.
Warmest regards
Art

4355. Re: Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 17:07:53 UTC
From: Bob Dixon <Bob_Dixon@osu.edu>
Message-ID: <Bob_Dixon-E74CD3.12075326022003@nntp.service.ohio-state.edu>
Source record: 123794

I find that modern car radios are less sensitive and selective than the old tube models on the AM band. And the AVC is not as effective. There is also more interference apparently coming from the car itself, such as various tones and heterodynes that may be coming from the on-board computers.

Bob W8ERD

In article <9IKdnWQjYN1uecGjXTWc3Q@comcast.com>, "Tarmo Tammaru" <t-tammaru@home.com> wrote:

> "Yuri Blanarovich" <k3bu@aol.com> wrote in message
> news:20030226083820.11044.00000377@mb-md.aol.com...
> > "Modern" recivers in today's cars are inferior to their older cousins
> > in
> front
> > end design - broad as a barn door. You drive by the broadcast station
> > or
> good
> > buddy with "big shoes" they come through. Lack of RF proofing in
> automotive
> > electronics is bordering on criminal and dangerous. You key the ham rig
> 100W
> > and speedometer jumps to 180 or car dies, or .... kinda scary. With ABS
> brakes,
> > collision avoidance systems and electrospying (oops, recording) one has
> > to
> very
> > carefull and test it before you call that CQ at 65 mph.
> > I love them old cars, easy to fix, no electronic crap and SAFE. Just
> finishing
> > arming up my 1972 Buick LeSabre with all band kW system.
> >
> > Yuri, K3BU
>
> I don't think I buy that. I remember with a 1960s vintage car, when the
> whole band got wiped out while driving past a BC transmitter. This has
> not
> happened with modern receivers (same place). They may be wide, but have
> more
> signal handling capability. At very close range a 64 Delco radio also
> picked
> up radar.
>
> Tam/WB2TT

>
>

4356. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 17:10:28 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302260910.1748528f@posting.google.com>
Source record: 123795

Thankyou for that response Roy. It really mirrors what Richard said.
Since I have done the drawings e.t.c. and a few runs at the write up I
think it will be best to just patent it and let it go at that.Just
like a painting if it is any good then it is for another generation to
enjoy.
I am a sort of follower of Dodds of Radcom so I certainly in time will
give him an antenna for him to play with. People at Radcom are
extremely friendly to their readers and are without pre conceived
ideas.
Thanks a lot for responding
Best Regards
Art

Roy Lewallen <w7el@eznec.com> wrote in message news:<v5kv1s8sm4gm6c@corp.supernews.com>...
> If you wanted to sell a miracle antenna (one that seemingly defies known
> laws) to broadcasters, what you absolutely have to do is to find a test
> site with an unused broadcast antenna and ground system set up according
> to current practice, or set one up yourself. Next, hire several people
> to make measurements of field strength. These people should be
> professionals well known in the community. Ground rules should include
> their ability to fully inspect the site, measure transmitter power
> output, and investigate anything else that might affect field strength.
> They should get the feeling that you're as interested in getting good
> quantitative results as they are. Next, remove the existing antenna and
> ground system, replace it with your antenna, and repeat the measurements
> under the same set of rules and procedures. The results, with complete
> details of equipment, methods, etc., should then be published in a
> professional journal, with any comments the people doing the
> measurements would want to make.
>
> This is the level of proof that will be required to convince
> broadcasters to adopt your invention. But if you do as I said above, I'm
> sure that the orders will pour in like gangbusters. The full measurement
> process will be expensive, but if you were to make very careful
> measurements, with the oversight and assistance of at least one good
> professional, of even a wire vertical with known ground system followed
> by your antenna in the same spot, favorable results should be adequate
> to convince the professional community and venture capitalists that
> you're on to something. Even the expense of the full tests would be paid
> back almost immediately if your antenna met the claims of the EH or CFA.
>
> I've heard that some professionals were invited to measure the CFA in
> Egypt and did so, but weren't allowed to do things like measure the
> transmitter output power or current on the outside of the feedline.

> Also, there was no comparative measurement from a standard installation,
> leaving the possibility that the ground conductivity is much greater
> than has been assumed and alleged. If anyone has information to the
> contrary, please correct me. Half-baked measurements work fine for
> selling to amateurs and late-night TV watchers. But they're simply a
> waste of time and money, if you're trying to convince real engineers
> that you have something.
>
> Scale model measurements in a certified antenna test lab would be
> another way to get preliminary data to convince people to invest in full
> scale tests. Again, at least one good and impartial consultant should be
> hired who is familiar with the ways tests can be fooled (intentionally
> and unintentionally), and who would be willing to add his name to the
> professional paper in which the results are published. This could
> probably be done at little more expense than obtaining a patent, and
> published results would alert the professional community that you really
> have what you say you do. Having these results in hand, you might be
> able to talk some professionals into helping with the full tests for an
> outlay only of expenses, a modest honorarium, and the opportunity to
> participate in some historic tests.
>
> I fully expect to hear a number of objections about why this isn't
> possible, realistic, practical, or some such. Of course the inventors of
> these miracle antennas avoid making bulletproof, professional, solid,
> measurements. If they did, I'm sure that the results would show how poor
> these antennas are. Because positive results would result in an
> incredible amount of interest and sales, there's no other conceivable
> reason for its not having been done already.
>
> Roy Lewallen, W7EL
>
> Art Unwin KB9MZ wrote:
> >
> > O.K Richard let us continue in this serious vein of thought
> > The E/H antenna is something that all amatuers would want if
> > it came up to expoectations. All will then have the ability
> > to operate on 160M regardless of garden size.
> > The fact is that even tho all desire it, it is also a fact that
> > people are predisposed with the thought that it is impossible.
> > So to be different to Hately ,when and if I decide to disclose
> > the solution to this problem, what is the correct way to do it?
> > There are plenty of glib answers that could be presented but
> > frankly it is a nye impossible task unless you are as successfull
> > at beating a drum as P.T.Barnum was. The fact is that talk is cheap
> > and every one has a pre thought out response to those who aspire to
> > reach the mountain top.
> > So in a serious vein, what is the best way for an ' outside of the
> > fence person' (to quote a member of this group) to get dislcosure
> > accepted without being assailed as a crook ?
> > Regards

> > Art

4357. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 17:14:03 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302260914.1ff4b9da@posting.google.com>
Source record: 123796

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<KJ5U7hDvPoW+EAgZ@ifwtech.co.uk>...
> Roy Lewallen wrote:
> >If you wanted to sell a miracle antenna (one that seemingly defies
> >known laws) to broadcasters, what you absolutely have to do is to find
> >a test site with an unused broadcast antenna and ground system set up
> >according to current practice, or set one up yourself. Next, hire
> >several people to make measurements of field strength. These people
> >should be professionals well known in the community. Ground rules
> >should include their ability to fully inspect the site, measure
> >transmitter power output, and investigate anything else that might
> >affect field strength. They should get the feeling that you're as
> >interested in getting good quantitative results as they are. Next,
> >remove the existing antenna and ground system, replace it with your
> >antenna, and repeat the measurements under the same set of rules and
> >procedures. The results, with complete details of equipment, methods,
> >etc., should then be published in a professional journal, with any
> >comments the people doing the measurements would want to make.
> >
> >This is the level of proof that will be required to convince
> >broadcasters to adopt your invention. But if you do as I said above,
> >I'm sure that the orders will pour in like gangbusters.
>
> The CFA has been tested by a large broadcasting organisation in the UK.
> The results have not been published - and may not ever be - because this
> was a strictly commercial exercise, not an academic one.
>
> Therefore we can only look for indirect clues about the results. Two
> such clues are that the organisation has not changed its existing
> antennas, and no fanfares of trumpets have been heard.

Ian, my interest is sharing, money is not a primary goal. I just do
not wish to be put in harms way as other inventors have and lose all
respect from my peers
Cheers
Art

4358. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 17:18:07 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302260918.d9e3bf8@posting.google.com>
Source record: 123797

Roy Lewallen <w7el@eznec.com> wrote in message news:<v5l30ecnrh5pee@corp.supernews.com>...
> My whole point is that publication is an essential part of the
> *commercial* exercise of selling the antenna. It's by publication in a
> refereed journal, along with full disclosure of people, methods, and
> equipment, that would enable them -- indeed, make it simple for them --
> to sell their invention to the otherwise skeptical potential buyers.
>
> If I had a miracle antenna which had been carefully measured and shown
> to be, indeed, all that I claimed, what possible reason would I have for
> not broadcasting the information to as large an audience as I possibly
> could? There is no reason. On the other hand, if the measurements showed
> that the antenna *doesn't* work as I claim, then there's every reason to
> keep the results under wraps.
Roy that is easy for an "insider" to do, others must run the hazing
route and be willing to "die" for his beliefs or resort to a loosening
of his morals.
Remember , the hobby lasts because it is just about talking.
Art

> Roy Lewallen, W7EL
>
> Ian White, G3SEK wrote:
> >
> > The CFA has been tested by a large broadcasting organisation in the UK.
> > The results have not been published - and may not ever be - because this
> > was a strictly commercial exercise, not an academic one.
> >
> > Therefore we can only look for indirect clues about the results. Two
> > such clues are that the organisation has not changed its existing
> > antennas, and no fanfares of trumpets have been heard.
> >
> >

4359. Re: Tower Cams?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 17:43:50 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302260943.26ede7c2@posting.google.com>
Source record: 123798

"Gary" <k5jfp@yahoo.com> wrote in message
news:<JVp6a.14507$O41.560895@twister.austin.rr.com>...
> Anybody out there successfully done a ham tower cam? I'd like to do
> something simple and inexpensive that would attach to my antenna mast and
> provide "decent" downlinked or wired color imagery from up top. There are
> all the usual considerations, of course, power source, survival in the
> weather, lightning, etc.
>
> Thanks in advance.
>
> Gary W5ZL

Gary, I use them all the time in my work with antennas, it sure
removes a lot of doubts as to whether a capacitor or variable inductor
is working or not. The newer small cameras are extremely cheap, I used
one for my prop pitch rotator to determine direction of antenna (see
N,S,E and W) markings)when working with large beams as well as to read
tower top meters.Cheap circuit board types work fine with just a spray
covering of liquid insulation and then stuck somewhere
Regards
Art.

4360. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 17:49:23 UTC
From: richardharrison@webtv.net
Message-ID: <16160-3E5CFE23-61@storefull-2314.public.lawson.webtv.net>
Source record: 123800

Brian Kelly wrote:
"I`m having a bad time coming up with the proper design equations for designing / building coaxial antennas."

I`m amazed I don`t find them in the ARRL Antenna Book. The coax antenna is recommend by the War Department in "Electrical Communication Engineering".

TM 11-486 says:
"The main advantage of the emergency antenna over a simple half-wave dipole
made of two pieces of wire is that coaxial feedline does not require a yard arm support when the antenna is hung vertically; also, radiation from the coaxial transmission line may be somewhat less." (A balun of coiled coax is used below the skirt.)

TM 11-486 gives a lengthy table of whip and skirt lengths hor the coax antenna starting at 27 MHz and extending through 40 MHz. These might be scaled for lower frequencies. Some of the lengths:
27 MHz, 108 in. whip, 119 in. skirt
28, 103, 111
29, 98, 103
30, 94, 96
31, 91, 89
32, 88, 82

They used exactly 4 turns of coax close-wound on a 5-in. form to make a balun. They didn`t specify RG 8 or RG 11. They said feed impedance was 50 to 70 ohms.

TM 11-486 says:
"---adjusted to 95% of half wavelength for the operating frequency, but this length is not critical of adjustment and may vary + or - 5% without adverse effects on transmitting or receiving, provided that the transmitter will load properly.

Besides emergency coaxial antennas, manufactured coax antennas were provided by Galvin (Motorola) and F.M. Link (Fred Link). The Signal Corps stock Nos. were 2A1649 and 2A272-3. These had adjustable whips and adjustable rigid skirt lengths.

Best regards, Richard Harrison, KB5WZI

4361. Re: Tower Cams?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 18:14:17 UTC
From: Gary <k5jfp@yahoo.com>
Message-ID: <Zt77a.18838$Tz6.1109818@twister.austin.rr.com>
Source record: 123799

Thanks, Art, and to all the others who have commented.

Gary

>
> Gary, I use them all the time in my work with antennas, it sure
> removes a lot of doubts as to whether a capacitor or variable inductor
> is working or not. The newer small cameras are extremely cheap, I used
> one for my prop pitch rotator to determine direction of antenna (see
> N,S,E and W) markings)when working with large beams as well as to read
> tower top meters.Cheap circuit board types work fine with just a spray
> covering of liquid insulation and then stuck somewhere
> Regards
> Art.

4362. 55 foot tubular crankup tower for sale!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 18:56:01 UTC
From: Michael Herron <Hurricane145@worldnet.att.net>
Message-ID: <5587a.1581$Uy4.142568@bgtnsc05-news.ops.worldnet.att.net>
Source record: 123801

55 foot Tristao galvanized steel crankup tower in very good condition for sale. Pretty much the same as the current US Towers MA550 tower, parts and accessories are the same. Comes with two standard bases, one is brand new with correct bolt, two new concrete anchor bolts, new eve or house bracket, new set of three coax arms (about $200 in new parts that you will need anyway), and a rotor plate. It is on the ground ready to go. Located in Seattle. Easily transported with a rented 18 foot boat trailer for about $40-50 a day. $800 firm, you remove/transport. Instant big gun stuff!! Mike K7MH Seattle, Wa. 206-356-3769 or Hurricane145@worldnet.att.net

4363. Re: Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 19:21:34 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <XKCcnfwvvKYmjsCjXTWcoA@comcast.com>
Source record: 123802

Bob,

Truthfully, I don't listen to AM very much, but suspect that a lot of what you say is caused by the tradeffs due to having the antenna in the glass. On the other hand, their FM performance has improved greatly. The first in-windshield radio I had was in a 1980 Oldsmobile. Almost useless on FM. A 1997 Alpine radio (antenna in rear window), though, was the best car radio I ever had. My present 2001 Delco (antenna in windshield) runs second, because it does not have the selectivity of the Alpine. I remember landmarks on the NJ Turnpike where the NY FM stations start to go out. and both the Alpine and the Delco go 10 - 15 miles further than anything with a fender mounted antenna. Haven't measured this on a map, but probably 60 - 70 miles. For some reason the range along I95 in Ga and FL seems to be quite a bit more.

Tam/WB2TT
"Bob Dixon" <Bob_Dixon@osu.edu> wrote in message
news:Bob_Dixon-E74CD3.12075326022003@nntp.service.ohio-state.edu...
> I find that modern car radios are less sensitive and selective than the
> old tube models on the AM band. And the AVC is not as effective. There
> is also more interference apparently coming from the car itself, such as
> various tones and heterodynes that may be coming from the on-board
> computers.
>
>
> Bob W8ERD

4364. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 19:22:48 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3j45u$i9b$1@slb3.atl.mindspring.net>
Source record: 123803

Mark:

[snip]
> Dunno, sad to read though. I really don't think it's an accurate
> viewpoint of the group towards him. I really don't think anyone cares
> where anyone is from, or presently at either. A 100 year or so blip,
> and I would have been born in Scotland or England myself instead of
> Dallas. The Keith family in Scotland is well known. Do a web search.
> Loads of stuff. And not all is exactly good either...:/ A bunch of
> heathens they were at times...They had a few bright points though I
> guess. My great grandfather on my mothers side was born in
> Southhampton. He came over here in the later 1800's. I doubt I would
> be any different except for the influences of my environment. About
> the only difference I can see from being born in Texas is you end up
> being a redneck and eat too much hot sauce. :/
> http://web.wt.net/~nm5k/tbf.jpg
>
> MK
[snip]

Like you I just dunno what's with Art. What is his problem?

I believe that most in this group seem to highly respect Art, his
contributions,
and his unique way of questioning conventional wisdom. At least I do.

He is certainly not helping his "cause", whatever that is, by "whining".

I say that he should either tell us straight up all there is to know about
his
"invention" and then take whatever comes like anybody else would, or if
he wants to keep it a secret or to protect some intellectual property, or
his
pride he should just shut up about it.

Whining never helps, makes enemies, and just sets him up for the "trolls".

--
Peter K1PO
Indialantic By-the-Sea, FL.

4365. Re: Antennas & J. D. Kraus

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 19:27:01 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <7JidndTnpsGfiMCjXTWc3g@comcast.com>
Source record: 123804

"Craig Buck" <k4ia@cox.net> wrote in message
news:K0f6a.60136$P1.3885508@news1.east.cox.net...
> Just picked up a softcover 3rd edition for $46. Go to www.half.com
> --
> Radio K4ia
> Craig "Buck"
> Fredericksburg, VA USA

Craig,

That was a good lead. I did not even know a modern version existed, but at half price I couldn't pass it up. So, ordered it.

Tam/WB2TT

4366. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 19:32:45 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5q5is1iandse9@corp.supernews.com>
Source record: 123805

We had one on the Observation Island (EAG-154), it was located on the forecastle. We had a bank of muticouplers that allowed it to be used by several transmitters at the same time. The base doubled as a stowage area.

I used it a bunch of times on 20 meters.

Doc" <w5lz@cwis.net> wrote in message news:3E5CDFBE.A8676574@cwis.net...
>
>
> Just as a matter of curiosity, do any of the
> 'squids' in here remember a coaxial antenna that
> was used aboard ship. A large diameter structure
> with a vertical element rising out of the center
> of it. It used to be used as an examle in one of
> the Navy Institutes course books, no idea which
> one now.
> 'Doc
>
> There used to be 'black shoes', 'brown shoes',
> then them 'other guys'...

4367. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 20:08:07 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302261208.6fe943af@posting.google.com>
Source record: 123806

Don't get me wrong Mark, it is not about nationality, it is
about piling on as a group when a Guru publicly denounces a
person as a fraud which thus gives cover for assault by others.
We have seen this many times on this newsgroup with various
manufacturers and inventors and there is no need to write out
a list of names, you can't escape the fact. I will only talk
about my own experiences who believes in certain moral behaviour,
in the case of antenna inventions I have not accepted offers from
others but rather would consult with my peers to ensure that no harm
is laid on my fellow hobbiest. Like other inventors on this group
which I said I would not name I defend myself but by being a non guru
or known publisher,pseudo expert, etc one a brick is thrown at you
by a guru and the piling on starts. I promised a person who gave some
suggestions of how to get out of this mess that I would not bring up
my old patent ideas again which every year stirs up a hornets nest but
I
would not give up on responding if asked. Frankly his advice
worked and the snide comment have pretty much come to a halt.
Yes Peter states that I am whining or I should do this or that or
I should devote more time to learning mathematics but even he will
change as he becomes alone. So back to my original point, how does
one share with others without placing up front a resume or a list
of different things that he has done or achieved just to gain the
podium to talk to like people that are willing to give respect?
If one were to even think of presenting his credentials before hand
I would consider it to be boastfull yet for an entrepreneur it is an
absolute must. In my case I read the post returns over the years and
which generally suggest that I am a 'dumbshit' possibly because I
change
hats sometimes and ask simple questions, now I have learned my lesson
knowing that anything new will be classed as a 'miracale' which is a
shame but which I accept. To do otherwise or to be 'out of my place'
means
personal derision and that I am certainly not going to repeat.
Eventually even Peter will disappear from my horizon but when the
next inventor comes along and suffers the consequences I hope that I
still have the courage to stand up for what I feel is right even
knowing what the consequences are. I will tell you now Mark that your
computor work appears to always start with an erronius assumption as
others did with my work that I offered. Even so, one would have
thought that even tho my assumption were
the one that was incorrect some surely would have thought I don't care
how he does it other than I know he does it, this is exactly what a
very rich

person said to me when he saw another duplicate my work. Yes, morals
got in my way again even tho some refer to me as a thief or a liar
or a pretender of some sort. Long winded Mark, maybe not
understandable
to you in many ways, Yes it gives Peter another shot but I hope I am
not totally frame this around nationalistic ground. I am a citisen by
choice and not by an accident of birth and with this move to the U.S.
I have received more rewards than I could have hoped for plus I have
given my family a chance to expand in any direction that they wish
plus I could not possibly have received as much respect from my peers
even if I was
back at 'home'.
Nuff said
Art XG

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0302252347.17dc3eb7@posting.google.com>...
> "Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:<b3ent7$i1b$1@slb6.atl.mindspring.net>...
> > Art:
> >
> > [snip]
> > > the rotten alien,slimey limey and all around nobody, talks and writes
> > > funny,a dumb shit, comes from the slum docklands,didn't go to
> > > University so can't possibly be one of the group on this side of the
> > > fence.His son invented
> > > the Biology Workbench computor program which apparently is now used in
> > > most Universities and does research work at Southern Cal, so he is
> > > taking over from his Dad, he must have stolen the idea because he was
> > > born in London also!
> > [snip]
> >
> > Above sure sounds like whining to me! What would you call it?
>
> Dunno, sad to read though. I really don't think it's an accurate
> viewpoint of the group towards him. I really don't think anyone cares
> where anyone is from, or presently at either. A 100 year or so blip,
> and I would have been born in Scotland or England myself instead of
> Dallas. The Keith family in Scotland is well known. Do a web search.
> Loads of stuff. And not all is exactly good either...:/ A bunch of
> heathens they were at times...They had a few bright points though I
> guess. My great grandfather on my mothers side was born in
> Southhampton. He came over here in the later 1800's. I doubt I would
> be any different except for the influences of my environment. About
> the only difference I can see from being born in Texas is you end up
> being a redneck and eat too much hot sauce. :/
> http://web.wt.net/~nm5k/tbf.jpg
>
> MK

4368. expert answer needed for technical questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 20:32:40 UTC
From: "J. Sun" <jsun@lucent.com>
Message-ID: <b3j89b$4rm@netnews.proxy.lucent.com>
Source record: 123808

Right now I have a TV outdoor antenna and a DVB satellite antenna outside.
I use a Diplexer to combine the signal before running though the in-house
coaxial cable.
On the wall outlet next to the TV, I use the diplexer to split the vhf/uhf
and satellite
signal. Now I want to put a mast mount preamp next to the antenna to boost
the
vhf/uhf signal and the power supply next to the tv in the tv signal path.
I have 3 questions
1. will the diplexer stop the DC current in the tv signal path so that
it will not burn the pre-amp circuit
2. will the voltage from the power supply do any harm to the satellite LNB ?
3. will the preamp get enough voltage with 2 diplexers in its path ?

Thanks !

Rus

4369. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 20:35:25 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5D250D.CF8E0D69@cwis.net>
Source record: 123807

Art,
The roll of 'martyr' doesn't fit you too well either. Very simple solution to the 'problem'. Just say what you mean so that some of us can understand it.
'Doc

4370. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 20:48:22 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3j96m$l62$1@helle.btinternet.com>
Source record: 123809

Art sed.
> People at Radcom are
> extremely friendly to their readers and are without pre conceived
> ideas.

==========

Art, you are obviousy joking.

Only newborn babies are without pre-conceived ideas. To whom do you refer - Radcom (and other magazine) old-wives who exist on repetitive plagiarism, or to their continuously brainwashed readers?

4371. Re: Cushcraft VS Force12

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 20:59:02 UTC
From: Craig Buck <k4ia@cox.net>
Message-ID: <qU97a.73192$P1.4761319@news1.east.cox.net>
Source record: 123810

Be sure you run the coax straight down to the ground (or as far as you can) before you go horizontal with it. That should help reduce RF pickup in the coax.
--
Radio K4ia
Craig "Buck"
Fredericksburg, VA USA
FISTS 6702 cc 788 Diamond 64

"Pat St. Jean" <stjeanp@pat-st-jean.com> wrote in message news:Jy6dnaYI2oDwsMGjXTWcpw@august.net...
> John <jwhughes@bellsouth.net> wrote:
> > Considerig the Cushcraft mav5 and the Force 12 Sigma 5. Any user comments on
> > either of these? Their appeal is no radials, and use in a townhome type
> > environment.
>
> Hi John,
> I can't speak for the MAV5, but I've had a Sigma-5 for about 5 months
> or so now and love it. I've had a little problem with RF feedback,
> especially on 20m, but I'm chalking that up to operator error and cheap
> coax.
> Here's a few of the QSOs I've had with it:
>
> 10m: 6Y, 9A, D4
> 12m: 8P, CO, J3
> 15m: JA
> 17m: P4, TI, YV
> 20m: HR, CT3, EA8
>
> Most of my contacts have been on 10m, but that's a personal thing, not
> any indication of the antenna.
>
> Pat
> --
> Pat in Lewisville K0OOK '97 XLH 883 (Rocinante)
> BS#140 EKIII rides with me
> http://www.pat-st-jean.com/stjeanp All things Pat
> http://www.pat-st-jean.com/products.html Software for paper money collectors

4372. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 20:59:19 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302261259.79f83b07@posting.google.com>
Source record: 123811

Roy Lewallen <w7el@eznec.com> wrote in message news:<v5kv1s8sm4gm6c@corp.supernews.com>...
> If you wanted to sell a miracle antenna (one that seemingly defies known
> laws) snip

Roy, my computor is shot but please allow me this post in response to
the tone of your post and then I am out of here.
Mirical.....defies known laws.

Yes there is a miracle here, just like all my so called inventions the
comment
"well I knew that!" always is said. The real miricle is really'why
me'?
Anybody with a technical background in this subject will eventually
say the same thing even tho it maybe after my death. Every book on
communication since the time of Terman (The library is getting me the
latest Kraus book) deals with this subject in depth. All I am doing is
putting stated formulae in action
and not just memorising them. When I put this in front of anybody eyes
will glase. In fact that is a real problem to me because the obvious
statement that this has been known for over a 100 years so you can't
claim on it. My former boss shakes his head when he sees my work in
amasement. The other miracle is that I was fortunate enough not to
deviate away with pre conceived ideas but left every thing on the
table and the results fell into place just as stated in EVERY book I
had. The other miracle is that my health has allowed me to get back
into things that I always like to do.....not to be a great inventor
but to put to use what the clever guys cut out of their work
achievements and left on the floor.
Nuff said, no ilwill intended
Art

4373. Looking for info on Gamma Match

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 21:39:12 UTC
From: shane0319@hotmail.com
Message-ID: <5e60425.0302261339.5a324ff3@posting.google.com>
Source record: 123812

Thank you for reading my post.

I am building a 2 meter cubical quad (http://www.softcom.net/users/kd6dks/quad.html)and would like to put a gamma match on it. I am not sure how to go about it. I also do not fully understand the theory. Could someone point me in the right direction. I cannot find what I am looking for online.

Thank you for your help.

Shane N0ZDI

4374. Re: expert answer needed for technical questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 21:46:48 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <OamcnSPDAO9ZqMCjXTWcpg@comcast.com>
Source record: 123813

Rus,

The only way you will know for sure is to measure the DC contenuety between the common port and the other two with an ohmmeter. If the diplexer just has high pass and low pass filters, the DC would go to the lower frequency port, and be blocked from the high frequency port.. Check the specs on your amp. It might have provisions for feeding power to it through a second connector. As for putting two diplexers in series, you can probably stand 5 to 10 ohms resistance per diplexer. You can always measure the voltage at the diplexer output (with the amp powered up).

Tam/WB2TT
"J. Sun" <jsun@lucent.com> wrote in message
news:b3j89b$4rm@netnews.proxy.lucent.com...
>
> Right now I have a TV outdoor antenna and a DVB satellite antenna outside.
> I use a Diplexer to combine the signal before running though the in-house
> coaxial cable.
> On the wall outlet next to the TV, I use the diplexer to split the
vhf/uhf
> and satellite
> signal. Now I want to put a mast mount preamp next to the antenna to
boost
> the
> vhf/uhf signal and the power supply next to the tv in the tv signal path.
> I have 3 questions
> 1. will the diplexer stop the DC current in the tv signal path so that
> it will not burn the pre-amp circuit
> 2. will the voltage from the power supply do any harm to the satellite LNB
?
> 3. will the preamp get enough voltage with 2 diplexers in its path ?
>
> Thanks !
>
> Rus
>
>
>

4375. Re: expert answer needed for technical questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 22:04:18 UTC
From: "J. Sun" <jsun@lucent.com>
Message-ID: <b3jdl5$632@netnews.proxy.lucent.com>
Source record: 123814

In fact, I am kind of sure that DC can only go through sat path because LNB
need
it. and diplexer blocks DC in tv path. I'm more concerned about the second
and the
third problem.

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:OamcnSPDAO9ZqMCjXTWcpg@comcast.com...
> Rus,
>
> The only way you will know for sure is to measure the DC contenuety
between
> the common port and the other two with an ohmmeter. If the diplexer just
has
> high pass and low pass filters, the DC would go to the lower frequency
port,
> and be blocked from the high frequency port.. Check the specs on your amp.
> It might have provisions for feeding power to it through a second
connector.
> As for putting two diplexers in series, you can probably stand 5 to 10
ohms
> resistance per diplexer. You can always measure the voltage at the
diplexer
> output (with the amp powered up).
>
> Tam/WB2TT

4376. Re: receive antenna spacing

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 22:23:00 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <-yqdnffz94Ddo8CjXTWcrg@comcast.com>
Source record: 123815

Joe,

At one time I had two 75 meter antennas. The standby antenna was picking up
10 W of power. May be enough to blow the PIN diode switch in the radio.

Tam/WB2TT
"Joe O" <jenjoeo@zianet.com> wrote in message
news:3e4e4b54$1@news.zianet.com...
> I suggest you install a relay to open up the receive only antenna when
> transmitting. I have a 350 ft beverage up 5 ft and it picks up enough
> transmitted RF to brightly illuminate a 12 volt bulb. My low band
> transmitting vertical is 70 ft away from the beverage.
>
> Joe O, KI5FJ
>
> "Larry D. Clark" <buddycl@swbell.net> wrote in message
> news:VGg3a.106$Dy5.70575120@newssvr12.news.prodigy.com...
> > i'm running an icom 756-pro i want to experiment
> > with using a separate receive antenna(via ant 1 and 1/r button)
> > in conjunction with a shunt fed tower on 160m.
> > any sage words of wisdom on the minimum
> > separation between them when running around 750watts?
> >
> > larry
> > kd5foy
> >
> >
>
>

4377. Antenna rods where can you buy the raw material

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 22:59:55 UTC
From: Xanax <keepItInTheNewsGroups@news.com>
Message-ID: <vDb7a.12087$V6.16301@news.indigo.ie>
Source record: 123816

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Hi all
Does anyone know where I can buy rods suitable to making antennas.
Some where in Ireland or the UK.

Cheers,
Xanax
-----BEGIN PGP SIGNATURE-----
Version: PGP 8.0 (Build 294) Beta

iQA/AwUBPl1G6CGakPXr24F/EQKNPgCg6NDcrIcYiSDGErrCgvOq5vWW3eIAnAnQ
KjO/Ff7W8CDQmwFgIjN8DmEc
=HHW8
-----END PGP SIGNATURE-----
```

4378. Re: Looking for info on Gamma Match

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 23:04:38 UTC
From: richardharrison@webtv.net
Message-ID: <4543-3E5D4806-59@storefull-2317.public.lawson.webtv.net>
Source record: 123817

Shane, N0ZDI wrote:
"I cannot find what I am looking for online."

Look in a book index under gamma. Try the ARRL Handbook or the ARRL Antenna Book. Mine have about all you would want to know about gamma matches.

Antennas scale inversely with frequency and so do capacitive reactances. Capacitors shrink as do antennas as frequency increases. So if what you see is for the wrong band, all you have to do is scale it for the right band.

For a table of quad dimensions and gamma matches for various bands (excluding 2m) see W6SAI`s "All about Cubical Quad Antennas", page 69. Scale down the values to 2m.

Best regards, Richard Harrison, KB5WZI

4379. Re: Cushcraft VS Force12

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 23:20:09 UTC
From: John <jwhughes@bellsouth.net>
Message-ID: <3e5d4665$1@post.newsfeed.com>
Source record: 123818

*** post for FREE via your newsreader at post.newsfeed.com ***

<paulfriedman@attbi.com> wrote in message
news:k0U6a.236051$2H6.4339@sccrnsc04...
> Comments on the Sigma 5:
>
> Yes, it is vertical dipole, so no radials -- it needs to be isolated from
> the ground.
>
> Needs a control cable and low amp power to the control box (which is very
> cheaply constructed -- unusual for Force 12)
>
> Very easy to assemble and disassemble: takes about 10 minutes or less for
> either.
>
> Very portable. Light weight, breaks down into small units. Can easily be
> supported in a large bucket with concrete or even sand.
>
> Decent performance. About as good (or bad) as my Butternut -- a little
> better on the WARC bands and a little worse on 10m. About the same on 15
and
> 20) -- no science here, just S-meter readings and reports. Broader
bandwidth
> than the Butternut -- particularly on 20m.
>
> Everyone I have heard of finds the 20m coil set too low in frequency. If
you
> are mostly a SSB operator, you will want to open the protective box and
futz
> the 20m coil. Instructions are provided, but an unnecessary PITA (note:
even
> if you are primarily a CW operator, you will probably want to move the
> center frequency up a bit).
>
> I hope that helps.
>
> Paul
>
>
> "John" <jwhughes@bellsouth.net> wrote in message
> news:3e5be90a$1@post.newsfeed.com...
> > *** post for FREE via your newsreader at post.newsfeed.com ***
> >
> > Considerig the Cushcraft mav5 and the Force 12 Sigma 5. Any user

comments
> on
> > either of these? Their appeal is no radials, and use in a townhome type
> > environment.
> >
> > Thanks
> >
> > John

Appreciate the info...

-----= Posted via Newsfeed.Com, Uncensored Usenet News =-----
http://www.newsfeed.com - The #1 Newsgroup Service in the World!
-----== 100,000 Groups! - 19 Servers! - Unlimited Download! =-----

4380. Re: Antenna rods where can you buy the raw material

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-26 23:44:06 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5qkacrt7kpff6@corp.supernews.com>
Source record: 123669

There's a guy in Lithuania selling them on ebay. I bought some but haven't
seen them yet.
"Xanax" <keepItInTheNewsGroups@news.com> wrote in message
news:vDb7a.12087$V6.16301@news.indigo.ie...
>
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> Hi all
> Does anyone know where I can buy rods suitable to making antennas.
> Some where in Ireland or the UK.
>
> Cheers,
> Xanax
> -----BEGIN PGP SIGNATURE-----
> Version: PGP 8.0 (Build 294) Beta
>
> iQA/AwUBPl1G6CGakPXr24F/EQKNPgCg6NDcrIcYiSDGErrCgvOq5vWW3eIAnAnQ
> KjO/Ff7W8CDQmwFgIjN8DmEc
> =HHW8
> -----END PGP SIGNATURE-----
>
>
>

4381. Ground Plane: How come radials slope down

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 00:24:43 UTC
From: fch <na@hle.com>
Message-ID: <3E5D5ACB.3DEB8B54@hle.com>
Source record: 123674

Ground Plane: How come radials slope down on some grounds
instead of being parallel to ground?

4382. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 00:55:20 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302261655.7af1342a@posting.google.com>
Source record: 123670

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
snip...
>
> > MK
> [snip]
>
> Like you I just dunno what's with Art. What is his problem?
.
Well there you go again Peter, fortunately you are fast becoming
a minority in terms of throwing stones. Yes I could shout it out loud
but for what purpose ? I am interested in this group because of the
items
of information that it provides, hopefully this year I will find a
similar group for old cars as I move on. But Peter the fact is that I
often reel when
I read things from experts of which I am not one. I was astonished
when I gave out the basics of an old antenna of mine where not one saw
the obvious and I suspect all started off on an assumption. It is
hopeless to carry one with
extended sharing if one has his legs cut off before he wants to move
forward.
Yes it is easy to dismiss everything especially if you have the
feeling deep down that all is known about antennas, which may well be
true, but not quite digested by those who consider progress the
ability to memorise formulae or to stick the answers on the back of
their slide rule for the exams.
Your solution for me is to quit 'whining' as you call it and go back
to school
and study mathematics all over again. Well it is too late in life to
start a new life, I enjoy setting myself a target and then achieving
it despite naysayers and still look forward to when a time comes where
I can share in a modest way what I have achieved so it can be shared
since I am a giver not a taker. I didn't read your other post after I
saw the leading paragraph but this one I did read and thus felt
compelled to respond even tho my communications skills have long gone
dormant. One thing tho makes me very comfortable was when the U of I
reviewed it and confirmed my claims, it must be after you leave
academia and get some sort of title that gives people such courage to
close the enquiring mind. Hope I don't run into you at Dayton where I
probably will be donated with a black eye, haven't been to a hamfest
for a very long time.
Regards
Art

4383. Re: expert answer needed for technical questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 01:10:53 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <dnCdncoBfe0F-MCjXTWcpw@comcast.com>
Source record: 123671

What is the frequency of the sat signal? I thought that would be higher than the TV, or is the TV UHF only (don't know what country you are in). Also, wouldn't it be simpler, and maybe cheaper to run separate coaxes?

Tam/WB2TT
"J. Sun" <jsun@lucent.com> wrote in message
news:b3jdl5$632@netnews.proxy.lucent.com...
> In fact, I am kind of sure that DC can only go through sat path because
LNB
> need
> it. and diplexer blocks DC in tv path. I'm more concerned about the second
> and the
> third problem.
>
>
> "Tarmo Tammaru" <t-tammaru@home.com> wrote in message
> news:OamcnSPDAO9ZqMCjXTWcpg@comcast.com...
> > Rus,
> >
> > The only way you will know for sure is to measure the DC contenuety
> between
> > the common port and the other two with an ohmmeter. If the diplexer just
> has
> > high pass and low pass filters, the DC would go to the lower frequency
> port,
> > and be blocked from the high frequency port.. Check the specs on your
amp.
> > It might have provisions for feeding power to it through a second
> connector.
> > As for putting two diplexers in series, you can probably stand 5 to 10
> ohms
> > resistance per diplexer. You can always measure the voltage at the
> diplexer
> > output (with the amp powered up).
> >
> > Tam/WB2TT
>
>
>

4384. Re: Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 01:19:44 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <0ljq5vkcs6a9lauca4irng6baebic0uj9j@4ax.com>
Source record: 123672

I guess it depends upon the car and the radio. Our '99 Accord with a
rear window antenna has the most sensitive AM receiver we have ever
owned in an automobile.

Dick - W6CCD

On Wed, 26 Feb 2003 12:07:53 -0500, Bob Dixon <Bob_Dixon@osu.edu>
wrote:

>I find that modern car radios are less sensitive and selective than the
>old tube models on the AM band. And the AVC is not as effective. There
>is also more interference apparently coming from the car itself, such as
>various tones and heterodynes that may be coming from the on-board
>computers.
>
>
> Bob W8ERD

4385. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 01:25:11 UTC
From: "Robert Lay (W9DMK)" <nobody@crosslink.net>
Message-ID: <u4qq5vsttltv5qear80lkrrsohviim92k8@4ax.com>
Source record: 123673

On Thu, 13 Feb 2003 03:02:06 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>Talking about antenna costs passed on to taxpayers -

Hi Reg,

Long Time No See.

How've you been keeping?

Bob, W9DMK

4386. Re: Ground Plane: How come radials slope down

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 01:44:39 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <b4e7a.3494$Ja.118921@news1.west.cox.net>
Source record: 123676

See URL:
http://www.cebik.com/gp3.html
Tells all

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"fch" <na@hle.com> wrote in message news:3E5D5ACB.3DEB8B54@hle.com...
> Ground Plane: How come radials slope down on some grounds
> instead of being parallel to ground?
>

4387. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 01:45:01 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <iYd7a.12819$Xa4.9655@fe01.atl2.webusenet.com>
Source record: 123675

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:sc1o5vstjnufl2ev9mkne3vib4gd5bhbed@4ax.com...
.
> Spacing is not critical, BUT... <add a few weasel words for just in
> case> If you get the two antennas too close there is very little gain.
> Then as you move out, secondary (and many other) side lobes appear.
> I use either 1.6 wave length (think that's what it was) spacing, or
> about 3/4 to one boom length spacing.
>

The optimum spacing is such that the effective aperature is maximized, but not so far that extra lobes appear. I have seen this drawn in terms of the effective aperature of the two antennas just touching but not overlapping.

What ever that spacing is, my statment was meant to mean that it would be <more weasel words> impossible to achieve over all of the TV channels. Channel 2 starts at 54 MHz. Channel 69 ends at 806 MHz. That is a range of almost 15 to 1. Even considering VHF only (54 MHz to 216 MHz), it would be a 4 to 1 spread. You're not going to get the 'optimum' spacing over more than a couple of channels at the most.

Jim
N8EE

4388. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 01:47:53 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <__d7a.12820$Xa4.3767@fe01.atl2.webusenet.com>
Source record: 123677

I have no experience with Winegard, but if I had a choice that is what I
would use based on their reputation. that is what all the 'professional'
installations use in this part of the country.

Jim
N8EE
"J. Sun" <jsun@lucent.com> wrote in message
news:b3iml7$p7@netnews.proxy.lucent.com...
> Now I have chosen the largest (I mean ups deliverable) antenna and can not
> install
> any higher so I'll try mast-mount pre-amp based on the responses. I have
the
> following
> candidates: Winegard 8275, ChannelMaster 0064 or Rado Shack 15-1109.
> Which one you would recommend ?
> Thanks !
>
> Rus
>
>
>
>

4389. Re: Ground Plane: How come radials slope down

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 01:55:02 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <Wde7a.3498$Ja.123148@news1.west.cox.net>
Source record: 123678

A common answer is It brings the feed-point impedance closer to 50 ohms
But see URL: http://www.cebik.com/gp3.html
for an in-depth discussion

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"fch" <na@hle.com> wrote in message news:3E5D5ACB.3DEB8B54@hle.com...
> Ground Plane: How come radials slope down on some grounds
> instead of being parallel to ground?
>

4390. Re: expert answer needed for technical questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 02:03:11 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <Qbe7a.65582$hh5.62332@fe07.atl2.webusenet.com>
Source record: 123679

Sat Sig. usually 950 - 1.4 Mhz. At least with C-Band Block Converter systems and the old PrimeStar. I beleive I heard that the Dish network uses the same block of freqs.

--
73,
Chuck
KE4ETH
USA-NA

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:dnCdncoBfe0F-MCjXTWcpw@comcast.com...
> What is the frequency of the sat signal? I thought that would be higher
than
> the TV, or is the TV UHF only (don't know what country you are in). Also,
> wouldn't it be simpler, and maybe cheaper to run separate coaxes?
>
> Tam/WB2TT
> "J. Sun" <jsun@lucent.com> wrote in message
> news:b3jdl5$632@netnews.proxy.lucent.com...
> > In fact, I am kind of sure that DC can only go through sat path because
> LNB
> > need
> > it. and diplexer blocks DC in tv path. I'm more concerned about the
second
> > and the
> > third problem.
> >
> >
> > "Tarmo Tammaru" <t-tammaru@home.com> wrote in message
> > news:OamcnSPDAO9ZqMCjXTWcpg@comcast.com...
> > > Rus,
> > >
> > > The only way you will know for sure is to measure the DC contenuety
> > between
> > > the common port and the other two with an ohmmeter. If the diplexer
just
> > has
> > > high pass and low pass filters, the DC would go to the lower frequency
> > port,
> > > and be blocked from the high frequency port.. Check the specs on your
> amp.
> > > It might have provisions for feeding power to it through a second
> > connector.
> > > As for putting two diplexers in series, you can probably stand 5 to 10

> > ohms
> > > resistance per diplexer. You can always measure the voltage at the
> > diplexer
> > > output (with the amp powered up).
> > >
> > > Tam/WB2TT
> >
> >
> >
>
>

4391. Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 02:11:01 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <_he7a.123629$Kj2.10082@fe02.atl2.webusenet.com>
Source record: 123680

What is the best way to ground 300-ohm twinlead for lightening protection outside the shack? Besides a knife switch (Don't wish to walk all the way around the house in the middle of the night.) at the entrance. I wish to do this on as low a budget as possible so commercial grounding equipment is out. (Wife understands as she is a tech, but there are limits.)

Any good and inexpensive ideas?

TNX
--
73,
Chuck
KE4ETH
USA-NA

4392. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 02:34:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5D7933.8010907@ieee.org>
Source record: 123681

Chuck/KE4ETH wrote:
> What is the best way to ground 300-ohm twinlead for lightening protection
> outside the shack? Besides a knife switch (Don't wish to walk all the way
> around the house in the middle of the night.) at the entrance. I wish to do
> this on as low a budget as possible so commercial grounding equipment is
> out. (Wife understands as she is a tech, but there are limits.)
>
> Any good and inexpensive ideas?

I did something that works well, at least here in East Texas. I have a
plexiglas plane mounted in my window with two banana plug sockets mounted
in the plexiglas. The twinlead has two banana plugs. Virtually all
lightning around here is accompanied by wind. When a strong wind blows,
the twinlead automatically unplugs itself.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4393. Re: expert answer needed for technical questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 03:38:19 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <GKf7a.10582$os6.738740@news20.bellglobal.com>
Source record: 123682

"J. Sun" asked about preamps and stuff

I believe that you should be able to get an in-line preamp that can be powered by the 13-17Vdc voltages (varies for polarity selection) that runs to the satellite LNB anyway, and the in-line preamp will amplify everything from VHF Ch2 up to and including the downconverted satellite block. The in-line preamplifier would be installed in the coax cable after it has been combined by the diplexer and just before it heads downstairs.

Ask your local satellite professional.

See also for some other options:

http://www.dbs-online.com/diplex1.htm

4394. Re: expert answer needed for technical questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 03:42:50 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <VOf7a.10591$os6.740435@news20.bellglobal.com>
Source record: 123683

"J. Sun"
> I'm more concerned about the second
> and the third problem.

Don't put any other power supplies on the coax cable to the satellite LNB.
The satellite receiver 'owns the DC rights' on that coax to feed and control
the LNB. Nobody else is allowed to put other DC voltages on that coax.
There - I've written it three different ways.

But usually other devices (like preamplifiers for example) can borrow some
power if they're designed for that application.

4395. Motorola MSR 2000 Manual Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 03:53:41 UTC
From: gervais <gfillio1@globetrotter.net>
Message-ID: <9Zf7a.50293$LR3.4746892@charlie.risq.qc.ca>
Source record: 123684

hi all,
i am looking for manuals for a repeater my radio club baught.
we thaught that by buying it for a surplus goverment we would have it,,,no luck.
we are seeking help from the ham communauty.
any help will be appreciated

she is vhf

73/s and merci

ve2ckn
gervais
ve2ckn@hotmail.com

4396. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 04:58:17 UTC
From: Neville Denetto <ndenetto@sympatico.ca>
Message-ID: <MUg7a.6680$VG.739161@news20.bellglobal.com>
Source record: 123685

Were you serious?

VA2ND

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E5D7933.8010907@ieee.org...
> Chuck/KE4ETH wrote:
> > What is the best way to ground 300-ohm twinlead for lightening
protection
> > outside the shack? Besides a knife switch (Don't wish to walk all the
way
> > around the house in the middle of the night.) at the entrance. I wish to
do
> > this on as low a budget as possible so commercial grounding equipment is
> > out. (Wife understands as she is a tech, but there are limits.)
> >
> > Any good and inexpensive ideas?
>
> I did something that works well, at least here in East Texas. I have a
> plexiglas plane mounted in my window with two banana plug sockets mounted
> in the plexiglas. The twinlead has two banana plugs. Virtually all
> lightning around here is accompanied by wind. When a strong wind blows,
> the twinlead automatically unplugs itself.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4397. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 05:15:02 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5D9ED6.4020606@ieee.org>
Source record: 123687

Neville Denetto wrote:
> Were you serious?

I installed the banana plugs so that I could unplug the antenna during thunderstorms. One day during a thunderstorm, I was away from home and remembered that I had forgotten to unplug the antenna. I rushed home only to find it had unplugged itself. I didn't design it that way but it has reliably unplugged itself many times when I have forgotten to unplug it.

> Cecil.A.Moore@ieee.org wrote:
>>I did something that works well, at least here in East Texas. I have a
>>plexiglas plane mounted in my window with two banana plug sockets mounted
>>in the plexiglas. The twinlead has two banana plugs. Virtually all
>>lightning around here is accompanied by wind. When a strong wind blows,
>>the twinlead automatically unplugs itself.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4398. Re: Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 05:15:37 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E5D98B7.8134BF7E@att.net>
Source record: 123686

The Simpsons wrote:

> The reason was that very low capacitance was required. The front end input
> circuit was a parallel tuned circuit with the antenna connected to the top
> of the circuit. This meant a very high input impedance. To reduce the
> losses, as the antenna / coax combination became part of the tuned circuit,
> very low capacitance was required, hence the design of the cable. If the
> capacitance was high, the tuned input circuit 'Q' lowered because of the
> poor L:C ratio. The input of the car receiver had to be tuned as well, to
> peak the input circuit due to the varitaion of antenna / coax etc. A small
> trimmer was provided to do this essential installation task.
> Modern receivers use a low impedance input as they don't need the effective
> gain provided by the older high impedance type. The modern input stage has
> much greater sensitivity than the older designs. Plus it makes matching to a
> 100MHz FM band input stage easier as well.
>
> Grant, ZL2BK.
>
> "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
> news:v5i8dodpnbr1b3@corp.supernews.com...
> > Back in the 1950s and 60 car radio antennas used a short peice of special
> > coax to connect a front fender mounted antenna to the radio. This leadin
> > cable was ~1/4" dia. with copper braid over a hollow tube that contained a
> > very thin center conductor, probably smaller than 30 guage as best I can
> > recall, and had a very low per foot capacitance. Rear mounted antennas
> > provided inferior reception and weren't used. Then it must have been in
> the
> > 1970s that someone figured out how make rear mounted antennas work without
> a
> > rear mounted preamp. I have two questions. Does anyone recall the
> > characteristic impedance of the thin center conductor lead in and what
> > happened in the 70s to make rear mounted antennas work without preamps?
> > tnx
> > hank wd5jfr
> >
> >

And, IIRC, the cable was RG-62.

Dick

4399. Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 05:29:37 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0302262129.175ef251@posting.google.com>
Source record: 123688
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Here is the application:
I am working on an SWR/wattmeter with a wide dynamic range. The design is just like the one at http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except that I will need a more complex rectification system. I use the same 10:1 turns ratios and the same 50-ohm resistances. The sampled forward voltage is 10V at the top power transmitted power level (200W) and .1V at the lowest transmitted power level (20mW). For an SWR of 1.22, the sampled reflected voltage will be 1V for 200W of transmitted power and .01V for 20mW of transmitted power.

The problem:
I am trying to rectify the RF voltages into DC voltages of the same amplitude. The frequency range is 1.6MHz-30MHz, and the voltage amplitude range is .01V to 10V. RF amplifiers are not a viable solution (not equipped to use SOICs, all my supplies are DIP). Amplifying the DC voltages with an ordinary op amp will not work due to the contamination from the offset voltage. And conventional audio op-amps like the 741 lack the bandwidth I need. So the only solution left for me is a chopper amplifier, which converts the DC voltages into audio frequency voltages, which are much easier to work with than DC or RF.

The questions:
What should I look for in a chopper amplifier? Did any chopper amplifiers that you have worked with have strange characteristics that affected performance? Are there any other issues I need to be aware of? Tell me about your experiences, because I have never seen a chopper amplifier before and have absolutely NO experience with any.

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com

4400. Re: Impedence of a half wave vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 06:05:30 UTC
From: dselwa1@juno.com
Message-ID: <fa160ace.0302262205.1384afb3@posting.google.com>
Source record: 123689

Thanks Guys for the tips. After reading your posts, I think I will go for the on turn gamma match approach. Iv'e seen this used lots of times and
it's a simple foolproof method. In very simplistic terms: one end of the coil is at the base of the antenna and the other end is at the coax braid. Somewhere between the high impedence point and ground (braid) has to be 50 ohms,I'll just cut the length of the antenna to formula and the use a big crocidile clip to
find the lowest SWR.

Dennis Selwa W6EH

4401. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 06:27:43 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5DAFDF.2B4E0DF0@cwis.net>
Source record: 123690

Cecil,
I wonder how many times it's unplugged it's self
when you didn't want it to?
'Doc

4402. Re: Long wire/random wire feedline and taxpayers.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 06:29:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3kb88eeo1@sparta.btinternet.com>
Source record: 123691

> Hi Reg,
> Long Time No See.
> How've you been keeping?
>
> Bob, W9DMK
======================

Hello Bob,
I'm none the worse after seeing your signature again on these walls.
And red wine continues to preserve the arteries.
But after a lapse of 10 years Bush has caused me to start smoking again.

Reg, G4FGQ

4403. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 07:18:10 UTC
From: Robert Baer <robertbaer@earthlink.net>
Message-ID: <3E5DBBFE.3F74A74D@earthlink.net>
Source record: 123692
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Jason Hsu wrote:
>
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> that I will need a more complex rectification system. I use the same
> 10:1 turns ratios and the same 50-ohm resistances. The sampled
> forward voltage is 10V at the top power transmitted power level (200W)
> and .1V at the lowest transmitted power level (20mW). For an SWR of
> 1.22, the sampled reflected voltage will be 1V for 200W of transmitted
> power and .01V for 20mW of transmitted power.
>
> The problem:
> I am trying to rectify the RF voltages into DC voltages of the same
> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> amplitude range is .01V to 10V. RF amplifiers are not a viable
> solution (not equipped to use SOICs, all my supplies are DIP).
> Amplifying the DC voltages with an ordinary op amp will not work due
> to the contamination from the offset voltage. And conventional audio
> op-amps like the 741 lack the bandwidth I need. So the only solution
> left for me is a chopper amplifier, which converts the DC voltages
> into audio frequency voltages, which are much easier to work with than
> DC or RF.
>
> The questions:
> What should I look for in a chopper amplifier? Did any chopper
> amplifiers that you have worked with have strange characteristics that
> affected performance? Are there any other issues I need to be aware
> of? Tell me about your experiences, because I have never seen a
> chopper amplifier before and have absolutely NO experience with any.
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

Well, there are a lot of inexpensive opamps that have bandwidths that
are in the hundreds of MHz (SOIC and DIP) that make RF amplification
easier than you seem to indicate.
And, there are a lot of cheap opamps that have low microvolt offsets.
So, with either of those as a solution, you will be better served,
since it is a bitch to rectify that 10mV signal.

4404. Re: How do you Extend the TX on a IC-756 PRO2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 07:52:28 UTC
From: F8BOE Olivier <f8boeNOSPAM@free.fr>
Message-ID: <3e5dc3c0$0$224$626a54ce@news.free.fr>
Source record: 123693

[No readable article body recovered]

4405. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 08:35:53 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <J5k7a.42987$VH5.72110@news-server.bigpond.net.au>
Source record: 123694
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Jason Hsu wrote:
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> that I will need a more complex rectification system. I use the
same
> 10:1 turns ratios and the same 50-ohm resistances. The sampled
> forward voltage is 10V at the top power transmitted power level
(200W)
> and .1V at the lowest transmitted power level (20mW). For an SWR of
> 1.22, the sampled reflected voltage will be 1V for 200W of
transmitted
> power and .01V for 20mW of transmitted power.
>
> The problem:
> I am trying to rectify the RF voltages into DC voltages of the same
> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> amplitude range is .01V to 10V. RF amplifiers are not a viable
> solution (not equipped to use SOICs, all my supplies are DIP).
> Amplifying the DC voltages with an ordinary op amp will not work due
> to the contamination from the offset voltage. And conventional
audio
> op-amps like the 741 lack the bandwidth I need. So the only
solution
> left for me is a chopper amplifier, which converts the DC voltages
> into audio frequency voltages, which are much easier to work with
than
> DC or RF.
>
> The questions:
> What should I look for in a chopper amplifier? Did any chopper
> amplifiers that you have worked with have strange characteristics
that
> affected performance? Are there any other issues I need to be aware
> of? Tell me about your experiences, because I have never seen a
> chopper amplifier before and have absolutely NO experience with any.
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

A log amp would do the job I think.

I suggest you check http://analog.com

They have a range of log amps such as AD8307, with a dynamic range of 90dB @ 500MHz. I think they have DIP versions available. The data sheets include applications information for a 1uW to 1KW RF power meter using a single IC.

Steve Andrew

4406. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 08:38:54 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <y8k7a.42989$VH5.72221@news-server.bigpond.net.au>
Source record: 123695
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Sorry - That should be http://www.analog.com

This is a direct link to the AD8307

http://www.analog.com/Analog_Root/productPage/productHome/0%2C2121%2CAD8307%2C00.html

An 8 pin DIP version is available.

Steve Andrew

4407. Re: How do you Extend the TX on a IC-756 PRO2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 08:39:48 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5rjmhhf6avta9@corp.supernews.com>
Source record: 123696

www.mods.dk

"F8BOE Olivier" <f8boeNOSPAM@free.fr> wrote in message
news:3e5dc3c0$0$224$626a54ce@news.free.fr...
>
>

4408. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 08:41:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5rjoupuf6uidd@corp.supernews.com>
Source record: 123697
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

I suggest that you take a look at "The Tandem Match - An Accurate Directional Wattmeter", by John Grebenkemper, QST, Jan. 1987, pp. 18-26. Also see "Tandem Match Corrections", Technical Correspondence, Jan. 1988, p. 49.

Roy Lewallen, W7EL

Jason Hsu wrote:
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> that I will need a more complex rectification system. I use the same
> 10:1 turns ratios and the same 50-ohm resistances. The sampled
> forward voltage is 10V at the top power transmitted power level (200W)
> and .1V at the lowest transmitted power level (20mW). For an SWR of
> 1.22, the sampled reflected voltage will be 1V for 200W of transmitted
> power and .01V for 20mW of transmitted power.
>
> The problem:
> I am trying to rectify the RF voltages into DC voltages of the same
> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> amplitude range is .01V to 10V. . .

4409. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 10:37:57 UTC
From: Ban <bansuri@masterweb.it>
Message-ID: <9UI7a.329127$AA2.12321247@news2.tin.it>
Source record: 123698
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Robert Baer wrote:
> Jason Hsu wrote:
>>
>> Here is the application:
>> I am working on an SWR/wattmeter with a wide dynamic range. The
>> design is just like the one at
>> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
>> that I will need a more complex rectification system. I use the same
>> 10:1 turns ratios and the same 50-ohm resistances. The sampled
>> forward voltage is 10V at the top power transmitted power level
>> (200W) and .1V at the lowest transmitted power level (20mW). For an
>> SWR of
>> 1.22, the sampled reflected voltage will be 1V for 200W of
>> transmitted power and .01V for 20mW of transmitted power.
>>
>> The problem:
>> I am trying to rectify the RF voltages into DC voltages of the same
>> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
>> amplitude range is .01V to 10V. RF amplifiers are not a viable
>> solution (not equipped to use SOICs, all my supplies are DIP).
>> Amplifying the DC voltages with an ordinary op amp will not work due
>> to the contamination from the offset voltage. And conventional audio
>> op-amps like the 741 lack the bandwidth I need. So the only solution
>> left for me is a chopper amplifier, which converts the DC voltages
>> into audio frequency voltages, which are much easier to work with
>> than DC or RF.
>>
>> The questions:
>> What should I look for in a chopper amplifier? Did any chopper
>> amplifiers that you have worked with have strange characteristics
>> that affected performance? Are there any other issues I need to be
>> aware of? Tell me about your experiences, because I have never seen
>> a chopper amplifier before and have absolutely NO experience with
>> any.
>>
>> Jason Hsu, AG4DG
>> usenet@@@@jasonhsu.com
>
> Well, there are a lot of inexpensive opamps that have bandwidths
> that are in the hundreds of MHz (SOIC and DIP) that make RF
> amplification easier than you seem to indicate.
> And, there are a lot of cheap opamps that have low microvolt

> offsets. So, with either of those as a solution, you will be better
> served, since it is a bitch to rectify that 10mV signal.

When I looked through the Analog Devices solutions bulletin of this month, I saw this AD8362 RMS-detector on the last page, which might serve for your purpose. It will require a bit of understanding to modify the chip for an SWR-meter, or even require a second one. The 60dB range and the fantastic bandwidth are promising though.
--
ciao Ban
electronic hardware designer
http://thinkamove.com/

4410. Re: Wireless Keyboard and Mouse

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 11:31:36 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b3ksumeup1@venus.btinternet.com>
Source record: 123699

Really? Interesting.....

Well, I opened it up and there's a really interesting looking PCB
groundplane antenna in there..... no clues as to frequency though.

Maybe I'll just stick a long wire on it and see what happens!

Thanks anyway,

D

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030226084349.01945.00000188@mb-mp.aol.com...
> >Anyone know what frequency these run at? I assume there is a European
> >standard licence exempt frequency for wireless data stuff that's not
802.11?
>
> Mine operates in the CB band, just between "channel" 13 + 14 (27.145 or
> something around that). Only suggestion is to put the receiver in "line of
> sight" (or buy a CB amp on Yahoo auctions.. ;))
>
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

4411. Re: Wireless Keyboard and Mouse

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 11:34:12 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b3kt3klip1@knossos.btinternet.com>
Source record: 123700

Sorry, thought it would be pretty clear from my posting but just to clarify
I'm obviously talking about an RF wireless kb and mouse.

"Dennis Kaylor" <k4oxg@tampabay.rr.com> wrote in message
news:3E5CB521.4020709@tampabay.rr.com...
> why dont you try mounting the reciever outside the cupboard where ytou
> have the PC hiding
> most of these wireless keyboards use infared light just like your TV
> remote to send data back and forth not RF so an antenna wouldnt do you
> any good
>
> Dean Elwood wrote:
> > Right, finally got my PC moved into a cupboard where I think they should
be!
> > Up until sometime as someone designs one (not a Mac) which is a piece of
> > furniture anyway.....
> >
> > Problem is the wireless keyboard and mouse are *just* out of range
(little
> > intermittent even with new batteries). I've tried everything I can,
getting
> > the receiver on the PC end up as high as possible etc etc. Not quite
right.
> >
> > I want to try sticking a decent antenna on this thing to fix my problem.
> >
> > Anyone know what frequency these run at? I assume there is a European
> > standard licence exempt frequency for wireless data stuff that's not
802.11?
> >
> > Many thanks,
> >
> > Dean
> >
> >
>

4412. Re: Wireless Keyboard and Mouse

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 11:36:01 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b3kt70$5gn$1@sparta.btinternet.com>
Source record: 123701

OK, clearly infra-red versions of these things exist also - I didn't realise that.

Cheers,

D

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E5CCB2A.8070603@ieee.org...
> Dean Elwood wrote:
> > Anyone know what frequency these run at? I assume there is a European
> > standard licence exempt frequency for wireless data stuff that's not 802.11?
>
> Mine runs at about 100,000 GHz. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4413. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 11:44:22 UTC
From: bill.sloman@ieee.org
Message-ID: <7c584d27.0302270344.164e4d80@posting.google.com>
Source record: 123702
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Robert Baer <robertbaer@earthlink.net> wrote in message
news:<3E5DBBFE.3F74A74D@earthlink.net>...
> Jason Hsu wrote:
> >
> > Here is the application:
> > I am working on an SWR/wattmeter with a wide dynamic range. The
> > design is just like the one at
> > http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> > that I will need a more complex rectification system. I use the same
> > 10:1 turns ratios and the same 50-ohm resistances. The sampled
> > forward voltage is 10V at the top power transmitted power level (200W)
> > and .1V at the lowest transmitted power level (20mW). For an SWR of
> > 1.22, the sampled reflected voltage will be 1V for 200W of transmitted
> > power and .01V for 20mW of transmitted power.
> >
> > The problem:
> > I am trying to rectify the RF voltages into DC voltages of the same
> > amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> > amplitude range is .01V to 10V. RF amplifiers are not a viable
> > solution (not equipped to use SOICs, all my supplies are DIP).
> > Amplifying the DC voltages with an ordinary op amp will not work due
> > to the contamination from the offset voltage. And conventional audio
> > op-amps like the 741 lack the bandwidth I need. So the only solution
> > left for me is a chopper amplifier, which converts the DC voltages
> > into audio frequency voltages, which are much easier to work with than
> > DC or RF.
> >
> > The questions:
> > What should I look for in a chopper amplifier? Did any chopper
> > amplifiers that you have worked with have strange characteristics that
> > affected performance? Are there any other issues I need to be aware
> > of? Tell me about your experiences, because I have never seen a
> > chopper amplifier before and have absolutely NO experience with any.
> >
> > Jason Hsu, AG4DG
> > usenet@@@@jasonhsu.com
>
> Well, there are a lot of inexpensive opamps that have bandwidths that
> are in the hundreds of MHz (SOIC and DIP) that make RF amplification
> easier than you seem to indicate.
> And, there are a lot of cheap opamps that have low microvolt offsets.
> So, with either of those as a solution, you will be better served,

> since it is a bitch to rectify that 10mV signal.

On the other hand, it wouldn't be that difficult to phase-sensitive detect/demodulate it by multiplying with the transmitter frequency.

You may have to do it twice - in-phase and in quadrature - to reliably capture the amplitude of the detected signal, but since this also gives you phase, this may be more of a feature than a bug.

The Analog Devices AD834 and AD835 parts are the first ones that come to my mind, but more RF-oriented engineers will think MiniCircuits mixers, and Jim Thompson will probably point out that the MC1496 is cheaper and quite fast enough.

Bill Sloman, Nijmegen

4414. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 13:28:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E5E1286.4020303@ieee.org>
Source record: 123703

'Doc wrote:
> I wonder how many times it's unplugged it's self
> when you didn't want it to?

It's never unplugged itself while I was operating and if
I'm not operating, it should be unplugged.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4415. Tower wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 13:35:52 UTC
From: el34guy@aol.com
Message-ID: <20030227083552.23249.00000211@mb-ma.aol.com>
Source record: 123704

Hi Everyone,
Im looking for a good used crankup or freestanding tower. It must be heavy duty(about 20sq ft or better) and around 56 ft high. Im looking for it in steel. Im in the midwest(Iowa). Anything out here? 73

Mark
W0NCL

4416. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 14:01:36 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0302270601.729ff554@posting.google.com>
Source record: 123705

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<10804-3E5BE7E7-705@storefull-2315.public.lawson.webtv.net>...
> Brian Kelly wrote:
> "I need a quickie 20m antenna."
>
> A coaxial antenna is a vertical dipole with a hollow tube skirt
> providing access to the drivepoint at its center.

Mine will run horizontally, should work the same as a vertical
ignoring the patterns.

> Formulas are used at VHF to use large rods and skirts to make the
> antenna so that it has more bandwidth and so its drivepoint impedance is
> brought down to better match the 50-ohm coax commonly used. Using these,
> I scale the rod to about 10 inches dia.and the skirt at 30 in dia with
> their lengths shortened to account for reduced velocity with the large
> diameters. This is not likely practical at 20m.

Fuhgeddit.

> At 20m, the skirt diameter is likely to be little larger than the coax
> and the lengths of the skirt (braid) and vertical rod (wire) placed
> above it are each likely to be about 1/4-wave, less 5%, at 14.25 MHz.
> I calculate about 16 ft and 5 in, for each.

> You might trim the skirt for a match as it will appear electrically a
> little longer than the upper antenna section as it is fatter. This will
> trend to a better balance also, perhaps. But it`s no big deal. You
> should be close enough without trimming anything. Surroundings will
> likely detune the antenna more than length error, unless I made a
> mistake.

Agreed.

Using 8X the skirt will be roughly 0.3" diameter, the "rod" will be
roughly 0.03" diameter.

I lurk low in the bands, mostly cw. Assume 14.1 Mhz design freq.
0.95^468/f = 31.53 feet = 189 inches per side.
Arbitrarily shorten the skirt 2%. 0.98^189" = 185"
Done and up she goes.

>
> Best regards, Richard Harrison, KB5WZI

Tnx,

w3rv

4417. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 14:25:28 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0302270625.8b05c76@posting.google.com>
Source record: 123706

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<16160-3E5CFE23-61@storefull-2314.public.lawson.webtv.net>...
> Brian Kelly wrote:
> "I`m having a bad time coming up with the proper design equations for
> designing / building coaxial antennas."
>
> I`m amazed I don`t find them in the ARRL Antenna Book.

. . .

That's what got me started on this whole thing. I'll swear it was in
the old Antenna Books.

>
> scaled for lower frequencies. Some of the lengths:
> 27 MHz, 108 in. whip, 119 in. skirt
> 28, 103, 111

Multiplying the the 28 Mhz lengths by 1.97 dimensions for 14.1 Mhz
yields 204" & 220" inches which are significantly longer than my 185"
& 189".

The pot thlickens . .

>
> Best regards, Richard Harrison, KB5WZI

w3rv

4418. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 14:38:00 UTC
From: richardharrison@webtv.net
Message-ID: <21865-3E5E22C8-215@storefull-2316.public.lawson.webtv.net>
Source record: 123707

Brian Kelly wrote:
"Mine will run horizontally---."

The War Department agrees with Brian. It says the coax antenna is suitable for horizontal mounting. Impedance is likely lower. The earth is in the null of an elevated vertical dipole. The earth is positioned to sap energy from a low horizontal dipole. This can lower drive impedance of the dipole.

Best regards, Richard Harrison, KB5WZI

4419. NMO antenna - Military mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 15:54:09 UTC
From: HS <fejkad_adress@dof.se>
Message-ID: <3E5E345D.2090905@dof.se>
Source record: 123708

I have a question for the group:

Will an antenna with the motorola type "NMO" mount fit a military type vehicular antenna mount, such as the AS-1729 or AS-3900?

I have a surplus military antenna base, but i have not been able to locate a NMO antenna (here in sweden) to try if it fits.

73 de SM3PXG, Hans.

4420. Re: expert answer needed for technical questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 15:59:53 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <xe-dnYWnfNpoqMOjXTWcpw@comcast.com>
Source record: 123709

I think we are confused as to what you have. Is this the setup:

1. cable from TV to diplexer.
2. From diplexer sat port to power feed.
3. From power feed to sat block downconverter.
4. From diplexer TV port to TV antenna.
5. You want to add a TV power feed between the diplexer TV port and TV antenna, adding a TV amp .

My original mail still stands, measure the diplexer with an ohmmeter. Or, disconnect part of the cabling and make sure voltages are not going where you don't want them to.

Tam/WB2TT
"J. Sun" <jsun@lucent.com> wrote in message
news:b3j89b$4rm@netnews.proxy.lucent.com...
>
> Right now I have a TV outdoor antenna and a DVB satellite antenna outside.
> I use a Diplexer to combine the signal before running though the in-house
> coaxial cable.
> On the wall outlet next to the TV, I use the diplexer to split the
vhf/uhf
> and satellite
> signal. Now I want to put a mast mount preamp next to the antenna to
boost
> the
> vhf/uhf signal and the power supply next to the tv in the tv signal path.
> I have 3 questions
> 1. will the diplexer stop the DC current in the tv signal path so that
> it will not burn the pre-amp circuit
> 2. will the voltage from the power supply do any harm to the satellite LNB
?
> 3. will the preamp get enough voltage with 2 diplexers in its path ?
>
> Thanks !
>
> Rus
>
>
>

4421. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 16:00:37 UTC
From: richardharrison@webtv.net
Message-ID: <2627-3E5E3625-214@storefull-2315.public.lawson.webtv.net>
Source record: 123713

Brian Kelly wrote:
"Multiplying the 28 MHz lengths by 1.97 dimensions for 14.1 MHz yields 204" & 220 inches which are significantly longer than my 185" & 189"."

Length to diameter ratio of the cable is less at the higher frequency. Length is less. Diameter is the same. Cable is fatter in wavelengths and can be shorter for resonance. But this does not explain descrepancies.

Using the War Department tables for lengths, 40 MHz/30 MHz is 1.333. Antenna lengths given are 190"/126"=1.5 for the 30 MHz and 40 MHz antennas.

I calculate 95% of the 1/2-wavelengths as 187in. and 140in.

I can`t reconcile the tables. The book came from M.I.T. and Harvard professors in WW-2. Perhaps students doing the actual work erred and the profs didn`t catch it.

Best regards, Richard Harrison, KB5WZI

4422. vlf grid dip mod ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 16:04:13 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5sdo0f9jnih72@corp.supernews.com>
Source record: 123710

Anyone recall an article in one of the ham mags that presented a unique way
to get below the broadcast band using a dip meter that was later followed up
by another improvement?
tnx
hankwd5jfr

4423. Re: Automobile antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 16:13:53 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <pNqcnZ3x6fmgpMOjXTWc3Q@comcast.com>
Source record: 123711

RG62 is 93 ohm cable, with a capacitance of 13.5 PF/ft.. There is also a
.405 high impedance cable, RG63, which is 125 ohms and 10 PF/ft.

Tam/WB2TT

_____
"Dick Carroll" <dickc58@att.net> wrote in message
news:3E5D98B7.8134BF7E@att.net...

> And, IIRC, the cable was RG-62.
>
> Dick
>
>

4424. Re: vlf grid dip mod ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 16:14:15 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v5seaqldiime26@corp.supernews.com>
Source record: 123712

Found it Ham Radio Aug 79 and HR July 80.
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v5sdo0f9jnih72@corp.supernews.com...
> Anyone recall an article in one of the ham mags that presented a unique
way
> to get below the broadcast band using a dip meter that was later followed
up
> by another improvement?
> tnx
> hankwd5jfr
>
>

4425. questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 16:18:56 UTC
From: "J. Sun" <jsun@lucent.com>
Message-ID: <b3ldpj$ebe@netnews.proxy.lucent.com>
Source record: 123714

I have a TV outdoor vhf/uhf antenna and a DVB satellite antenna
outdoors. The frquency band from DVB after LNB is about 0.95G-2.2G.
The LNB is powered by 18 dc volt from the satellite receiver. I use a
diplexer1 as a combiner to combine the tv and sat signal before entering
the house and running though the in-house coaxial cable. Thediplexer
allows DC current to pass through the sat signal path and power the sat
LNB. The diplexer blocks the DC on tv signal path
On the wall outlet next to the TV, I use the diplexer2 to split the vhf/uhf
and satellite signal, then feed TV and sat receiver, respectively.

Now if I want to add a Winegard mast monut antenna pre-amp 8275. The
pre-amp is to be mounted next to the ant. It is powered by a 18 ac volt
power supply next to the tv set inside the house on the tv signal path after
diplexer2. I have the following questions

```
sat ant & lnb ---------------- -----sat receiver
| indoor--> |
diplexer1-----------diplexer2
|. . |
vhf/uhf ant --8275 preamp--- --power supply---tv
```

1. Is it the right way to do it in such configuration. ?
2. will the18ac volt from pre-amp power supply do the harm to sat LNB
and sat receiver ?
3. will the 18dc volt from the sat receiver do the harm to both
power supply and preamp ? I guess the diplexer1 will block the dc
current to pre-amp, right? how about 18dc volt to the power supply ?

Thanks !

4426. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 17:06:15 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302270906.38f58ab8@posting.google.com>
Source record: 123715

'Doc <w5lz@cwis.net> wrote in message news:<3E5D250D.CF8E0D69@cwis.net>...
> Art,
> The roll of 'martyr' doesn't fit you too well
> either. Very simple solution to the 'problem'. Just
> say what you mean so that some of us can understand
> it.
> 'Doc

Doc, I now know what you are and who you are. You feel
an urge to always have a comment. So go ahead with your battle cry of
it is not my job or fault' and thus I can absolve you. If you have
technical input then I am all ears.
Art

4427. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 17:10:25 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302270910.2a1e8b1b@posting.google.com>
Source record: 123716

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b3j96m$l62$1@helle.btinternet.com>...
> Art sed.
> > People at Radcom are
> > extremely friendly to their readers and are without pre conceived
> > ideas.
>
> ==========
>
> Art, you are obviousy joking.
>
> Only newborn babies are without pre-conceived ideas. To whom do you refer -
> Radcom (and other magazine) old-wives who exist on repetitive plagiarism,
> or to their continuously brainwashed readers?

Reg, I like the way they explain things and give their thoughts so the
reader can decide. Pulling down a contributor does not supply an equal
and opposite reaction by placing the detractor on a higher plain.
To each his own.
Art

4428. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 18:13:18 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0302271013.3eda973a@posting.google.com>
Source record: 123717
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0302262129.175ef251@posting.google.com>...
>[lots deleted]
> Amplifying the DC voltages with an ordinary op amp will not work due
> to the contamination from the offset voltage. And conventional audio
> op-amps like the 741 lack the bandwidth I need. So the only solution
> left for me is a chopper amplifier, which converts the DC voltages
> into audio frequency voltages, which are much easier to work with than
> DC or RF.
>
Offset voltage is not a problem; you can simply introduce an identical
voltage of opposing polarity to null it out. The real issue, of course,
is whether it stays nulled out, or if something changes with temperature
or something else so you can't count on it.

I hate to say this, but it sure seems like the reason you are
now asking about choppers is because on the last iteration, you
got some suggestions of using them. But that was crossposted,
like this one, and I'm still not convinced choppers are necessary.
In other words, you may be going down a false path, based on
an initial false premise.

I can't remember ever seeing choppers in hobby circles. Oh,
people fiddled with them forty or fifty years ago, so they could
see DC fluctuation on their AC coupled scopes. And I suppose
there were some highly critical and very obscure use of them.
But the fact that you don't see them in hobby circles seems
like a good indication that you may be looking at the problem
wrong.

The only exception that immediately comes to mind was something
in Ham Radio magazine about 1978, I think by Joe Reisart, where
he used an AM modulated signal source, and then could use an
AC coupled amplifier after the detector. But my memory of
this is vague enought that I can't even remember what exactly
he was doing with it.

I think the initial problem is your misunderstanding of
offset problems. But to dismiss things like RF amplification
for trivial reasons like you can't find them in the right package
(people were building amplifiers long before there were ICs)
and likely plenty of other solutiions, before dismissing
choppers seems like you're going down a false path.

Michael

4429. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 19:05:51 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <rzw7a.2438$sA1.1641@fe03.atl2.webusenet.com>
Source record: 123624

I think the Sat LNB is fed with about 15-18 volts already. You might not need to feed with the power supply for the pre-amp. Look at Sat Receiver on the back where the co-ax connects from the dish and see what voltage it feeds.

--
73,
Chuck
KE4ETH
USA-NA

"J. Sun" <jsun@lucent.com> wrote in message
news:b3ldpj$ebe@netnews.proxy.lucent.com...
> I have a TV outdoor vhf/uhf antenna and a DVB satellite antenna
> outdoors. The frquency band from DVB after LNB is about 0.95G-2.2G.
> The LNB is powered by 18 dc volt from the satellite receiver. I use a
> diplexer1 as a combiner to combine the tv and sat signal before entering
> the house and running though the in-house coaxial cable. Thediplexer
> allows DC current to pass through the sat signal path and power the sat
> LNB. The diplexer blocks the DC on tv signal path
> On the wall outlet next to the TV, I use the diplexer2 to split the
vhf/uhf
> and satellite signal, then feed TV and sat receiver, respectively.
>
> Now if I want to add a Winegard mast monut antenna pre-amp 8275. The
> pre-amp is to be mounted next to the ant. It is powered by a 18 ac volt
> power supply next to the tv set inside the house on the tv signal path
after
> diplexer2. I have the following questions
>
>
> sat ant & lnb ---------------- -----sat
receiver
> | indoor--> |
> diplexer1-----------diplexer2
> |. . |
> vhf/uhf ant --8275 preamp--- --power
supply---tv
>
>
> 1. Is it the right way to do it in such configuration. ?
> 2. will the18ac volt from pre-amp power supply do the harm to sat LNB
> and sat receiver ?
> 3. will the 18dc volt from the sat receiver do the harm to both
> power supply and preamp ? I guess the diplexer1 will block the dc

> current to pre-amp, right? how about 18dc volt to the power supply ?
>
> Thanks !
>
>
>
>

4430. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 19:07:22 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <Bzw7a.2443$sA1.1483@fe03.atl2.webusenet.com>
Source record: 123625

Thanks

Good idea, but wouldn't I still need to walk around the house?

--
73,
Chuck
KE4ETH
USA-NA

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E5E1286.4020303@ieee.org...
> 'Doc wrote:
> > I wonder how many times it's unplugged it's self
> > when you didn't want it to?
>
> It's never unplugged itself while I was operating and if
> I'm not operating, it should be unplugged.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4431. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 19:24:26 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <b3lola$2vr2$1@news1.tribune.com>
Source record: 123718

This is in my shack, but it could be outside.

http://user.mc.net/~jdewey/Ham_radio/grounding_relay.jpg

I bought a heavy duty (30 amp 250volt) open frame relay at a ham fest. You
can get them with 24 volt ac or 120 volt ac coils
I have the 120 volt ac coil hooked to the main power switch for my
equipment.
When the lights are on, the relay connects to my tuner. When the lights are
off, it connects to ground.

Obviously a direct strike will blow up everything, but I don't worry about
forgetting this, which I did with a knife switch.

John
KA9CAR

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:_he7a.123629$Kj2.10082@fe02.atl2.webusenet.com...
> What is the best way to ground 300-ohm twinlead for lightening protection
> outside the shack? Besides a knife switch (Don't wish to walk all the way
> around the house in the middle of the night.) at the entrance. I wish to
do
> this on as low a budget as possible so commercial grounding equipment is
> out. (Wife understands as she is a tech, but there are limits.)
>
> Any good and inexpensive ideas?
>
> TNX
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
>
>
>

4432. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 20:15:57 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5E71FD.FC234442@cwis.net>
Source record: 123619

Cecil,
Good enough!
'Doc

4433. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 20:24:29 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E5E73FD.A4EC23E9@cwis.net>
Source record: 123620

Art,
Who or 'what' I am has never been a secret,
so good for you! I think my 'opinion', that you
are hard to understand, is a fairly common one.
So, I don't feel all that unusual because of it.
As for always having a comment, I don't comment
on a lot of things I have an opinion about. And
as for having a 'battle cry', it's 'Ubi est ignum?'
And as for absolution... 'Deo gratias'!
'Doc

4434. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 20:59:40 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E5E7C3C.4C455F3B@uci.edu>
Source record: 123621

If you have something to share, Art, then go ahead and share it.

Art Unwin KB9MZ wrote:
>
> Don't get me wrong Mark, it is not about nationality, it is
> about piling on as a group when a Guru publicly denounces a
> person as a fraud which thus gives cover for assault by others.
> We have seen this many times on this newsgroup with various
> manufacturers and inventors and there is no need to write out
> a list of names, you can't escape the fact. I will only talk
> about my own experiences who believes in certain moral behaviour,
> in the case of antenna inventions I have not accepted offers from
> others but rather would consult with my peers to ensure that no harm
> is laid on my fellow hobbiest. Like other inventors on this group
> which I said I would not name I defend myself but by being a non guru
> or known publisher,pseudo expert, etc one a brick is thrown at you
> by a guru and the piling on starts. I promised a person who gave some
> suggestions of how to get out of this mess that I would not bring up
> my old patent ideas again which every year stirs up a hornets nest but
> I
> would not give up on responding if asked. Frankly his advice
> worked and the snide comment have pretty much come to a halt.
> Yes Peter states that I am whining or I should do this or that or
> I should devote more time to learning mathematics but even he will
> change as he becomes alone. So back to my original point, how does
> one share with others without placing up front a resume or a list
> of different things that he has done or achieved just to gain the
> podium to talk to like people that are willing to give respect?
> If one were to even think of presenting his credentials before hand
> I would consider it to be boastfull yet for an entrepreneur it is an
> absolute must. In my case I read the post returns over the years and
> which generally suggest that I am a 'dumbshit' possibly because I
> change
> hats sometimes and ask simple questions, now I have learned my lesson
> knowing that anything new will be classed as a 'miracale' which is a
> shame but which I accept. To do otherwise or to be 'out of my place'
> means
> personal derision and that I am certainly not going to repeat.
> Eventually even Peter will disappear from my horizon but when the
> next inventor comes along and suffers the consequences I hope that I
> still have the courage to stand up for what I feel is right even
> knowing what the consequences are. I will tell you now Mark that your
> computor work appears to always start with an erronius assumption as
> others did with my work that I offered. Even so, one would have

> thought that even tho my assumption were
> the one that was incorrect some surely would have thought I don't care
> how he does it other than I know he does it, this is exactly what a
> very rich
> person said to me when he saw another duplicate my work. Yes, morals
> got in my way again even tho some refer to me as a thief or a liar
> or a pretender of some sort. Long winded Mark, maybe not
> understandable
> to you in many ways, Yes it gives Peter another shot but I hope I am
> not totally frame this around nationalistic ground. I am a citisen by
> choice and not by an accident of birth and with this move to the U.S.
> I have received more rewards than I could have hoped for plus I have
> given my family a chance to expand in any direction that they wish
> plus I could not possibly have received as much respect from my peers
> even if I was
> back at 'home'.
> Nuff said
> Art XG
>
> nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0302252347.17dc3eb7@posting.google.com>...
> > "Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:<b3ent7$i1b$1@slb6.atl.mindspring.net>...
> > > Art:
> > >
> > > [snip]
> > > > the rotten alien,slimey limey and all around nobody, talks and writes
> > > > funny,a dumb shit, comes from the slum docklands,didn't go to
> > > > University so can't possibly be one of the group on this side of the
> > > > fence.His son invented
> > > > the Biology Workbench computor program which apparently is now used in
> > > > most Universities and does research work at Southern Cal, so he is
> > > > taking over from his Dad, he must have stolen the idea because he was
> > > > born in London also!
> > > [snip]
> > >
> > > Above sure sounds like whining to me! What would you call it?
> >
> > Dunno, sad to read though. I really don't think it's an accurate
> > viewpoint of the group towards him. I really don't think anyone cares
> > where anyone is from, or presently at either. A 100 year or so blip,
> > and I would have been born in Scotland or England myself instead of
> > Dallas. The Keith family in Scotland is well known. Do a web search.
> > Loads of stuff. And not all is exactly good either...:/ A bunch of
> > heathens they were at times...They had a few bright points though I
> > guess. My great grandfather on my mothers side was born in
> > Southhampton. He came over here in the later 1800's. I doubt I would
> > be any different except for the influences of my environment. About
> > the only difference I can see from being born in Texas is you end up
> > being a redneck and eat too much hot sauce. :/

> > http://web.wt.net/~nm5k/tbf.jpg
> >
> > MK

4435. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 21:07:52 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E5E7E28.6928DE7B@uci.edu>
Source record: 123622

I wonder if it might always unplug itself when you're not operating, and
the only time you notice is when it forgets to plug itself back in? ;-)

73, ac6xg

OC_CAM's Razor wrote:
>
> I installed the banana plugs so that I could unplug the antenna during
> thunderstorms. One day during a thunderstorm, I was away from home and
> remembered that I had forgotten to unplug the antenna. I rushed home
> only to find it had unplugged itself. I didn't design it that way but
> it has reliably unplugged itself many times when I have forgotten to
> unplug it.

4436. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 21:41:02 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e5e8741_2@news1.prserv.net>
Source record: 123623

Your problem is keeping the 18 volts AC and 18 volts DC going to the correct places. If you put 18 volts AC on the coax, it will adversely affect the satellite LNB (like blow it up or something). You are going to have to figure a way to separate the AC and DC at the top before the top diplexer. Possible, but not easy. Big inductances for 50 Hz. In fact, interesting challenge. Let us know how you do it. By the way, introducing AC onto the coax will also blow the satellite receiver's source of 18 volts DC, come to think of it. If, indeed, the 18 volts DC is a fixed voltage, and not a tuning voltage, as I suspect it is, then simply modify the preamp to run on DC and beef up the source to carry the additional current.

--
Crazy George
Remove NO and SPAM from return address
"J. Sun" <jsun@lucent.com> wrote in message
news:b3ldpj$ebe@netnews.proxy.lucent.com...
> I have a TV outdoor vhf/uhf antenna and a DVB satellite antenna
> outdoors. The frquency band from DVB after LNB is about 0.95G-2.2G.
> The LNB is powered by 18 dc volt from the satellite receiver. I use a
> diplexer1 as a combiner to combine the tv and sat signal before entering
> the house and running though the in-house coaxial cable. Thediplexer
> allows DC current to pass through the sat signal path and power the sat
> LNB. The diplexer blocks the DC on tv signal path
> On the wall outlet next to the TV, I use the diplexer2 to split the
vhf/uhf
> and satellite signal, then feed TV and sat receiver, respectively.
>
> Now if I want to add a Winegard mast monut antenna pre-amp 8275. The
> pre-amp is to be mounted next to the ant. It is powered by a 18 ac volt
> power supply next to the tv set inside the house on the tv signal path
after
> diplexer2. I have the following questions
>
>
> sat ant & lnb ---------------- -----sat
receiver
> | indoor--> |
> diplexer1-----------diplexer2
> |. . |
> vhf/uhf ant --8275 preamp--- --power
supply---tv
>
>
> 1. Is it the right way to do it in such configuration. ?

> 2. will the18ac volt from pre-amp power supply do the harm to sat LNB
> and sat receiver ?
> 3. will the 18dc volt from the sat receiver do the harm to both
> power supply and preamp ? I guess the diplexer1 will block the dc
> current to pre-amp, right? how about 18dc volt to the power supply ?
>
> Thanks !
>
>
>
>

4437. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 23:06:57 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <WIw7a.13510$_9.7320@fe02.atl2.webusenet.com>
Source record: 123626

Sorry, I got confused. I agree with George. May I need to be called
Impulsive (Repulsive?) Chuck

--
73,
Chuck
KE4ETH
USA-NA

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:rzw7a.2438$sA1.1641@fe03.atl2.webusenet.com...
> I think the Sat LNB is fed with about 15-18 volts already. You might not
> need to feed with the power supply for the pre-amp. Look at Sat Receiver
on
> the back where the co-ax connects from the dish and see what voltage it
> feeds.
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "J. Sun" <jsun@lucent.com> wrote in message
> news:b3ldpj$ebe@netnews.proxy.lucent.com...
> > I have a TV outdoor vhf/uhf antenna and a DVB satellite antenna
> > outdoors. The frquency band from DVB after LNB is about 0.95G-2.2G.
> > The LNB is powered by 18 dc volt from the satellite receiver. I use a
> > diplexer1 as a combiner to combine the tv and sat signal before entering
> > the house and running though the in-house coaxial cable. Thediplexer
> > allows DC current to pass through the sat signal path and power the sat
> > LNB. The diplexer blocks the DC on tv signal path
> > On the wall outlet next to the TV, I use the diplexer2 to split the
> vhf/uhf
> > and satellite signal, then feed TV and sat receiver, respectively.
> >
> > Now if I want to add a Winegard mast monut antenna pre-amp 8275. The
> > pre-amp is to be mounted next to the ant. It is powered by a 18 ac volt
> > power supply next to the tv set inside the house on the tv signal path
> after
> > diplexer2. I have the following questions
> >
> >
> > sat ant & lnb ---------------- -----sat
> receiver

> > | indoor--> |
> > diplexer1-----------diplexer2
> > |. .
|
> > vhf/uhf ant --8275 preamp--- --power
> supply---tv
> >
> >
> > 1. Is it the right way to do it in such configuration. ?
> > 2. will the18ac volt from pre-amp power supply do the harm to sat LNB
> > and sat receiver ?
> > 3. will the 18dc volt from the sat receiver do the harm to both
> > power supply and preamp ? I guess the diplexer1 will block the dc
> > current to pre-amp, right? how about 18dc volt to the power supply ?
> >
> > Thanks !
> >
> >
> >
> >
>
>
>

4438. Re: Grounding Twinlead feedline

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 23:11:19 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <nLw7a.13529$_9.4843@fe02.atl2.webusenet.com>
Source record: 123627

Thanks.

Are those resistors or diodes to ground?

--
73,
Chuck
KE4ETH
USA-NA

"KA9CAR" <ka9car@a_r_r_l_.net> wrote in message
news:b3lola$2vr2$1@news1.tribune.com...
> This is in my shack, but it could be outside.
>
> http://user.mc.net/~jdewey/Ham_radio/grounding_relay.jpg
>
> I bought a heavy duty (30 amp 250volt) open frame relay at a ham fest.
You
> can get them with 24 volt ac or 120 volt ac coils
> I have the 120 volt ac coil hooked to the main power switch for my
> equipment.
> When the lights are on, the relay connects to my tuner. When the lights
are
> off, it connects to ground.
>
> Obviously a direct strike will blow up everything, but I don't worry about
> forgetting this, which I did with a knife switch.
>
> John
> KA9CAR
>
>
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:_he7a.123629$Kj2.10082@fe02.atl2.webusenet.com...
> > What is the best way to ground 300-ohm twinlead for lightening
protection
> > outside the shack? Besides a knife switch (Don't wish to walk all the
way
> > around the house in the middle of the night.) at the entrance. I wish to
> do
> > this on as low a budget as possible so commercial grounding equipment is
> > out. (Wife understands as she is a tech, but there are limits.)
> >
> > Any good and inexpensive ideas?

> >
> > TNX
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA
> >
> >
> >
> >
>
>

4439. Re: NMO antenna - Military mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-27 23:53:43 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e5ebadd_2@news1.prserv.net>
Source record: 123631

Hans:

NMO is 1&1/8" dia., 16 threads per inch male. I'll let you convert that to metric. Center contact protrudes about 5/16" above the gasket. I've never seen a military mount of that configuration.

Are you sure NMO is what you are after? The old mil stuff was 3/8" x 24 TPI, some of it is 5/16" x 32(?) TPI, and there is some 1/2", all female mounts.

--
Crazy George
Remove NO and SPAM from return address
"HS" <fejkad_adress@dof.se> wrote in message news:3E5E345D.2090905@dof.se...
> I have a question for the group:
>
> Will an antenna with the motorola type "NMO" mount fit a military type
> vehicular antenna mount, such as the AS-1729 or AS-3900?
>
> I have a surplus military antenna base, but i have not been able to
> locate a NMO antenna (here in sweden) to try if it fits.
>
>
> 73 de SM3PXG, Hans.
>
>

4440. Need copy of Telrex Eggbeater antenna manual

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 00:02:07 UTC
From: hudog515@msn.com
Message-ID: <2bcb985.0302271602.7d7c0a0e@posting.google.com>
Source record: 123628

I will be picking up a Telrex Eggbeater antenna, and will be in need of an assembly manual. Can anyone help me out with this, or point me to where I can obtain one?

tnx,

George N0GH

4441. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 00:30:18 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E5DB9DC.347AA847@att.net>
Source record: 123629

Brian,

Outfit I used to work for employed a large number of vertically mounted coaxial sleeve dipoles, commercial Kraco brand, on a 42 mhz frequency. They weren't made of cable but they were very straightforward in design consisting of a 1/4 wave length of 1/2 in. aluminum rod as the "hot" element mounted to a porcelein insulator with a pipe thread mount for the mounting mast that fit inside the 1 3/4 in aluminum tube sleeve that mounted on the outside of the center insulator and over the mast. The coax feedline fed up through the mounting mast inside the sleeve element to the porcelein insulator where an SO239 socket was mounted. The sleeve elemen just hung down over the mast.

As I recall there was some discussion of element diameter here some time ago where some guru said that for element diameter to become a significant factor it would have to be quite large, such as a wire cage. I can't tell you how exact the element lengths and diameters were on the Kracos but if the larger sleeve diameter made a difference in its length it had to be slight, since visually they were close to the same length.

The Kracos were rugged, worked very well and were bulletproof, withstanding everything that came along *except* a direct lightning strike.....I still have the remains of that one at home in the junk box. Nothin' much left except the aluminum sleeve. I drew the job of replacing it atop a 50 ft tower, that is what wasn't scattered all over the parking lot.

I think I'll try to make one like you're considering -I have a similar need- using RG58 and using an additional loose longer length of RG58 braid slid over the outer jacket of the feedline for the sleeve side and soldered to the feedling sleeve at the feedpoint. I plan to make it overly long and trim to size with an antenna analyzer. Long is better as always since the tuner easily cancels out the extra L.

The one thing I'd like to know is whether or not there might be any interaction between the sleeve end and the coax feedline since the feedline will enter the voltage end of the sleeve element. In the Kracos there was an extra layer of shielding in the form of the mounting mast (with the feedline inside it). I don't believe it will matter but I guess
the best way is to try it and find out.
(I'm out of pocket right now and it'll be at least a couple weeks before I can do it).

Dick

Brian Kelly wrote:

>
> I need a quickie 20m antenna I can run more or less horizontally from
> a second-story window to a tree yonder just to get on the air and
> familiarize myself with a new xcvr and to see if I can work a bit of
> dx. A coaxial antenna would not need the second support a dipole would
> require and I wouldn't have to run coax around the property. Which
> would be a problem in this case. I'm not particulaly concerned about
> field disturbances, I wish I had a field, any field to disturb and I
> need to get past that fundamental problem first. A coaxial antenna
> would meet the installation limtations almost ideally and I'll takes
> what I gets as far as disturbances, patterns and the rest go.
>
> >

4442. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 01:26:24 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <bxudnYsf8-MmJ8OjXTWcpQ@comcast.com>
Source record: 123630
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

You realize that nobody under the age of 60 knows what a chopper amplifier is?

Tam/WB2TT

4443. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 02:04:01 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E5EC372.75B433DC@attbi.com>
Source record: 123632
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

And very few over the age of 60!

I'm 65 and my last chopper stabilized amplifier design job was in 1963.
My use was to amplify a 0.1 Hz signal with 0.005 Vp maximum.

In those days they were used to monitor very low level of DC [DC]
signals. Amplifiers were made by George Philbrick Laboratories.

A wide band amplifier with offset trimmed to zero and operating from a
well regulated power supply in a moderately temperature controlled
environment should meet the original needs. Use a high Gain-bandwidth
amplifier at least to 300 MHz.

Deacon Dave, W1MCE

Tarmo Tammaru wrote:
>
> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?
>
> Tam/WB2TT

4444. Re: Cushcraft VS Force12

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 02:10:56 UTC
From: HF Patrol <thehfpatrol@hfpatrol.com>
Message-ID: <v5th9gspoo9ad4@corp.supernews.com>
Source record: 123633

Cush who?

Force12 all the way.

"Pat St. Jean" <stjeanp@pat-st-jean.com> wrote in message
news:Jy6dnaYI2oDwsMGjXTWcpw@august.net...
> John <jwhughes@bellsouth.net> wrote:
> > Considerig the Cushcraft mav5 and the Force 12 Sigma 5. Any user
comments on
> > either of these? Their appeal is no radials, and use in a townhome type
> > environment.
>
> Hi John,
> I can't speak for the MAV5, but I've had a Sigma-5 for about 5 months
> or so now and love it. I've had a little problem with RF feedback,
> especially on 20m, but I'm chalking that up to operator error and cheap
> coax.
> Here's a few of the QSOs I've had with it:
>
> 10m: 6Y, 9A, D4
> 12m: 8P, CO, J3
> 15m: JA
> 17m: P4, TI, YV
> 20m: HR, CT3, EA8
>
> Most of my contacts have been on 10m, but that's a personal thing, not
> any indication of the antenna.
>
> Pat
> --
> Pat in Lewisville K0OOK '97 XLH 883
(Rocinante)
> BS#140 EKIII rides
with me
> http://www.pat-st-jean.com/stjeanp All things Pat
> http://www.pat-st-jean.com/products.html Software for paper money
collectors

4445. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 02:13:05 UTC
From: Alan McClure <mcclures@gwis.com>
Message-ID: <3E5EC5B1.83588D76@gwis.com>
Source record: 123634
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

I'm under 60, (by a few years) and I know and worked on chopper
stabilized instrument amplifiers for over eight years in the late 70's and
early 80's. These were double pole double throw mechanical choppers,
some 60 hz but most were 103 Hz units. 103 Hz being prime relative to
both 60 Hz and 50 Hz and their harmonics.
The application was an instrumentation amplifier to amplify the differential
voltage of two thermocouples in connected series opposing. Gain was
15000 and meaningful signal out could be .1 millivolts to an XYY plotter.
You do the math.
ARM

Tarmo Tammaru wrote:

> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?
>
> Tam/WB2TT

4446. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 02:48:33 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <%5A7a.7199$x_5.800630@news20.bellglobal.com>
Source record: 123635

"J. Sun"
> The LNB is powered by 18 dc volt from the
> satellite receiver. ... Now if I want to add a
> Winegard mast mount pre-amp...powered
> by a 18 ac volt power supply...

It is probably less effort to simply purchase a satellite-compatible preamplifier from your local satellite professional. They make them for boosting the downconverted satellite signals for long coax runs. They are powered by the satellite receiver and are compatible with the variable-voltage polarization signalling as well. They should be also be compatible with, and provide gain on, the TV broadcast bands (your main goal). Probably US$20 or so. Plug and play.

4447. Re: NMO antenna - Military mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 02:50:59 UTC
From: Squirt <squirt.news.invalid@web2news.net>
Message-ID: <17014N659@web2news.com>
Source record: 123636

hello Hans

> Hans:
>
> NMO is 1&1/8" dia., 16 threads per inch male. I'll let
> you convert that to
> metric. Center contact protrudes about 5/16" above the
> gasket. I've never
> seen a military mount of that configuration.
>
> Are you sure NMO is what you are after? The old mil stuff
> was 3/8" x 24
> TPI, some of it is 5/16" x 32(?) TPI, and there is some
> 1/2", all female
> mounts.

--
Direct access to this group with http://web2news.com
http://web2news.com/?rec.radio.amateur.antenna

4448. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 03:52:04 UTC
From: "Keith R. Williams" <krw@attglobal.net>
Message-ID: <MPG.18c8a6eeffa3959298a0c5@enews.newsguy.com>
Source record: 123638
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <bxudnYsf8-MmJ8OjXTWcpQ@comcast.com>, t-tammaru@home.com says...
> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?

Nonsense. I'm not 60 (just 32h ;-) and know perfectly well what they are. I worked on vibrator-stabilized op-amps on the analog computers in college. Choppers were required to get the gain necessary for four significant digits. The servo multipliers and sine converters were the real hoot.

--
Keith

4449. Re: Line Of Sight Propagation Type Question: From A Newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 04:09:40 UTC
From: "G.Balinski" <Nospam@nospam.com>
Message-ID: <8iB7a.264396$tq4.6331@sccrnsc01>
Source record: 123637

"Robert11" <rgsrose@tiac.net> wrote in message
news:b2let3$7pf$1@slb3.atl.mindspring.net...
> Hi,
>
> New at this, and have a really basic type of question.
> > Was wondering a bit about modes, and Line Of Sight propagation.
> > I understand that the curvature of the earth limits what you can receive
> from, e.g., a fm antenna at a given height. So, that's the reason I
guess I can't receive any police
> calls from Philadelphia if I live in Boston.

True, BUT we have heard Philly FD in Massachusetts. This was during an
"opening" where, due to particular atmospheric conditions that sometimes
happen in the summer months, VHF transmissions can be received hundreds and
sometimes thousands of miles away from the transmitting station. It makes
for interresting listening. This is what allows us to hear the 5 FDNY VHF
channels in New Hampshire on an HT. A good location (hilltop) for the
listening post helps too.
>
> But, was wondering:
>
> Is this also mode dependent? NO
> Is it just as true for am as it is for fm? Yes.
>
> The reason I'm asking is that I wonder why I CAN receive two way aero
> conversations from Gander.

The FAA will sometimes retransmit or simulcast depending upon the
controllers preferences. So you may be hearing information received from a
remote receiver in the Gander area retransmitted locally. This may be to
increase the situational awareness of pilots getting ready to transit the
area. It is also a method for "busying" out a channel when the controller
is working someone on another frequency preventing multiple calls from
different aircraft on different channels. One controller sometimes watches
or works several frequencies.
You may also be hearing a retrans of the HF conversations for aircraft just
entering or just leaving the VHF coverage area. Someone correct me, but I
think that Gander is the VHF-HF cross over point.

> The plane transmits over a pretty wide cone angle I would think, so that's
> probably why I can receive it in Boston.

You can check that. Just look on the web for propagation charts for LOS at
10,00 20,000, and 30,000 feet. That will tell you if you can hear them
direct in normal mode.

>
> But, why can I also receive what being transmitted From Gander to the
plane?
> Wouldn't line of sight apply here also, and prohibit my receiving it in
> Boston?
>
> The frequencies in question are around 133 MHz (AM), so wouldn't LOS
> limitations apply too?

It normally does.
>
> Or, is it that being am, LOS doesn't really apply, and the "133 MHz high
> freq." am "bounces" off the ionospheric layers like the low am
frequencies do?

VHF hi-band propagates differently than the VHF Lo-band, and very
differently from the HF, and MF (AM) bands. VHF is normally LOS. See above
comments for exceptions. You might want to check a copy of the ARRL
Handbook for some good propagation info. There are plenty of other books on
the subject as well.
Good Luck,
Gene

4450. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 04:26:07 UTC
From: richardharrison@webtv.net
Message-ID: <4545-3E5EE4DF-43@storefull-2317.public.lawson.webtv.net>
Source record: 123639

Dick Carroll wrote:
"Outfit I used to work for employed a large number of vertically mounted coaxial sleeve antennas---."

Outfit I used to work for did too. We used two versions, 33 MHz and 150 MHz. Ours were mounted on workboats and some other portable and mobile applications. Any place a person might come eye to radial level with an antenna would likely find a coax antenna substituted for a ground-plane. On cars and trucks we just used whips and the vehicle body served as a counterpoise.

As Dick Carroll said, they (coax antennas)
were "bulletproof". Performance was almost the same as a ground-plane, and a lot easier on the eyes in several respects.

Our base stations all used folded monopole ground-planes which provided a short circuited connection at the top of the supporting tower for all the lightning protection needed with thousands of direct hits. The Andrew stainless steel folded monopoles pitted but never melted or blew apart. They just kept on working as if nothing had happened. We had hundreds in the highest places around. So, they got lots of hits.
No coax disconnects, toss-outs, power unplugs, gas tubes on the coax, or any other such protection. Radios remained connected 24-7.

Best regards, Richard Harrison, KB5WZI

4451. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 04:54:02 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3E5EEB69.10701@attbi.com>
Source record: 123640
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

I ca't remeber who makes the silicon ones but I've worked with some nice
I.C. chpper amps recently.
Bill Higdon
Keith R. Williams wrote:
> In article <bxudnYsf8-MmJ8OjXTWcpQ@comcast.com>, t-
> tammaru@home.com says...
>
>>You realize that nobody under the age of 60 knows what a chopper amplifier
>>is?
>
>
> Nonsense. I'm not 60 (just 32h ;-) and know perfectly well what
> they are. I worked on vibrator-stabilized op-amps on the analog
> computers in college. Choppers were required to get the gain
> necessary for four significant digits. The servo multipliers and
> sine converters were the real hoot.
>

4452. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 06:23:08 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0302272223.7aff8b3a@posting.google.com>
Source record: 123641

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0302261208.6fe943af@posting.google.com>...
> Don't get me wrong Mark, it is not about nationality, it is
> about piling on as a group when a Guru publicly denounces a
> person as a fraud which thus gives cover for assault by others.

Well, a fraud should be piled on. But what does this have to do with
you?

> We have seen this many times on this newsgroup with various
> manufacturers and inventors and there is no need to write out
> a list of names, you can't escape the fact.

Yep, thats why I hang out here. It's hard to pull the wool over many
of the eyes around here.

I will only talk
> about my own experiences who believes in certain moral behaviour,
> in the case of antenna inventions I have not accepted offers from
> others but rather would consult with my peers to ensure that no harm
> is laid on my fellow hobbiest. Like other inventors on this group
> which I said I would not name I defend myself but by being a non guru
> or known publisher,pseudo expert, etc one a brick is thrown at you
> by a guru and the piling on starts.

When that happens, it a good idea to inspect what one is doing, and
see what the problem may be. I have no real idea what exact project
you are talking about, but if a group that is fairly knowledgable as a
whole piles upon a person, I would tend to think there is a good
reason for it.

I promised a person who gave some
> suggestions of how to get out of this mess that I would not bring up
> my old patent ideas again which every year stirs up a hornets nest but
> I
> would not give up on responding if asked. Frankly his advice
> worked and the snide comment have pretty much come to a halt.

I haven't seen any hornets nests around here.

> Yes Peter states that I am whining or I should do this or that or
> I should devote more time to learning mathematics but even he will
> change as he becomes alone.

What? Are they planning to lock him away in a closet or something?

So back to my original point, how does
> one share with others without placing up front a resume or a list
> of different things that he has done or achieved just to gain the
> podium to talk to like people that are willing to give respect?

Share with others without placing up front a resume. Or a list. Put it on a webpage. Go to hamfests. Carry a big 2x4 to clobber the naysayers if needed. I really don't see what the problem is. You place a resume when you look for a job. Not when you solicit comments about an antenna design.

> If one were to even think of presenting his credentials before hand
> I would consider it to be boastfull yet for an entrepreneur it is an
> absolute must.

That is total crap. I would never tell anyone my credentials to try to support a claim of antenna performance. Money "performance" talks, credentials walk. If whatever it is you are trying to build works, you don't need to do a damn thing except show it to people in an honest and non evasive manner. IE: proper testing, etc. It will sell itself, if it does as claimed, and the claim is something that is actually useful to people. If I were really convinced my product worked, due to through testing, I could tell people I was a dental floss salesman, and it would have no real effect on my program.

In my case I read the post returns over the years and
> which generally suggest that I am a 'dumbshit' possibly because I
> change
> hats sometimes and ask simple questions, now I have learned my lesson
> knowing that anything new will be classed as a 'miracale' which is a
> shame but which I accept. To do otherwise or to be 'out of my place'
> means
> personal derision and that I am certainly not going to repeat.

I don't know what you are talking about here. I've seen no one call you a dumbshit.
> Eventually even Peter will disappear from my horizon but when the
> next inventor comes along and suffers the consequences I hope that I
> still have the courage to stand up for what I feel is right even
> knowing what the consequences are.

What are the consequences?

I will tell you now Mark that your
> computor work appears to always start with an erronius assumption as
> others did with my work that I offered.

Huh? You haven't seen 1 % of my computer work. How would you know? As far as your antenna which you wanted someone to model, what erronious assumption are you referring to? As usual, I have no idea what you are talking about. You said a dipole with what amounts to a delta loop feed with a tuning cap would be steerable. I said it would not be. Yep, you can bet your ass that was a preconceived notion. I wouldn't just utter that remark without any thought at all. Sure, many

of my preconceived notions may be wrong, but I don't think this one was. The model said it would not be. The model said, yes, the antenna will work, but no , not steerable. You can't steer a single element by changing it's matching device. And yes, the loop thing you have attached to the antenna you described, is a matching device of the same manner as a delta match. It is not , and does not act as a separate antenna. If you have some earthshaking data that this is incorrect, I'd like to hear it.
In order to steer the pattern, you would have to feed both as separate elements. And even then , being the loop described is so small, it's a joke as a directive or reflective element compared to another dipole element in parallel, or whatever. This is my opinion. If it's erronious, prove it. or have someone else do it.

Even so, one would have
> thought that even tho my assumption were
> the one that was incorrect some surely would have thought I don't care
> how he does it other than I know he does it, this is exactly what a
> very rich
> person said to me when he saw another duplicate my work.

Again, I have no idea what you are talking about. I haven't seen anyone try to duplicate your work so far.

Yes, morals
> got in my way again even tho some refer to me as a thief or a liar
> or a pretender of some sort.

Bullshit Art. Only you do that. You are starting to remind of those guys in the middle east who go around constantly flogging themselves with those whip looking things.

MK

4453. Re: NMO antenna - Military mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 09:12:06 UTC
From: HS <fejkad_adress@dof.se>
Message-ID: <3E5F27A0.8050903@dof.se>
Source record: 123642

Hi there George, and thanks for the info on NMO.

The mounts i have has a fine thread stud approx 1" diam onto which the
the antenna whip is attached. The stud also have a center contact. This
was the typical vehicle antenna for the pcr77 type radios i believe.

I will go measure the mount thread, to see if it might be 1-1/8*16, but
i have all that stuff back at the family farm, and im not going there
until next weekend.

73 de Hans, SM3PXG

By the way, I have a few old American cars, so I am quite familiar with
the american inch system, ;-)

Crazy George wrote:

> Hans:
>
> NMO is 1&1/8" dia., 16 threads per inch male. I'll let you convert that to
> metric. Center contact protrudes about 5/16" above the gasket. I've never
> seen a military mount of that configuration.
>
> Are you sure NMO is what you are after? The old mil stuff was 3/8" x 24
> TPI, some of it is 5/16" x 32(?) TPI, and there is some 1/2", all female
> mounts.
>
> --
> Crazy George
> Remove NO and SPAM from return address
> "HS" <fejkad_adress@dof.se> wrote in message news:3E5E345D.2090905@dof.se...
>
>>I have a question for the group:
>>
>>Will an antenna with the motorola type "NMO" mount fit a military type
>>vehicular antenna mount, such as the AS-1729 or AS-3900?
>>
>>I have a surplus military antenna base, but i have not been able to
>>locate a NMO antenna (here in sweden) to try if it fits.
>>
>>
>>73 de SM3PXG, Hans.
>>
>>

>>
>
>

4454. Butterfly HF5B info

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 10:37:10 UTC
From: Andrea <IZ0EHOtogliquesto@libero.it>
Message-ID: <MPG.18c95a40d898af209896aa@news.fastwebnet.it>
Source record: 123643

Hi all

I would like to buy the Butterfly HF5B mini beam for my shack, but I have
not any friends using it.
Please any info regards that antenna are aprreciated expecially for
tuning mode and gain to compare it with other mini beam (MA5B Cushcraft)
best 73
--
IZ0EHO Andrea
www.qsl.net/iz0eho
remove TOGLIQUESTO for direct answer

4455. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 10:56:05 UTC
From: bill.sloman@ieee.org
Message-ID: <7c584d27.0302280256.4b9205c3@posting.google.com>
Source record: 123644
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:<bxudnYsf8-MmJ8OjXTWcpQ@comcast.com>...
> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?

They may call it an auto-zero amplifier. Farnell lists a bunch of
integrated cirucit chopper amplifiers. The Linear Technology LTC1050
is listed as chopper stabilised CMOS operational amplifier, as are the
Maxim MAX422 and MAX430 and the Texas Instruments TI2652 and TI2654 as
well as the Intersil ICL7650.

Oddly enough, the National Semiconductor LMC2001 is not listed as
chopper-stabilised - it is, and very neatly - nor is the Analog
Devices AD8572 dual.

Bill Sloman, Nijmegen

4456. Re: testing a posting problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 11:15:33 UTC
From: "David J. Windisch" <davidw@copper.net>
Message-ID: <3e5f433f_3@newsfeed>
Source record: 123645

Lucky me. The problem was a corrupted TCP/IP stack, which I fixed with help
from my isp. 73, Dave, N3HE
"David J. Windisch" <davidwnospam@copper.net> wrote in message
news:3e5a03c1$1_3@newsfeed...
> testing a posting problem
>
> Seems as if I or my isp may be blocked from some places <heavysigh>
>
> 73, Dave, N3HE

4457. Re: Looking for info on Gamma Match

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 11:22:32 UTC
From: conconemail@libero.it
Message-ID: <bcd1b798.0302280322.1a14b5b8@posting.google.com>
Source record: 123646

> Shane, N0ZDI wrote:
> "I cannot find what I am looking for online."
>

Give a look here, there are many antenna projects..

http://www.dxzone.com/

look under Technical Reference : antennas

max

4458. Re: Line Of Sight Propagation Type Question: From A Newbie

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 12:50:37 UTC
From: richardharrison@webtv.net
Message-ID: <26923-3E5F5B1D-345@storefull-2313.public.lawson.webtv.net>
Source record: 123650

Gene wrote:
"Just look on the web for propagation charts for LOS at 10,000, 20,000, and 30,000 feet."

It`s easy to find with a calculator. Just double the feet of elevation, and take the square root. That`s the distance to the radio horizon in miles. For the three elevations above: 141 miles, 200 miles, and 245 miles.

Best regards, Richard Harrison, KB5WZI

4459. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 13:16:58 UTC
From: richardharrison@webtv.net
Message-ID: <26925-3E5F614A-57@storefull-2313.public.lawson.webtv.net>
Source record: 123649

J. Sun wrote:
"Now if I want to add a Winegard mast mount pre-amp...powered by an 18 ac power supply..."

The Winegard is powered by d-c also. Most likely this is supplied directly by an internal rectifier which will pass the d-c just fine. So, it is probably only necessary to provide a 20 V d-c supply with enough amperage for the LNB and the Winegard. Check it out. There probably isn`t any problem.

Best regards, Richard Harrison, KB5WZI

4460. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 13:21:45 UTC
From: richardharrison@webtv.net
Message-ID: <26923-3E5F6269-353@storefull-2313.public.lawson.webtv.net>
Source record: 123651

J. Sun wrote:
"Now if I want to add a Winegard mast mount pre-amp...powered by an 18 ac power supply..."

The Winegard is powered by d-c also. Most likely this is supplied directly by an internal rectifier which will pass the d-c just fine. So, it is probably only necessary to provide a 20 V d-c supply with enough amperage for the LNB and the Winegard. Check it out. There probably isn`t any problem.

Best regards, Richard Harrison, KB5WZI

4461. Re: is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 13:39:44 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <AEJ7a.7440$hj.2041085@nnrp1.ptd.net>
Source record: 123648

According to the latest numbers I've seen, only about 12% of
Americans receive their TV signals "over the air" from local
TV broadcast stations ... the rest are get their TV signals
from cable TV or the satellite "mini-dishes" which give them
good signals and the availability of many more channels of
programming ...

The main reason that broadcasters need to continue "over
the air" transmissions lies in the FCC's "must carry" rules,
which require cable companies to carry local channels.

If the FCC were to change its rules, allowing local stations
to become nothing more than "sources of programming,"
and preventing cable companies and satellite providers from
"freezing them out," they could feed their programs to the cable
companies (and the satellite providers) via other means and the
"need" for traditional "over the air" TV transmissions would, in
essence, disappear ... freeing up a huge amount of "prime"
spectrum that's currently, IMNSHO, being wasted.

Carl - wk3c

"Frog" <FrogRemailer@bigfoot.com> wrote in message
news:HIDCF5GO37680.194525463@Gilgamesh-frog.org...
> On Tue, 27 Aug 2002 12:42:40 -0500, "Crazy George"
> <munschNO@attglobal.net.SPAM> wrote:
>
> >off the air TV is going away in 5 years, so why bother?
>
> Would you please explain what you mean by this comment. While it may be
> true that analog transmissions will end, digital transmissions will be
> broadcast. So why do you write such a statement? Are you saying that in
5
> years we can all throw away out antennas, because there won't be any
> broadcast signals?
>
>

4462. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 13:54:23 UTC
From: richardharrison@webtv.net
Message-ID: <25951-3E5F6A0F-44@storefull-2311.public.lawson.webtv.net>
Source record: 123652

J. Sun wrote:
"Now if I want to add a Winegard mast mount pre-amp...powered by an 18 ac power supply..."

The Winegard is powered by d-c also. Most likely this is supplied directly by an internal rectifier which will pass the d-c just fine. So, it is probably only necessary to provide a 20 V d-c supply with enough amperage for the LNB and the Winegard. Check it out. There probably isn`t any problem.

Best regards, Richard Harrison, KB5WZI

4463. Re: is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 14:22:58 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E5F705E.1858243E@gte.net>
Source record: 123653

"Carl R. Stevenson" wrote:

> According to the latest numbers I've seen, only about 12% of
> Americans receive their TV signals "over the air" from local
> TV broadcast stations ... the rest are get their TV signals
> from cable TV or the satellite "mini-dishes" which give them
> good signals and the availability of many more channels of
> programming ...

The CATV companies I am involved with get their local programming from antenna headends. Is there a replacement for this in the works? If not, 5 years seems a bit short for something to be put in place.
Dale W4OP

4464. OT antenna combiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 14:31:30 UTC
From: Carl Van Camp <thevancamps@ameritech.netpickle>
Message-ID: <6pK7a.2165$rM4.448825@newssrv26.news.prodigy.com>
Source record: 123647

Hi all-

I have separate AM & FM broadcast antennas on my roof. I am looking for a way to combine their signals so I can send them to a radio that has a single antenna input for both bands.

My goal is to minimize loss for the FM side--I am trying to get some weak signals--whereas the AM side is only concerned with fairly strong local stations.

Any advice for a situation like this? TIA!

4465. Re: OT antenna combiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 15:10:18 UTC
From: richardharrison@webtv.net
Message-ID: <10547-3E5F7BDA-131@storefull-2312.public.lawson.webtv.net>
Source record: 123655

Carl Van Camp wrote:
"I have separate AM & FM broadcast antennas on my roof."

Carl can use r-f chokes to prevent interaction from combining antenna signals on the roof. These chokes could be something like 5 microhenries each. These have a reactance of more than 3000 ohms each at 100 MHz.

Two chokes in series across the FM antenna terminals won`t upset the FM antenna or transmission line. The AM antenna lead can be connected at the center-tap.

Similar chokes can be connected across the FM receiver terminals to provide an AM signal output at the center-tap. The AM signal is using the FM transmission line in its common-mode. A ground return on the roof, or elsewhere, and at the receiver is needed to complete the circuit. This may already exist via the power line or other connections. It may not be the quietest AM signal source for AM reception. A dedicated ground wire following the FM transmissiom line path may be needed for lower noise on AM.

Best regards, Richard Harrison, KB5WZI

4466. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 15:15:17 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <7s2cnQnYTPSf4MKjXTWcqg@comcast.com>
Source record: 123654

I think there is a picture of what you want to do, less the TV amp, at http://www.system-high.com/rcaplexer.asp . You could also do a search on "diplexer".

If you can not power the sat and the TV amp off the same supply, seems that there are two things you could do. Either get rid of the diplexers and run two coaxes, or connect the power source for the TV amp at the point between the antenna and its closest diplexer. The power feed blob should block any DC or 60 Hz from going back towards the diplexer. You don't want to run 120VAC outside. So, the second method only works if the power supply and combiner are not in the same box.

Clearly, you can not have two different voltages on the common piece of coax.

Tam/WB2TT
"J. Sun" <jsun@lucent.com> wrote in message
news:b3ldpj$ebe@netnews.proxy.lucent.com...
> I have a TV outdoor vhf/uhf antenna and a DVB satellite antenna
> outdoors. The frquency band from DVB after LNB is about 0.95G-2.2G.
> The LNB is powered by 18 dc volt from the satellite receiver. I use a
> diplexer1 as a combiner to combine the tv and sat signal before entering
> the house and running though the in-house coaxial cable. Thediplexer
> allows DC current to pass through the sat signal path and power the sat
> LNB. The diplexer blocks the DC on tv signal path
> On the wall outlet next to the TV, I use the diplexer2 to split the
vhf/uhf
> and satellite signal, then feed TV and sat receiver, respectively.
>
> Now if I want to add a Winegard mast monut antenna pre-amp 8275. The
> pre-amp is to be mounted next to the ant. It is powered by a 18 ac volt
> power supply next to the tv set inside the house on the tv signal path
after
> diplexer2. I have the following questions
>
>
> sat ant & lnb ---------------- -----sat
receiver
> | indoor--> |
> diplexer1-----------diplexer2
> |. . |
> vhf/uhf ant --8275 preamp--- --power
supply---tv
>
>

> 1. Is it the right way to do it in such configuration. ?
> 2. will the18ac volt from pre-amp power supply do the harm to sat LNB
> and sat receiver ?
> 3. will the 18dc volt from the sat receiver do the harm to both
> power supply and preamp ? I guess the diplexer1 will block the dc
> current to pre-amp, right? how about 18dc volt to the power supply ?
>
> Thanks !
>
>
>
>

4467. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 15:42:49 UTC
From: richardharrison@webtv.net
Message-ID: <10547-3E5F8379-133@storefull-2312.public.lawson.webtv.net>
Source record: 123659

Jason Hsu wrote:
"Amplifying the DC voltages with an ordibary op amp will not work due to the contamination from the offset voltage.

Jason has Bill Sloman in Nijmegen supplying far more educated answers than I can offer.

I would just note that this is ancient SOP for industrial instrumentation. Standard signals there are 4-20ma and 1-5 volts or 3 to 15 pounds of air pressure. In the vacuum tube days, an electro-mechanical chopper was used on the d-c electrical output from process transducers to condition them for a-c amplification. This chopper was a lot like the vibrator used in car radios.

Search process control techniques for the latest on solid-state signal handling.

Best regards, Richard Harrison, KB5WZI

4468. Re: OT antenna combiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 16:09:00 UTC
From: richardharrison@webtv.net
Message-ID: <10545-3E5F899C-381@storefull-2312.public.lawson.webtv.net>
Source record: 123658

After my posting appeared, I realized the FM antenna and receiver may have low-impedance, for AM signals to ground. Small capacitors can be used to couple the FM signals to the transmission line to solve this complication. The chokes would be used on the line sides of these capacitors to couple the AM signal to and from the line. The capacitors would have enough reactance to avoid shorting the AM to ground. The approximate 100 to 1 frequency ratio between FM and AM signals makes their separation relatively easy.

Best regards, Richard Harrison, KB5WZI

4469. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 16:12:52 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <8UL7a.4756$Uy4.375608@bgtnsc05-news.ops.worldnet.att.net>
Source record: 123657

W0EX:
> Outfit I used to work for employed a large number of vertically
> mounted coaxial sleeve dipoles, commercial Kraco brand, on a 42 mhz
> frequency....

FWIW, that company is actually called KRECO and has a website:

http://www.krecoantennas.com/

> The Kracos were rugged, worked very well and were bulletproof,
> withstanding everything that came along *except* a direct lightning
> strike.....

They offer a version that shunt-feeds the sleeve and *may* be
a bit more resistant to lightning strikes. I'll second Dick's
assessment - a very rugged and trouble-free design.

--
Jim Bromley, K7JEB k7jeb(at)arrl.net
Glendale, Arizona

4470. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 16:43:11 UTC
From: "J. Sun" <jsun@lucent.com>
Message-ID: <b3o3j3$re1@netnews.proxy.lucent.com>
Source record: 123661

You are most likely right ! It is powered by 18VDC.
In Stark electroic website it mentioned the following:

NOTE: Don't install a regular splitter between the power supply and the
pre-amp or you will short circuit the system and it won't work. You can
install a special splitter that is power passive on only one port. Or put a
DC Block on the outputs that don't run to the power supply.

what does it mean ?

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:25951-3E5F6A0F-44@storefull-2311.public.lawson.webtv.net...
> J. Sun wrote:
> "Now if I want to add a Winegard mast mount pre-amp...powered by an 18
> ac power supply..."
>
> The Winegard is powered by d-c also. Most likely this is supplied
> directly by an internal rectifier which will pass the d-c just fine. So,
> it is probably only necessary to provide a 20 V d-c supply with enough
> amperage for the LNB and the Winegard. Check it out. There probably
> isn`t any problem.
>
> Best regards, Richard Harrison, KB5WZI
>

4471. Re: is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 16:47:34 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <GoM7a.1776$se1.1359595@newssvr28.news.prodigy.com>
Source record: 123656

There is no rush by cable companies or satellite providers to "repeat" DTV signals from broadcasters. I have had HDTV for several years, and except for a few satellite channels, all my programming has to be watched with an outside antenna...and the situation has hardly changed the last couple of years. Maybe a few major cable companies in big cities will offer this, but I am in a top 10 market, and I don't think there are any who offer it here.

In response to your original question, I've always had good luck with Channel Master.

--
73,
Larry N8LP
www.telepostinc.com

"Carl R. Stevenson" <wk3cqth@wk3c.com> wrote in message
news:AEJ7a.7440$hj.2041085@nnrp1.ptd.net...
> According to the latest numbers I've seen, only about 12% of
> Americans receive their TV signals "over the air" from local
> TV broadcast stations ... the rest are get their TV signals
> from cable TV or the satellite "mini-dishes" which give them
> good signals and the availability of many more channels of
> programming ...
>
> The main reason that broadcasters need to continue "over
> the air" transmissions lies in the FCC's "must carry" rules,
> which require cable companies to carry local channels.
>
> If the FCC were to change its rules, allowing local stations
> to become nothing more than "sources of programming,"
> and preventing cable companies and satellite providers from
> "freezing them out," they could feed their programs to the cable
> companies (and the satellite providers) via other means and the
> "need" for traditional "over the air" TV transmissions would, in
> essence, disappear ... freeing up a huge amount of "prime"
> spectrum that's currently, IMNSHO, being wasted.
>
> Carl - wk3c
>
>
> "Frog" <FrogRemailer@bigfoot.com> wrote in message
> news:HIDCF5GO37680.194525463@Gilgamesh-frog.org...
> > On Tue, 27 Aug 2002 12:42:40 -0500, "Crazy George"
> > <munschNO@attglobal.net.SPAM> wrote:
> >

> > >off the air TV is going away in 5 years, so why bother?
> >
> > Would you please explain what you mean by this comment. While it may be
> > true that analog transmissions will end, digital transmissions will be
> > broadcast. So why do you write such a statement? Are you saying that
in
> 5
> > years we can all throw away out antennas, because there won't be any
> > broadcast signals?
> >
> >
>

4472. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 17:05:34 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0302280905.73771f7e@posting.google.com>
Source record: 123662

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0302272223.7aff8b3a@posting.google.com>...
> aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0302261208.6fe943af@posting.google.com>...
> > Don't get me wrong Mark, it is not about nationality, it is
> > about piling on as a group when a Guru publicly denounces a
> > person as a fraud which thus gives cover for assault by others.
>
> Well, a fraud should be piled on. But what does this have to do with
> you?
>
> > We have seen this many times on this newsgroup with various
> > manufacturers and inventors and there is no need to write out
> > a list of names, you can't escape the fact.
>
> Yep, thats why I hang out here. It's hard to pull the wool over many
> of the eyes around here.
>
> I will only talk
> > about my own experiences who believes in certain moral behaviour,
> > in the case of antenna inventions I have not accepted offers from
> > others but rather would consult with my peers to ensure that no harm
> > is laid on my fellow hobbiest. Like other inventors on this group
> > which I said I would not name I defend myself but by being a non guru
> > or known publisher,pseudo expert, etc one a brick is thrown at you
> > by a guru and the piling on starts.
>
> When that happens, it a good idea to inspect what one is doing, and
> see what the problem may be. I have no real idea what exact project
> you are talking about, but if a group that is fairly knowledgable as a
> whole piles upon a person, I would tend to think there is a good
> reason for it.
>
> I promised a person who gave some
> > suggestions of how to get out of this mess that I would not bring up
> > my old patent ideas again which every year stirs up a hornets nest but
> > I
> > would not give up on responding if asked. Frankly his advice
> > worked and the snide comment have pretty much come to a halt.
>
> I haven't seen any hornets nests around here.
>
> > Yes Peter states that I am whining or I should do this or that or
> > I should devote more time to learning mathematics but even he will

> > change as he becomes alone.
>
> What? Are they planning to lock him away in a closet or something?
>
> So back to my original point, how does
> > one share with others without placing up front a resume or a list
> > of different things that he has done or achieved just to gain the
> > podium to talk to like people that are willing to give respect?
>
> Share with others without placing up front a resume. Or a list. Put it
> on a webpage. Go to hamfests. Carry a big 2x4 to clobber the naysayers
> if needed. I really don't see what the problem is. You place a resume
> when you look for a job. Not when you solicit comments about an
> antenna design.
>
> > If one were to even think of presenting his credentials before hand
> > I would consider it to be boastfull yet for an entrepreneur it is an
> > absolute must.
>
> That is total crap. I would never tell anyone my credentials to try to
> support a claim of antenna performance. Money "performance" talks,
> credentials walk. If whatever it is you are trying to build works, you
> don't need to do a damn thing except show it to people in an honest
> and non evasive manner. IE: proper testing, etc. It will sell itself,
> if it does as claimed, and the claim is something that is actually
> useful to people. If I were really convinced my product worked, due to
> through testing, I could tell people I was a dental floss salesman,
> and it would have no real effect on my program.
>
> In my case I read the post returns over the years and
> > which generally suggest that I am a 'dumbshit' possibly because I
> > change
> > hats sometimes and ask simple questions, now I have learned my lesson
> > knowing that anything new will be classed as a 'miracale' which is a
> > shame but which I accept. To do otherwise or to be 'out of my place'
> > means
> > personal derision and that I am certainly not going to repeat.
>
> I don't know what you are talking about here. I've seen no one call
> you a dumbshit.
> > Eventually even Peter will disappear from my horizon but when the
> > next inventor comes along and suffers the consequences I hope that I
> > still have the courage to stand up for what I feel is right even
> > knowing what the consequences are.
>
> What are the consequences?
>
> I will tell you now Mark that your
> > computor work appears to always start with an erronius assumption as
> > others did with my work that I offered.

>
> Huh? You haven't seen 1 % of my computer work. How would you know?
> As far as your antenna which you wanted someone to model, what
> erronious assumption are you referring to? As usual, I have no idea
> what you are talking about. You said a dipole with what amounts to a
> delta loop feed with a tuning cap would be steerable. I said it would
> not be. Yep, you can bet your ass that was a preconceived notion. I
> wouldn't just utter that remark without any thought at all. Sure, many
> of my preconceived notions may be wrong, but I don't think this one
> was. The model said it would not be. The model said, yes, the antenna
> will work, but no , not steerable. You can't steer a single element by
> changing it's matching device. And yes, the loop thing you have
> attached to the antenna you described, is a matching device of the
> same manner as a delta match. It is not , and does not act as a
> separate antenna. If you have some earthshaking data that this is
> incorrect, I'd like to hear it.
> In order to steer the pattern, you would have to feed both as separate
> elements. And even then , being the loop described is so small, it's a
> joke as a directive or reflective element compared to another dipole
> element in parallel, or whatever. This is my opinion. If it's
> erronious, prove it. or have someone else do it.
>
> Even so, one would have
> > thought that even tho my assumption were
> > the one that was incorrect some surely would have thought I don't care
> > how he does it other than I know he does it, this is exactly what a
> > very rich
> > person said to me when he saw another duplicate my work.
>
> Again, I have no idea what you are talking about. I haven't seen
> anyone try to duplicate your work so far.
>
> Yes, morals
> > got in my way again even tho some refer to me as a thief or a liar
> > or a pretender of some sort.
>
> Bullshit Art. Only you do that. You are starting to remind of those
> guys in the middle east who go around constantly flogging themselves
> with those whip looking things.
>
> MK

Mark,
You are a good man and your great grandpa blased the way from
Southampton
before I stepped on the same dock to get here myself.
So, I need to get advice from a couple of people on how best to share
my antenna ideas but in a better way more than just patenting it and
let it lie dormant for years to come. I need to speak with a couple of
people first so that a method can be followed that will not put me in

harms way. Not from true technical discussions even tho they can be very painfull to me because I am what I am but to some how push to to one side stone throwers or troollers what ever that means so that I have the opportunity to explain things in their entirety thru a person with communication skills rather than take the first path available to shunt me to one side aqnd let the rest of my work to rot.
So let us have this thread drop. I need to consult with Larry Phipps and also
Richard Clark (need telephone numbers)who both have excellent credentials as seen by their personal pages which I admire and recognise as a SHARING of information.
To my mind I am not a guru but somebody who used antennas as a life line to hold on to as I tried to recover from a serious illness which meant starting from scratch, To my mind also my work provides a path or trail that all may follow and will change antennas as we know it now. I am not bragging tho what I say is obviously not plausable.But even in its worst case it will show that we amateurs by virtue of our ability to experiment efforts to try to bend the boundaries without fear can provide good reasons why this hobby should not be pushed aside by beurocracy. In a worst case scenario I will place on the net a newspaper article that was written about me that should explain who I really am.
Hope to have my E mail back up and working in a few days Mark which will allow us to communicate privately.At this point for myself I consider this thread as dead.
Best regards
Art 309 828 7204

4473. Re: OT antenna combiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 17:14:24 UTC
From: Carl Van Camp <thevancamps@ameritech.netpickle>
Message-ID: <QNM7a.14$3g.10662@newssrv26.news.prodigy.com>
Source record: 123660

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:10547-3E5F7BDA-131@storefull-2312.public.lawson.webtv.net...
>> Similar chokes can be connected across the FM receiver terminals to
> provide an AM signal output at the center-tap. The AM signal is using
> the FM transmission line in its common-mode. A ground return on the
> roof, or elsewhere, and at the receiver is needed to complete the
> circuit. This may already exist via the power line or other connections.
> It may not be the quietest AM signal source for AM reception. A
> dedicated ground wire following the FM transmissiom line path may be
> needed for lower noise on AM.

Thanks Richard, really appreciate it. I already have dedicated coax runs down from each antenna and simply need to mash the two signals together right at the back of the radio. It sounds like your 4 choke plan is more for sharing 2 signals on a single coax?

But maybe I can use one choke to couple the AM signal into the center conductor of the radio and then just tie the coax shields together?

Thanks again,
Carl Van Camp

4474. Re: is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 17:27:45 UTC
From: WB2JKX <mycall-N0SPAM@arrl.net>
Message-ID: <l_M7a.4824$Uy4.380915@bgtnsc05-news.ops.worldnet.att.net>
Source record: 123663

In the New York Metro area, because of the WTC destruction, the local TV stations have set up temporary antenna systems and coverage isn't particularly good. They are looking to build a ~2000 ft shared tower in NJ to replace the old WTC antenna systems, which is higher than what they had previously. It's hard to believe that they would make this investment if they didn't feel that there will be a long term need to provide over the air transmission. This is probably particularly true for DTV (it's not always "H") As indicated elsewhwhere in this thread, the cable companies aren't eager to have to deal with this.

Larry Phipps <larry@telepostinc.com> wrote in message news:GoM7a.1776$se1.1359595@newssvr28.news.prodigy.com...
> There is no rush by cable companies or satellite providers to "repeat" DTV
> signals from broadcasters. I have had HDTV for several years, and except
> for a few satellite channels, all my programming has to be watched with an
> outside antenna...and the situation has hardly changed the last couple of
> years. Maybe a few major cable companies in big cities will offer this, but
> I am in a top 10 market, and I don't think there are any who offer it here.
>
> In response to your original question, I've always had good luck with
> Channel Master.
>
> --
> 73,
> Larry N8LP
> www.telepostinc.com
>
>
> "Carl R. Stevenson" <wk3cqth@wk3c.com> wrote in message
> news:AEJ7a.7440$hj.2041085@nnrp1.ptd.net...
> > According to the latest numbers I've seen, only about 12% of
> > Americans receive their TV signals "over the air" from local
> > TV broadcast stations ... the rest are get their TV signals
> > from cable TV or the satellite "mini-dishes" which give them
> > good signals and the availability of many more channels of
> > programming ...
> >
> > The main reason that broadcasters need to continue "over
> > the air" transmissions lies in the FCC's "must carry" rules,
> > which require cable companies to carry local channels.
> >
> > If the FCC were to change its rules, allowing local stations

> > to become nothing more than "sources of programming,"
> > and preventing cable companies and satellite providers from
> > "freezing them out," they could feed their programs to the cable
> > companies (and the satellite providers) via other means and the
> > "need" for traditional "over the air" TV transmissions would, in
> > essence, disappear ... freeing up a huge amount of "prime"
> > spectrum that's currently, IMNSHO, being wasted.
> >
> > Carl - wk3c
> >
> >
> > "Frog" <FrogRemailer@bigfoot.com> wrote in message
> > news:HIDCF5GO37680.194525463@Gilgamesh-frog.org...
> > > On Tue, 27 Aug 2002 12:42:40 -0500, "Crazy George"
> > > <munschNO@attglobal.net.SPAM> wrote:
> > >
> > > >off the air TV is going away in 5 years, so why bother?
> > >
> > > Would you please explain what you mean by this comment. While it may
be
> > > true that analog transmissions will end, digital transmissions will be
> > > broadcast. So why do you write such a statement? Are you saying that
> in
> > 5
> > > years we can all throw away out antennas, because there won't be any
> > > broadcast signals?
> > >
> > >
> >
>
>

4475. Resistors on antenna feed line.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 18:23:55 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <b3o9fr$2ep0$1@news1.tribune.com>
Source record: 123664

I used to use a closed loop antenna, which had one side grounded. One of the things people say about a loop is that it is a very "quiet" antenna in terms of qrn. I suspect this has as much to do with its inability to develop static across its terminals as it does with propogation angle. A tuner that uses a transformer or choke type balun has a DC ground path.

When I went to a Dipole, on a balanced tuner, that had no DC path to ground (Johnson Match Box), I wanted to control static on the lines. I have seen wind conditions and / or lightening that could cause a spark to jump between terminals on a 300 ohm line!

I put a 1 meg resistor from each side of the dipole to ground to have both sides of the antenna at DC ground. I guess I used a high enough value, as the 1/4 watt resistors do not get warm from my 100 watt radio. The antenna is nice and "quiet"

JOHN
KA9CAR

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message news:nLw7a.13529$_9.4843@fe02.atl2.webusenet.com...
> Thanks.
>
> Are those resistors or diodes to ground?
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "KA9CAR" <ka9car@a_r_r_l_.net> wrote in message
> news:b3lola$2vr2$1@news1.tribune.com...
> > This is in my shack, but it could be outside.
> >
> > http://user.mc.net/~jdewey/Ham_radio/grounding_relay.jpg
> >
> > I bought a heavy duty (30 amp 250volt) open frame relay at a ham fest.
> You
> > can get them with 24 volt ac or 120 volt ac coils
> > I have the 120 volt ac coil hooked to the main power switch for my
> > equipment.
> > When the lights are on, the relay connects to my tuner. When the lights
> are

> > off, it connects to ground.
> >
> > Obviously a direct strike will blow up everything, but I don't worry
about
> > forgetting this, which I did with a knife switch.
> >
> > John
> > KA9CAR
> >
> >
> >
> > "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> > news:_he7a.123629$Kj2.10082@fe02.atl2.webusenet.com...
> > > What is the best way to ground 300-ohm twinlead for lightening
> protection
> > > outside the shack? Besides a knife switch (Don't wish to walk all the
> way
> > > around the house in the middle of the night.) at the entrance. I wish
to
> > do
> > > this on as low a budget as possible so commercial grounding equipment
is
> > > out. (Wife understands as she is a tech, but there are limits.)
> > >
> > > Any good and inexpensive ideas?
> > >
> > > TNX
> > > --
> > > 73,
> > > Chuck
> > > KE4ETH
> > > USA-NA
> > >
> > >
> > >
> > >
> >
> >
>
>
>

4476. Re: Resistors on antenna feed line.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 19:12:48 UTC
From: larryc@northwest.com
Message-ID: <3E5FB4B0.A8340CE3@northwest.com>
Source record: 123665

are you talking about a magnetic (shielded) loop or an e-field loop? Both can pick up QRN... QRN can also mean interference, not necessarily static (a fine point, I know).

if you mean static as qrn, having one-side grounded will help drain off the buildup of static electricity, wind-induced and rain static. Then there's the feedline L-di/dt issue to deal with, too. Can't change the voltage instantaneously. A drain resistor (a few kilohms) on outside antennas is an old and effective trick.
==========

KA9CAR wrote:

> I used to use a closed loop antenna, which had one side grounded. One of
> the things people say about a loop is that it is a
> very "quiet" antenna in terms of qrn. I suspect this has as much to do
> with its inability to develop static across its terminals as it does with
> propogation angle. A tuner that uses a transformer or choke type balun has
> a DC ground path.
>
> When I went to a Dipole, on a balanced tuner, that had no DC path to ground
> (Johnson Match Box), I wanted to control static on the lines. I have seen
> wind conditions and / or lightening that could cause a spark to jump between
> terminals on a 300 ohm line!
>
> I put a 1 meg resistor from each side of the dipole to ground to have both
> sides of the antenna at DC ground. I guess I used a high enough value, as
> the 1/4 watt resistors do not get warm from my 100 watt radio. The antenna
> is nice and "quiet"
>
> JOHN
> KA9CAR
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:nLw7a.13529$_9.4843@fe02.atl2.webusenet.com...
> > Thanks.
> >
> > Are those resistors or diodes to ground?
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA
> >

> > "KA9CAR" <ka9car@a_r_r_l_.net> wrote in message
> > news:b3lola$2vr2$1@news1.tribune.com...
> > > This is in my shack, but it could be outside.
> > >
> > > http://user.mc.net/~jdewey/Ham_radio/grounding_relay.jpg
> > >
> > > I bought a heavy duty (30 amp 250volt) open frame relay at a ham fest.
> > You
> > > can get them with 24 volt ac or 120 volt ac coils
> > > I have the 120 volt ac coil hooked to the main power switch for my
> > > equipment.
> > > When the lights are on, the relay connects to my tuner. When the lights
> > are
> > > off, it connects to ground.
> > >
> > > Obviously a direct strike will blow up everything, but I don't worry
> about
> > > forgetting this, which I did with a knife switch.
> > >
> > > John
> > > KA9CAR
> > >
> > >
> > >
> > > "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> > > news:_he7a.123629$Kj2.10082@fe02.atl2.webusenet.com...
> > > > What is the best way to ground 300-ohm twinlead for lightening
> > protection
> > > > outside the shack? Besides a knife switch (Don't wish to walk all the
> > way
> > > > around the house in the middle of the night.) at the entrance. I wish
> to
> > > do
> > > > this on as low a budget as possible so commercial grounding equipment
> is
> > > > out. (Wife understands as she is a tech, but there are limits.)
> > > >
> > > > Any good and inexpensive ideas?
> > > >
> > > > TNX
> > > > --
> > > > 73,
> > > > Chuck
> > > > KE4ETH
> > > > USA-NA
> > > >
> > > >
> > > >
> > > >
> > > >
> > >

> > >
> >
> >
> >

4477. Re: questions rephrased ! tv ant + sat ant

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 19:22:16 UTC
From: richardharrison@webtv.net
Message-ID: <25949-3E5FB6E8-326@storefull-2311.public.lawson.webtv.net>
Source record: 123666

J Sun wrote:
"What does it mean?"

Some guesses:
"Don`t install a regular splitter" probably means the splitter`s conductance can provide a path that shorts-out the d-c.

A "special splitter" may have internal capacitors to block d-c to all ports except one input and one output used to provide d-c to power the pre-amp.

The other option mentioned is: "---put a DC block on the outputs" (capacitors in series with connections not needed for pre-amp d-c power) so they can`t short-out the d-c.

Best regards, Richard Harrison, KB5WZI

4478. Re: OT antenna combiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 19:53:37 UTC
From: richardharrison@webtv.net
Message-ID: <25950-3E5FBE41-157@storefull-2311.public.lawson.webtv.net>
Source record: 123667

Carl Van Camp wrote:
"But maybe I can use one choke to couple the AM signal into the center conductor of the radio and then just tie the coax shields together."

Yes. A VHF choke blocks VHF but has too little inductance to block medium wave signals.

A 53 picofarad capacitor has about 30 ohms reactance at 100 MHz. It will couple VHF well in most circuits but has 3000 ohms reactance at 1-MHz. So it can effectively block medium-wave signals while passing VHF signals in circuits with impedances of the transmission line ilk.

Best regards, Richard Harrison, KB5WZI

4479. Re: Resistors on antenna feed line.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 20:16:38 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <XOQ7a.99676$ED.99483@fe06.atl2.webusenet.com>
Source record: 123569

Thanks John, Looks like a viable way for me to do it.

--
73,
Chuck
KE4ETH
USA-NA

"KA9CAR" <ka9car@a_r_r_l_.net> wrote in message
news:b3o9fr$2ep0$1@news1.tribune.com...
> I used to use a closed loop antenna, which had one side grounded. One of
> the things people say about a loop is that it is a
> very "quiet" antenna in terms of qrn. I suspect this has as much to do
> with its inability to develop static across its terminals as it does with
> propogation angle. A tuner that uses a transformer or choke type balun
has
> a DC ground path.
>
> When I went to a Dipole, on a balanced tuner, that had no DC path to
ground
> (Johnson Match Box), I wanted to control static on the lines. I have
seen
> wind conditions and / or lightening that could cause a spark to jump
between
> terminals on a 300 ohm line!
>
> I put a 1 meg resistor from each side of the dipole to ground to have both
> sides of the antenna at DC ground. I guess I used a high enough value, as
> the 1/4 watt resistors do not get warm from my 100 watt radio. The antenna
> is nice and "quiet"
>
> JOHN
> KA9CAR
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:nLw7a.13529$_9.4843@fe02.atl2.webusenet.com...
> > Thanks.
> >
> > Are those resistors or diodes to ground?
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA

> >
> > "KA9CAR" <ka9car@a_r_r_l_.net> wrote in message
> > news:b3lola$2vr2$1@news1.tribune.com...
> > > This is in my shack, but it could be outside.
> > >
> > > http://user.mc.net/~jdewey/Ham_radio/grounding_relay.jpg
> > >
> > > I bought a heavy duty (30 amp 250volt) open frame relay at a ham fest.
> > You
> > > can get them with 24 volt ac or 120 volt ac coils
> > > I have the 120 volt ac coil hooked to the main power switch for my
> > > equipment.
> > > When the lights are on, the relay connects to my tuner. When the
lights
> > are
> > > off, it connects to ground.
> > >
> > > Obviously a direct strike will blow up everything, but I don't worry
> about
> > > forgetting this, which I did with a knife switch.
> > >
> > > John
> > > KA9CAR
> > >
> > >
> > >
> > > "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> > > news:_he7a.123629$Kj2.10082@fe02.atl2.webusenet.com...
> > > > What is the best way to ground 300-ohm twinlead for lightening
> > protection
> > > > outside the shack? Besides a knife switch (Don't wish to walk all
the
> > way
> > > > around the house in the middle of the night.) at the entrance. I
wish
> to
> > > do
> > > > this on as low a budget as possible so commercial grounding
equipment
> is
> > > > out. (Wife understands as she is a tech, but there are limits.)
> > > >
> > > > Any good and inexpensive ideas?
> > > >
> > > > TNX
> > > > --
> > > > 73,
> > > > Chuck
> > > > KE4ETH
> > > > USA-NA

> > > >
> > > >
> > > >
> > > >
> > >
> > >
> >
> >
> >
>
>

4480. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 21:34:09 UTC
From: John Jardine <john@jjdesigns.fsnet.co.uk>
Message-ID: <b3ojm3$g26$1@newsg4.svr.pol.co.uk>
Source record: 123668
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Jason Hsu <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0302262129.175ef251@posting.google.com...
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
[clip]
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

(There's a surprising number of video op-amps in DIP packages that will
directly amplify the R.F. side.)

From the DC POV, it's a bit pointless nowadays building a chopper amp (if
you insist, then the simplest is a '4066 as synchronous
modulator/demodulator :) when the likes of ICL7650 or OP177 are available .
Just amplify those diode voltages directly. But ... for good SWR's there's
still a big problem with diode AC to DC non-linearity at the bottom end of
the power range.
The linearising "compensator" circuit mentioned on the site is of only
little use with diode outputs below about 0.5VDC, as the compensator diode
'DC' comparison voltage is only a vague reflection of an actual input ACV
needed to give a particular diode DC output.
Good linearisation down to a mV or so, can be acheived using pairs of
matched (bench selected or IC packaged) diodes. One diode rectifying the
wanted RF. The other diode being fed with a variable AC voltage at say a few
hundred Hz. The DC outputs of both diodes are compared by a low offset
op-amp. This op-amp output then adjusts the low frequency signal voltage
level until DC balance is made.
As diodes are not really frequency sensitive, then for both to be giving out
(say) 1mVdc implies both are receiving maybe 100mVAC at their inputs. The
low frequency reference voltage can then be simply measured using normal
means such as a precision rectifier etc.
regards
john

4481. Physically model a hairpin in NEC2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 22:12:12 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E5FDEBC.6F4AFA04@netscape.net>
Source record: 123570

Is it possible to physically model a hairpin in NEC2? Adding the geometry is simple and it seems like it would work, but when I add on into my model the gain drops by a couple dB (pattern shape looks the same though?). I didn't even try to dial in a hairpin size to see if I could get a match - I thought I'd ask the question here before I did anything else...Thanks, Scott.

4482. Re: Physically model a hairpin in NEC2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 22:28:40 UTC
From: k3bu@aol.com
Message-ID: <20030228172840.20962.00000547@mb-fh.aol.com>
Source record: 123571

>
>Is it possible to physically model a hairpin in NEC2? Adding the
>geometry is simple and it seems like it would work, but when I add on
>into my model the gain drops by a couple dB (pattern shape looks the
>same though?). I didn't even try to dial in a hairpin size to see if I
>could get a match - I thought I'd ask the question here before I did
>anything else...Thanks, Scott.
>
>
>
>
>

Did you adjust the electrical length of the radiator to compensate for the loading by the hairpin? It appears that your resonant frequency was shifted if you did not.

Yuri, K3BU

4483. Re: Physically model a hairpin in NEC2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 22:47:57 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E5FE71D.46F19AF6@netscape.net>
Source record: 123572

Ok, I did not. I guess that is the problem, Yuri. I just plugged some numbers into match.exe that come with YagiMax for a hairpin match to get the hairpin length and it worked out almost perfectly. I guess I have to shorten the antenna up first - Scott.

Yuri Blanarovich wrote:

> >
> >Is it possible to physically model a hairpin in NEC2? Adding the
> >geometry is simple and it seems like it would work, but when I add on
> >into my model the gain drops by a couple dB (pattern shape looks the
> >same though?). I didn't even try to dial in a hairpin size to see if I
> >could get a match - I thought I'd ask the question here before I did
> >anything else...Thanks, Scott.
> >
> >
> >
> >
> >
>
> Did you adjust the electrical length of the radiator to compensate for the
> loading by the hairpin? It appears that your resonant frequency was shifted if
> you did not.
>
> Yuri, K3BU

4484. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 22:52:04 UTC
From: k7itm@aol.com
Message-ID: <3200347.0302281452.2a387274@posting.google.com>
Source record: 123573
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

What with all the chopper discussion here, I just have to jump in.

First of all, Jason, I think you should check out the RF log detectors mentioned by others; besides Analog Devices, I believe you'll find that folk like Linear Technology and Maxim make some. But AD has some that will detect both phase and magnitude, and you _could_ use that to monitor not just the SWR but the complex reflection coefficient. That could be much more useful that just SWR.

On choppers and signal levels: What do you want the chopper for, exactly? I can imagine wanting an amp with good DC characteristics following a diode detector, but surely not for RF amplification in this case. But even for amplifying the DC out of a good diode detector, you don't need chopper stabilization for 10 millivolts of RF input; that should get you on the order of a millivolt of DC out, into a high impedance. A lot of op amps have low enough initial offset to handle that, and a whole lot more are stable enough that they'd work with a simple offset null adjusted once a year or less. A bigger problem is that you're wanting to operate a diode detector over a range that spans linear and logarithmic output versus input. That is, at 10 millivolts, the output voltage will be very nearly proportional to input power (or to input volts-squared), but at 1 volt and above, the output will vary linearly with input voltage. You'll be much better off to scale the input to match one of the RF log detectors, which will have guaranteed performance and a relatively easy to deal with output scale factor. Otherwise, be prepared to do some careful calibration work.

I used a chopper-stabilized op amp about ten years ago in a sensitive field strength meter. I needed that for low offset voltage and in this case low input bias current. It can "see" down to about 30 microvolts of input. That's around a microvolt out of the detector. That's WAY less signal than you'll have, and is only useful with a selective tank on the input. The chopper-stabilized amp was much easier to deal with than the drifty CMOS amp in the prototype version of the FSM. The biggest problem I had with it was from leakage currents around the chopper feedback pin; I had nailed input leakages by carefully guarding the input trace, but discovered that high humidity would really mess things up in the chopper stabilization part of the ckt. This was with the Harris part that Win mentioned.

With ANY solid-state parts around high RF fields, beware of rectification that can introduce difficult-to-trace offsets and other errors. If you're looking for low DC offset in your amplifiers, do

NOT let RF get into the inputs (or the power supplies). In some
cases, even a few millivolts can screw things up.

Cheers,
Tom

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0302262129.175ef251@posting.google.com>...
> Here is the application:
> I am working on an SWR/wattmeter with a wide dynamic range. The
> design is just like the one at
> http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html except
> that I will need a more complex rectification system. I use the same
> 10:1 turns ratios and the same 50-ohm resistances. The sampled
> forward voltage is 10V at the top power transmitted power level (200W)
> and .1V at the lowest transmitted power level (20mW). For an SWR of
> 1.22, the sampled reflected voltage will be 1V for 200W of transmitted
> power and .01V for 20mW of transmitted power.
>
> The problem:
> I am trying to rectify the RF voltages into DC voltages of the same
> amplitude. The frequency range is 1.6MHz-30MHz, and the voltage
> amplitude range is .01V to 10V. RF amplifiers are not a viable
> solution (not equipped to use SOICs, all my supplies are DIP).
> Amplifying the DC voltages with an ordinary op amp will not work due
> to the contamination from the offset voltage. And conventional audio
> op-amps like the 741 lack the bandwidth I need. So the only solution
> left for me is a chopper amplifier, which converts the DC voltages
> into audio frequency voltages, which are much easier to work with than
> DC or RF.
>
> The questions:
> What should I look for in a chopper amplifier? Did any chopper
> amplifiers that you have worked with have strange characteristics that
> affected performance? Are there any other issues I need to be aware
> of? Tell me about your experiences, because I have never seen a
> chopper amplifier before and have absolutely NO experience with any.
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

4485. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 22:53:41 UTC
From: bill.sloman@ieee.org
Message-ID: <7c584d27.0302281453.313b64ea@posting.google.com>
Source record: 123574

richardharrison@webtv.net (Richard Harrison) wrote in message news:<10547-3E5F8379-133@storefull-2312.public.lawson.webtv.net>...
> Jason Hsu wrote:
> "Amplifying the DC voltages with an ordibary op amp will not work due to
> the contamination from the offset voltage.
>
> Jason has Bill Sloman in Nijmegen supplying far more educated answers
> than I can offer.
>
> I would just note that this is ancient SOP for industrial
> instrumentation. Standard signals there are 4-20ma and 1-5 volts or 3 to
> 15 pounds of air pressure. In the vacuum tube days, an
> electro-mechanical chopper was used on the d-c electrical output from
> process transducers to condition them for a-c amplification. This
> chopper was a lot like the vibrator used in car radios.

George Kent in Luton used to have such a chopper in their chart recorders. My boss told me about developing a JFET-based chopper that plugged into the same socket, and replaced it - IIRR the performance no worse and the FET-based part was expected to last for ever. This was back in 1975. I've not seen many chart recorders in recent years, so I don't know how well this expectation has been met.

Bill Sloman, Nijmegen

4486. Re: Re: Resistors on antenna feed line.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 22:57:50 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v5vqbbmroo36c7@corp.supernews.com>
Source record: 123575

I think the last letter is the key N=natural M=man made.

At least that's what I was taught by my Elmer in 1952.

<mcduffie@xactcom.net> wrote in message
news:6gmv5vg6nn77mdq4l2jss61ss48a1cjvmc@4ax.com...
> On Fri, 28 Feb 2003 11:12:48 -0800, larryc@northwest.com wrote:
>
> > QRN can also mean interference, not necessarily static (a fine
> > point, I know).
>
> When did you rewrite the Q signal defs? QRN MEANS static, not
> interference. QRM is interference.
>
> gm
> --
> There is no x in my ISPs domain name.

4487. Re: Physically model a hairpin in NEC2?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-02-28 23:22:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v5vrq0n5ag9679@corp.supernews.com>
Source record: 123576

The answer to your question is that some hairpin matches can't be modeled with NEC-2.

If the pattern shape is staying the same but the field strength is dropping, there's something wrong unless you can account for it with wire or load loss. I recommend running an average gain test. (See RP card fields.)

A typical hairpin match is in shunt with the source, making a small loop containing a source. NEC-2 doesn't like small loops, particularly ones containing a source. If the average gain test comes out badly, that's the likely cause.

Roy Lewallen, W7EL

Scott wrote:
> Is it possible to physically model a hairpin in NEC2? Adding the
> geometry is simple and it seems like it would work, but when I add on
> into my model the gain drops by a couple dB (pattern shape looks the
> same though?). I didn't even try to dial in a hairpin size to see if I
> could get a match - I thought I'd ask the question here before I did
> anything else...Thanks, Scott.
>

4488. Re: Re: Resistors on antenna feed line.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 00:08:38 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <mKS7a.15439$Xa4.4266@fe01.atl2.webusenet.com>
Source record: 123577

mcduffie@xactcom.net wrote:
> On Fri, 28 Feb 2003 11:12:48 -0800, larryc@northwest.com wrote:
>
>> QRN can also mean interference, not necessarily static (a fine
>> point, I know).
>
> When did you rewrite the Q signal defs? QRN MEANS static, not
> interference. QRM is interference.
>
> gm

QRN - Interference of a natural source (could be static, lightning, solar, etc.)
QRM - Interference of a man made source (could be a carrier, splatter, etc.)

73 de W6DKN

4489. Antenna Warehouse Super Discone Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 00:10:47 UTC
From: Joe Guthart <jguthart@attbi.com>
Message-ID: <bUS7a.273446$iG3.31377@sccrnsc02>
Source record: 123578

Anyone have any experience with this antenna? Thinking of using for general purpose scanning plus transmitting on 2m and 70cm. I know there is no gain. However, I've heard that it's fairly good for transmitting. Other recommendations?

4490. Re: double antennas for uhf/vhf

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 00:58:55 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <96106v8ehl8ksebggm246p34vnte214jbk@4ax.com>
Source record: 123579

On Wed, 26 Feb 2003 20:47:53 -0500, "JLB" <IHateSpam@nospam.net>
wrote:

>I have no experience with Winegard, but if I had a choice that is what I
>would use based on their reputation. that is what all the 'professional'
>installations use in this part of the country.

For some years, which were many years back, I did a lot of antenna
installations in the Central Michigan area. I think the
ChannelMaster and Winegard are pretty much equal. Now days, I just
pick what ever is handiest. I have no complaint with the Radio
Cra..er...Shack stuff. It seems to work well and I've only lost one
over the last 14 years...I don't know if that was due to lightening,
or overload from the 2-meter station.

Check to see if each has an FM trap and you can adjust the gain from
inside the house. That can be quite handy in the case of front end
overload. Then again, it probably wouldn't be noticed in most
installations.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>Jim
>N8EE
>"J. Sun" <jsun@lucent.com> wrote in message
>news:b3iml7$p7@netnews.proxy.lucent.com...
>> Now I have chosen the largest (I mean ups deliverable) antenna and can not
>> install
>> any higher so I'll try mast-mount pre-amp based on the responses. I have
>the
>> following
>> candidates: Winegard 8275, ChannelMaster 0064 or Rado Shack 15-1109.
>> Which one you would recommend ?
>> Thanks !
>>
>> Rus
>>
>>
>>
>>
>
>

4491. Re: Resistors on antenna feed line.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 04:30:27 UTC
From: larryc@northwest.com
Message-ID: <3E603763.B4080511@northwest.com>
Source record: 123580

good gods, dude. get a life.

========

mcduffie@xactcom.net wrote:

> On Fri, 28 Feb 2003 11:12:48 -0800, larryc@northwest.com wrote:
>
> > QRN can also mean interference, not necessarily static (a fine
> > point, I know).
>
> When did you rewrite the Q signal defs? QRN MEANS static, not
> interference. QRM is interference.
>
> gm
> --
> There is no x in my ISPs domain name.

4492. Re: Resistors on antenna feed line.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 04:30:56 UTC
From: larryc@northwest.com
Message-ID: <3E603780.800C8F4B@northwest.com>
Source record: 123581

OK... OK!

========

"Dr. Fred Hambrecht Sr" wrote:

> I think the last letter is the key N=natural M=man made.
>
> At least that's what I was taught by my Elmer in 1952.
>
> <mcduffie@xactcom.net> wrote in message
> news:6gmv5vg6nn77mdq4l2jss61ss48a1cjvmc@4ax.com...
> > On Fri, 28 Feb 2003 11:12:48 -0800, larryc@northwest.com wrote:
> >
> > > QRN can also mean interference, not necessarily static (a fine
> > > point, I know).
> >
> > When did you rewrite the Q signal defs? QRN MEANS static, not
> > interference. QRM is interference.
> >
> > gm
> > --
> > There is no x in my ISPs domain name.

4493. Re: OT antenna combiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 05:09:21 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <grf06vcaqgc0fm36u73gsn8q59mi5cdlfc@4ax.com>
Source record: 123582

On Fri, 28 Feb 2003 09:10:18 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Carl Van Camp wrote:
>"I have separate AM & FM broadcast antennas on my roof."
>

It's a WHOLE lot easier to just go down to Radio Shack and purchase a
two way combiner. You already have the baluns at the antennas, or you
wouldn't be running coax. The combiner provides *some* isolation
(probably enough), but not as much as a custom built and tuned
installation.

As the antennas are for different bands it should work just fine
plugging the cable into the combiner and the output of the combiner
into the receiver.

I do that regularly with separate TV and FM antennas.
The impedance of the AM antenna will probably be off a bit (I didn't
catch what the AM antenna is), but I think you will find they work
just fine with no special effort.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>Carl can use r-f chokes to prevent interaction from combining antenna
>signals on the roof. These chokes could be something like 5 microhenries
>each. These have a reactance of more than 3000 ohms each at 100 MHz.
>
>Two chokes in series across the FM antenna terminals won`t upset the FM
>antenna or transmission line. The AM antenna lead can be connected at
>the center-tap.
>
>Similar chokes can be connected across the FM receiver terminals to
>provide an AM signal output at the center-tap. The AM signal is using
>the FM transmission line in its common-mode. A ground return on the
>roof, or elsewhere, and at the receiver is needed to complete the
>circuit. This may already exist via the power line or other connections.
>It may not be the quietest AM signal source for AM reception. A
>dedicated ground wire following the FM transmissiom line path may be
>needed for lower noise on AM.
>
>Best regards, Richard Harrison, KB5WZI

4494. Re: CATV Hardline Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 05:44:41 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <amg06vgefr3j707n167dfj84f7jom3hmqn@4ax.com>
Source record: 123583
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On 24 Feb 2003 00:20:48 GMT, Allodoxaphobia <nobody@frontier.net>
wrote:

>On Sun, 23 Feb 2003 21:09:44 GMT, Adam Adkins hath writ:
>> Recently I have been trying to use 1/2" CATV hardline to feed my
>> vertical antenna. The cable is a little larger diameter as LMR-400 or
>> any other .405 OD coax. It has a solid center conductor with foam
>> dialectric that is glued to the center conductor. The jacket is
>> aluminum, and there is no PVC outer jacket. The connector was crafted
>> from a PL-259 and a brass double female 1/2" compression fitting. That

That is the same thing I used with the 1/2 inch *stuff*.

>> experience has taught me a couple of things, and raised some questions.
>> If anyone has any helpful comments about the following, I would really
>> appreciate hearing them.
>>
>> I discovered very quickly how a kink in the cable is a disaster.
>> Thirty feet from the end of a 200 foot run, the cable kinked and the
>> outer metal jacket ruptured. Bleah. How disappointing.

The outer jacket is very thin on 1/2 inch.

>> Can anyone tell me good, cheap and durable ways to splice the
>> cable?

Two brass compression fittings and one UHF brass barrel connector.
You may (will) have to smooth down the threads to fit inside the
compression fittings. That's where having a lathe is nice, but a file
will do. Just make sure the finished surface is both smooth and
ROUND. You may have to add a bit of solder to the center conductors
of the 1/2 inch to get a tight fit inside the barell connector..

THEN, go down to your local electrical contracting store and pick up
some "flooded" heat shrink tubing. The stuff is a bit over one inch
inside diameter (unshrunk). It will shrink down tight on RG-8, so
it'll do the same with the connector and hard line.

The heat shrink tubing comes in four foot lengths at about $9 or so
"as I recall". Cut a piece long enough to extend about two to three
inches beyond the splice on each side. Slide this over one of the
pieces of coax *before* making the splice. After the splice is
completed, slide the heat shrink into place and then using a heat gun,
start at the middle and work out, shrinking the stuff tight enough to
see the shape of the connectors.

If done right you will see the flooding material (hot glue) squeeze
out both ends and all the way around. Just let it set...Don't stick
your finger in it as that stuff is *hot* and it won't let go. Please
don't ask how I know.<sigh>

>
>Can't help you there. I've only `slightly` kinked either the 1/2"
>or the 3/4" stuff but once each -- and it did not burst and I'm
>gonna live with it.
>
>> Talking to a friend, I mentioned that I didn't plan to bury the
>> cable but for a short run to make sure it isn't run over with the
>> tractor. He asked me, "Wouldn't that change the impedance?" I had to

As Jonsey said, nope!

>> admit that I don't know, but didn't think it would since the jacket is
>> ground anyway.
>
>Mox nix -- being ground. What you'll get is a smashed tube - with
>the outer wall much closer to the inner conductor - giving you
>(perhaps many - depending on how active the tractor) impedance `bumps`.
>
>[Oh, now that I've re-read the question: No, burying the hardline
> directly, or in-directly will *not* alter the impedance. sri]

It will if he doesn't bury it deep enough <:-))
One Tractor tire, or even car can make a big difference, particularly
if it's spinning..

>
>> I could not find the answer to this question anywhere. Can anyone
>> tell me whether buried / not buried will change the impedance of this
>> feed line? Are there advantages to burying the entire run? Are there
>> any wild aluminum eating creatures that nibble holes in hardline?
>
>Without _any_ poly jacket, you need to worry about electrolysis and/or
>the PH of the soil. If it were me: I'd bury it in some black poly pipe.
>'Twould be a feat to stuff in a looooooong run of it...

It's actually not all that bad...Use lots of wire pulling soap..The
ugly yellow stuff that comes in a pressurized can...sliperier than
snot on a door knob.

One person can do it, but it's safer (for the coax) if you can get two
of three. You need to get the pipe out straight, so it might have to
spend a day or two in the warm sun getting straightened a bit at a
time.

You need to be careful getting the coax out of the roll and
straightened before going into the pipe. It's real easy to pull a bit
too much coax while forgetting to watch the roll. As you've found,
that stuff kinks easily. That's where the extra help comes in handy.

>
>> Finally, does anyone care to share any hard-won experience, or
>> pointers to complete information, or whatever?
>
> http://www.jonz.net/W3DHJ/catvhardline.html
>

The only thing I'd change with the 3/4 inch is using brass compression fittings and UHF barrel connectors.
http://www.rogerhalstead.com/conn.htm Moisture is not usually a problem in the 3/4 inch as it can't migrate even if it does get in at the connector, so a good weather proofing of the connection should do the job. You can use adapters for N connectors.

>...but, none of my CATV HardLine comes even close to the ground.
>Out thru the basement window -- along the side of the house --
>and up inside of a 40' tower.

Good Luck,

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>HTH es 73,
>Jonesy

4495. Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 08:33:26 UTC
From: cprstn54zz@att.net
Message-ID: <3e606d29.657692203@news-server.optonline.net>
Source record: 123584

I picked up a dummy load at a hamfest. It has an N-male connector and cast fins of rectangular cross section. It measures 1-1/4 x 2 x 4 and weighs a hefty 12 oz. It is new, but has no labels (except for the Dymo label I put on it). See pic at:
http://home.att.net/~cprstn54/dummy.jpg

Is there a practical way to determine its capacity? Like maybe running measured steady state power into it and measuring its steady-state temperature?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

4496. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 10:53:14 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E60911A.368A70A5@cwis.net>
Source record: 123585

Ken,
Yes, you can do that.
'Doc

4497. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 12:05:06 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <KI18a.8935$x_5.1021717@news20.bellglobal.com>
Source record: 123586

"Ken"
> ...picked up a dummy load at a hamfest.
> It measures 1-1/4 x 2 x 4...

That size is typically about 50 watts continuous.

4498. 40 /80

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 12:40:48 UTC
From: Jayne Medley <kjm52@blomand.net>
Message-ID: <b3q9o7$340m$1@news3.infoave.net>
Source record: 123587

Want some info on the best ver design for 40 and 80 band using one ant . Got info you want to pass on ?

4499. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 15:13:42 UTC
From: cprstn54zz@att.net
Message-ID: <3e60cd4a.754562@news-server.optonline.net>
Source record: 123588

On Sat, 01 Mar 2003 04:53:14 -0600, 'Doc <w5lz@cwis.net> wrote:>
>Ken,
> Yes, you can do that.
> 'Doc

Well . . .

How hot is too hot?

I don't want it to lose its smoke.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

4500. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 15:25:01 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e60d314_4@news1.prserv.net>
Source record: 123591

Ken:

As one of the other respondents indicated, that is likely a 50 watt rated load, probably from a circulator port on a cell site. Here are some other considerations. Say the steady state dissipation is rated at 50 watts. Fan forced cooled, it will probably handle 100 watts without damage. Or suspended on a big oil bath, maybe more, but the internal thermal conductivity becomes critical, and at this point that is an unknown quantity. On the other hand, if you operate it as shown in the photo, I would not put more than 20 watts into it. You need to get it mounted so there is free air circulation through the fins if you are going to operate it at near full power for more than a minute at duty cycles exceeding 10%. Those were usually installed by screwing them onto a panel mounted female connector, leaving the load projecting out into unrestricted air circulation in a cabinet which often had fan or refrigeration cooling.

--
Crazy George
Remove NO and SPAM from return address
"Ken" <cprstn54zz@att.net> wrote in message
news:3e606d29.657692203@news-server.optonline.net...
> I picked up a dummy load at a hamfest. It has an N-male connector and
> cast fins of rectangular cross section. It measures 1-1/4 x 2 x 4 and
> weighs a hefty 12 oz. It is new, but has no labels (except for the
> Dymo label I put on it). See pic at:
> http://home.att.net/~cprstn54/dummy.jpg
>
> Is there a practical way to determine its capacity? Like maybe
> running measured steady state power into it and measuring its
> steady-state temperature?
>
> Ken KC2JDY
>
>
> Ken
> (to reply via email
> remove "zz" from address)

4501. Re: Cushcraft VS Force12

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 15:25:11 UTC
From: "Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid>
Message-ID: <98i16vooi7doipcjhb5qb72u19ffhdsffv@4ax.com>
Source record: 123589

On Wed, 26 Feb 2003 20:59:02 GMT, "Craig Buck" <k4ia@cox.net> wrote:

>Be sure you run the coax straight down to the ground (or as far as you can)
>before you go horizontal with it. That should help reduce RF pickup in the
>coax.

This may apply to the Cushcraft, but not to the Force 12 Sigma 5. The instruction manual specifically says "Run the coax and 5-conductor lines away from the antenna, at approximately a 45 degree angle, as far as possible. Straight out for several feet is excellent. If the feed line and control lines are dropped close to the Sigma-5, current from the antenna will couple into the lines and the antenna will be de-tuned."

I use my Sigma-5 for portable operation when I go to the beach and have found it to be an excellent performer. It blows the socks off of my old Hy-Gain 12AVQ vertical. It can be assembled, and in operation in 15 minutes...if you are slow. 8*)

As others have indicated, the 20 meter coils required retuning. As a matter of fact, every review I have read of this antenna made the same observation. As it comes from the factory the 20 mx resonance is something like 13.9 mHz. Retuning is simple, requiring opening the center container with the coils and relays and then spreading the turns of the 14 mHz coils until the SWR is at a minimum at the desired point in the band. I hit the desired frequency on the second try.

The only other observation that I would make about the Sigma 5 is that it is sensitive to surrounding objects. My original placement next to the house gave high SWR on all bands. I concluded that it was coupling to the rain downspouts so I moved it away from the deck by about 25 feet and the SWR curves were perfect. I have noticed a similar effect when it was mounted too close to a tree. Not surprisingly, the bottom line seems to be that the Sigma 5 should be mounted in the clear.

Ken K4XL - Replace "invalid" with "net" to reply.
*** BoatAnchor Manual Archive ***
On the web at http://bama.sbc.edu or
FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

4502. Re: 40 /80

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 15:29:05 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e60d315_4@news1.prserv.net>
Source record: 123590

Radio And Television News, June 1954, page 66: "Three Bands, 1 Vertical."
You get 20 meters as a bonus.

--
Crazy George
Remove NO and SPAM from return address
"Jayne Medley" <kjm52@blomand.net> wrote in message
news:b3q9o7$340m$1@news3.infoave.net...
> Want some info on the best ver design for 40 and 80 band using one ant .
Got
> info you want to pass on ?
>
>

4503. ATU for marine use

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 15:52:19 UTC
From: "Richard C. Ferryman" <Richard.Ferryman@btinternet.com>
Message-ID: <eil16vo64nem73l1pvcige8da7hp76f4ed@4ax.com>
Source record: 123592
Cross-posted to: rec.radio.amateur.antenna,rec.boats.electronics

Can anyone recommend an atu that is rugged elecrically but will also stand up well to the harsh marine environment? It is to tune the the backstay on a yacht. 100W pepmaximum but I like to overrate everything so 300W pep capability.
Thanks
Richard G4BBH G4BBH/MM

4504. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 16:14:52 UTC
From: cprstn54zz@att.net
Message-ID: <3e60db6e.4373609@news-server.optonline.net>
Source record: 123594

On Sat, 1 Mar 2003 09:25:01 -0600, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:
>On the other hand, if you operate it as shown in the photo, I
>would not put more than 20 watts into it.

Is it fair to say that -- regardless of circulation -- if I can keep
my hand on it (i.e. it is under 150F), it is not being overloaded?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

4505. Re: ATU for marine use

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 16:20:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E60DDE2.1070108@ieee.org>
Source record: 123595
Cross-posted to: rec.radio.amateur.antenna,rec.boats.electronics

Richard C. Ferryman wrote:
> Can anyone recommend an atu that is rugged elecrically but will also
> stand up well to the harsh marine environment?

Some of the SGC ATU's are designed for that purpose.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4506. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 16:33:09 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <0pn16voaq6di5amah061i23os3v7hecbvn@4ax.com>
Source record: 123596

On 28 Feb 2003 14:53:41 -0800, bill.sloman@ieee.org (Bill Sloman)
wrote:

>richardharrison@webtv.net (Richard Harrison) wrote in message
news:<10547-3E5F8379-133@storefull-2312.public.lawson.webtv.net>...
>> Jason Hsu wrote:
>> "Amplifying the DC voltages with an ordibary op amp will not work due to
>> the contamination from the offset voltage.
>>
>> Jason has Bill Sloman in Nijmegen supplying far more educated answers
>> than I can offer.
>>
>> I would just note that this is ancient SOP for industrial
>> instrumentation. Standard signals there are 4-20ma and 1-5 volts or 3 to
>> 15 pounds of air pressure. In the vacuum tube days, an

Also 3 to 15 volts and a bunch of others. Most of our equipment had
selectable ranges. I think I have about 9 of the adjustable limits
(tripped a really at a preset voltage or current) that could use most
of the current and voltage inputs.

>> electro-mechanical chopper was used on the d-c electrical output from
>> process transducers to condition them for a-c amplification. This
>> chopper was a lot like the vibrator used in car radios.
>
>George Kent in Luton used to have such a chopper in their chart
>recorders. My boss told me about developing a JFET-based chopper that
>plugged into the same socket, and replaced it - IIRR the performance
>no worse and the FET-based part was expected to last for ever. This
>was back in 1975. I've not seen many chart recorders in recent years,
>so I don't know how well this expectation has been met.

The JFET would last forever, or until it was spiked. <:-))

The chopper is just a switch that turns the DC into a square wave.
As you are now measuring peak to peak (PP)baseline drift is no longer
a problem.

Almost all precision DC measurement circuits use a chopper of one
form or another.

I think I still have two or three of the compact size
electromechanical ones out in the shop.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>-----
>Bill Sloman, Nijmegen

4507. Multi-Feed Horizontal Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 16:51:56 UTC
From: karl <wb0vzz@email.msn.com>
Message-ID: <3e60e413$1@news.sihope.com>
Source record: 123597

Hello to the group!

I'm currently running a horizontal wire loop. The specifics are:
1) 40 feet by 70 feet.
2) 7 feet above the roof of a 4 story apartment building.
3) coax fed to the roof to an SGC-239 autotuner.
4) 450 ohm feed from tuner to loop -- about 9 feet long.
5) loop feed point is about three feet from corner on 40 feet side.

It works on all band from 10-80. The patterns on the various bands are "how-knows-what". I'm sure the patterns involve major and minor lobes on any given band, with more lobes as the frequency goes up.

Now the question! What are the thoughts of feeding the loop at two points. One in the middle of the short side, and one in the middle of the long side, for example. This would involve two tuners, and probably two coax feeds with the switching between one or the other to be done in the shack. This should, theoretically, allow the switching of the pattern, perhaps 90 degrees, thus compensating for the major/minor lobes. This would allow for some directionality in the patterns, and coverage in directions that wouldn't otherwise exist.
Two tuners would sure be simpler (and cheaper?) than beam, rotor, tower, etc which isn't allowed in my apartment QTH.

Thanks in advance for your thoughts. This could make for a fun summer experiment.

Karl K0TBT

4508. Re: Cushcraft VS Force12

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 16:59:56 UTC
From: John <jwhughes@bellsouth.net>
Message-ID: <3e60e1c6$1@post.newsfeed.com>
Source record: 123598

*** post for FREE via your newsreader at post.newsfeed.com ***

Thanks Ken. That's really helpful and the first response I've seen on the sigma. The placement issue is important along with the no radial requirement as I live in a townhouse association and I'd have to have it close to my two story unit...within 5 or 6 feet.

73 and also, like your call...

John, ks4xn

"Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid> wrote in message news:98i16vooi7doipcjhb5qb72u19ffhdsffv@4ax.com...
> On Wed, 26 Feb 2003 20:59:02 GMT, "Craig Buck" <k4ia@cox.net> wrote:
>
> >Be sure you run the coax straight down to the ground (or as far as you can)
> >before you go horizontal with it. That should help reduce RF pickup in the
> >coax.
>
> This may apply to the Cushcraft, but not to the Force 12 Sigma 5. The
> instruction manual specifically says "Run the coax and 5-conductor
> lines away from the antenna, at approximately a 45 degree angle, as
> far as possible. Straight out for several feet is excellent. If the
> feed line and control lines are dropped close to the Sigma-5, current
> from the antenna will couple into the lines and the antenna will be
> de-tuned."
>
> I use my Sigma-5 for portable operation when I go to the beach and
> have found it to be an excellent performer. It blows the socks off of
> my old Hy-Gain 12AVQ vertical. It can be assembled, and in operation
> in 15 minutes...if you are slow. 8*)
>
> As others have indicated, the 20 meter coils required retuning. As a
> matter of fact, every review I have read of this antenna made the same
> observation. As it comes from the factory the 20 mx resonance is
> something like 13.9 mHz. Retuning is simple, requiring opening the
> center container with the coils and relays and then spreading the
> turns of the 14 mHz coils until the SWR is at a minimum at the desired
> point in the band. I hit the desired frequency on the second try.
>
> The only other observation that I would make about the Sigma 5 is that
> it is sensitive to surrounding objects. My original placement next to
> the house gave high SWR on all bands. I concluded that it was

> coupling to the rain downspouts so I moved it away from the deck by
> about 25 feet and the SWR curves were perfect. I have noticed a
> similar effect when it was mounted too close to a tree. Not
> surprisingly, the bottom line seems to be that the Sigma 5 should be
> mounted in the clear.
>
> Ken K4XL - Replace "invalid" with "net" to reply.
> *** BoatAnchor Manual Archive ***
> On the web at http://bama.sbc.edu or
> FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

-----= Posted via Newsfeed.Com, Uncensored Usenet News =-----
http://www.newsfeed.com - The #1 Newsgroup Service in the World!
-----== 100,000 Groups! - 19 Servers! - Unlimited Download! =-----

4509. Re: OT antenna combiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 17:03:20 UTC
From: Carl Van Camp <thevancamps@ameritech.netpickle>
Message-ID: <sJ58a.494$3g.172419@newssrv26.news.prodigy.com>
Source record: 123593

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:grf06vcaqgc0fm36u73gsn8q59mi5cdlfc@4ax.com...
> It's a WHOLE lot easier to just go down to Radio Shack and purchase a
> two way combiner.

Thanks Roger. You're talking about using a normal CATV splitter backwards, right? I don't want to have any loss on the FM side of this setup, so I don't think that's what I'm looking for. But I do appreciate the input.

The goal is to have minimum loss for the FM signals and "I don't care" loss for the AM--I only need to couple in the strong local AM signals, and my AM antenna is fairly hot (Ramsey SM-100, which has a JFET amp, mounted in the attic).

FWIW the FM antenna is the 6 element Radio Shack, modified for tighter pattern, 20 feet above my roof on a rotor. Cable is Belden 1189A quad shield RG6; and I have a Hamtronics LNY preamp (which is a miracle worker in my situation).

Carl Van Camp

4510. Re: Multi-Feed Horizontal Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 17:24:59 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E60EC84.B0F8752C@gte.net>
Source record: 123599

karl wrote:

> Hello to the group!
>
> I'm currently running a horizontal wire loop. The specifics are:
> 1) 40 feet by 70 feet.
> 2) 7 feet above the roof of a 4 story apartment building.
> 3) coax fed to the roof to an SGC-239 autotuner.
> 4) 450 ohm feed from tuner to loop -- about 9 feet long.
> 5) loop feed point is about three feet from corner on 40 feet side.
>
> It works on all band from 10-80. The patterns on the various bands are
> "how-knows-what". I'm sure the patterns involve major and minor lobes on
> any given band, with more lobes as the frequency goes up.
>
> Now the question! What are the thoughts of feeding the loop at two points.
> One in the middle of the short side, and one in the middle of the long side,
> for example. This would involve two tuners, and probably two coax feeds
> with the switching between one or the other to be done in the shack. This
> should, theoretically, allow the switching of the pattern, perhaps 90
> degrees, thus compensating for the major/minor lobes. This would allow for
> some directionality in the patterns, and coverage in directions that
> wouldn't otherwise exist.
> Two tuners would sure be simpler (and cheaper?) than beam, rotor, tower, etc
> which isn't allowed in my apartment QTH.
>
> Thanks in advance for your thoughts. This could make for a fun summer
> experiment.
>
> Karl K0TBT

Before I went to any of that trouble, I think I would model the antenna and see what you might gain.

Dale W4OP

4511. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 17:31:13 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E60EE61.77AF5232@cwis.net>
Source record: 123600

Ken
How hot is too hot? I don't know, but
you will, just as soon as it 'gets' there.
In destructive testing, 'letting the smoke
out' is one of the first signs of the end
of test.
'Doc

4512. Re: 40 /80

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 17:43:06 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933162DC19775pookster@216.168.3.50>
Source record: 123601

"Jayne Medley" <kjm52@blomand.net> wrote in
news:b3q9o7$340m$1@news3.infoave.net:

> Want some info on the best ver design for 40 and 80 band using one ant
> . Got info you want to pass on ?
>
>

You don't say what height you are limited to, but if you can put up a full size 40m vertical and switch in a loading coil for 80m at the base, you will have a very effective antenna. You will need a good set of radials and some means to tune the loading coil unless you operate only a narrow range on 80. I used that for several years and was very pleased.

The key to making a vertical like this work well is lots of radials. The vertical portion is much less critical. As long as you have a low loss loading coil, any height within reason will do fine. If you don't already have one, the ARRL antenna book would be a good investment.

--
Bill, W7TI

4513. Re: Multi-Feed Horizontal Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 19:20:29 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v621s8bssevv63@corp.supernews.com>
Source record: 123602

One would wish to model the antenna in order to have an idea about the
results of a second feed point.

Additional information that will help:
Is the loop a horizontal rectangle? (seems likely) How high is the
antenna? (appears to be about 13 meters)
Are there any other buildings nearby? How far away? Higher than
the antenna?

73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"karl" <wb0vzz@email.msn.com> wrote in message
news:3e60e413$1@news.sihope.com...
> Hello to the group!
>
> I'm currently running a horizontal wire loop. The specifics are:
> 1) 40 feet by 70 feet.
> 2) 7 feet above the roof of a 4 story apartment building.
> 3) coax fed to the roof to an SGC-239 autotuner.
> 4) 450 ohm feed from tuner to loop -- about 9 feet long.
> 5) loop feed point is about three feet from corner on 40 feet side.
>
> It works on all band from 10-80. The patterns on the various bands
are
> "how-knows-what". I'm sure the patterns involve major and minor lobes
on
> any given band, with more lobes as the frequency goes up.
>
> Now the question! What are the thoughts of feeding the loop at two
points.
> One in the middle of the short side, and one in the middle of the long
side,
> for example. This would involve two tuners, and probably two coax
feeds
> with the switching between one or the other to be done in the shack.
This
> should, theoretically, allow the switching of the pattern, perhaps 90
> degrees, thus compensating for the major/minor lobes. This would
allow for
> some directionality in the patterns, and coverage in directions that
> wouldn't otherwise exist.

> Two tuners would sure be simpler (and cheaper?) than beam, rotor,
tower, etc
> which isn't allowed in my apartment QTH.
>
> Thanks in advance for your thoughts. This could make for a fun summer
> experiment.
>
> Karl K0TBT
>
>

4514. Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 20:08:05 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0303011208.4bb127c9@posting.google.com>
Source record: 123603
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I would particularly like to hear what Reg, Roy, and Doc have to say.

I'm working on a super SWR/wattmeter for a graduate school project. Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide good resolution only at low SWR levels? The reflection co-efficient (reflected voltage divided by forward voltage) is .5 at an SWR of 3. But for all of the SWR meters I have seen (including my cross-needle MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past it. In fact, the middle of the scale is usually an SWR of more like 2. But a transmitter SWR under 2 is good enough. Does it really matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it would help to know if you are tuning in the right direction. On my SWR meter, it's hard to tell the difference between an SWR of 5 and an SWR of infinity. I would rather have the good resolution at high SWR levels, and that is the inspiration for my project. I may seem strange to you, but I would like to know if I have lowered my SWR from 15 to 10. At least I would know I'm going in the right direction, and I would know if I passed up the low SWR point.

An SWR of 5 corresponds to a reflection ratio of 2/3. An SWR of 2 corresponds to a reflection ratio of 1/3. Showing an SWR of 5 should be as easy as showing an SWR of 2, but an SWR of 5 is usually portrayed as a hair away from infinity. An SWR of 1.5 corresponds to a reflection ratio of .2 while an SWR of 9 corresponds to a reflection ratio of .8. But in my MFJ meter, an SWR of 1.5 is easily readable, while an SWR of 9 is indistinguishable from infinity. An SWR of 1.2 corresponds to a reflection ratio of .09, and an SWR of 21 corresponds to a reflection ratio of .91.

So why do SWR meter designs have to be skewed so greatly?

Jason Hsu, AG4DG
usenet@@@jasonhsu.com

4515. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 20:08:40 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <nf2dnQTrHaSOv_yjXTWcqQ@ctc.net>
Source record: 123606
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> I'm working on a super SWR/wattmeter for a graduate school project.
> Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide
> good resolution only at low SWR levels? The reflection co-efficient
> (reflected voltage divided by forward voltage) is .5 at an SWR of 3.
> But for all of the SWR meters I have seen (including my cross-needle
> MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past
> it. In fact, the middle of the scale is usually an SWR of more like
> 2. But a transmitter SWR under 2 is good enough. Does it really
> matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it

Most simple swr (wattmeters) use components that work on a log function. The diodes in them function mainly in the so called square log area of voltage/power. If you look at the scales of many analog meters any that are not measuring power or resistance do not have linear scales simply because it is easy and cheaper to make them that way. ONe other thing is that when the SWR geto over 2 or 3 to 1 then it is high enough to do something about.

4516. Which antenna configuration is more efficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 20:25:03 UTC
From: fch <na@hle.com>
Message-ID: <3E61171E.DB95AF88@hle.com>
Source record: 123605

1) A 40 m dipole at 30 ft with one end sloping down to
10 ft above ground and other end at 30 ft.

2) Same dipole but the sloping end goes out straight at 30 ft
but then takes a 90 deg downward vertical bend next to a tree
on the last 10 ft of that dipole end.

3) No perceptable difference between two configurations.

Does bending one end down cause an imbalance in the Z
therby creating feedline radiation?

4517. Re: OT antenna combiner question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 20:32:55 UTC
From: richardharrison@webtv.net
Message-ID: <28132-3E6118F7-30@storefull-2318.public.lawson.webtv.net>
Source record: 123604

Carl Van Camp wrote:
"I only need to couple in the strong AM signals."

You may use a 2.2K (more or less) resistor in series with the AM signal input to the receiver antenna connector. For less loss of the strong AM signal, use a VHF r-f choke in place of the 2.2K resistor. 5 microhenries have a reactance of about 30 ohms at 1 MHz, but 100X or 3000 ohms reactance at 100 MHz. Compared to the 75-ohm coax impedance, the VHF inductor reactance loss is less than 3 db for the AM signal. Attenuation at 100 MHz of 3000 ohms reactance (or 2.2K-ohms resistance) shunted across 75 ohms is very small indeed.

Best regards, Richard Harrison, KB5WZI

4518. Re: 40 /80

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 21:20:45 UTC
From: richardharrison@webtv.net
Message-ID: <19792-3E61242D-171@storefull-2316.public.lawson.webtv.net>
Source record: 123608

Jayne Medley wrote:
"Want some information on the best ver design for 40 and 80 band using
only one antenna."

Ver is an incomplete vertical. The "Mul Tee" is an incomplete vertical.
It`s a folded and loaded vertical monopole using a horizontal flat top
as a loading extension. It requires no matching network for a fair match
to 50-ohm coax on both bands. It`s made from cheap 300-ohm twinlead.

For 80-40 meters, the horizontal folded dipole length is 35 feet. The
vertical length and height are 26 feet.
It requires radials. The more the better.

The antenna is called the "W6BCX Multee Antenna", and can be found in
W6SAI`s "The Radio Handbook".

Best regards, Richard Harrison, KB5WZI

4519. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 21:31:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6126C5.8070100@ieee.org>
Source record: 123607
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jason Hsu wrote:
> So why do SWR meter designs have to be skewed so greatly?

SWR's around 1:1 are most interesting to the most people.
If you want something else, install a microcontroller to
do the math for you and drive a digital display with it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4520. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 22:14:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rdc26vgjag13f65ad6a2hdb60m8m5f112a@4ax.com>
Source record: 123609

On Sat, 01 Mar 2003 15:13:42 GMT, cprstn54zz@att.net (Ken) wrote:

>Well . . .
>
>How hot is too hot?
>

Hi Ken,

Grab hold of it under typical use and count. If you can get to 10
without letting go, it is not too hot.

73's
Richard Clark, KB7QHC

4521. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 22:29:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i6d26vgqj0vj7up6eddh691q4tsl6ls0ic@4ax.com>
Source record: 123610
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 1 Mar 2003 12:08:05 -0800, jason_hsu@my-deja.com (Jason Hsu) wrote:

>
>So why do SWR meter designs have to be skewed so greatly?
>
>Jason Hsu, AG4DG

Hi Jason,

Why? Because it is both easy and reveals the region of most interest
to the average user.

Want to change that? Add another diode across the meter's leads.

73's
Richard Clark, KB7QHC

4522. Re: Multi-Feed Horizontal Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 22:45:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <tnd26vktku20v4r39sdekfjado07boffns@4ax.com>
Source record: 123611

On Sat, 1 Mar 2003 10:51:56 -0600, "karl" <wb0vzz@email.msn.com>
wrote:

>Two tuners would sure be simpler

Hi Karl,

It appears both of them would be connected up to the antenna. One of the tuners seems guaranteed to load the other (and you get to pick which). Even with one tuner and two transmission lines; one of them could get quite hot (jolts-wise) while the other was being driven.

Given the wide operating range, something has to give.

73's
Richard Clark, KB7QHC

4523. Re: Which antenna configuration is more efficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 22:58:05 UTC
From: jgboyles@aol.com
Message-ID: <20030301175805.12801.00000328@mb-fe.aol.com>
Source record: 123612

>1) A 40 m dipole at 30 ft with one end sloping down to
>10 ft above ground and other end at 30 ft.

This is a tough question, there will not be much difference between:

>2) Same dipole but the sloping end goes out straight at 30 ft
>but then takes a 90 deg downward vertical bend next to a tree
>on the last 10 ft of that dipole end.

Just try them both and see, or better yet model them, but still I suspect no difference.

>Does bending one end down cause an imbalance in the Z
>therby creating feedline radiation?
>

If you do not preserve symmetry between the two halves of the antenna and its surroundings, you invite feedline radiation. Whether this will be a big problem, is another try it and see.

73 Gary N4AST

4524. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 23:06:01 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ST6yNxFZzTY+EAiC@ifwtech.co.uk>
Source record: 123613

J. Harvey wrote:
>"Ken"
>> ...picked up a dummy load at a hamfest.
>> It measures 1-1/4 x 2 x 4...
>
>That size is typically about 50 watts continuous.
>
On the other hand, I have one here that's about 3 x 3 x 4 and rated at only 25W - it all depends on the type of resistor inside, its maximum temperature rating, and how effectively the heat is transferred to the fins and from there to the air.

As well as forced-air cooling, another option for increasing the rating is to immerse most of the load in cold water... obviously not the connector, and provided of course that the rest is well sealed.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4525. Re: Cushcraft VS Force12

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 23:33:45 UTC
From: paulfriedman@attbi.com
Message-ID: <trb8a.283236$tq4.6385@sccrnsc01>
Source record: 123614

John:

I wouldn't be overly worry about coupling effects with near-by objects. Yes, the antenna IS sensitive to these, but retuning the coils is rather simple, so you will be able the get the SWR to a reasonable level on all 5 bands, I'm sure. Being close to various objects (like your townhouse <grin>) we change the pattern and reduce radiation efficiency -- but then that is true of any radiator place close to the same objects. I think you will be happy with the Sigma 5 given your limitations.

Paul AB0SI

"John" <jwhughes@bellsouth.net> wrote in message
news:3e60e1c6$1@post.newsfeed.com...
> *** post for FREE via your newsreader at post.newsfeed.com ***
>
> Thanks Ken. That's really helpful and the first response I've seen on the
> sigma. The placement issue is important along with the no radial
requirement
> as I live in a townhouse association and I'd have to have it close to my
two
> story unit...within 5 or 6 feet.
>
> 73 and also, like your call...
>
> John, ks4xn
>
> "Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid> wrote in message
> news:98i16vooi7doipcjhb5qb72u19ffhdsffv@4ax.com...
> > On Wed, 26 Feb 2003 20:59:02 GMT, "Craig Buck" <k4ia@cox.net> wrote:
> >
> > >Be sure you run the coax straight down to the ground (or as far as you
> can)
> > >before you go horizontal with it. That should help reduce RF pickup in
> the
> > >coax.
> >
> > This may apply to the Cushcraft, but not to the Force 12 Sigma 5. The
> > instruction manual specifically says "Run the coax and 5-conductor
> > lines away from the antenna, at approximately a 45 degree angle, as
> > far as possible. Straight out for several feet is excellent. If the
> > feed line and control lines are dropped close to the Sigma-5, current
> > from the antenna will couple into the lines and the antenna will be
> > de-tuned."
> >

> > I use my Sigma-5 for portable operation when I go to the beach and
> > have found it to be an excellent performer. It blows the socks off of
> > my old Hy-Gain 12AVQ vertical. It can be assembled, and in operation
> > in 15 minutes...if you are slow. 8*)
> >
> > As others have indicated, the 20 meter coils required retuning. As a
> > matter of fact, every review I have read of this antenna made the same
> > observation. As it comes from the factory the 20 mx resonance is
> > something like 13.9 mHz. Retuning is simple, requiring opening the
> > center container with the coils and relays and then spreading the
> > turns of the 14 mHz coils until the SWR is at a minimum at the desired
> > point in the band. I hit the desired frequency on the second try.
> >
> > The only other observation that I would make about the Sigma 5 is that
> > it is sensitive to surrounding objects. My original placement next to
> > the house gave high SWR on all bands. I concluded that it was
> > coupling to the rain downspouts so I moved it away from the deck by
> > about 25 feet and the SWR curves were perfect. I have noticed a
> > similar effect when it was mounted too close to a tree. Not
> > surprisingly, the bottom line seems to be that the Sigma 5 should be
> > mounted in the clear.
> >
> > Ken K4XL - Replace "invalid" with "net" to reply.
> > *** BoatAnchor Manual Archive ***
> > On the web at http://bama.sbc.edu or
> > FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr
>
>
>
>
> -----= Posted via Newsfeed.Com, Uncensored Usenet News =-----
> http://www.newsfeed.com - The #1 Newsgroup Service in the World!
> -----== 100,000 Groups! - 19 Servers! - Unlimited Download! =-----
>

4526. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-01 23:43:41 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <NAb8a.10017$kf7.1362718@news20.bellglobal.com>
Source record: 123615

"Ken"
> ...picked up a dummy load at a hamfest.
> It measures 1-1/4 x 2 x 4...

J. Harvey wrote:
>That size is typically about 50 watts continuous.

"Ian White, G3SEK"
> On the other hand, I have one here that's about 3 x 3 x 4
> and rated at only 25W - it all depends on the type of resistor
> inside, its maximum temperature rating, and how effectively
> the heat is transferred to the fins and from there to the air.

It goes without saying that my 'typically about 50W' is a guess.

Is your '25W' dummy load 'all heatsink' like Ken's ? Or is yours one of those that is built into a smooth sided box ? Ken's looks to be a 'professional' unit, as opposed to one of those semi-homemade types.

4527. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 00:08:38 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E614B86.18E4F7E8@cwis.net>
Source record: 123616
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jason,
The usual SWR meter scale is not linear at all (but logarithmic). And, as Cecil said, most people don't care it they can distinguish between a 5:1 and a 20:1, they would rather see what is happening at the other end of the scale. Personally, knowing if I have an SWR between 10:1 and infinity doesn't interest me as much as 'where' the SWR is between 1:1 and 5:1. Once it gets over 5:1, I figure I'm in the wrong 'ball park' anyway. Of course, if you want to, you could always recalibrate the meter's scale for the high end, but how often would you use it?
'Doc

4528. Re: Which antenna configuration is more efficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 00:34:58 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <45k26vsphqtsf77tim1nckojtqu1coqlul@4ax.com>
Source record: 123617

On Sat, 01 Mar 2003 12:25:03 -0800, fch <na@hle.com> wrote:

>1) A 40 m dipole at 30 ft with one end sloping down to
>10 ft above ground and other end at 30 ft.
>
>2) Same dipole but the sloping end goes out straight at 30 ft
>but then takes a 90 deg downward vertical bend next to a tree
>on the last 10 ft of that dipole end.
>
>3) No perceptable difference between two configurations.
>
>Does bending one end down cause an imbalance in the Z
>therby creating feedline radiation?

They will all exhibt about the same efficientcy. But the difference will be in radiation resistance and pattern skew. if it were me and I could slope the antenna toward a favored DX location I'd go with the sloper. I've used one here many times and they work pretty well on forty meters.

If on the other hand you want more local coverage I'd go with horizontal and bend both sides down 5 feet instead of one side 10 ft.. this would help to preserve the pattern and also keep the sytem more balanced..

Happy hamming,
73 Dave kc1di

4529. Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 01:15:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E615B4C.8020809@ieee.org>
Source record: 123618

In every treatment of the buildup to steady-state, including Johnson's,
that I have ever seen, the reflection coefficient is constant and
equal to the actual physical reflection coefficient.

Then, suddenly at the exact moment that steady-state is reached, the
reflection coefficient switches from the actual physical reflection
coefficient to the steady-state virtual reflection coefficient.

However, differential calculus indicates that the steady-state value
is never reached. So how do we know the exact point at which we are
supposed to switch from the actual physical reflection coefficient
to the virtual steady-state reflection coefficient? Is there some
magic 9x.x percentage point that requires the switch? If 100% is
never reached, why do we have to switch at all? Why is the physical
reflection coefficient completely constant and unchanging at 50%, 75%,
80%, 85%, 90%, 95%, 98%, 99%, ... and then suddenly changes to a different
steady-state virtual reflection coefficient value at some undefined point
in time?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4530. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 01:27:57 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <npn26v8diepu4ce26ef2bc68v8seh11fm1@4ax.com>
Source record: 123519

On Sat, 01 Mar 2003 19:15:56 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>In every treatment of the buildup to steady-state, including Johnson's,
>that I have ever seen, the reflection coefficient is constant and
>equal to the actual physical reflection coefficient.
>
>Then, suddenly at the exact moment that steady-state is reached, the
>reflection coefficient switches from the actual physical reflection
>coefficient to the steady-state virtual reflection coefficient.
>
>However, differential calculus indicates that the steady-state value
>is never reached. So how do we know the exact point at which we are
>supposed to switch from the actual physical reflection coefficient
>to the virtual steady-state reflection coefficient? Is there some
>magic 9x.x percentage point that requires the switch? If 100% is
>never reached, why do we have to switch at all? Why is the physical
>reflection coefficient completely constant and unchanging at 50%, 75%,
>80%, 85%, 90%, 95%, 98%, 99%, ... and then suddenly changes to a different
>steady-state virtual reflection coefficient value at some undefined point
>in time?

63%

73's
Richard Clark, KB7QHC

4531. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 03:45:39 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3ruq3$rs3$1@slb5.atl.mindspring.net>
Source record: 123520

Cecil:

[snip]
> Then, suddenly at the exact moment that steady-state is reached, the
> reflection coefficient switches from the actual physical reflection
> coefficient to the steady-state virtual reflection coefficient.
[snip]

Huh? Your statement above does not make sense to me! Switches? That's an odd way of describing what happens on a transmission system.

By the usual definition, the steady state voltage reflection coefficient rho(f) for a linear
time invariant system is defined by constant parameters which are not functions of time
or of the voltages and currents on the line. The voltage reflection coefficient is a
dimensionless quantity calculated by a simple ratio which depends only on the
linear time invariant physical properties of the transmission system.

rho(f) := (reflected voltage wave)/(incident voltage wave) = B(f)/A(f)

rho(f) is a function of frequency which may be the ratio of polynomials or transendental functions
of f with constant parameters, and it has an impulse response rho(t) which may be calculated
from rho(f) via the Fourier or LaPlace Integrals.

But rho(f) itself does not vary with time!

There is not some inanimate set of reflection coefficients sitting there waiting to "switch" at
a particular time!

What?
--
Peter K1PO
Indialantic By-the-Sea, FL

4532. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 04:02:07 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3rvnv$s2n$1@knossos.btinternet.com>
Source record: 123521
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> So why do SWR meter designs have to be skewed so greatly?
> Jason Hsu, AG4DG

==========

Jason,

There's a strict mathematical relationship between the output voltage of a so-called SWR bridge, the linear meter deflection of a moving coil meter, and the SWR which causes it.

So there's nothing anybody can do about how the meter scale is graduated such that the needle indicates an SWR between 1 and infinity.

If you should feel the need for more sensible, meaningful, graduations then erase all thoughts from your mind about SWR and calibrate the scale LINEARLY from 0-to-1 (full scale deflection) in terms of "Magnitude of the Reflection Coefficient".

Actually, there's no such thing as an SWR meter. The name is a misnomer. In most situations there isn't even a transmission line to measure it on.

Of course, the little box between transmitter and tuner does perform a valuable function. But a far more appropriate name is TLI = "Transmitter Loading Indicator". And it needs no scale graduations.

That you have already discovered little useful meaning can be attached to indicated SWR values (eg., the difference between 9 and 11) is itself sufficient evidence of no need for scale markings.

The magnitude of the reflection coefficient is not of much use either. Nothing can be calculated from it because phase information has been willfully discarded.

Green (good) and red (bad) bands would make a colorful finishing touch for your project.

In view of your description "super" power meter you should be warned that the most inaccurate procedure in RF engineering is the measurement of power. Consider it essential to check accuracy by making entirely independent measurements of the power dissipated in say a 500-ohm load on the antenna side a 50-to-500 ohm ATU.

You may find program SWRMETER of interest.

==========
Regards from Reg, G4FGQ

For Free Radio Design Software
go to http://www.g4fgq.com
==========

4533. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 04:24:52 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <olf8a.64023$lf5.3342421@twister.southeast.rr.com>
Source record: 123522

The trouble with doing this is that the vinyl insulation on the outside of coax is a truly awful insulator at RF. You would be better off using a metal tube for the folded back braid and putting some better insulation between the shield of the coax and the folded back part of the antenna.Folding back the braid is a real pain. I gave up and soldered four wires to the shield and tucked it away in a length of PVC pipe.

"Brian Kelly" <kelly@dvol.com> wrote in message
news:d22b54c3.0302242015.c2dbb8c@posting.google.com...
> I'm having bad time coming up with the proper cookbook design
> equations for designing/building coaxial antennas. I'm not a newbie to
> the things, I've offhandedly put together a number of them for yakking
> the 2m machines. But I never bothered with any of the numbers beyond
> the fact that a quarter wave on 2m is well known to be a nominal 19".
> And that's as far as I ever took the "engineering". I peeled two feet
> off the jacket of the RG58 and rolled the exposed braid back over the
> remaining jacket (south end). Annoying process. After "firming up" the
> braid over the jacket I nipped both the braid and the center conductor
> (north end, still encased in it's dielectric material) to 19" lengths.
> From there I laid a length of nylon cord alongside the north end, slid
> heat shrink tubing over the whole shebang and sealed it. Net result
> has been a number of <$2 very compact hang-anywhere vertical 2m
> dipoles which worked.
>
> I suspect that getting away with my sloppy "antenna engineering" on 2m
> is allowable. Hitting the machines with a spoon soldered to the center
> thingy of a PL-259 would probably work around here too so I didn't
> bother cranking the numbers.
>
> So now I'm in a situation where I'd like to build & put up a 14 Mhz.
> version. Has to do with my installation options, an end-fed coax-fed
> dipole would be *much* easier to put up than the usual center-fed
> variety. Wrong time for sloppy engineering.
>
> Issues like conductor diameters/lengths/freq ratios, VFs, etc., come
> into play. Does anybody out there know where I might find disussions
> and/or the equations for coaxial antennas in some reasonable depth? I
> haven't had any luck at all by searching the Web.
>
> Tnx!
>
> w3rv

4534. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 04:33:44 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <IQf8a.64085$lf5.3343905@twister.southeast.rr.com>
Source record: 123523

This may be due to the velocity factor of the vynil insulation. The outside insulation on coax was not designed to handle RF.

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:2627-3E5E3625-214@storefull-2315.public.lawson.webtv.net...
> Brian Kelly wrote:
> "Multiplying the 28 MHz lengths by 1.97 dimensions for 14.1 MHz yields
> 204" & 220 inches which are significantly longer than my 185" & 189"."
>
> Length to diameter ratio of the cable is less at the higher frequency.
> Length is less. Diameter is the same. Cable is fatter in wavelengths and
> can be shorter for resonance. But this does not explain descrepancies.
>
> Using the War Department tables for lengths, 40 MHz/30 MHz is 1.333.
> Antenna lengths given are 190"/126"=1.5 for the 30 MHz and 40 MHz
> antennas.
>
> I calculate 95% of the 1/2-wavelengths as 187in. and 140in.
>
> I can`t reconcile the tables. The book came from M.I.T. and Harvard
> professors in WW-2. Perhaps students doing the actual work erred and the
> profs didn`t catch it.
>
> Best regards, Richard Harrison, KB5WZI
>

4535. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 05:27:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6392in8plgb7a@corp.supernews.com>
Source record: 123524

That's interesting. I've done a number of analyses of the buildup to steady state, and have never had to "switch" reflection coefficients. The steady state is easily calculated from the traveling waves as the sum of an infinite geometric series, with the same reflection coefficient used throughout. I'm sure you must have gone through this same exercise yourself many times.

There's only one definition of reflection coefficient I'm aware of ((Zl - Z0)/(Zl + Z0)). Is this what you're calling the "actual physical reflection coefficient", or is it the "steady-state virtual reflection coefficient", or neither? What's the definition and equation for the other one (or two)?

Are these two "kinds" of reflection coefficient perhaps something else that's required in order to get all the waves of traveling average power to add up right?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> In every treatment of the buildup to steady-state, including Johnson's,
> that I have ever seen, the reflection coefficient is constant and
> equal to the actual physical reflection coefficient.
>
> Then, suddenly at the exact moment that steady-state is reached, the
> reflection coefficient switches from the actual physical reflection
> coefficient to the steady-state virtual reflection coefficient.
>
> However, differential calculus indicates that the steady-state value
> is never reached. So how do we know the exact point at which we are
> supposed to switch from the actual physical reflection coefficient
> to the virtual steady-state reflection coefficient? Is there some
> magic 9x.x percentage point that requires the switch? If 100% is
> never reached, why do we have to switch at all? Why is the physical
> reflection coefficient completely constant and unchanging at 50%, 75%,
> 80%, 85%, 90%, 95%, 98%, 99%, ... and then suddenly changes to a different
> steady-state virtual reflection coefficient value at some undefined point
> in time?

4536. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 10:19:51 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <y89K2QCHrdY+EAEh@ifwtech.co.uk>
Source record: 123525

J. Harvey wrote:

>"Ken"
>> ...picked up a dummy load at a hamfest.
>> It measures 1-1/4 x 2 x 4...
>
>J. Harvey wrote:
>>That size is typically about 50 watts continuous.
>
>"Ian White, G3SEK"
>> On the other hand, I have one here that's about 3 x 3 x 4
>> and rated at only 25W - it all depends on the type of resistor
>> inside, its maximum temperature rating, and how effectively
>> the heat is transferred to the fins and from there to the air.
>
>It goes without saying that my 'typically about 50W' is a guess.
>
>Is your '25W' dummy load 'all heatsink' like Ken's ? Or is yours one of
>those that is built into a smooth sided box ? Ken's looks to be a
>'professional' unit, as opposed to one of those semi-homemade types.

'All heatsink': actually it's more like 2.5 x 2.5 x 3, but that still
makes the overall surface area bigger than Ken's.

http://www.inmetcorp.com/IMPRDATT5-50Watt.htm and the PDF data sheets
will give a good guide to dissipation versus external size, and there's
more on the Bird site... but the rated dissipation of a load still
depends on the way it's constructed inside.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4537. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 10:24:37 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <kcVP+aDlvdY+EAF7@ifwtech.co.uk>
Source record: 123526

OC_CAM's Razor wrote:
>In every treatment of the buildup to steady-state, including Johnson's,
>that I have ever seen, the reflection coefficient is constant and
>equal to the actual physical reflection coefficient.
>
>Then, suddenly at the exact moment that steady-state is reached, the
>reflection coefficient switches from the actual physical reflection
>coefficient to the steady-state virtual reflection coefficient.
>
For those of us who don't have Johnson to hand, please can you *quote*
(ie using *his* words, not yours) where and how he uses the terms
"physical", "virtual" and "switch"?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4538. SWR Problem with Butternut HV-6

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 12:32:15 UTC
From: Dave Nissen <mcsok9@winco.net>
Message-ID: <b3sthp$4iqm$1@news3.infoave.net>
Source record: 123527

I need some advice from the group. I have a Butternut HV-6 that has been in operation for several years without problem. Tonight I attempted to use it and discovered that the SWR would "jump" from 10:1 to 1.5:1 without warning.

I tried to tune it using a Heathkit SA-2060A without any luck. I connected the MFJ 259B up to the antenna and watched the meter. It also showed the SWR " jumping" around. I checked the 259 connection at the tuner and it appeared OK, and I was unable to change it or cause the "jumping" by moving the coax inside the shack.

I went outside and could find nothing that looked out of line, but it was dark and the only light was a flashlight.

Has anyone had a similar experience? Suggestions? Tuner is OK after checking a 10 meter beam, and agrees with the MFJ on that antenna. I looked for the manual, but after a move from a divorce it seems that the manual is gone but not forgotten.

TNX
Dave de W9COP

4539. Re: ATU for marine use

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 13:25:47 UTC
From: "Richard C. Ferryman" <Richard.Ferryman@btinternet.com>
Message-ID: <2c146v4s79npg60i1mmh4h70et961570s0@4ax.com>
Source record: 123528
Cross-posted to: rec.radio.amateur.antenna,rec.boats.electronics

I've seen the SGC ATUs in adverts but wasn't sure how well they stand up in practice. I assume they are not man enough to be mounted above deck so that then means feeding the antenna wire through the deck at what is potentially a fairly high impedance node on the antenna (and postentially high voltage) unless the stay has an insualtor placed so that the feed point is below about 500 ohms on all bands.
Richard

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote:

>Richard C. Ferryman wrote:
>> Can anyone recommend an atu that is rugged elecrically but will also
>> stand up well to the harsh marine environment?
>
>Some of the SGC ATU's are designed for that purpose.

4540. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 15:21:48 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b3t7i9$1p3brs$1@ID-175933.news.dfncis.de>
Source record: 123529
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

The meter scale may favor *indications* of low VSWR for the reasons already posted -- but that doesn't mean they can be believed.

The directivity of the RF coupler used to drive the metering circuits often is not better than about 26dB, which limits fairly accurate "VSWR" measurements to about 1.4:1 (and progressively more inaccurate at lower indicated VSWRs).

RF

4541. Re: SWR Problem with Butternut HV-6

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 15:24:55 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <d6846vs5io98d25sf095rd6g2p4qu98dlk@4ax.com>
Source record: 123530

On Sun, 2 Mar 2003 06:32:15 -0600, "Dave Nissen" <mcsok9@winco.net>
wrote:

>I need some advice from the group. I have a Butternut HV-6 that has been in
>operation for several years without problem. Tonight I attempted to use it
>and discovered that the SWR would "jump" from 10:1 to 1.5:1 without warning.
>
>I tried to tune it using a Heathkit SA-2060A without any luck. I connected
>the MFJ 259B up to the antenna and watched the meter. It also showed the SWR
>" jumping" around. I checked the 259 connection at the tuner and it appeared
>OK, and I was unable to change it or cause the "jumping" by moving the coax
>inside the shack.
>
>I went outside and could find nothing that looked out of line, but it was
>dark and the only light was a flashlight.
>
>Has anyone had a similar experience? Suggestions? Tuner is OK after checking
>a 10 meter beam, and agrees with the MFJ on that antenna. I looked for the
>manual, but after a move from a divorce it seems that the manual is gone but
>not forgotten.
>
>TNX
>Dave de W9COP

My vote is for something loose. Try some tests and make a table of
your findings. Some questions to seek answers for: does it do this on
one band, on many or on all? Are there any conditions such as wind
that affect the problem? Can you give it a wiggle with a rope or pole
that will affect the problem? Is there anything in the line such as
coax switches, connectors or lightning arrestors that can affect the
problem? Is the tuner really ok? You can see what I'm driving at
here. Use different conditions and see how they work, then try to
make a deduction from the information you develop.

Russ

4542. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 15:40:41 UTC
From: "Robert Lay (W9DMK)" <nobody@crosslink.net>
Message-ID: <q8846votdksdearjt262fs8ns5mi0esq7c@4ax.com>
Source record: 123531

On Sat, 01 Mar 2003 19:15:56 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>In every treatment of the buildup to steady-state, including Johnson's,
>that I have ever seen, the reflection coefficient is constant and
>equal to the actual physical reflection coefficient.
>
>Then, suddenly at the exact moment that steady-state is reached, the
>reflection coefficient switches from the actual physical reflection
>coefficient to the steady-state virtual reflection coefficient.
>
>However, differential calculus indicates that the steady-state value
>is never reached. So how do we know the exact point at which we are
>supposed to switch from the actual physical reflection coefficient
>to the virtual steady-state reflection coefficient? Is there some
>magic 9x.x percentage point that requires the switch? If 100% is
>never reached, why do we have to switch at all? Why is the physical
>reflection coefficient completely constant and unchanging at 50%, 75%,
>80%, 85%, 90%, 95%, 98%, 99%, ... and then suddenly changes to a different
>steady-state virtual reflection coefficient value at some undefined point
>in time?

Dear Cecil,

I recommend "Transformation Calculus and Electrical Transients" by
Stanford Goldman as the best reference on this topic.

I think you will find that during the buildup to steady state on a
given line and at a given point on that line, there exists a
succession of traveling waves, each of which has made one or more
trips out to the discontinuities and back. At any given moment, it is
the sum total of all of these waves that give rise to a combined
forward wave and a combined reflected wave. The reflection coefficient
at any given instant and at a given point on that line is a function
of those combined forward and reflected waves. Since those quantities
are ever changing and approaching their stead state values, the
reflection coefficient itself is, likewise, changing. Therefore, the
reflection coefficient does not change abruptly - it is continuously
indicated the summed forward and reflected waves at the point in
question.

You may want to review the more extensive treatiment of this subject
at any of the following URL's, or I can furnish you with scanned in
pages from Goldman's text:
http://www.qsl.net/w9dmk/QuarterWaveLine/qrtrwav3.html
http://www.fortunecity.com/meltingpot/albania/784/QuarterWaveLine/qrtrwav3.html

http://www.geocities.com/w9dmk/QuarterWaveLine/qrtrwav3.html

==========
73 de W9DMK - Bob in Dahlgren, VA
Change "nobody" to "w9dmk" for direct mail
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

4543. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 16:47:06 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b3tcib$u04$1@slb9.atl.mindspring.net>
Source record: 123532

Cecil:

"Transcient"??? Surely you are joking Mr. Moore!

Is this "transcient state" some new third state that we have not yet heard
of?

i.e. The Steady state, The Transient state and now, ta da... The
"Transcient" state.

Heh, heh... Perhaps your point is that the venerable reflection coefficient

rho = (R - Z)/(R + Z)

Which has worked well for the past century or more for both the old standby
steady state
and the transient state is not applicable to this new "transcient" state.
What?

What exactly is the formula for this new transcient state reflection
coefficient?

Could you share it with us please?

--
Peter K1PO
Indialantic By-the-Sea, FL

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E615B4C.8020809@ieee.org...
> In every treatment of the buildup to steady-state, including Johnson's,
> that I have ever seen, the reflection coefficient is constant and
> equal to the actual physical reflection coefficient.
>
> Then, suddenly at the exact moment that steady-state is reached, the
> reflection coefficient switches from the actual physical reflection
> coefficient to the steady-state virtual reflection coefficient.
>
> However, differential calculus indicates that the steady-state value
> is never reached. So how do we know the exact point at which we are
> supposed to switch from the actual physical reflection coefficient
> to the virtual steady-state reflection coefficient? Is there some
> magic 9x.x percentage point that requires the switch? If 100% is
> never reached, why do we have to switch at all? Why is the physical
> reflection coefficient completely constant and unchanging at 50%, 75%,
> 80%, 85%, 90%, 95%, 98%, 99%, ... and then suddenly changes to a different
> steady-state virtual reflection coefficient value at some undefined point

> in time?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4544. Re: Which antenna configuration is more efficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 17:00:05 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E623895.89372DFD@cwis.net>
Source record: 123533

fch,
Door number three...
'Doc

4545. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 17:17:39 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303020917.3e6e1d4f@posting.google.com>
Source record: 123534

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0302280905.73771f7e@posting.google.com>...
> nm5k@wt.net (Mark Keith) wrote in message
Mark, I said I would contact you privately, well I can't.
This computor only allows me to read and respond to this
newsgroup and no more. I purchased a used computor in the
hope that I could meet my personal comittment but it will
not load up with windows so it would appear that I have
bought a lemon.
On the other commitment I made I have had no contact with the two
people
that I hoped for. From one person I needed advice on how best to
procede.
The other person Richard Clarke who has been on strong critic I wanted
to be able to persuade him to release Roy so that he may share a
computor
analysis that he did on an old patent of mine. Roy stated only
recently
that he has still not received permission from Richard.
This goes to the very heart of what could happen again if I shared
with all my latest idea.
In sharing that old patent as you are personaly aware many people
including
yourself had problems with and yet Roy supplied to Richard a computor
analysis
of what he thought my claim was about. This was not released so I am
unaware
where the fault lies in my sharing aproach. During those long
discussion
and critisisms Richard dropped one post where he said that I should
be proud of what I had acomplished but did not explain to the group
why or how and the critisism carried on. Criticism based on technical
facts is what I look for but with you holding back what you based your
review on (the computor analysis supplied to you by Roy) puts me
at a total disadvantage and until we have cleared that up I am subject
to the same tactics and thus I may repeat my technical mistakes which
helps
nobody. Interestingly Roy stated that I may have got the patent(the
old
one) but it takes a lot more proof to persuade the likes of him!
So it would appear that the program supplies good reasons to faulty
reasonings on my part.
So Roy, release the secret analysis that you did upon which Richard
based

his long critisisms which to me is purely a common courtesy .
Richard, make it easier for Roy to comply by releasing him from any commitment that was made. You owe it not only to me but to all the group of which many struggled with a computor analysis of my claim. If it doesn't help them then it would atleast give them some satisfaction that each and every analysis they made was correct and I was totally without justification.
I am ready to share my new ideas and put the past behind me including technical mistakes made if you do this Richard I will supply you with all the information that I have so that you may have the full opportunity
to supply a agressive technical analysis.

Mark, I will get in contact with you when the means become available. With this completed it will then allow me to share with all what I have
now without making similar technical errors are extremely

4546. Re: SWR Problem with Butternut HV-6

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 17:28:16 UTC
From: John Siegel <JohnASiegel@worldnet.att.net>
Message-ID: <3E623F2D.926C478B@worldnet.att.net>
Source record: 123535

Do check the connection of the coax center conductor at the base of the
antenna. In my case, I found after several years that the solid wire
had snapped right at the connection point. After repair it now has
better strain relief and so far no recurrence of the problem.
John

Russ wrote:
>
> On Sun, 2 Mar 2003 06:32:15 -0600, "Dave Nissen" <mcsok9@winco.net>
> wrote:
>
> >I need some advice from the group. I have a Butternut HV-6 that has been in
> >operation for several years without problem. Tonight I attempted to use it
> >and discovered that the SWR would "jump" from 10:1 to 1.5:1 without warning.
> >
> >I tried to tune it using a Heathkit SA-2060A without any luck. I connected
> >the MFJ 259B up to the antenna and watched the meter. It also showed the SWR
> >" jumping" around. I checked the 259 connection at the tuner and it appeared
> >OK, and I was unable to change it or cause the "jumping" by moving the coax
> >inside the shack.
> >
> >I went outside and could find nothing that looked out of line, but it was
> >dark and the only light was a flashlight.
> >
> >Has anyone had a similar experience? Suggestions? Tuner is OK after checking
> >a 10 meter beam, and agrees with the MFJ on that antenna. I looked for the
> >manual, but after a move from a divorce it seems that the manual is gone but
> >not forgotten.
> >
> >TNX
> >Dave de W9COP
>
> My vote is for something loose. Try some tests and make a table of
> your findings. Some questions to seek answers for: does it do this on
> one band, on many or on all? Are there any conditions such as wind
> that affect the problem? Can you give it a wiggle with a rope or pole
> that will affect the problem? Is there anything in the line such as
> coax switches, connectors or lightning arrestors that can affect the
> problem? Is the tuner really ok? You can see what I'm driving at
> here. Use different conditions and see how they work, then try to
> make a deduction from the information you develop.
>
> Russ

4547. Re: is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 17:58:02 UTC
From: N7RX <n7rx@arrl.net>
Message-ID: <3E62462A.6020309@arrl.net>
Source record: 123536

>
> If the FCC were to change its rules, allowing local stations
> to become nothing more than "sources of programming,"
> and preventing cable companies and satellite providers from
> "freezing them out," they could feed their programs to the cable
> companies (and the satellite providers) via other means and the
> "need" for traditional "over the air" TV transmissions would, in
> essence, disappear ... freeing up a huge amount of "prime"
> spectrum that's currently, IMNSHO, being wasted.

Wasted, that is, on people who can't pay monthly fees to service
providers and viewers in areas not served by cable.

4548. Re: SWR Problem with Butternut HV-6

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 17:59:34 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <sQdN9sUGakY+EA0C@ifwtech.co.uk>
Source record: 123541

Dave Nissen wrote:
>I need some advice from the group. I have a Butternut HV-6 that has been in
>operation for several years without problem. Tonight I attempted to use it
>and discovered that the SWR would "jump" from 10:1 to 1.5:1 without warning.
>
>I tried to tune it using a Heathkit SA-2060A without any luck. I connected
>the MFJ 259B up to the antenna and watched the meter. It also showed the SWR
>" jumping" around. I checked the 259 connection at the tuner and it appeared
>OK, and I was unable to change it or cause the "jumping" by moving the coax
>inside the shack.
>
>I went outside and could find nothing that looked out of line, but it was
>dark and the only light was a flashlight.
>
>Has anyone had a similar experience? Suggestions? Tuner is OK after checking
>a 10 meter beam, and agrees with the MFJ on that antenna. I looked for the
>manual, but after a move from a divorce it seems that the manual is gone but
>not forgotten.

If the SWR can be as low as 1.5, that points to a loose connection. Now
that it's light, get out there with a long piece of wood and tap it
lightly in various places.

You probably won't need the manual at all. If it was working before, *do
not* try to readjust anything - simply find whatever has broken or come
loose, and fix it.

The secret of fault-finding is to change as *little* as possible. If
you're forced to use trial-and-error, check each part carefully and
then put it back *exactly* as it was. Continue until the whole thing
starts to work again. Then stop ;-)

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4549. Need Choke Ideas For J-Pole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 18:04:42 UTC
From: Glynn Kevin <kfglynn@mindspring.com>
Message-ID: <b3th8p$2q5$1@slb2.atl.mindspring.net>
Source record: 123537

Hi gang,

I want to make a 2 Meter j-pole for a friend. I will feed with about 10' RG-58 or RG-8x cable.

Would running 5 or 6 turns of coax through an FT240-43 work as a choke? As good as a W2DU choke using type 43 beads? Coax choke of how many turns and diameter of coil?

Thanks for your help.

73 Kevin N2TO

4550. Re: is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 18:10:18 UTC
From: "J. Harvey" <JM002.Harvey_SPAM*IS*BAD_@Sympatico.ca>
Message-ID: <cOr8a.286$KJ3.60008@news20.bellglobal.com>
Source record: 123538

>> "need" for traditional "over the air" TV transmissions
>> would, in essence, disappear ... freeing up a huge
>> amount of "prime" spectrum that's currently, IMNSHO,
>> being wasted.

"N7RX"
> ...viewers in areas not served by cable.

Years ago, a friend of mine was installing a channel-specific antenna that I had built for him. His neighbour wandered over and asked what he was up to. My friend explained that he was installing a TV antenna. The neighbour asked, "Is that legal ?"

4551. Re: Which antenna configuration is more efficient?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 18:10:27 UTC
From: richardharrison@webtv.net
Message-ID: <1695-3E624913-137@storefull-2315.public.lawson.webtv.net>
Source record: 123540

fch wrote:
"Does bending one end (of a dipole 30 ft up) down cause an imbalance in the Z thereby creating feedline radiation?"

Yes, unless something is done to keep unbalanced r-f currents off the feedline.

Not enough data are provided to determine the difference between a dipole with one end sloping and the other dipole with one end folded down in parallel with a tree. How close is the tree, for example?

Dipoles are relatively insensitive to the supports at their ends when they are perpendicular to those supports. Nulls are at the dipole ends. The nulls come from the open circuits at the ends of the dipole. A dipole end is the site of a current reversal. Equal and opposite currents cancel radiation in the direction of the wire.

Volts, however, do not cancel at the open-circuit ends of a dipole. They double as a result of current cancellation. The energy is not destroyed in a cancellation. Doubled volts is a reflection of temporary suppression of the magnetic field. This does, however, tend to double displacement current through the end capacitance to surrounding objects. A low dipole has substantial displacement current to the earth at its ends. This displacement current radiates the same as conduction current does. This was J.C. Maxwell`s great contribution to explain the phenomenon of radiation. So, we get vertically polarized radiation from the ends of low Dipoles. It`s not so strong as broadside horizontally polarized radiation from conduction current through the dipole because most of the energy is radiated in the first pass before reaching the dipole ends. The capacitance at the dipole ends is normally small, but rises as the dipole is lowered.

Highly conductive supports for horizontal dipoles are just fine, so long as they remain perpendicular and well insulated from the dipole.

Best regards, Richard Harrison, KB5WZI

4552. True Ladder Line?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 18:28:32 UTC
From: Gary Boyer <gboyer@columbus.rr.com>
Message-ID: <k3s8a.13213$6n4.4519736@twister.columbus.rr.com>
Source record: 123539

There is a ad in QST (March-2003) that advertises true ladder line antennas...noticed the ladder line is 600 ohms.....one antenna is a 160-10 meter doublet antenna with this 600 ohm ladder line attached to this antenna....has anyone purchased any of these antennas....the open ladder (600 ohms) might be a problem for some antenna tuners....please advise..... If you are using this antenna, let us know what tuner you are using..tnx...K8BY..Gary

4553. Hustler 6BTV Problems

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 19:08:41 UTC
From: Tor <torlang82@hotmail.com>
Message-ID: <EFs8a.53483$NV.1181330@news.direcpc.com>
Source record: 123542

Here is a problem I have not found a solution for:

Got a Hustler 6BTV, chimney mounted on a 6 foot steel mast. Got 4 radials on each band at about 45 deg. below horizon`. The SWR is not bad at all after I tuned the antenna when I set it up. As usual, somewhat narrow on 40, and extremely narrow on 80.
My problem is when it rains, the antenna gets longer. The rain pulls the res. frq. downwards on all band. We are talking about 200 Khz down on 10-15-20. I can not for the best of me figure out why it is doing this. Any others have the same problem with the 6BTV, or verticals in general?

Tor

4554. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 20:32:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E626A53.2080907@ieee.org>
Source record: 123543

Peter O. Brackett wrote:
> Huh? Your statement above does not make sense to me! Switches? That's an
> odd way of describing what happens on a transmission system.
>
> By the usual definition, the steady state voltage reflection coefficient
> rho(f) for a linear
> time invariant system is defined by constant parameters which are not
> functions of time
> or of the voltages and currents on the line. The voltage reflection
> coefficient is a
> dimensionless quantity calculated by a simple ratio which depends only on
> the
> linear time invariant physical properties of the transmission system.

Huh? What about the following?

Source-----50 ohm feedline----x----1/2 WL 150 ohm feedline----50 ohm load

The initial voltage reflection coefficient at t=0 at 'x' is 0.5.
The steady-state virtual reflection coefficient at 'x' is zero,
i.e. no reflections on the 50 ohm feedline.

> What?

What?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4555. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 20:38:48 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E626BD8.3060800@ieee.org>
Source record: 123545

Roy Lewallen wrote:
> There's only one definition of reflection coefficient I'm aware of ((Zl
> - Z0)/(Zl + Z0)). Is this what you're calling the "actual physical
> reflection coefficient", or is it the "steady-state virtual reflection
> coefficient", or neither? What's the definition and equation for the
> other one (or two)?
>
> Are these two "kinds" of reflection coefficient perhaps something else
> that's required in order to get all the waves of traveling average power
> to add up right?

My question is based on what I was told a couple of months ago. Here's
the configuration:

Source-----50 ohm feedline---x---1/2WL 150 ohm feedline---50 ohm load

I was told that the steady-state reflection coefficient at 'x' is zero
even though (Z1-Z0)/(Z1+Z0) = 0.5

Did someone tell me wrong? Rho = SQRT(Pref/Pfwd) on the 50 ohm feedline
equals zero during steady-state but it equals 0.5 during the transient
state.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4556. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 20:38:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <sip46vo97lf1v7rspfjan5qkvu62uttdpn@4ax.com>
Source record: 123544

On 2 Mar 2003 09:17:39 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0302280905.73771f7e@posting.google.com>...
>> nm5k@wt.net (Mark Keith) wrote in message
>Mark, I said I would contact you privately, well I can't.
>This computor only allows me to read and respond to this
>newsgroup and no more. I purchased a used computor in the
> hope that I could meet my personal comittment but it will
> not load up with windows so it would appear that I have
> bought a lemon.
>On the other commitment I made I have had no contact with the two
>people
>that I hoped for. From one person I needed advice on how best to
>procede.
>The other person Richard Clarke who has been on strong critic I wanted
>to be able to persuade him to release Roy so that he may share a
>computor
> analysis that he did on an old patent of mine.

Hi Art,

I, for one, have no idea what you are referring to. I think Roy would
have wrestled free by now if he wanted release.

>Roy stated only
>recently
>that he has still not received permission from Richard.

For what, pray tell? Me Richard? or Richard Harrison?

>This goes to the very heart of what could happen again if I shared
>with all my latest idea.
>In sharing that old patent as you are personaly aware many people
>including
>yourself had problems with and yet Roy supplied to Richard a computor
>analysis

You must be thinking of an allusion Roy made. As far as I know, I
have no analysis.

>of what he thought my claim was about. This was not released so I am
>unaware
>where the fault lies in my sharing aproach. During those long
>discussion
>and critisisms Richard dropped one post where he said that I should

> be proud of what I had acomplished but did not explain to the group
>why or how and the critisism carried on.

Art, such comments were for your support and any "explanation" would
weaken such a gesture. In a sense, it means let your effort speak for
itself and simply reveal all the details (not the "story") of
invention.

>Criticism based on technical
>facts is what I look for but with you holding back what you based your
> review on (the computor analysis supplied to you by Roy) puts me
>at a total disadvantage and until we have cleared that up I am subject
>to the same tactics and thus I may repeat my technical mistakes which
>helps
>nobody. Interestingly Roy stated that I may have got the patent(the
>old
>one) but it takes a lot more proof to persuade the likes of him!

For that matter, a patent is proof of nothing except having emerged
from the patent process. The PTO does not confer the seal of
authority upon any idea, it merely allows you to use it in an
unrestrained monopoly. A Patent is more a license to trade than it is
a degree to teach.

>So it would appear that the program supplies good reasons to faulty
>reasonings on my part.
>So Roy, release the secret analysis that you did upon which Richard
>based
> his long critisisms which to me is purely a common courtesy .
> Richard, make it easier for Roy to comply by releasing him from any
>commitment that was made. You owe it not only to me but to all the
>group of which many struggled with a computor analysis of my claim.

Be it known to all denizens, creatures and inhabitants of the RRAA
that I, KB7QHC, do hereby and without restriction release, unfetter
and free any and all who feel any sense of obligation to secrecy in
matters discussed or undiscussed to enable them to disclose, discuss,
write, communicate, post, publish, or otherwise disseminate any
materials bearing upon antennae from any source.

Be further advised that I will not accept any materials under the
presumption that they will be kept confidential (insofar as technical
matters go) and guarded against circulation in any form. I have
absolutely no interest in "closet writings."

>If it doesn't help them then it would atleast give them some
>satisfaction that each and every analysis they made was correct and I
>was totally without justification.
>I am ready to share my new ideas and put the past behind me including
>technical mistakes made if you do this Richard I will supply you with
> all the information that I have so that you may have the full
>opportunity

>to supply a agressive technical analysis.

Any unsolicited materials submitted to me qualify for publication at one or any of my pages published on the net. This is not a threat, it is neither a promise, it is simply a statement of MY option.

>
>Mark, I will get in contact with you when the means become available.
>With this completed it will then allow me to share with all what I
>have
>now without making similar technical errors are extremely

Those materials that I do solicit, or arrive through mutual agreement will be treated with every courtesy of discretion and privacy.

73's
Richard Clark, KB7QHC

4557. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 20:44:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E626D34.7080507@ieee.org>
Source record: 123546

Ian White, G3SEK wrote:
> For those of us who don't have Johnson to hand, please can you *quote*
> (ie using *his* words, not yours) where and how he uses the terms
> "physical", "virtual" and "switch"?

Oh, Johnson doesn't use those words. Those words were used by members
of this newsgroup to explain how the actual physical reflection
coefficient morphs into a virtual reflection coefficient during the
transient state on the way to steady-state, e.g. what is the reflection
coefficient at 'x' during steady-state?

Source----50 ohm feedline---x---1/2WL 150 ohm feedline---50 ohm load
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4558. Re: ATU for marine use

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 20:47:31 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E626DE3.1010201@ieee.org>
Source record: 123547
Cross-posted to: rec.radio.amateur.antenna,rec.boats.electronics

Richard C. Ferryman wrote:
> I've seen the SGC ATUs in adverts but wasn't sure how well they stand
> up in practice.

I had mine mounted on the back of an S10 pickup exposed to all
sorts of weather and road junk. The case is plastic so it won't
rust. The only problem I ever had was from a nut loosening due
to vibration.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4559. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 20:54:40 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E626F90.6080905@ieee.org>
Source record: 123548

Robert Lay (W9DMK) wrote:
> The reflection coefficient
> at any given instant and at a given point on that line is a function
> of those combined forward and reflected waves. Since those quantities
> are ever changing and approaching their stead state values, the
> reflection coefficient itself is, likewise, changing.

Thanks Bob, I know that is conventional wisdom but I am working on
the math that will allow the actual physical reflection coefficient
to remain physical and constant. Seems to me, a wave wouldn't recognize
a V/I ratio as anything worthy of a reflection reaction. Seems to me, a
wave is completely unaffected by waves traveling in the opposite direction
and is only affected by coherent waves traveling in the same direction as
itself. (if waves have a self :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4560. Re: is there a difference in quality in rooftop tv antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 20:58:38 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <2gu8a.8889$hj.2242754@nnrp1.ptd.net>
Source record: 123551

"N7RX" <n7rx@arrl.net> wrote in message news:3E62462A.6020309@arrl.net...
> >
> > If the FCC were to change its rules, allowing local stations
> > to become nothing more than "sources of programming,"
> > and preventing cable companies and satellite providers from
> > "freezing them out," they could feed their programs to the cable
> > companies (and the satellite providers) via other means and the
> > "need" for traditional "over the air" TV transmissions would, in
> > essence, disappear ... freeing up a huge amount of "prime"
> > spectrum that's currently, IMNSHO, being wasted.
>
> Wasted, that is, on people who can't pay monthly fees to service
> providers and viewers in areas not served by cable.
>

Again, the most recent numbers show that 12% or less of
Americans receive their TV signals "over the air" ... satellite
mini-dish coverage is ubiquitous ... cable systems are nearly
so.

The question is: "Is it worth consuming those vast amounts of
prime over the air spectrum considering those facts?"

I don't believe the "value proposition" is in favor of it ...

Carl - wk3c

4561. Re: True Ladder Line?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 21:01:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E627120.8030908@ieee.org>
Source record: 123550

Gary Boyer wrote:
> There is a ad in QST (March-2003) that advertises true ladder line
> antennas...noticed the ladder line is 600 ohms.....one antenna is a 160-10
> meter doublet antenna with this 600 ohm ladder line attached to this
> antenna....has anyone purchased any of these antennas....the open ladder
> (600 ohms) might be a problem for some antenna tuners....please advise.....
> If you are using this antenna, let us know what tuner you are
> using..tnx...K8BY..Gary

It may be a problem for some antenna tuners but not for the reason you
apparently think. On an antenna fed with 600 ohm line that has a relatively
high SWR, as those antennas do, the feedpoint impedance will ***NEVER***
be 600 ohms. Let's assume your antenna has a feedpoint impedance of 50 ohms.
The SWR on the 600 ohm line will be 600/50=12:1. Worst case impedance might
be 600*12=7200 ohms. It is true that a lot of antenna tuners won't match
that impedance but if they could, they would be operating in a very low
loss mode. If your antenna tuner won't match the impedance presented to it
by the 600 ohm line, simply change the length of the line. You can get some
ideas on this subject from my web page.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4562. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 21:02:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rjs46vgbnm3p46ngclebb46ue22llb8jta@4ax.com>
Source record: 123549

On Sun, 02 Mar 2003 14:54:40 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Seems to me, a
>wave is completely unaffected by waves traveling in the opposite direction
>and is only affected by coherent waves traveling in the same direction as
>itself.

Seeming indeed.

73's
Richard Clark, KB7QHC

4563. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 21:07:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E627280.4050808@ieee.org>
Source record: 123553

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Seems to me, a
>>wave is completely unaffected by waves traveling in the opposite direction
>>and is only affected by coherent waves traveling in the same direction as
>>itself.
>
> Seeming indeed.

Dang, what an enlightening technical statement about reality.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4564. A FEW KCs OFF TOPIC.....

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 21:07:28 UTC
From: Butch Butler <k4nau@hotmail.com>
Message-ID: <XJmdnWMxEaqZ7v-jXTWcrg@comcast.com>
Source record: 123552

Can anyone tell me if the Icom AT-160 auto-tuner that was designed for the IC-728 and others will mate to an
IC-735? I know the AT-150 is the natural mate to the 735, but I can get a 160 for a good price right now and need to know how much of a hassle it will be to work with my 735.

Thnx & 73,

k4nau

4565. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 21:17:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4ct46v8hs7a323lul707o8888bgfridbiv@4ax.com>
Source record: 123554

On Sun, 02 Mar 2003 15:07:12 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Seems to me, a
>>>wave is completely unaffected by waves traveling in the opposite direction
>>>and is only affected by coherent waves traveling in the same direction as
>>>itself.
>>
>> Seeming indeed.
>
>Dang, what an enlightening technical statement about reality.

Hi Cecil,

You still have problems with inversions. ;-)
It was an enlightening real statement about a technicality.

73's
Richard Clark, KB7QHC

4566. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 22:06:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E628059.3040604@ieee.org>
Source record: 123555

Richard Clark wrote:
> You still have problems with inversions. ;-)
> It was an enlightening real statement about a technicality.

- which begs the question. Are forward-traveling waves affected
by rearward-traveling waves? - or is the perceived interference
pattern between them all due to our human perceptions? Does the
wave "know" it is being interfered with? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4567. Re: *** !!! KILL SADDAM !!! *** -- Military Action In Iraq NOW! _____ yqotzeq

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 22:09:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6280FF.6090700@ieee.org>
Source record: 123556

waBxatl9d68ie@saveweststreet.com wrote:
> Don't be a traitor or a dimwhit! Support President Bush in the liberation of Iraq!!

What would happen if I don't? Please make specific predictions
including dates of specific happenings.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4568. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 23:09:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6579isq2hgba2@corp.supernews.com>
Source record: 123559

Art Unwin KB9MZ wrote:
> . . .
> yourself had problems with and yet Roy supplied to Richard a computor
> analysis
> of what he thought my claim was about.

This is not true. I did not supply Richard or anyone else with a computer analysis of what I thought your claim was about.

In fact, I was sent a model created by someone else, and asked to comment on it. I replied that EZNEC seemed to be operating within its limitations when analyzing the model. I made no comment on whether I did or didn't think that it accurately represented what you had been describing on the newsgroup. Frankly, I never could understand, myself, what you were describing So there's no way I could have either made a model or judged whether it represented what you've described.

But I explained all this to you in email I sent you on August 20, 2002 in reponse to your email to me on August 19. There has been no activity on the subject since.

Richard was neither the person who sent the model to me nor the person who created it. And I did not send a model or analysis to Richard or anyone else.

> . . .
> . . . Criticism based on technical
> facts is what I look for but with you holding back what you based your
> review on (the computor analysis supplied to you by Roy) puts me
> at a total disadvantage and until we have cleared that up I am subject
> to the same tactics and thus I may repeat my technical mistakes which
> helps
> nobody.

I did not supply any computer analysis to Richard. Or anyone else, for that matter, regarding your antenna.

Interestingly Roy stated that I may have got the patent(the
> old
> one) but it takes a lot more proof to persuade the likes of him!

Sorry, I have no idea what you're talking about.

> So it would appear that the program supplies good reasons to faulty
> reasonings on my part.
> So Roy, release the secret analysis that you did upon which Richard
> based

> his long critisisms which to me is purely a common courtesy .

I cannot, because there is no such "secret analysis".

> Richard, make it easier for Roy to comply by releasing him from any
> commitment that was made. You owe it not only to me but to all the
> group of which many struggled with a computor analysis of my claim.

This is entirely in your imagination.

If you'd like to send me a model of your antenna which you've created, I'll be glad to do the same for you as I did for the other fellow last August, and tell you whether I think the model results are likely to be correct. This of course means only that if the antenna is like the model, then the results are accurate. If the real antenna isn't like the model, then of course the results won't reflect actual performance.

If your objective really were to convince people that you've made some innovations, your time would be much better spent in producing some quantitative results. Just how much bandwidth, efficiency, gain, or whatever does your antenna produce compared to a reference antenna with known characteristics?

Roy Lewallen, W7EL

4569. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 23:39:08 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303021539.618a9e43@posting.google.com>
Source record: 123557

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303020917.3e6e1d4f@posting.google.com>...
> aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0302280905.73771f7e@posting.google.com>...
> > nm5k@wt.net (Mark Keith) wrote in message
> Mark, I said I would contact you privately, well I can't.
> This computor only allows me to read and respond to this
> newsgroup and no more. I purchased a used computor in the
> hope that I could meet my personal comittment but it will
> not load up with windows so it would appear that I have
> bought a lemon.

May be something else. If it's working "here", it should run windows.
I'm confused to how it's working here frankly... DOS? Might be a
corrupted windows disk.

> Mark, I will get in contact with you when the means become available.

I don't really see the point. But whatever. Myself, I prefer to keep
all antenna talk here. It does no one else any good if all is kept to
private emails. I have no secrets as far as antennas go. Besides, I've
already done my analysis. Unless you change the antenna, my viewpoint
on it's operation is not going to change. As far as Richard and Roy, I
don't have a clue to what they did. It would probably be better to see
what they did first before I tried to go any farther with it.

MK

4570. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-02 23:50:43 UTC
From: "Robert Lay (W9DMK)" <nobody@crosslink.net>
Message-ID: <am356vsjuuritj0otdtndn7gkuik2h8a42@4ax.com>
Source record: 123558

On Sun, 02 Mar 2003 14:54:40 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Robert Lay (W9DMK) wrote:
>> The reflection coefficient
>> at any given instant and at a given point on that line is a function
>> of those combined forward and reflected waves. Since those quantities
>> are ever changing and approaching their stead state values, the
>> reflection coefficient itself is, likewise, changing.
>
>Thanks Bob, I know that is conventional wisdom but I am working on
>the math that will allow the actual physical reflection coefficient
>to remain physical and constant. Seems to me, a wave wouldn't recognize
>a V/I ratio as anything worthy of a reflection reaction. Seems to me, a
>wave is completely unaffected by waves traveling in the opposite direction
>and is only affected by coherent waves traveling in the same direction as
>itself. (if waves have a self :-)

Dear Cecil,

I appreciate your problem.

I suggest that the fundamental concept of reflection coefficient is
based on the relationship between incident and reflected waves. It is
only in the steady state condition that this can be converted to the
impedance formula (Z1-Z0)/(Z1+Z0)

In a transient analysis the sum total of all incident and all
reflected waves present at the physical point and time of analysis
will determine the reflection coefficent at that point on the line.

In the specific example that you referred to:

Source-----50 ohm feedline---x---1/2WL 150 ohm feedline---50 ohm load

The steady state analysis gives a reflection coefficient of zero just
to the left of point x and a reflection coefficent of 0.5 just to the
right of point x.

At point x there is a discontinuity.

The transient analysis begins with the interval where there is an
incident wave in the 50 ohm line only . (Rho = 0 in this interval).

The transient analysis continues with an interval in which there is an
incident wave in the 150 ohm line and both an incident wave and a
reflected wave in the 50 ohm line. The value of Rho is 0 in the 150
ohm line, even tho it is mismatched, and that is because the wave has

not yet reached the terminator, and no reflected wave is present anywhere in that line.

Meanwhile, in the 50 ohm line the reflection coefficent is zero in the region where there is only the incident wave, but in the region where there are both incident and reflected waves, the reflection coefficient is 0.5

Etc., etc.

I can see why you would rather not have to deal with this kind of situation, but so far as I can see, the reflection coefficient is really a function of the actual traveling waves at any given point on the line - and that will present a variety of situations as the number of waves present builds up due to the reflections from the discontinuities.

==========
73 de W9DMK - Bob in Dahlgren, VA
Change "nobody" to "w9dmk" for direct mail
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

4571. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 00:20:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v65be816t31le6@corp.supernews.com>
Source record: 123561

Egad, virtual shorts, virtual opens, dissipationless resistances, and now morphing virtual reflection coefficients. It appears that some posters in this newsgroup require concepts and terminology that the entire professional community has done just fine without for the past century.

I do just fine without these phantoms, and I ain't hitting this tar baby.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Ian White, G3SEK wrote:
>
>> For those of us who don't have Johnson to hand, please can you *quote*
>> (ie using *his* words, not yours) where and how he uses the terms
>> "physical", "virtual" and "switch"?
>
>
> Oh, Johnson doesn't use those words. Those words were used by members
> of this newsgroup to explain how the actual physical reflection
> coefficient morphs into a virtual reflection coefficient during the
> transient state on the way to steady-state, e.g. what is the reflection
> coefficient at 'x' during steady-state?
>
> Source----50 ohm feedline---x---1/2WL 150 ohm feedline---50 ohm load

4572. Re: True Ladder Line?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 00:26:07 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E62A0F1.D5DB01BF@attbi.com>
Source record: 123560

I used the 80-10 meter version of the antenna and feedline quite successfully for three years. I recently moved from Massachusetts to New Hampshire and the 80-10 will be going back up in the spring. The performance of the antenna/transmission line was very stable with negligible weather effects.

My tuner is an old [very old] Murch 2000A. I added a 3KW 1:1 balun at the output to accomplish the balancing of the signals. [I run 1200 watts maximum]. Additionally, my VSWR on low end of 80 was off scale and had to be calculated at or near 40:1. The Murch would handle 800 watts continuously under this high VSWR.

I was VERY careful to maintain balance in the 600 ohm line. Spacing to house walls was controlled, spacing through windows was controlled, spacing to the tower was controlled and the 600 ohm line was run at right angles to the antenna for 1/4 wavelength minimum, etc. [I used Radio Shack twin lead screw in spacers to keep spacing in and out of my home. I use spacers every 5 to 6 feet in the house. One wire was run through each spacer].

If you take measures to maintain system symmetry it is a great antenna. If you don't maintain symmetry antenna/transmission line is compromised.

NOTE: The Murch 2000A is a roller inductor type antenna rated for 1 KW Continuous [olden days of AM] and 'infinitely adjustable'.

Deacon Dave, W1MCE
+ + +

4573. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 01:49:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E62B494.5070702@ieee.org>
Source record: 123562

Roy Lewallen wrote:
> I do just fine without these phantoms, and I ain't hitting this tar baby.

Too bad everyone is not like you, Roy. We are told that a mere V/I ratio
can reflect a wave and that two waves involved in wave cancellation actually
continue forever in the original direction with zero energy driving them.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4574. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 01:52:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E62B572.80904@ieee.org>
Source record: 123563

Robert Lay (W9DMK) wrote:
> I suggest that the fundamental concept of reflection coefficient is
> based on the relationship between incident and reflected waves.

... which begs the question. Exactly how does a V/I ratio reflect
a wave? There are V/I ratios all up and down a transmission line
with reflections and they don't reflect any waves. Why does a
V/I ratio at an impedance discontinuity reflect a wave when that
exact same V/I ratio 1/2WL away doesn't reflect any waves at all?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4575. A request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 02:09:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v65hrqo8pcmu66@corp.supernews.com>
Source record: 123369

If anyone wants to correspond with me via email, please make sure the From: or Reply-To: line in your message header is valid. If my return mail to you bounces because of an invalid return address, I won't try a second time.

If it's too much trouble for you to unmunge your address when you send me a message, it's too much trouble for me to unmunge it to reply.

Roy Lewallen, W7EL

4576. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 02:26:34 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303021826.f4e128e@posting.google.com>
Source record: 123564

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0303021539.618a9e43@posting.google.com>...
> aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303020917.3e6e1d4f@posting.google.com>...
> > aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0302280905.73771f7e@posting.google.com>...
> > > nm5k@wt.net (Mark Keith) wrote in message
> > Mark, I said I would contact you privately, well I can't.
> > This computor only allows me to read and respond to this
> > newsgroup and no more. I purchased a used computor in the
> > hope that I could meet my personal comittment but it will
> > not load up with windows so it would appear that I have
> > bought a lemon.
>
> May be something else. If it's working "here", it should run windows.
> I'm confused to how it's working here frankly... DOS? Might be a
> corrupted windows disk.

Tell me about it Mark, this laptop will not allow me to cruise the net
at will
or to respond privately to group members which is why I finally forked
out for a used one which has turned out to be a lemon.
>
> > Mark, I will get in contact with you when the means become available.
>
> I don't really see the point. But whatever. Myself, I prefer to keep
> all antenna talk here. It does no one else any good if all is kept to
> private emails. I have no secrets as far as antennas go.
I could not agree more but I made a commitment to respond

Besides, I've
> already done my analysis. Unless you change the antenna, my viewpoint
> on it's operation is not going to change.
Yes, you did an awefull lot of work on that program I believe that you
also should have closure and I am willing to share with you privately
my program
and my present work ifr an explanation is not forth coming, I think
you earned it.
As far as Richard and Roy, I
> don't have a clue to what they did. It would probably be better to see
> what they did first before I tried to go any farther with it.

Exactly my thoughts and with no changing of the subject tactics to
avoid closure, whining comments I'll accept
I am really getting excited about how certain comments were arrived

at.
(What does "not" or "what" mean after a posting? It appears to be a
reversal of what was stated in the posting
Even tho I passed the Oxbridge entance exam for english and have lived
in America for a long time I have never come across this style before
so I do not know how to interprete it (See doctor or is it General
now, communication problems go both ways ,even with the same language)
>
> MK

Best regards
Art.

4577. new ham needs help

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 02:35:24 UTC
From: STEVE G TROOK <STROOK@OPTONLINE.NET>
Message-ID: <Mbz8a.657460$HG.123518447@news4.srv.hcvlny.cv.net>
Source record: 123565

I am a new ham in the U.S. I have my tech class license, I am working on my general. I have a small house and limited space. I want to work 10-80 meters. Is there any single 1 antenna that will do that that is not a monstrosity???

4578. Re: new ham needs help

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 02:52:45 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9332C00CE262Bpookster@216.168.3.50>
Source record: 123567

"STEVE G TROOK" <STROOK@OPTONLINE.NET> wrote in
news:Mbz8a.657460$HG.123518447@news4.srv.hcvlny.cv.net:

> I am a new ham in the U.S. I have my tech class license, I am
> working on my general. I have a small house and limited space. I want
> to work 10-80 meters. Is there any single 1 antenna that will do that
> that is not a monstrosity???
>
>

Please describe your space available. Lot size, any trees, how many
story house or apartment, etc.

--
Bill, W7TI

4579. Re: new ham needs help

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 03:06:13 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3E62C6B6.6020305@adelphia.net>
Source record: 123568

STEVE G TROOK wrote:

> I am a new ham in the U.S. I have my tech class license, I am working on
> my general. I have a small house and limited space. I want to work 10-80
> meters. Is there any single 1 antenna that will do that that is not a
> monstrosity???

Personally, I like a dipole, as big as you can fit on your lot. Feed it with balanced line, and use a tuner. This setup works well for me. Not glamorous for sure, but IDC.

Another thing. Although height is important, it's not so important that you don't put the antenna up. People have effectively used antennas that are surprisingly low.

- Mike KB3EIA -

4580. Re: new ham needs help

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 03:20:59 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E62CA1B.D3BFE17E@cwis.net>
Source record: 123370

Please define monstrosity.
'Doc

4581. Re: True Ladder Line?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 03:26:24 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E62CB60.C1C32697@cwis.net>
Source record: 123371

Gary,
Why should 600 ohm ladder line give any more problems than 450 ohm ladder line?
By the way, who exactly is the 'us' who wants to know which tuner(s) I use?
'Doc

4582. Re: new ham needs help

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 03:38:11 UTC
From: "Dee D. Flint" <deehays@qix.net>
Message-ID: <D6A8a.2451$se1.1721086@newssvr28.news.prodigy.com>
Source record: 123566

"STEVE G TROOK" <STROOK@OPTONLINE.NET> wrote in message
news:Mbz8a.657460$HG.123518447@news4.srv.hcvlny.cv.net...
> I am a new ham in the U.S. I have my tech class license, I am working on
> my general. I have a small house and limited space. I want to work 10-80
> meters. Is there any single 1 antenna that will do that that is not a
> monstrosity???
>
>

The G5RV works reasonably well for most people for 10-80. In addition, it
is inexpensive so you could put this up for a starter while you investigate
other solutions.

Dee Flint, N8UZE

4583. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 03:38:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E62CE4F.5AE3B481@cwis.net>
Source record: 123372

Time for a reality check. Is anyone having trouble
understanding that last post, or is it just me?
'Doc

4584. Re: True Ladder Line?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 04:01:47 UTC
From: "Edward A. Feustel" <efeustel@erols.com>
Message-ID: <b3uk0v$716$1@bob.news.rcn.net>
Source record: 123373

"Gary Boyer" <gboyer@columbus.rr.com> wrote in message
news:k3s8a.13213$6n4.4519736@twister.columbus.rr.com...
> There is a ad in QST (March-2003) that advertises true ladder line
> antennas...noticed the ladder line is 600 ohms.....one antenna is a 160-10
> meter doublet antenna with this 600 ohm ladder line attached to this
> antenna....has anyone purchased any of these antennas....the open ladder
> (600 ohms) might be a problem for some antenna tuners....please
advise.....
> If you are using this antenna, let us know what tuner you are
> using..tnx...K8BY..Gary
>
>
I have the 160 Meter version at about 45 feet. The about 50 feet of line
runs around my basement in a loop.
My Johnson Matchboxes don't have trouble on most bands, but occasionally
will not load up well.
When this happens I switch to a different tuner and/or use either a single
side as a "random wire" or
the two conductors together as a top loaded antenna. Not optimum, but seems
to get out.

I had only two failures in the antenna. The first near one of their
insulators when a branch fell on it.
The second at the center insulator. I had not had a pulley/counterweight
system and so as the trees
moved the center of the antenna would go up or down by as much as 10-15
feet. Needless to say, I have
added a counterweight/pulley system.

While I wish they had used a heavier conductor for my long span, I
appreciate the outer black coating on
the wire. Makes the antenna near invisible in the trees unless you know
where to look.

It has been up with moderate icing with Dacron rope supports. Not really
heavy icing though.

Summary: I'd buy another.

Ed, N5EI

4585. Re: A FEW KCs OFF TOPIC.....

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 04:24:49 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e62da79_2@news1.prserv.net>
Source record: 123374

Butch:

Unfortunately, I don't know the answer, but a little hint: You are more likely to get a response if you put something like AT-160 + IC-735 = ? in the subject line rather than the off topic mention. The next header in my newsreader above yours is ***Kill Saddam, etc., and I looked at yours just to see if it could be more OT than Saddam. You aren't even in the running. And, ATs are included in the antenna topic set anyway, so your OT claim doesn't hold water.

--
Crazy George
Remove NO and SPAM from return address
"Butch Butler" <k4nau@hotmail.com> wrote in message
news:XJmdnWMxEaqZ7v-jXTWcrg@comcast.com...
> Can anyone tell me if the Icom AT-160 auto-tuner that was designed for the
> IC-728 and others will mate to an
> IC-735? I know the AT-150 is the natural mate to the 735, but I can get a
> 160 for a good price right now and need to know how much of a hassle it
will
> be to work with my 735.
>
> Thnx & 73,
>
> k4nau
>
>

4586. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 07:04:05 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <F7D8a.67808$lf5.3580811@twister.southeast.rr.com>
Source record: 123376
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

If you want to see the effect of tuning when SWR is high you should be watching reflected power not SWR.

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message news:f7d9a152.0303011208.4bb127c9@posting.google.com...
> I would particularly like to hear what Reg, Roy, and Doc have to say.
>
> I'm working on a super SWR/wattmeter for a graduate school project.
> Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide
> good resolution only at low SWR levels? The reflection co-efficient
> (reflected voltage divided by forward voltage) is .5 at an SWR of 3.
> But for all of the SWR meters I have seen (including my cross-needle
> MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past
> it. In fact, the middle of the scale is usually an SWR of more like
> 2. But a transmitter SWR under 2 is good enough. Does it really
> matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it
> would help to know if you are tuning in the right direction. On my
> SWR meter, it's hard to tell the difference between an SWR of 5 and an
> SWR of infinity. I would rather have the good resolution at high SWR
> levels, and that is the inspiration for my project. I may seem
> strange to you, but I would like to know if I have lowered my SWR from
> 15 to 10. At least I would know I'm going in the right direction, and
> I would know if I passed up the low SWR point.
>
> An SWR of 5 corresponds to a reflection ratio of 2/3. An SWR of 2
> corresponds to a reflection ratio of 1/3. Showing an SWR of 5 should
> be as easy as showing an SWR of 2, but an SWR of 5 is usually
> portrayed as a hair away from infinity. An SWR of 1.5 corresponds to
> a reflection ratio of .2 while an SWR of 9 corresponds to a reflection
> ratio of .8. But in my MFJ meter, an SWR of 1.5 is easily readable,
> while an SWR of 9 is indistinguishable from infinity. An SWR of 1.2
> corresponds to a reflection ratio of .09, and an SWR of 21 corresponds
> to a reflection ratio of .91.
>
> So why do SWR meter designs have to be skewed so greatly?
>
>
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com

4587. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 07:13:54 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <SgD8a.67811$lf5.3582181@twister.southeast.rr.com>
Source record: 123375

Looks a lot like a Bird Termaline, My guess would be 50 watts, I know it is bigger than my 25 watter, It may be as much as 100 but I would thaink that would be the max.

"Ken" <cprstn54zz@att.net> wrote in message news:3e606d29.657692203@news-server.optonline.net...
> I picked up a dummy load at a hamfest. It has an N-male connector and
> cast fins of rectangular cross section. It measures 1-1/4 x 2 x 4 and
> weighs a hefty 12 oz. It is new, but has no labels (except for the
> Dymo label I put on it). See pic at:
> http://home.att.net/~cprstn54/dummy.jpg
>
> Is there a practical way to determine its capacity? Like maybe
> running measured steady state power into it and measuring its
> steady-state temperature?
>
> Ken KC2JDY
>
>
> Ken
> (to reply via email
> remove "zz" from address)

4588. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 07:57:56 UTC
From: jaroslavlipka@msn.com
Message-ID: <d7855f42.0303022357.356736b9@posting.google.com>
Source record: 123377

'Doc <w5lz@cwis.net> wrote in message news:<3E62CE4F.5AE3B481@cwis.net>...
> Time for a reality check. Is anyone having trouble
> understanding that last post, or is it just me?
> 'Doc
Doc
the reality check i would like, is to find out exactly what you
do understand?. I have not seen you ask or answer any technical
questions of depth on any thread at any time, yet you continually make
"snide" remarks against Art, who i believe is accepted by most to be
a genuine person. Art would be the first to admit he has a
communication problem, but that does not give you the right to stick a
knife in his back because "you" are not capable of understanding.
If the post was directed to "you", and "you" do not understand the
post, say so, and i am sure Art would "try" to educate you. Do not ask
others to join you in your cowardly attacks, if you are not capable of
standing alone. Over the years i have seen Art take on many of the
good and great on this group and stand his ground.I have "never"
"never" seen him resort to making the cowardly type of personal attack
postings that you lower yourself to make.

Reality check no2 When i saw in a previous thread someone had
bracketed you with "Reg" and "Roy" i laughed so much my shack nearly
collapsed around me and i would lay odds i was not alone. It just
goes to show that if you get your name in print often enough some
people will believe you are a guru, but in reality although you have a
reasonable knowledge i believe it has no depth. That is why i believe
you do not get involved in threads of any depth. As a very great man
once said, "You can fool some of the people some of the time, but you
can't fool all of the people all of the time". Jaroslav.

4589. End Fed Zepp Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 08:22:27 UTC
From: Tony Angerame <tangerame@earthlink.net>
Message-ID: <3E63118D.4C32E584@earthlink.net>
Source record: 123378

Yup that's right the end fed Zepp originally hung from Zeppelins so as to avoid one element of a dipole folding back on the other. An old antenna for an old ham. Hey, it seems to fit my new QTH in the mountains. Lots of Pine trees and lots of land.

Here's my question to the group. I plan hoisting the middle of a 120 foot wire to 80 feet in a tree. The remainder droops like an inverted vee but the feedpoint is at one end. Fed with 45 feet of open wire or twinlead to a balun and tuner in the shack. Nice brown insulated wire and twinlead so as not to show up too much to the neighbors. Counter weighted so as to sway with the breeze. Stealth is not required here but over the ears I find it to be an advantage. What they don't see won't hurt 'em. Has anyone ever used a Zepp in the invereted vee configuration? Is anyone that old? I am hoping to have a bit more omni directional coverage on the higher bands as this will be the only antenna at this site. Good antenna setup or am I headed for another Hindenburg disaster?

Tony WA6LZH

4590. End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 08:25:27 UTC
From: Tony Angerame <tangerame@earthlink.net>
Message-ID: <3E631262.63C5DD98@earthlink.net>
Source record: 123379

Any opinions on the end fed Zepp? I plan on 1/2 wave at 3.9 (120 Ft)
supported from a tree at the middle and fed at the end with 45 feet of
twinnlead. Anohter Hindenburg?

Tony WA6LZH

4591. Re: new ham needs help

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 09:20:57 UTC
From: F8BOE Olivier <f8boeNOSPAM@free.fr>
Message-ID: <3e631e76$0$232$626a54ce@news.free.fr>
Source record: 123380

Hi Steve,

Congrats for your tech licence.

If you don't have much space, go for a multiband vertical antenna such as the Cushcraft AP8A with the (wire) radial kit that you can even install on the roof of your house. I found a second hand model that performs quite good for a vertical (it's a quarter wave) and I installed it just above the ground.

If you have 30 meter in-line place a dipole or better a Levy (2 X 11 meters + 10 meters ladder line) would do the job fine but a REAL symetrical Levy antenna tuner is mandatory. If you want to work mostly on CW or PSK31 and if you are not affraid to have HF energy running in your shack try the G5RV or a random length dipole with a good antenna tuner.

The G5RV IS NOT a multiband antenna, it's just a compromise. And in either case, home-brewed or commercial, you will need an antenna tuner to work from 80m to 10m.
I used a G5RV (my first decametric antenna) during one week and since I use only home brewed OCFDs and Levy wire antennas.

73 de F8BOE Olivier ...-.-

"STEVE G TROOK" <STROOK@OPTONLINE.NET> a crit dans le message de news:
Mbz8a.657460$HG.123518447@news4.srv.hcvlny.cv.net...
> I am a new ham in the U.S. I have my tech class license, I am working on
> my general. I have a small house and limited space. I want to work 10-80
> meters. Is there any single 1 antenna that will do that that is not a
> monstrosity???
>
>

4592. Re: End Fed Zepp Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 10:02:07 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87isv0wyxs.fld@barrow.com>
Source record: 123381

Tony Angerame <tangerame@earthlink.net> wrote:
>Yup that's right the end fed Zepp originally hung from Zeppelins so as
>to avoid one element of a dipole folding back on the other. An old
>antenna for an old ham. Hey, it seems to fit my new QTH in the
>mountains. Lots of Pine trees and lots of land.
>
>Here's my question to the group. I plan hoisting the middle of a 120
>foot wire to 80 feet in a tree. The remainder droops like an inverted
>vee but the feedpoint is at one end. Fed with 45 feet of open wire or
>twinlead to a balun and tuner in the shack.

It's actually a bit difficult to end feed a half wavelength,
because the impedance is so high. What you end up with usually
isn't what you think you've got. :-) Since the load is not
balanced, that balanced transmission line will not act like a
transmission line, but rather as part of the antenna. You won't
really be feeding a half wavelength at the end, but something a
bit longer than a half wavelength (which will make it a bit
easier to use reasonable values for the matching network, so it
is not a bad thing necessarily).

What you need to realize though is that the transmission line is
indeed part of the antenna, and you want to treat it as such.
Don't run it 12 inches away from a metal roof for 30 feet, which
you definitely could with a properly balanced load on it, for
example! Get it up and away from obstructions as cleanly as
possible.

With 45 feet of it, you are just on the short side of having it
long enough to be _really_ significant. You don't want a
current node down at the low point if you can help it (but then
again, if it is a high impedance point you don't want it
paralleling any obstructions either. The closer that "feedline"
is to 1/4 wave, the closer you are to a current null right at
the near end of it.

Hence the only thing I would question is whether you need to use
real feedline at all! Just end feed a 165 foot wire.

But then again, without trying both ways you just won't know.
And just trying both ways at different times isn't good enough
either. You have to be able to measure them against each other,
and you you can't do that.

But what you can do is put up another antenna of some kind, to
use as a standard. It should be the best you can make it, but

it doesn't have to be as good as the other one. Then you can
put in an antenna switch and toggle back and forth between the
antenna under test and the standard antenna to see the
difference. Use it for a week or two that way, and keep a log
of what differences you find. For example it may be that DX is
6 dB better on the tested antenna, but regional signals are 10
dB better and local signals are 3 dB. And would certainly
change with direction too, though with short antennas at low
elevations you aren't going to see so much directional effect as
would be with longer or higher antennas.

Anyway, once you have a page or two of comparative numbers from
a variety of locations, go modify your test antenna and try that
one for a couple weeks.

You may find they are different, but one has advantage in one
area and another has advantages in a different area. Decisions,
decisions... ;-)

>Nice brown insulated wire
>and twinlead so as not to show up too much to the neighbors. Counter
>weighted so as to sway with the breeze. Stealth is not required here but
>over the ears I find it to be an advantage. What they don't see won't
>hurt 'em. Has anyone ever used a Zepp in the invereted vee
>configuration? Is anyone that old? I am hoping to have a bit more omni
>directional coverage on the higher bands as this will be the only

As the wavelengths get shorter, your antenna is effectively
longer and higher. That means it will likely exhibit
significant directional characteristics on higher bands. I
would guess that your best bet there is to put a couple of
spreader bars at 35 feet, 18 feet and so on, and run single
wires, cut to 1/4 wavelength for each band, from the base to
each of these spreaders.

Note that with the vertical elements in there your ground becomes
more important than it was with only the single wire.

Also note that the less vertical that part is, the less effective
and the more directional it will be too.

>antenna at this site. Good antenna setup or am I headed for another
>Hindenburg disaster?

Pie in the ski. Go for it.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

4593. Re: A request

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 10:50:08 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <ArG8a.303$gF3.41721@newsread1.prod.itd.earthlink.net>
Source record: 123382

Roy Lewallen <w7el@eznec.com> wrote in message
news:v65hrqo8pcmu66@corp.supernews.com...
> If anyone wants to correspond with me via email, please make sure the
> From: or Reply-To: line in your message header is valid. If my return
> mail to you bounces because of an invalid return address, I won't try a
> second time.
>
> If it's too much trouble for you to unmunge your address when you send
> me a message, it's too much trouble for me to unmunge it to reply.
>
> Roy Lewallen, W7EL
>

Don't feel bad Roy, I get requests for parts from my inventory where they
also can't be bothered!
(Also a giggle, they often make requests via E-Mail and can't understand why
I don't just KNOW
their snail mail address!)

--
*
| __O Thomas C. Sefranek WA1RHP@ARRL.net
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

4594. Re: True Ladder Line?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 11:59:34 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <GsH8a.661533$HG.124932662@news4.srv.hcvlny.cv.net>
Source record: 123383

"Gary Boyer" <gboyer@columbus.rr.com> wrote in message
news:k3s8a.13213$6n4.4519736@twister.columbus.rr.com...
> There is a ad in QST (March-2003) that advertises true ladder line
> antennas...noticed the ladder line is 600 ohms.....one antenna is a 160-10
> meter doublet antenna with this 600 ohm ladder line attached to this
> antenna....has anyone purchased any of these antennas....the open ladder
> (600 ohms) might be a problem for some antenna tuners....please
advise.....
> If you are using this antenna, let us know what tuner you are
> using..tnx...K8BY..Gary

Hi Gary,

I'm currently using the 40m version of this antenna along with a Palstar
AT1500C. All is well and I've encountered no problems.

--
73 de Bert
WA2SI

4595. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 12:32:59 UTC
From: k1bqt@aol.com
Message-ID: <20030303073259.15316.00000272@mb-cr.aol.com>
Source record: 123384

>Art would be the first to admit he has a
communication problem...<

Possibly the one area of universal agreement.

>but that does not give you the right to stick a knife in his back....<

A little melodramatic, don't you think? I believe Art has a large collection of "knives" he is well practiced at inserting all by himself--without any assistace from the people here who are trying to help him out.

>because "you" are not capable of understanding...<

Art may be unique, but his pattern of behavior is not. In my view, Art simply "doesn't get it" and would rather confess to being wired differently than do the work it would take to learn something useful (our universities are full of these people). At this juncture, I don't understand why Roy and Richard continue to respond.

Rick K1BQT

4596. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 13:37:58 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E635AB6.2060008@mwci-news>
Source record: 123385

Roy Lewallen wrote:
> Egad, virtual shorts, virtual opens, dissipationless resistances, and
> now morphing virtual reflection coefficients. It appears that some
> posters in this newsgroup require concepts and terminology that the
> entire professional community has done just fine without for the past
> century.

The idea of a dissipationless "resistance" (which
is not the same as a dissipationless "resistor")
has been widely known for more than a hundred
years. For example refer to James Clerk Maxwell.

Bill W0IYH

4597. Re: True Ladder Line?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 13:50:23 UTC
From: jaroslavlipka@msn.com
Message-ID: <d7855f42.0303030550.6f2b92e7@posting.google.com>
Source record: 123386

'Doc <w5lz@cwis.net> wrote in message news:<3E62CB60.C1C32697@cwis.net>...
> Gary,
> Why should 600 ohm ladder line give any
> more problems than 450 ohm ladder line?
> By the way, who exactly is the 'us' who
> wants to know which tuner(s) I use?
> 'Doc

"wow" 'Doc I bet he finds that a great help, but there you go,
you have got your name on screen again

4598. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 14:15:25 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303030615.37274875@posting.google.com>
Source record: 123387

Dick Carroll <dickc58@att.net> wrote in message news:<3E5DB9DC.347AA847@att.net>...
> Brian,

Hi Richard . . Been a bit busy here for the past few days.

> Outfit I used to work for employed a large number of vertically
> mounted coaxial sleeve dipoles, commercial Kraco brand, on a 42 mhz
> frequency. They weren't made of cable but they were very
> straightforward in design consisting of a 1/4 wave length of 1/2 in.
> aluminum rod as the "hot" element mounted to a porcelein insulator with
> a pipe thread mount for the mounting mast that fit inside the 1 3/4
> in aluminum tube sleeve that mounted on the outside of the center
> insulator and over the mast. The coax feedline fed up through the
> mounting mast inside the sleeve element to the porcelein insulator where
> an SO239 socket was mounted. The sleeve elemen just hung down over the
> mast.

> As I recall there was some discussion of element diameter here some
> time ago where some guru said that for element diameter to become a
> significant factor it would have to be quite large, such as a wire cage.

That's SOP with any dipole.

> I can't tell you how exact the element lengths and diameters were on the
> Kracos but if the larger sleeve diameter made a difference in its length
> it had to be slight, since visually they were close to the same length.

I don't know if they're Kracos but they're coaxial antennas and
they're all over the towers atop the fire stations and other emergency
and municipal services facilities around here. I sure can't discern
any differences in the lengths of the "radiators" and the sleeves from
the street.

> The Kracos were rugged, worked very well and were bulletproof,
> withstanding everything that came along *except* a direct lightning
> strike.....I still have the remains of that one at home in the junk
> box. Nothin' much left except the aluminum sleeve. I drew the job of
> replacing it atop a 50 ft tower, that is what wasn't scattered all over
> the parking lot.

. . . at least it wuz lighter when you took it down than it wuz when
it went up . . ?

> I think I'll try to make one like you're considering -I have a similar
> need- using RG58 and using an additional loose longer length of RG58
> braid slid over the outer jacket of the feedline for the sleeve side and
> soldered to the feedling sleeve at the feedpoint.

Good idea, makes more sense than rolling the braid back over the
jacket. That maneuver is a pain in the butt for 2m let alone for 20m.

> I plan to make it
> overly long and trim to size with an antenna analyzer. Long is better as
> always since the tuner easily cancels out the extra L.

Have 259B, Will Trim . .

> The one thing I'd like to know is whether or not there might be any
> interaction between the sleeve end and the coax feedline since the
> feedline will enter the voltage end of the sleeve element. In the Kracos
> there was an extra layer of shielding in the form of the mounting mast
> (with the feedline inside it).

You raised a yellow flag in my mind Dick. I'm trying to noodle the
implications of not having that grounded element between the feedline
and the sleeve but I'm not doing very well with it.

> I don't believe it will matter but I
> guess
> the best way is to try it and find out.

I guess but I'd like to have a better grip on the physics.

> (I'm out of pocket right now and it'll be at least a couple weeks
> before I can do it).

Mine is not going to happen for at least a month. I just found out
that my rented abode is being sold out from under me and I'm outta
here unexpectedly and shortly.

> Dick

w3rv

4599. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 14:19:10 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303030619.16470528@posting.google.com>
Source record: 123388

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<2627-3E5E3625-214@storefull-2315.public.lawson.webtv.net>...
> Brian Kelly wrote:
> "Multiplying the 28 MHz lengths by 1.97 dimensions for 14.1 MHz yields
> 204" & 220 inches which are significantly longer than my 185" & 189"."
>
> Length to diameter ratio of the cable is less at the higher frequency.
> Length is less. Diameter is the same. Cable is fatter in wavelengths and
> can be shorter for resonance. But this does not explain descrepancies.
>
> Using the War Department tables for lengths, 40 MHz/30 MHz is 1.333.
> Antenna lengths given are 190"/126"=1.5 for the 30 MHz and 40 MHz
> antennas.
>
> I calculate 95% of the 1/2-wavelengths as 187in. and 140in.
>
> I can`t reconcile the tables. The book came from M.I.T. and Harvard
> professors in WW-2. Perhaps students doing the actual work erred and the
> profs didn`t catch it.

. . . would not be the first time Cambridge dwellers screwed up . .

>
> Best regards, Richard Harrison, KB5WZI

w3rv

4600. Re: True Ladder Line?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 14:19:22 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <KvJ8a.23761$8f7.17471@nwrdny02.gnilink.net>
Source record: 123389

"'Doc" <w5lz@cwis.net> wrote in message news:3E62CB60.C1C32697@cwis.net...
>
>
> Gary,
> Why should 600 ohm ladder line give any
> more problems than 450 ohm ladder line?

I think this is part of Gary's question.

> By the way, who exactly is the 'us' who
> wants to know which tuner(s) I use?
> 'Doc

Many AROs use the term "we" in place of I when operating. "We're running a Kenwood with a 5 element Yagi." Perhaps this carried over into Gary's post. No harm, no foul.

--
73 de Bert
WA2SI

4601. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 14:21:07 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e636615_3@news1.prserv.net>
Source record: 123390

Both postings of your question appeared, and the other got one answer, so here is another from someone old enough to have actually run a Zepp 50 years ago. I remember we had to use open wire feeders, because the peak voltage is quite high on some bands across the feeder. Twinlead arced over on modulation peaks. AM of course, SSB was only in the IRE and BSTJ books then. So, I would be a little careful with the plastic insulated line. The antenna is going to radiate like any piece of wire X fractions of a wavelength long, bent in the middle. There will be some radiation from the feeders, but most will be from the antenna. BTW, to do it right, you need a balanced tuner. There was a long knock down drag out discussion on here last year about why a unbalanced tuner feeding a balun into high impedance parallel line feeders isn't a good idea. Do a Google Groups search for tuners and sort through the hits for the longest thread.

--
Crazy George
Remove NO and SPAM from return address
"Tony Angerame" <tangerame@earthlink.net> wrote in message
news:3E631262.63C5DD98@earthlink.net...
> Any opinions on the end fed Zepp? I plan on 1/2 wave at 3.9 (120 Ft)
> supported from a tree at the middle and fed at the end with 45 feet of
> twinnlead. Anohter Hindenburg?
>
>
> Tony WA6LZH
>

4602. Re: End Fed Zepp Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 14:27:16 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E636644.4070607@ieee.org>
Source record: 123391

Tony Angerame wrote:
> Yup that's right the end fed Zepp originally hung from Zeppelins so as
> to avoid one element of a dipole folding back on the other. An old
> antenna for an old ham. Hey, it seems to fit my new QTH in the
> mountains. Lots of Pine trees and lots of land.

An end-fed Zepp is a single-band antenna. The radiating element is
1/2WL with a very high feedpoint impedance. The feedline is a 1/4WL
series-section transformer which transforms the high feedpoint
impedance to a low impedance. These conditions will exist on only
one band.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4603. Re: *** !!! KILL SADDAM !!! *** -- Military Action In Iraq NOW! _____ yqotzeq

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 14:31:10 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030303093110.24273.00000117@mb-ca.aol.com>
Source record: 123392

>Don't be a traitor or a dimwhit! Support President Bush in the liberation of
>Iraq!!
>-

Why? Are they going to erect an antenna farm there? Is that why this BS is on
this newsgroup?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

4604. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 14:31:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E636751.6050301@ieee.org>
Source record: 123393

Tony Angerame wrote:
> Any opinions on the end fed Zepp? I plan on 1/2 wave at 3.9 (120 Ft)
> supported from a tree at the middle and fed at the end with 45 feet of
> twinnlead. Anohter Hindenburg?

That's not an end-fed Zepp. For it to be an end-fed Zepp, your feedline
needs to be about 57 feet. The EFZ feedline is 1/4WL long and it's an
EFZ on only one band.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4605. Re: new ham needs help

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 14:35:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63682E.8010104@ieee.org>
Source record: 123394

F8BOE Olivier wrote:
> The G5RV IS NOT a multiband antenna, it's just a compromise.

It would be more accurate to say the G5RV is not an all-band
antenna. It works pretty well and is near resonance on 80m,
40m, 20m, and 12m. The series-section transformer transforms
the feedpoint impedance on those four bands to resonance
although not to 50 ohms.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4606. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 14:45:24 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E636A84.7928D8C9@cwis.net>
Source record: 123395

jaroslav,
It was an honest question, "snide", or not. If you have been tracking this thread, I would think that you might wonder also. I, in fact, did not understand the post I referred to, and was checking my 'reality', not Art's. I'm sorry you feel it was a personal attack, and also that you seem to be a little 'one sided' about who makes these 'personal attacks' and who doesn't.
As to being "bracketed" with Roy and Reg, I suggest you take that up with who ever made the post. I certainly wasn't the one who characterized my self that way (it suprized me too). I don't consider my self to be a 'guru', although I think I have a fair layman's understanding of antennas. I'm also very aware that I don't know it all, by any means. I don't participate in some of the "in depth" threads for a number of reasons, ranging from lack of interest, to, "I don't know what the hell they're talking about, or why".
So, I think there's an easy and simple way for you to deal with my posts. Just 'block' them, and that's what I would suggest that you do.
'Doc

PS - As a not so famous fictional character once said, "Bite me"...

4607. Re: ATU for marine use

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 15:34:56 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <3E637620.6060409@psu.edu>
Source record: 123397
Cross-posted to: rec.radio.amateur.antenna,rec.boats.electronics

Richard,

You might look at the JRC NFG-230. It works with the JST-245 and JST-135 transceivers but could be made to work with others. It is weatherproof. JRC has many marine products, so they know what it takes to survive that environment.

73,
Bob AD3K

Richard C. Ferryman wrote:
> Can anyone recommend an atu that is rugged elecrically but will also
> stand up well to the harsh marine environment? It is to tune the the
> backstay on a yacht. 100W pepmaximum but I like to overrate
> everything so 300W pep capability.
> Thanks
> Richard G4BBH G4BBH/MM

--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

4608. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 15:36:49 UTC
From: n1kk@netzero.net
Message-ID: <d7adbb57.0303030736.4610eeac@posting.google.com>
Source record: 123396

Here is my original post,

I would like to hear from some users of this antenna concerning
the 160m performance. I would also like to hear
from anyone that might have upgraded from his original
80-10m antenna and noticed any difference
in the 80 and 40 meter performance. I am concerned
the closer spaced winding of the coil on the
160m version might reduce performance.

I did a little reading from a book
called REFLECTIONS by Walter Maxwell.
He states distributed capacitence increases
when the turns are wound closer together. This
capacitance is in parallel with the coil
lowering the self resonant frequency of the
coil. This would look like an impedance
that increases as you get closer to
the self resonant frequency.

This is what concerns me about several of
the 160m - 10m screwdriver antennas.
The traditional screwdriver antenna uses
10 turns per inch. Some use 8.
If I remember correctly Mel, and I am
sure others too, use a closer turns
per inch to get enough turns for 160m.

I wonder if an add on 160m coil might be
the better way to go preserving the
10 turns per inch for 80m-10m ??

Ken

---

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0302171144.7fd020a4@posting.google.com>...
> Richard, If you look at the question analyticaly you can determine the
> resonant frequency for the same inductance but repeat it for one turn
> removed and then two turns removed. If this is plotted in the form of
> inductance versus frequency to get a straight line (plot would have
> to be the reciprocal of frequency) one can strike a straight line
> which conforms to a algebraic equation. Of course with diminishing
> turns so will interwinding capacitance will reduce but for the

> readings taken it is close enough to a straight line. Thus the
> straight line should show a negative inductance for a zero frequency(
> i.e. a capacitance that can be equated to the intercoil capacity for
> the values from which the line was generated.
> Ofcourse, in actual fact the capacitance will reduce as turns are
> reduced so a true graph line will not be exactly straight,on another
> thread but will show a relative magnitude of interwinding capacitance
> for the initial rezonant frequency points made. The bottom line is
> that these values are relatively small and thus capacitance in
> 'general' terms can be stated exactly as Reg stated.
> Got the book by the way Richard from the library.The section that you
> alluded to on another thread was exactly what I was looking for to
> satisfy my curiousity.
> Thanks a bunch.
> Regards
> Art
>
>
> renrichardharrison@webtv.net (Richard Harrison) wrote in message
news:<9629-3E50FD45-55@storefull-2315.public.lawson.webtv.net>...
> > Art, KB9MZ wrote:
> > "---clossness of wire winding IS real and must always be a factor---."
> >
> > Reg wrote:
> > "Self capacitance is primarily a function of a coil`s overall length and
> > diameter."
> >
> > The subject is single layer solenoids. A rigid VHF coil may be
> > compressed to increase its inductance and capacitance, thus lowering its
> > resonant frequency.
> >
> > Reg`s observation may be that for a given inductance, a close-wound coil
> > has more capacitance between turns but it also has less turns, So, the
> > self capacitance of the coil may be very nearly a function of the coil`s
> > length and diameter. The close-wound coil has less turns which offsets
> > the proximity of the turns when considering total capacitance.
> >
> > Best regards, Richard Harrison, KB5WZI

4609. Re: *** !!! KILL SADDAM !!! *** -- Military Action In Iraq NOW! _____ yqotzeq

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 15:38:49 UTC
From: Steve <steve@stevebb.com>
Message-ID: <iGK8a.253$wC6.202@newsfep3-gui.server.ntli.net>
Source record: 123398

Personally I think it is all an elaborate plot to put "YI" back in the Top
20 most wanted countries list ;-)

Guess I'm lucky having him confirmed lol

Steve G4KIV / ZC4BS

Homepage: http://www.stevebb.com
Email: steve@stevebb.com

4610. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 15:52:02 UTC
From: richardharrison@webtv.net
Message-ID: <13253-3E637A22-585@storefull-2314.public.lawson.webtv.net>
Source record: 123400

Bill, W0IYH wrote:
"The idea of a dissipationless "resistance" (which is not the same as a dissipationless "resistor") has been widely known for more than a hundred years."

Yes. My dictionary says:
"Resistance - Ratio of the applied electromotive force to the resulting current in a circuit."

"Resistor - A component made of a material (like carbon) that has a specified resistance, or opposition to the flow of electrical current."

We have various examples of nearly lossless resistance such as: the impedances of free-space, transmission-linee surges, the switched-off time of a Class-C amplifier, etc., all of which are not noted heat producers. They all do have resistance and produce definable voltage to current ratios.

We have resistors made for use as circuit elements. All of these, I`ve seen, produce heat and have specified voltage to current ratios (resistance).

Best regards, Richard Harrison, KB5WZI

4611. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 16:12:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b3vutl$r1q$1@knossos.btinternet.com>
Source record: 123399
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Jimmy" wrote -
> If you want to see the effect of tuning when SWR is high you should be
> watching reflected power not SWR.

==========

Of what possible use is swr OR reflected power to an HF amateur?

He needs to know only whether or not the transmitter is loaded with a
resistance of approximately 50 ohms.

Anything else is just something to waffle about by SWR meter salesmen and on
newsgroups. ;o

Reg, G4FGQ

.

4612. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 16:18:27 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <17t66v0fqsba6svdi30ghdqgj6kq34l53l@4ax.com>
Source record: 123401
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 1 Mar 2003 12:08:05 -0800, jason_hsu@my-deja.com (Jason Hsu) wrote:

|I would particularly like to hear what Reg, Roy, and Doc have to say.
|
|I'm working on a super SWR/wattmeter for a graduate school project.
|Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide
|good resolution only at low SWR levels? The reflection co-efficient
|(reflected voltage divided by forward voltage) is .5 at an SWR of 3.
|But for all of the SWR meters I have seen (including my cross-needle
|MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past
|it. In fact, the middle of the scale is usually an SWR of more like
|2. But a transmitter SWR under 2 is good enough. Does it really
|matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it
|would help to know if you are tuning in the right direction. On my
|SWR meter, it's hard to tell the difference between an SWR of 5 and an
|SWR of infinity. I would rather have the good resolution at high SWR
|levels, and that is the inspiration for my project. I may seem
|strange to you, but I would like to know if I have lowered my SWR from
|15 to 10. At least I would know I'm going in the right direction, and
|I would know if I passed up the low SWR point.
|
|An SWR of 5 corresponds to a reflection ratio of 2/3. An SWR of 2
|corresponds to a reflection ratio of 1/3. Showing an SWR of 5 should
|be as easy as showing an SWR of 2, but an SWR of 5 is usually
|portrayed as a hair away from infinity. An SWR of 1.5 corresponds to
|a reflection ratio of .2 while an SWR of 9 corresponds to a reflection
|ratio of .8. But in my MFJ meter, an SWR of 1.5 is easily readable,
|while an SWR of 9 is indistinguishable from infinity. An SWR of 1.2
|corresponds to a reflection ratio of .09, and an SWR of 21 corresponds
|to a reflection ratio of .91.
|
|So why do SWR meter designs have to be skewed so greatly?
|

Most of these things are actually measuring reflection coefficient and
displaying it as something else: SWR.

In the old days, circuits such as the Monimatch, etc. were set up with
a front panel pot that adjusted the meter sensitivity. You switched
to the forward position and adjusted the meter to FS. This
"normalized" the meter to account for the incident power.

When you switched to reverse, you were reading the normalized
reflection coefficient (rho), but the meter face was calibrated in SWR

where:

SWR = (1+rho)/(1-rho) Eq.1

So with SWR = 3:1, the meter reads half-scale. If the builder wants to normalize the forward reading to something other than one (FS), the reverse reading will move accordingly. Now you have to get inside the head of the designer.

In your case, you seem to want to look for small changes in a big number. (Going from SWR 15:1 to 10:1 is the difference between 0.875 and 0.818) Clearly, a piece of cake for a DVM but rather difficult with an analog meter. (Hint)

4613. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 16:24:59 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <vlL8a.8676$Uy4.756992@bgtnsc05-news.ops.worldnet.att.net>
Source record: 123402

AB4BC (Peter O. Brackett) wrote:

> "Transcient"??? Surely you are joking Mr. Moore!

> Is this "transcient state" some new third state
> that we have not yet heard of?

> i.e. The Steady state, The Transient state and now,
> ta da... The "Transcient" state.

The transcient state is the time interval between
the prescient and the omniscient.

It should be well known to readers of this NG.

--
Jim Bromley, K7JEB k7jeb(at)arrl(dot)net
Glendale, Arizona

4614. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 16:33:28 UTC
From: richardharrison@webtv.net
Message-ID: <2597-3E6383D8-220@storefull-2317.public.lawson.webtv.net>
Source record: 123403

Roy Lewallen wrote:
"I do just fine without these phantoms, and I ain`t hitting the tar baby."

That`s probably a wise discretion.

It`s too late for me. I`ve already commented on lossless resistance (not resistors).

I`ll give examples of virtual shorts and opens.

A virtual short exists on one end of a quarter-wave stub when the other end is open.

A virtual open exists on one end of a quarter-wave stub when the other end is shorted.

Best regards, Richard Harrison, KB5WZI

4615. Re: Tower Cams?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 17:01:03 UTC
From: Hal <HCK@austin.rr.com>
Message-ID: <3E638A4D.770E07AC@austin.rr.com>
Source record: 123404

Gary wrote:

> Anybody out there successfully done a ham tower cam? I'd like to do
> something simple and inexpensive that would attach to my antenna mast and
> provide "decent" downlinked or wired color imagery from up top. There are
> all the usual considerations, of course, power source, survival in the
> weather, lightning, etc.
>
> Thanks in advance.
>
> Gary W5ZL

4616. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 17:01:57 UTC
From: richardharrison@webtv.net
Message-ID: <28130-3E638A85-472@storefull-2318.public.lawson.webtv.net>
Source record: 123405

I wrote, "My dictionary says:
Resistance - Ratio of the applied electromotive force to the resulting current in a circuit."

That`s what it says, but it should be more restrictive . Reactances aren`t excluded by the quoted definition, and they should be. The dictionary should add that in a resistance the current is in-phase with the voltage. No delay.

Resistances have in-phase voltage and current even if they produce no loss, same as resistances which produce a total loss.

Best regards, Richard Harrison, KB5WZI

4617. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 17:19:34 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303030919.3d1bcb12@posting.google.com>
Source record: 123406

Roy Lewallen <w7el@eznec.com> wrote in message news:<v6579isq2hgba2@corp.supernews.com>...
> Art Unwin KB9MZ wrote:
> > . . .
> > yourself had problems with and yet Roy supplied to Richard a computor
> > analysis
> > of what he thought my claim was about.
>
> This is not true. I did not supply Richard or anyone else with a
> computer analysis of what I thought your claim was about.
>
> In fact, I was sent a model created by someone else, and asked to
> comment on it. I replied that EZNEC seemed to be operating within its
> limitations when analyzing the model. I made no comment on whether I did
> or didn't think that it accurately represented what you had been
> describing on the newsgroup. Frankly, I never could understand, myself,
> what you were describing So there's no way I could have either made a
> model or judged whether it represented what you've described.
>
> But I explained all this to you in email I sent you on August 20, 2002
> in reponse to your email to me on August 19. There has been no activity
> on the subject since.
>
> Richard was neither the person who sent the model to me nor the person
> who created it. And I did not send a model or analysis to Richard or
> anyone else.
>
> > . . .
> > . . . Criticism based on technical
> > facts is what I look for but with you holding back what you based your
> > review on (the computor analysis supplied to you by Roy) puts me
> > at a total disadvantage and until we have cleared that up I am subject
> > to the same tactics and thus I may repeat my technical mistakes which
> > helps
> > nobody.
>
> I did not supply any computer analysis to Richard. Or anyone else, for
> that matter, regarding your antenna.
>
> Interestingly Roy stated that I may have got the patent(the
> > old
> > one) but it takes a lot more proof to persuade the likes of him!
>
> Sorry, I have no idea what you're talking about.
>

> > So it would appear that the program supplies good reasons to faulty
> > reasonings on my part.
> > So Roy, release the secret analysis that you did upon which Richard
> > based
> > his long critisisms which to me is purely a common courtesy .
>
> I cannot, because there is no such "secret analysis".
>
> > Richard, make it easier for Roy to comply by releasing him from any
> > commitment that was made. You owe it not only to me but to all the
> > group of which many struggled with a computor analysis of my claim.
>
> This is entirely in your imagination.
>
> If you'd like to send me a model of your antenna which you've created,
> I'll be glad to do the same for you as I did for the other fellow last
> August, and tell you whether I think the model results are likely to be
> correct. This of course means only that if the antenna is like the
> model, then the results are accurate. If the real antenna isn't like the
> model, then of course the results won't reflect actual performance.
>
> If your objective really were to convince people that you've made some
> innovations, your time would be much better spent in producing some
> quantitative results. Just how much bandwidth, efficiency, gain, or
> whatever does your antenna produce compared to a reference antenna with
> known characteristics?
>
> Roy Lewallen, W7EL

Roy,One does not need an Agatha Christi to read the archives including
those generated before Google took over.To me the past is always
important but it is not as important that one should manacle himself
to it. I am encouraged that Richard is going to do an indepth review
or is going to provide final comments (I may have misread that)
Isaid I will share so I will in the best and only way I can but I
would point out that it suits nobody to berate an amputee because he
cannot run as fast as the rest nor to complain that he should grow
another leg.
I had an illnes that affected my brain but I am overcoming it so I can
rejoin all, I do not look for sympathy, just permission to join.
I will give the antenna details myself in a different thread. I have
visitors coming from Europe despite Saddam so it will be slow in
starting.
I will also state at the outset that I bear no ill will to anybody.
.....I just want to be along with others and share, even tho my
thoughts are rediculous. It certainly is not as laborious or as long
as
"common mode" discussions, nor will it be so complicated or loaded
with equations that newcomers can not follow but in the same vein in
which I described "Q" in a previous thread.

For those who already knew what I am describing
it is better to block the thread out rather than disrupting it.
I look for a fresh start in sharing my present aproach.
Have a good day.
Art

4618. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 17:51:36 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303030951.3763551e@posting.google.com>
Source record: 123407

n1kk@netzero.net (Ken) wrote in message
news:<d7adbb57.0303030736.4610eeac@posting.google.com>...
> Here is my original post,
>
> I would like to hear from some users of this antenna concerning
> the 160m performance. I would also like to hear
> from anyone that might have upgraded from his original
> 80-10m antenna and noticed any difference
> in the 80 and 40 meter performance. I am concerned
> the closer spaced winding of the coil on the
> 160m version might reduce performance.
>
> ----------
>
> I did a little reading from a book
> called REFLECTIONS by Walter Maxwell.
> He states distributed capacitence increases
> when the turns are wound closer together. This
> capacitance is in parallel with the coil
> lowering the self resonant frequency of the
> coil. This would look like an impedance
> that increases as you get closer to
> the self resonant frequency.
>
> This is what concerns me about several of
> the 160m - 10m screwdriver antennas.
> The traditional screwdriver antenna uses
> 10 turns per inch. Some use 8.
> If I remember correctly Mel, and I am
> sure others too, use a closer turns
> per inch to get enough turns for 160m.
>
> I wonder if an add on 160m coil might be
> the better way to go preserving the
> 10 turns per inch for 80m-10m ??
>
> Ken

It might make a small difference. There is one catch though...On a
160m mobile antenna, ground losses will predominate coil losses. So it
may well end up being that there is little real difference between the
two coils. I think the height of the coil above the base is the most
important step for better current distribution, and even better,
adding a top hat to further improve current distribution. MK

4619. Re: Tower Cams?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 18:02:23 UTC
From: "Fred P. Wilbur" <fpwdds@swbell.net>
Message-ID: <3E6398AD.9846FA02@swbell.net>
Source record: 123408

Hal wrote:

> Gary wrote:
>
> > Anybody out there successfully done a ham tower cam? I'd like to do
> > something simple and inexpensive that would attach to my antenna mast and
> > provide "decent" downlinked or wired color imagery from up top. There are
> > all the usual considerations, of course, power source, survival in the
> > weather, lightning, etc.
> >
> > Thanks in advance.
> >
> > Gary W5ZL

4620. Re: Multi-Feed Horizontal Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 18:18:25 UTC
From: M1nn0w <1c3d0g@att.net>
Message-ID: <R%M8a.79735$zF6.5682842@bgtnsc04-news.ops.worldnet.att.net>
Source record: 123409

Perhaps I'm way off base here but wouldn't the second Xmission line now become part of the overall antenna? changing the basic characteristics of the whole setup? I suppose with a tuner it really wouldn't matter much but I keep thinking that you might be bringing your transmitted signal right back into the shack.

4621. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 18:31:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E639F6D.7020008@ieee.org>
Source record: 123410

Richard Harrison wrote:
> A virtual short exists on one end of a quarter-wave stub when the other
> end is open.

Does the virtual short actually short out anything in reality? Does
the virtual short cause any reflections? Here are two examples using
a piece of Z0 lossless transmission line.

```
source-----Length=L-----+
|
1/4 |
WL |
open
```

```
source
|
| 1/4
| WL
+----Length=L--------open
```

Where are the reflections occuring in each system? Does changing
the location of a 90 degree bend make these systems different?
Do any reflections occur at '+' in either system?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4622. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 18:38:20 UTC
From: Zoran Brlecic <...WA7AA...@get.lost>
Message-ID: <3E63A117.1000707@get.lost>
Source record: 123411
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Reg Edwards wrote:

>>If you want to see the effect of tuning when SWR is high you should be
>>watching reflected power not SWR.
>
> Of what possible use is swr OR reflected power to an HF amateur?
>
> He needs to know only whether or not the transmitter is loaded with a
> resistance of approximately 50 ohms.

OK, and how is he supposed to find that out *without* the SWR meter?
Please don't say the antenna analyzer.

> Anything else is just something to waffle about by SWR meter salesmen and on
> newsgroups. ;o

From the amount of your anti-SWR meter posts, one would conclude you're
an antenna tuner salesman.

SWR meter is a useful tool because it provides a quick and cheap visual
indication of the antenna resonance, over short and long periods of
time. The user is able to determine not only whether his signal is
making it to the antenna, but also whether there is a change in
performance which may indicate a problem with either the antenna or
something else in the output path.

73 ... WA7AA

--

Anti-spam measure: look me up on qrz.com if you need to reply directly

4623. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 18:40:49 UTC
From: Zoran Brlecic <...WA7AA...@get.lost>
Message-ID: <3E63A1AB.4080805@get.lost>
Source record: 123412

Art Unwin KB9MZ wrote:
> I have visitors coming from Europe despite Saddam

Hilarious. Surely you meant "despite Bush".

73 ... WA7AA

--

Anti-spam measure: look me up on qrz.com if you need to reply directly

4624. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 18:54:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63A4FA.2040407@ieee.org>
Source record: 123413
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Zoran Brlecic wrote:
> Reg Edwards wrote:
>> He needs to know only whether or not the transmitter is loaded with a
>> resistance of approximately 50 ohms.
>
> OK, and how is he supposed to find that out *without* the SWR meter?

Why, a Wein or Wheatstone Bridge, of course. Wait a minute!
Aren't those used in SWR meters? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4625. Re: Tower Cams?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 18:59:24 UTC
From: Me Two <nobody@frontier.net>
Message-ID: <slrnb679gb.dq4.nobody@animas.frontier.net>
Source record: 123414

On Mon, 03 Mar 2003 17:01:03 GMT, Hal hath writ:
> Gary wrote:
>
>> Anybody out there successfully done a ham tower cam? I'd like to do
>> something simple and inexpensive that would attach to my antenna mast and
>> provide "decent" downlinked or wired color imagery from up top. There are
>> all the usual considerations, of course, power source, survival in the
>> weather, lightning, etc.
>>
>> Thanks in advance.
>>
>> Gary W5ZL

4626. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 19:00:54 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rq976vo689ijnhvqkqregepqs9f7988qf3@4ax.com>
Source record: 123415

On Mon, 03 Mar 2003 12:31:09 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Does the virtual short actually short out anything in reality?

It would "seem" so.

When you start out with visions of virtual, what is reality?

73's
Richard Clark, KB7QHC

4627. Re: A FEW KCs OFF TOPIC.....

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 19:02:37 UTC
From: Allodoxaphobia <nobody@frontier.net>
Message-ID: <slrnb679mc.dq4.nobody@animas.frontier.net>
Source record: 123416

On Sun, 2 Mar 2003 22:24:49 -0600, Crazy George hath writ:
> Butch:
>
> Unfortunately, I don't know the answer, but a little hint: You are more
> likely to get a response if you put something like AT-160 + IC-735 = ? in
> the subject line rather than the off topic mention. The next header in my
> newsreader above yours is ***Kill Saddam, etc., and I looked at yours just
> to see if it could be more OT than Saddam. You aren't even in the running.
> And, ATs are included in the antenna topic set anyway, so your OT claim
> doesn't hold water.

The Universal Subject Text is a hoot, too:

Subject: help

Don't see those here anymore -- killfile'd.
So much noise.
So little time.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

4628. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 19:15:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vma76vcocea9gli6geqgg03sajome8vbhs@4ax.com>
Source record: 123417
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 03 Mar 2003 12:54:50 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Zoran Brlecic wrote:
>> Reg Edwards wrote:
>>> He needs to know only whether or not the transmitter is loaded with a
>>> resistance of approximately 50 ohms.
>>
>> OK, and how is he supposed to find that out *without* the SWR meter?
>
>Why, a Wein or Wheatstone Bridge, of course. Wait a minute!
>Aren't those used in SWR meters? :-)

No.

73's
Richard Clark, KB7QHC

4629. Re: Hustler 6BTV Problems

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 19:30:43 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b40agc$1h6$1@slb2.atl.mindspring.net>
Source record: 123418

Check the traps for water leakage. Make sure the drain hole is on the
bottom. Do same at feedpoint to insure coax is not getting soaked full of
water.

What type of roof is it mounted above? Perhaps the water is making the
ground look different?

Just a few ideas.

Dan/W4NTI

"Tor" <torlang82@hotmail.com> wrote in message
news:EFs8a.53483$NV.1181330@news.direcpc.com...
> Here is a problem I have not found a solution for:
>
> Got a Hustler 6BTV, chimney mounted on a 6 foot steel mast. Got 4 radials
on
> each band at about 45 deg. below horizon`. The SWR is not bad at all after
I
> tuned the antenna when I set it up. As usual, somewhat narrow on 40, and
> extremely narrow on 80.
> My problem is when it rains, the antenna gets longer. The rain pulls the
> res. frq. downwards on all band. We are talking about 200 Khz down on
> 10-15-20. I can not for the best of me figure out why it is doing this.
Any
> others have the same problem with the 6BTV, or verticals in general?
>
> Tor
>
>

4630. Re: Multi-Feed Horizontal Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 19:36:05 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b40are$8ce$1@slb5.atl.mindspring.net>
Source record: 123469

Yep...seems right to me.

Dan/W4NTI
"M1nn0w" <1c3d0g@att.net> wrote in message
news:R%M8a.79735$zF6.5682842@bgtnsc04-news.ops.worldnet.att.net...
> Perhaps I'm way off base here but wouldn't the second Xmission line now
> become part of the overall antenna? changing the basic characteristics of
> the whole setup? I suppose with a tuner it really wouldn't matter much
but
> I keep thinking that you might be bringing your transmitted signal right
> back into the shack.
>
>

4631. Re: Rating a dummy load?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 19:37:10 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <vqCdncMfWcF5M_6jXTWcqQ@comcast.com>
Source record: 123470

Ken,

Ratings of dummy loads are not straight forward. I have an MFJ 1500 W dummy load. What does that mean? There is a graph on the side that shows the maximum operate time at 1500 W is about 8 seconds; the curve then becomes asymptotic to 100 W at 5 minutes. Eyeballing the innards leads me to believe that it contains a 100 W resistor. Even using it in short bursts, at 1200 W it got hot enough on me to melt the solder on the end of the resistor. My rule of thumb on stuff like that is if it doesn't boil spit, it's not too hot. Your dummy load is almost certainly good for 100W and tens of seconds.

Tam/WB2TT
"Ken" <cprstn54zz@att.net> wrote in message
news:3e606d29.657692203@news-server.optonline.net...
> I picked up a dummy load at a hamfest. It has an N-male connector and
> cast fins of rectangular cross section. It measures 1-1/4 x 2 x 4 and
> weighs a hefty 12 oz. It is new, but has no labels (except for the
> Dymo label I put on it). See pic at:
> http://home.att.net/~cprstn54/dummy.jpg
>
> Is there a practical way to determine its capacity? Like maybe
> running measured steady state power into it and measuring its
> steady-state temperature?
>
> Ken KC2JDY
>
>
> Ken
> (to reply via email
> remove "zz" from address)

4632. Aluminum Tubing Sources

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 20:25:35 UTC
From: kb1flr@hotmail.com
Message-ID: <7c04d49.0303031225.18718744@posting.google.com>
Source record: 123471

There are several antenna projects that I am planning that require aluminum tubing of various dimensions. Home Depot and Lowe's do not carry any stock that would do the trick. Where do group members find their antenna building stock?

Best Regards,
Rick, KB1FLR

4633. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 20:38:13 UTC
From: richardharrison@webtv.net
Message-ID: <6135-3E63BD35-606@storefull-2312.public.lawson.webtv.net>
Source record: 123472

CAM wrote:
"Does the virtual short actually short out anything in reality?"

Consider the radar duplexer operation. The transmitter has a direct waveguide path to the antenna. The receiver is Teed into this path. A TR gas tube is sited exactly 1/4-wavelength down the receiver pipe from its T-junction with the transmitter waveguide.

The transmitter pulse fires the TR tube which reflects a near open circuit at the entrance to the receiver waveguide. It doesn`t take much energy to keep the TR tube fired, once it is ionized. The TR tube isn`t a perfect short, so it doesn`t reflect a perfect open 1/4-wavelength away but it works well enough to protect the receiver from being damaged and well enough to keep the receiver from loading the transmitted pulse excessively.

Best regards, Richard Harrison, KB5WZI

4634. Re: SWR Problem with Butternut HV-6

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 20:46:40 UTC
From: mike beauchamp <private.m.j@sympatico.ca>
Message-ID: <PaP8a.989$KJ3.267220@news20.bellglobal.com>
Source record: 123474

yes i had a vetical thtat did that once take a file and clean all your pl
259 up and take a qtip and clean you so238 and tichten tour brackets its
amazing what condensation will do if you run a higer power than avarage and
the damn connections sweat.. also the wind will move the sections of the
antenna around and also your coax might be broken on the inside of the
dielectric its possible.... ve3tya
private.m.j@sympatico.ca
"Dave Nissen" <mcsok9@winco.net> wrote in message
news:b3sthp$4iqm$1@news3.infoave.net...
> I need some advice from the group. I have a Butternut HV-6 that has been
in
> operation for several years without problem. Tonight I attempted to use it
> and discovered that the SWR would "jump" from 10:1 to 1.5:1 without
warning.
>
> I tried to tune it using a Heathkit SA-2060A without any luck. I connected
> the MFJ 259B up to the antenna and watched the meter. It also showed the
SWR
> " jumping" around. I checked the 259 connection at the tuner and it
appeared
> OK, and I was unable to change it or cause the "jumping" by moving the
coax
> inside the shack.
>
> I went outside and could find nothing that looked out of line, but it was
> dark and the only light was a flashlight.
>
> Has anyone had a similar experience? Suggestions? Tuner is OK after
checking
> a 10 meter beam, and agrees with the MFJ on that antenna. I looked for
the
> manual, but after a move from a divorce it seems that the manual is gone
but
> not forgotten.
>
> TNX
> Dave de W9COP
>
>
>
>

4635. Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 20:48:47 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303031248.201503df@posting.google.com>
Source record: 123473

Many in this hobby are skilled in many things but some like myself
have to start off from scratch. If one is skilled in mathematics
then one can obtain one of several books on "Fields and Waves" e.t.c.
but even that can become a bit daunting when the subject revolves
around curls,
TEM and the like, so many will probably aproach antennas in the same
way that I have. Thus I am sharing my aproach to antennas which led to
a couple of patents
plus another which is ongoing. Conclusions reached may well prove
insightfull
or on the other hand may prove to be absurd, but then the hunt for
knoweledge
is where the real fun lies, not the mortar board that comes with
graduation.
When first looking at antennas and descriptive circuits there are
a few true
solid forms such as RESISTANCE,CAPACITANCE and INDUCTANCE which reside
in a electrical circuit. Yes, there are other things that can be
looked at but why overload ourselves at this time.
Resistance pretty much explains itself, it is like a brick wall. To
hit it your self generates a lot of heat but the wall is still there.
It can be broken down
if one sat on a bulldoser and changing the potential energy to kinetic
energy
and charging the wall can destroy it. The fact is that resistance in
the circuit can portray many things but we have to walk before we can
run.
Inductance is shown on a circuit drawing as a piece of wire that is
twisted in coil shape. Fact is that just a straight piece of wire is
an inductance in the antenna world, if we wind it in loops then there
is more than one direction that energy can flow, along the wire until
it becomes dizzy, or it can jump from coil to coil until it gets to
the end, both of these paths takes time a fact that is important as we
will see later on.
Capacitance is shown on a drawing as two plates in parallel with a gap
inbetween
so current flow can only in one direction as between two thin rods
with a separation in the middle. If it were truly shaped like the
drawing, current flow can easily choose to walk the plank as it were
before it jumps the gap.
This alternate direction of flow brings out the similarity between
inductance and capacitance in that they can represent one or more
directions of flow,
it can be a pure inductance or a mixture of inductance plus a bit of

capacitance thrown in. For the inductance that is straight we have a length of wire which is called an inductance or a coiled wire which is also called an inductance even tho we have introduced capacitance type flow. The same goes for the Capacitance which like inductance can be seen as "pure" or with a dash of inductance created by the flow of current along a plate before the jump is made.
Now that is not to hard to follow but it is 'antennas' where our interest lies
even tho we are looking at an electrical circuit in a book.
Well the one basic thing that you have to remember is .... if something can carry current it can also radiate as an antenna regardless of length and diameter. You must keep this reference to antenna length in mind at all times
together with the dual meanings of the words capacitance and inductance as we move on to using a computor in determining what happens when we stick TWO radiating lengths together as in 'two antennas stuck together must be better than one'
What length are we talking about you may ask, well the above said length doesn't matter. Well what frequency are we looking at? Well I haven't mentioned frequency yet so it is not important at this time but if you want to get ahead of things..... then read the thread on "Q" because it involves all that is important with respect to antennas and reflects what we aim to achieve Hi, Hi
The next portion which carries an antenna disclosure will be on a separate thread to ensure continuity of subject matter regardles of what direction comments may take this particular thread.
Have fun but take nothing as gospel and don't run before you can walk
Art

4636. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 21:38:59 UTC
From: richardharrison@webtv.net
Message-ID: <13253-3E63CB73-644@storefull-2314.public.lawson.webtv.net>
Source record: 123475

Jason Hsu wrote:
"So why do SWR meter designs have to be skewed so greatly?"

Non-linearity is inherent in the diodes.

The best field instrument for about 40 years has been the Bird wattmeter. It uses a chart to convert forward and reflected power indications into SWR.

The Bird needs no battery or external power supply to operate. So, it doesn`t become damaged from over-ripe batteries. It can be used anywhere, even atop tall towers without extra wires or complications. If its compromises were easily improved upon, it would likely have already been done.

Putting electronics in a meter requires power from somewhere. Taking it from the signal would limit sensitivity.

For the lab, powered instruments are no big problem. But for the field, it`s advantageous to do without a power supply.

Best regards, Richard Harrison, KB5WZI

4637. Re: Screwdriver ant. opinions, Mel Woody design 160m-10m

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 21:46:25 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303031346.bcb2e28@posting.google.com>
Source record: 123476

n1kk@netzero.net (Ken) wrote in message
news:<d7adbb57.0303030736.4610eeac@posting.google.com>...
> Here is my original post,
>
> I would like to hear from some users of this antenna concerning
> the 160m performance. I would also like to hear
> from anyone that might have upgraded from his original
> 80-10m antenna and noticed any difference
> in the 80 and 40 meter performance. I am concerned
> the closer spaced winding of the coil on the
> 160m version might reduce performance.
>
> ----------
>
> I did a little reading from a book
> called REFLECTIONS by Walter Maxwell.
> He states distributed capacitence increases
> when the turns are wound closer together. This
> capacitance is in parallel with the coil
> lowering the self resonant frequency of the
> coil. This would look like an impedance
> that increases as you get closer to
> the self resonant frequency.
>
> This is what concerns me about several of
> the 160m - 10m screwdriver antennas.
> The traditional screwdriver antenna uses
> 10 turns per inch. Some use 8.
> If I remember correctly Mel, and I am
> sure others too, use a closer turns
> per inch to get enough turns for 160m.
>
> I wonder if an add on 160m coil might be
> the better way to go preserving the
> 10 turns per inch for 80m-10m ??
>
> Ken

Well good for you Ken in reading up on it.
For a coil one has to realise that the last thing we want
is for a voltage spike to go from one end of the coil to
to the other but fortunately for a coil the voltage drop
over each coil must be multiplied by the number of coils used
so fortunately how close the coils are to each other doesn't

normaly present any problems.
But your reading was not for naught since you latched onto
resonant frequency which can be a problem in a worst case scenario.
As I explained before when you draw a graph of frequency versus
number of turns there is a varience in resonant frequencies which is
created
by the introduction of interwinding capacitance which in effect puts a
series of circuits one after the other with each circuit containing
capacitance, inductance and resistance which as you well know can be a
bunch of resonant circuits and not just a pure inductance as was first
imagined.So the resonant frequency of the coil is actually different
from a true capacitance free coil
With that said for an actual antenna it is important that we stay away
from the resonant frequency of the coil when we choose what frequency
we want to operate on. Fortunately again designers are very well aware
of actual and theoretical
resonances so they stay completely away from it even tho the
differences are extremely small as can be shown by graphical methods.
So good for you for reading up on it, even tho it eventualy it was
not a catrostrophic problem in the making. You unlike many others have
a better understanding of the WHY'S which will surely be a seed for
clearer understandings as you read about antennas.
Have a great week
Art

>
> aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0302171144.7fd020a4@posting.google.com>...
> > Richard, If you look at the question analyticaly you can determine the
> > resonant frequency for the same inductance but repeat it for one turn
> > removed and then two turns removed. If this is plotted in the form of
> > inductance versus frequency to get a straight line (plot would have
> > to be the reciprocal of frequency) one can strike a straight line
> > which conforms to a algebraic equation. Of course with diminishing
> > turns so will interwinding capacitance will reduce but for the
> > readings taken it is close enough to a straight line. Thus the
> > straight line should show a negative inductance for a zero frequency(
> > i.e. a capacitance that can be equated to the intercoil capacity for
> > the values from which the line was generated.
> > Ofcourse, in actual fact the capacitance will reduce as turns are
> > reduced so a true graph line will not be exactly straight,on another
> > thread but will show a relative magnitude of interwinding capacitance
> > for the initial rezonant frequency points made. The bottom line is
> > that these values are relatively small and thus capacitance in
> > 'general' terms can be stated exactly as Reg stated.
> > Got the book by the way Richard from the library.The section that you
> > alluded to on another thread was exactly what I was looking for to
> > satisfy my curiousity.
> > Thanks a bunch.
> > Regards

> > Art
> >
> >
> > renrichardharrison@webtv.net (Richard Harrison) wrote in message
news:<9629-3E50FD45-55@storefull-2315.public.lawson.webtv.net>...
> > > Art, KB9MZ wrote:
> > > "---clossness of wire winding IS real and must always be a factor---."
> > >
> > > Reg wrote:
> > > "Self capacitance is primarily a function of a coil`s overall length and
> > > diameter."
> > >
> > > The subject is single layer solenoids. A rigid VHF coil may be
> > > compressed to increase its inductance and capacitance, thus lowering its
> > > resonant frequency.
> > >
> > > Reg`s observation may be that for a given inductance, a close-wound coil
> > > has more capacitance between turns but it also has less turns, So, the
> > > self capacitance of the coil may be very nearly a function of the coil`s
> > > length and diameter. The close-wound coil has less turns which offsets
> > > the proximity of the turns when considering total capacitance.
> > >
> > > Best regards, Richard Harrison, KB5WZI

4638. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 21:50:57 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <57Q8a.68038$lf5.3662719@twister.southeast.rr.com>
Source record: 123477
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I dont care , Just what he wanted to know.

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b3vutl$r1q$1@knossos.btinternet.com...
> "Jimmy" wrote -
> > If you want to see the effect of tuning when SWR is high you should be
> > watching reflected power not SWR.
>
> ================================
>
> Of what possible use is swr OR reflected power to an HF amateur?
>
> He needs to know only whether or not the transmitter is loaded with a
> resistance of approximately 50 ohms.
>
> Anything else is just something to waffle about by SWR meter salesmen and
on
> newsgroups. ;o
> ---
> Reg, G4FGQ
>
> .
>
>

4639. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 21:55:43 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b40j10$ri6$1@slb1.atl.mindspring.net>
Source record: 123478

Jim:

[snip]
"K7JEB" <k7jeb@arrl.no_spam.net> wrote in message
news:vlL8a.8676$Uy4.756992@bgtnsc05-news.ops.worldnet.att.net...
> AB4BC (Peter O. Brackett) wrote:
>
> > "Transcient"??? Surely you are joking Mr. Moore!
>
> > Is this "transcient state" some new third state
> > that we have not yet heard of?
>
> > i.e. The Steady state, The Transient state and now,
> > ta da... The "Transcient" state.
>
> The transcient state is the time interval between
> the prescient and the omniscient.
>
> It should be well known to readers of this NG.
> --
> Jim Bromley, K7JEB k7jeb(at)arrl(dot)net
> Glendale, Arizona
[snip]

ROTFLMAO...
--
Peter K1PO
Indialantic By-the-Sea, FL.

4640. Re: End Fed Zepp Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:01:41 UTC
From: Tony Angerame <tangerame@earthlink.net>
Message-ID: <3E63D149.58246A1F@earthlink.net>
Source record: 123480

OC_CAM's Razor wrote:

> Tony Angerame wrote:
> > Yup that's right the end fed Zepp originally hung from Zeppelins so as
> > to avoid one element of a dipole folding back on the other. An old
> > antenna for an old ham. Hey, it seems to fit my new QTH in the
> > mountains. Lots of Pine trees and lots of land.
>
> An end-fed Zepp is a single-band antenna. The radiating element is
> 1/2WL with a very high feedpoint impedance. The feedline is a 1/4WL
> series-section transformer which transforms the high feedpoint
> impedance to a low impedance. These conditions will exist on only
> one band.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

Aha I didn't know it was only a single band antenna. Hmmm maybe I better
try feeding the middle.

4641. Re: Aluminum Tubing Sources

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:01:51 UTC
From: Jim <"jdr at wa5rrh dot org">
Message-ID: <iuj76vste2m0fpl6rlmukcpg3nmb76d7oj@4ax.com>
Source record: 123479

On 3 Mar 2003 12:25:35 -0800, kb1flr@hotmail.com (KB1FLR) wrote:

>There are several antenna projects that I am planning that require
>aluminum tubing of various dimensions. Home Depot and Lowe's do not
>carry any stock that would do the trick. Where do group members find
>their antenna building stock?
>
>Best Regards,
>Rick, KB1FLR

http://www.mcmaster.com

-jdr-

4642. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:21:36 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <t3h76vs9bulni88r3h458b5de68sp4tqik@4ax.com>
Source record: 123481

On Mon, 03 Mar 2003 12:31:09 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Harrison wrote:
>> A virtual short exists on one end of a quarter-wave stub when the other
>> end is open.
>
>Does the virtual short actually short out anything in reality? Does
>the virtual short cause any reflections? Here are two examples using
>a piece of Z0 lossless transmission line.
>
>source-----Length=L-----+
> |
> 1/4 |
> WL |
> open
>
>source
> |
> | 1/4
> | WL
> +----Length=L--------open
>
>Where are the reflections occuring in each system? Does changing
>the location of a 90 degree bend make these systems different?
>Do any reflections occur at '+' in either system?

Dear Cecil,

Something must be wrong with my newsreader - I don't see the Richard Harrison message that you are responding to.

Please excuse my butting in on this branch of the thread.

Your two examples above are very interesting and they have both been discussed in the literature many times.

In the first diagram, the quarter wave stub does in fact produce a short at the point where it connects to the main line. I don't really worry about what kind of short you call it - virtual or otherwise. The reflections in that system occur only at the open end of the quarter wave stub. The right angle bend is no different than if the quarter wave stub were oriented as an extension of the main line. The impedance seen by the source is whatever is called for by the Length L plus the length of the open ended quarter wave section. Tell me the length L, the value of Zo, the frequency and the vel factor for the

cable and I will give you the impedance seen by the generator.

As an aside, it is worth noting that when we go to the Smith Chart to solve for the impedance seen by the generator, we can enter this problem as an open circuited line of length L plus the 1/4 wave, or we can enter it as the length L shorted - either way, the Smith Chart gives the same resultant impedance value seen by the source.

The second diagram is obviously designed to confuse the observer. It is NO different than the first diagram. The reflections occur only at the open end of the main line and the right angle bend is of no consequence whatsoever, and the impedance seen by the generator is identical with the first diagram.

You may want to quibble with me about where the reflections occur. I will try to rebut your concerns in advance. The reason why no reflections occur at the + sign is because
1) there is no discontinuity there;
2) the transmission line sections all have the same Zo;
3) putting in right angle bends has no effect on non-radiating lines

You may also want to quibble about why the "virtual short" in the first diagram does not produce a reflection (given that a real short or open at the END of a line is certainly going to produce a reflection). The answer is as follows: The terminating impedance, Zt, hung on the end of an ideal line will be repeated at EVEN multiples of a quarter wavelength along the line. The terminating impedance, Zt, will also cause an impedance of Zo squared/Zt
[See Note 1]
to be seen at ODD multiples of 1/4 wavelength. When the terminating impedance happens to be an open or a short, then there will be the equivalent of opens and shorts appearing every quarter wavelength along the line. None of those shorts or opens are considered to be discontinuities - they are only the local manifestation of the terminating impedance itself. Experimental data using TDR will show, for each of the diagrams above, that during the transient phase, the only true discontinuity that causes a reflection is the open or circuit at the very end of the line. Those points along the line where you would mark the presence of a "virtual short" will not cause any reflection in TDR. Furthermore, at steady state, the only thing that you will be able to observe using SWR sensing is that the SWR is infinite (the incident wave and the reflected wave are everywhere equal in magnitude)

Note 1: The quarter wave section exhibits the property that the characteristic impedance of the line will be the geometric mean of the two impedances.
==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html

==========

4643. Re: Aluminum Tubing Sources

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:22:39 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <ksudnVtQn_QxSP6jXTWcqQ@comcast.com>
Source record: 123482

Try Texas Towers at http://www.texastowers.com/aluminum.htm

Tam/WB2TT
"KB1FLR" <kb1flr@hotmail.com> wrote in message
news:7c04d49.0303031225.18718744@posting.google.com...
> There are several antenna projects that I am planning that require
> aluminum tubing of various dimensions. Home Depot and Lowe's do not
> carry any stock that would do the trick. Where do group members find
> their antenna building stock?
>
> Best Regards,
> Rick, KB1FLR

4644. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:23:45 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0303031423.5fac29de@posting.google.com>
Source record: 123483
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

OK, OK, so the diode detectors operate in the square law region and the forward/reverse power meter scales are logarithmic.

However, I still can't understand why people aren't interested in SWR measurements above 5. Don't many HF operators use nonresonant antennas? What about those using a random wire? G5RV? Or a mobile antenna with bandwidth narrower than Ally McBeal's waistline? Come on, I don't see how anyone can hold the SWR under 5 over the entire 160m or 75/80m bands, especially those who don't have room for a 65-130-foot vertical antenna or a 130-260-foot dipole as well as those who use one antenna for multiple bands.

How do you keep your transmitter SWR under 5 for the entire band? Come on, SWR bandwidth is so tight on 160m and 75/80m that it would be easy to miss the resonant settings when twisting those tuner knobs. I would think you would want to know when you have brought your SWR of 20 down to single digits so that you know it's time to slow down your knob-twisting.

Jason Hsu, AG4DG
usenet@@@jasonhsu.com

4645. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:33:07 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <DKQ8a.68043$lf5.3672370@twister.southeast.rr.com>
Source record: 123489

Yep on the EFZ, But reguardless of what it is called it will still work pretty much as well as a inverted V. I did this to appease the XYL. She did not like the feedlines hanging down from the middle of the dipoles.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E636751.6050301@ieee.org...
> Tony Angerame wrote:
> > Any opinions on the end fed Zepp? I plan on 1/2 wave at 3.9 (120 Ft)
> > supported from a tree at the middle and fed at the end with 45 feet of
> > twinnlead. Anohter Hindenburg?
>
> That's not an end-fed Zepp. For it to be an end-fed Zepp, your feedline
> needs to be about 57 feet. The EFZ feedline is 1/4WL long and it's an
> EFZ on only one band.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4646. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:33:13 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b40l79$a4c$1@sparta.btinternet.com>
Source record: 123484
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Zoran Brlecic" wrote -
>
> From the amount of your anti-SWR meter posts, one would conclude you're
> an antenna tuner salesman.

==========

The original enquirer and other readers may wish to draw their own
conclusions from YOUR posts.

Reg G4FGQ

4647. IC-735 + AT-160.....Will they work together?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:45:46 UTC
From: Butch Butler <k4nau@hotmail.com>
Message-ID: <E2OdnTuHRJGWRv6jXTWcog@comcast.com>
Source record: 123485

Can anyone tell me if the Icom AT-160 auto-tuner that was designed for the IC-728 and others will mate to an
IC-735? I know the AT-150 is the natural mate to the 735, but I can get a 160 for a good price right now and need to know how much of a hassle it will be to work with my 735.

Thnx & 73,

k4nau

4648. Repair Diamond X510

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:50:33 UTC
From: Manolis Pasoulas <sv1fxf@yahoo.com>
Message-ID: <b40m3e$18fc$1@aluminium.acn.gr>
Source record: 123486

Please if you know about the capacitors of this antenna,
except the down after the connector,
informe me at address mpasoulas@alarco.gr

Thanks and 73

Manolis Pasoulas
sv1fxf
GREECE

4649. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:50:38 UTC
From: k3bu@aol.com
Message-ID: <20030303175038.11325.00000654@mb-bd.aol.com>
Source record: 123487

>However, I still can't understand why people aren't interested in SWR
>measurements above 5. Don't many HF operators use nonresonant
>antennas? What about those using a random wire? G5RV? Or a mobile
>antenna with bandwidth narrower than Ally McBeal's waistline? Come
>on, I don't see how anyone can hold the SWR under 5 over the entire
>160m or 75/80m bands, especially those who don't have room for a
>65-130-foot vertical antenna or a 130-260-foot dipole as well as those
>who use one antenna for multiple bands.

Come on over and you could see.
No half boiled ham would operate his antennas with SWR over 5. Try with with
"modern" solid state rig :-)
That's the whole purpose of SWR bridge to tune or adjust antenna so it is close
to 50 ohm, no reflections/losses. That' why we design antennas to be close to
feedline impedance or use matching circuits.
This should be included in the exams for ham radio license.

73 Yuri

4650. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 22:59:26 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b40mpfatp1@slb5.atl.mindspring.net>
Source record: 123488

Art:

Thank God! You've now stopped whining.

Great!

Now you'r gonna teach the NG how to get a patent I guess.

Good luck with the lurkers... I hope you find what you are after.

BTW... FWIW... What exactly are you looking for anyway?

Regards,
--
Peter K1PO
Indialantic By-the-Sea, FL.

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0303031248.201503df@posting.google.com...
> Many in this hobby are skilled in many things but some like myself
> have to start off from scratch. If one is skilled in mathematics
> then one can obtain one of several books on "Fields and Waves" e.t.c.
> but even that can become a bit daunting when the subject revolves
> around curls,
> TEM and the like, so many will probably aproach antennas in the same
> way that I have. Thus I am sharing my aproach to antennas which led to
> a couple of patents
> plus another which is ongoing. Conclusions reached may well prove
> insightfull
> or on the other hand may prove to be absurd, but then the hunt for
> knoweledge
> is where the real fun lies, not the mortar board that comes with
> graduation.
> When first looking at antennas and descriptive circuits there are
> a few true
> solid forms such as RESISTANCE,CAPACITANCE and INDUCTANCE which reside
> in a electrical circuit. Yes, there are other things that can be
> looked at but why overload ourselves at this time.
> Resistance pretty much explains itself, it is like a brick wall. To
> hit it your self generates a lot of heat but the wall is still there.
> It can be broken down
> if one sat on a bulldoser and changing the potential energy to kinetic
> energy
> and charging the wall can destroy it. The fact is that resistance in
> the circuit can portray many things but we have to walk before we can
> run.

> Inductance is shown on a circuit drawing as a piece of wire that is
> twisted in coil shape. Fact is that just a straight piece of wire is
> an inductance in the antenna world, if we wind it in loops then there
> is more than one direction that energy can flow, along the wire until
> it becomes dizzy, or it can jump from coil to coil until it gets to
> the end, both of these paths takes time a fact that is important as we
> will see later on.
> Capacitance is shown on a drawing as two plates in parallel with a gap
> inbetween
> so current flow can only in one direction as between two thin rods
> with a separation in the middle. If it were truly shaped like the
> drawing, current flow can easily choose to walk the plank as it were
> before it jumps the gap.
> This alternate direction of flow brings out the similarity between
> inductance and capacitance in that they can represent one or more
> directions of flow,
> it can be a pure inductance or a mixture of inductance plus a bit of
> capacitance thrown in. For the inductance that is straight we have a
> length of wire which is called an inductance or a coiled wire which is
> also called an inductance even tho we have introduced capacitance type
> flow. The same goes for the Capacitance which like inductance can be
> seen as "pure" or with a dash of inductance created by the flow of
> current along a plate before the jump is made.
> Now that is not to hard to follow but it is 'antennas' where our
> interest lies
> even tho we are looking at an electrical circuit in a book.
> Well the one basic thing that you have to remember is .... if
> something can carry current it can also radiate as an antenna
> regardless of length and diameter. You must keep this reference to
> antenna length in mind at all times
> together with the dual meanings of the words capacitance and
> inductance as we move on to using a computor in determining what
> happens when we stick TWO radiating lengths together as in 'two
> antennas stuck together must be better than one'
> What length are we talking about you may ask, well the above said
> length doesn't matter. Well what frequency are we looking at? Well I
> haven't mentioned frequency yet so it is not important at this time
> but if you want to get ahead of things..... then read the thread on
> "Q" because it involves all that is important with respect to antennas
> and reflects what we aim to achieve Hi, Hi
> The next portion which carries an antenna disclosure will be on a
> separate thread to ensure continuity of subject matter regardles of
> what direction comments may take this particular thread.
> Have fun but take nothing as gospel and don't run before you can walk
> Art

4651. Re: True Ladder Line?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 23:02:29 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E63DF05.47757845@cwis.net>
Source record: 123490

jaro,
You can do better than that! Take another
shot...
'Doc

4652. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 23:03:54 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b40n0qvru1@slb3.atl.mindspring.net>
Source record: 123491

Cecil:

Virtual what?

Reminds me of the circuit theorists "games" back in the seventies...

BTW...

What is the name for the "element" that exists across the + and - inputs of
an
ideal Operational Amplifier with strong negative feedback applied?

Ever heard of "nullors" and "norators"? Gyrators, FDNR's, GIC's, etc...

Virtual what?

Regards,
--
Peter K1PO
Indialantic By-the-Sea, FL.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E639F6D.7020008@ieee.org...
> Richard Harrison wrote:
> > A virtual short exists on one end of a quarter-wave stub when the other
> > end is open.
>
> Does the virtual short actually short out anything in reality? Does
> the virtual short cause any reflections? Here are two examples using
> a piece of Z0 lossless transmission line.
>
> source-----Length=L-----+
> |
> 1/4 |
> WL |
> open
>
> source
> |
> | 1/4
> | WL
> +----Length=L--------open
>
> Where are the reflections occuring in each system? Does changing
> the location of a 90 degree bend make these systems different?
> Do any reflections occur at '+' in either system?
> --

> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4653. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 23:06:57 UTC
From: John Eckert <john_eckert@agilent.com>
Message-ID: <1046732849.277635@cswreg.cos.agilent.com>
Source record: 123492
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

I'm with Roy. Once you determine your desired coupling ratio, that will dictate the turns ratio. 10:1 for 20db, 31:1 for 30db... You then need to choose a core material that yields enough reactance at your lowest frequency (i.e. 4x Zo) with those turns. Then choose one large enough to handle the power.
Regards,
JE

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v3ortfkfuffr4c@corp.supernews.com...
> With any of the ferrites of reasonable permeability, coupling isn't a
> problem in a transformer -- you'll get very close to a unity coefficient
> of coupling with any of them. So the issues are:
>
> 1. You need to have adequate winding impedance. That is, the impedance
> of a winding should be at least several times the impedance of the
> circuit it's connected across. Unless power dissipation is a problem
> (see #2, below), it doesn't matter what the angle of the impedance is. A
> resistive, as opposed to reactive, impedance is often more desirable
> because it stays relatively constant over a wide range of frequency.
>
> 2. Heating. The power the core dissipates due to each winding is
> approximately winding I^2 * R, where R is the resistive part of the
> winding impedance, and I is the signal current in the winding. You can
> keep this product in bounds by making R high. The heading will of course
> be less for larger cores. I've found that hysteresis or other
> amplitude-related loss isn't a concern for this sort of application. But
> you'd undoubtedly impress your professor by showing that you considered
> this, and the calculations you used to arrive at your conclusion.
>
> The frequency ranges given for ferrites are often based on the frequency
> range over which their impedance is primarily reactive, i.e., the range
> over which they make decent inductors or tuned circuit elements. These
> aren't the criteria that are important for broad band transformers,
> however. The main properties you have to consider are the ones impacting
> the two considerations above. Ferrites like type 61 have lower R for a
> given impedance, but you might not be able to get enough impedance over
> the frequency range, especially when resonance effects are considered.
> Type 43, on the other hand, might have dissipation problems at 200
> watts. Welcome to engineering!
>
> A graduate student should be able to calculate the necessary value of
> winding impedance based on the design requirements. You can find the

> impedances of cores of various sizes and materials at the Fair-Rite web
> site. Estimation of temperature rise based on physical size and mounting
> is also something a grad student should be able to handle, at least
> approximately. (A simple lab test to show the validity of the
> calculations or approximations would be a plus.) If you submitted your
> work to me as evidence of your ability when interviewing for an
> engineering job, I'd put a lot of weight on how you came to make the
> choices you did. Perhaps your professors use different criterion for
> judging work, however.
>
> Roy Lewallen, W7EL
>
> Jason Hsu wrote:
> > I am working on a better 1.6MHz-30MHz SWR/wattmeter for a graduate
> > school independent study project. It will be able to handle power
> > levels as high as 200W (thus comfortably handle the full 100W) and
> > power levels as low as a small fraction of a watt.
> >
> > As you know, SWR meters use transformers as sensors to sample the load
> > current and voltage. Type 43 material looked like the best choice.
> > Most of the SWR meter designs I have seen use type 43 toroids
> > (FT50-43), and http://www.bytemark.com/products/fermgprp.htm gives
> > this material a frequency range of 1-50MHz.
> >
> > I will be placing my order on Monday, and I am leaning towards
> > FT50-43, since that seems to be the consensus of others who have built
> > SWRmeters.
> >
> > My three questions:
> > 1. Should I use type 43 or type 61 material?
> > 2. What size toroid should I use?
> >
> > Regarding question 1:
> > I was all set to order several type 43 toroidal cores from Palomar
> > Engineers only to find that they recommend type 61 at
> > http://www.palomar-engineers.com/Ferrite_Cores/ferrite_cores.html.
> > According to the Palomar web site, transformers should use type 43
> > material is for .01-10 MHz but type 61 material for .2-100 MHz.
> > Bytemark lists the wide band frequency range of type 61 material as 10
> > to
> > 200 MHz
> >
> > Who is right? Palomar recommends type 61 while Bytemark and the
> > consensus of homebrewers recommend type 43. Under what circumstances
> > is type 61 better, and under what circumstances is type 43 better?
> >
> > Regarding question 2:
> >
> > I estimate that in the worst case scenarios (100-200W and a short
> > circuit or open circuit for a load), the RF transformers may be

> > subject up to 1-2 watts. This doesn't sound like much, but my Radio
> > Shack resistors can only handle .5 watts.
> >
> > I will be using either type 43 or type 61 ferrite material. I noticed
> > that most cores used in other SWR meter designs are size FT-50, which
> > is .50 in. outer diameter, .28 in. inner diameter, and .188 in.
> > thickness. Larger cores take up more space and cost more, but I
> > believe they can also handle more power. (Correct me if I am wrong.)
> > Would I need the F-50A size core (.25 in. thick) or F-50B (.50 in.
> > thick)? Is there any reason I should use a larger core? A smaller
> > core?
> >
> > Would using a larger (or smaller) core narrow the bandwidth or make it
> > less sensitive? Remember: I want my device to work from 1.6 MHz to 30
> > MHz and at power levels as low as a fraction of a watt.
> >
> > Also, I have heard that Amidon has a formula for estimating the
> > maximum power a transformer can handle without heating up excessively.
> > Can anyone have a link to this?
> >
> > Jason Hsu, AG4DG
> > usenet@@@@jasonhsu.com
>
>

4654. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 23:10:55 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E63E0FF.9040706@mwci-news>
Source record: 123493

Richard Clark wrote:
> On Mon, 03 Mar 2003 12:31:09 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Does the virtual short actually short out anything in reality?

No. Only an actual hardware short can do that. A
wave reflects from an actual hardware short and
produces zero-voltage points on the line that are
1/2 wavelength apart from each other. These are
called "virtual shorts".

The term "virtual" refers to something that seems
to be real, but isn't real.

A virtual short is not, itself, a point of
reflection, because its existence *requires* the
existence of a true hardware short farther along
the line.

Bill W0IYH

4655. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 23:29:16 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v67paago5q4g00@corp.supernews.com>
Source record: 123494

The SWR meter is the absolute bane of amateur radio. It has caused more old wives tales and problems than it has ever solved.

I was a ham for at least 10 years before I ever saw one. I suspect that I am not alone in this respect.

How in the world did we ever get on the air without them?

Then again we were not saddled with fixed 50 Ohm outputs. Those old PI networks could match a rather large difference in impedance.

"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030303175038.11325.00000654@mb-bd.aol.com...
> >However, I still can't understand why people aren't interested in SWR
> >measurements above 5. Don't many HF operators use nonresonant
> >antennas? What about those using a random wire? G5RV? Or a mobile
> >antenna with bandwidth narrower than Ally McBeal's waistline? Come
> >on, I don't see how anyone can hold the SWR under 5 over the entire
> >160m or 75/80m bands, especially those who don't have room for a
> >65-130-foot vertical antenna or a 130-260-foot dipole as well as those
> >who use one antenna for multiple bands.
>
> Come on over and you could see.
> No half boiled ham would operate his antennas with SWR over 5. Try with
with
> "modern" solid state rig :-)
> That's the whole purpose of SWR bridge to tune or adjust antenna so it is
close
> to 50 ohm, no reflections/losses. That' why we design antennas to be close
to
> feedline impedance or use matching circuits.
> This should be included in the exams for ham radio license.
>
> 73 Yuri

4656. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 23:30:27 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303031530.3fb5085c@posting.google.com>
Source record: 123495

Zoran Brlecic <...WA7AA...@get.lost> wrote in message news:<3E63A1AB.4080805@get.lost>...
> Art Unwin KB9MZ wrote:
> > I have visitors coming from Europe despite Saddam
>
> Hilarious. Surely you meant "despite Bush".
>
>
> 73 ... WA7AA

Very good, we just can't understand that when we gave the Islamic
Holy places to the Jews and allowed them to place the former
population in reservations while incoming families took away
their land, we would be upsetting people on a World wide basis.
We also get upset when somebody else threatens to use a veto when most
American vetoes was made to prevent the resolving of the Holy place
problem.
But there could be help at hand. Bush can do what he likes as he has
the power of a dictator whereas in the U.K. Blair can be stripped of
his power instantly
All other democratic countries have kept the rule that if a leader
inspires no confidence a simple majority vote can remove him thus
other portions of Government cannot afford to look away from the
wishes of the voters.
Russia.France,Russia,Turkey are all very much aware how a religeous
war
can have major internal consequences, it remains to be seen if the
British Paliament takes the oportunity or perform their duty by a vote
of no confidence.In America we have a reserve of 8 million
people(illegals)
of different religeons waiting to legally join their friends. Other
countries seeing that America has designated them as future targets
can only resort to getting H bombs in the hope of detering later
attacks.
Seems like we can kid some of the World some of the time but this time
it apears to be a Rubicon that we are aproaching and there is nothing
you and I can do about it but to count the coming body bags.
Boy, if other people can change the subject at will don't fight it,
join it!!
Art XG

4657. Re: Hustler 6BTV Problems

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-03 23:45:01 UTC
From: Tor <torlang82@hotmail.com>
Message-ID: <HOR8a.53880$NV.1191007@news.direcpc.com>
Source record: 123496

Dan,

It is mounted above a wooden roof with shingles on top of the roof, with 4 radials on each band. I suspect one of the traps are getting wet. The drain is down on all traps. The antenna comes back to normal after a dry day. Also, it is extremely narrow on 80m, even when the rest of the bands act normal, including 40m, about 25Khz bandwidth on 80m (1.5:1 - 1:1 - 1.5:1) I virually sealed the whole coax connection with Scotchkote, so I don't think the connection / coax is taking in any water. I am seriously considering taking it down and sealing up where the top of the traps (plastic) and the aluminum meets and see if that helps.

Tor/KG4YKF

"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message news:b40agc$1h6$1@slb2.atl.mindspring.net...
> Check the traps for water leakage. Make sure the drain hole is on the
> bottom. Do same at feedpoint to insure coax is not getting soaked full of
> water.
>
> What type of roof is it mounted above? Perhaps the water is making the
> ground look different?
>
> Just a few ideas.
>
> Dan/W4NTI
>
> "Tor" <torlang82@hotmail.com> wrote in message
> news:EFs8a.53483$NV.1181330@news.direcpc.com...
> > Here is a problem I have not found a solution for:
> >
> > Got a Hustler 6BTV, chimney mounted on a 6 foot steel mast. Got 4 radials
> on
> > each band at about 45 deg. below horizon`. The SWR is not bad at all after
> I
> > tuned the antenna when I set it up. As usual, somewhat narrow on 40, and
> > extremely narrow on 80.
> > My problem is when it rains, the antenna gets longer. The rain pulls the
> > res. frq. downwards on all band. We are talking about 200 Khz down on
> > 10-15-20. I can not for the best of me figure out why it is doing this.
> Any
> > others have the same problem with the 6BTV, or verticals in general?
> >

> > Tor
> >
> >
>
>

4658. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:21:06 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F172.3080804@ieee.org>
Source record: 123497

Richard Clark wrote:
> On Mon, 03 Mar 2003 12:31:09 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>>Does the virtual short actually short out anything in reality?
>
> It would "seem" so.

Would you please define "seem"? Does "seem" have anything to do
with reality?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4659. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:28:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F327.1030907@ieee.org>
Source record: 123499
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Why, a Wein or Wheatstone Bridge, of course. Wait a minute!
>>Aren't those used in SWR meters? :-)
>
> No.

Of course they are, Richard, as defined on page 27-4 of my ARRL
Antenna Book, 17th Edition. There's even the "Maxwell" and the
"Bruene" bridges documented on that page.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4660. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:29:32 UTC
From: k3bu@aol.com
Message-ID: <20030303192932.11325.00000655@mb-bd.aol.com>
Source record: 123498

W4JLE writes:
>
>I was a ham for at least 10 years before I ever saw one. I suspect that I am
>not alone in this respect.
>
>How in the world did we ever get on the air without them?

Yea but those were the days of "integrated" TX and PAs and wire antennas. Then
came the open wire feeders, then coax and SWR bridges, and the experts arguing
about re-re-reflections. Such is the progress :-)
What you don't know, it doesn't hurt!

Heck, we used to pull the arc with pencil - that was some power meter!

Yuri

4661. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:30:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F3AB.2050607@ieee.org>
Source record: 123500

Richard Harrison wrote:
> CAM wrote:
> "Does the virtual short actually short out anything in reality?"
>
> Consider the radar duplexer operation. The transmitter has a direct
> waveguide path to the antenna. The receiver is Teed into this path. A TR
> gas tube is sited exactly 1/4-wavelength down the receiver pipe from its
> T-junction with the transmitter waveguide.
>
> The transmitter pulse fires the TR tube which reflects a near open
> circuit at the entrance to the receiver waveguide. It doesn`t take much
> energy to keep the TR tube fired, once it is ionized. The TR tube isn`t
> a perfect short, so it doesn`t reflect a perfect open 1/4-wavelength
> away but it works well enough to protect the receiver from being damaged
> and well enough to keep the receiver from loading the transmitted pulse
> excessively.

I'm sorry, Richard. I'm a very simple person. Is that a "yes" or "no" answer?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4662. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:32:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F427.1010801@ieee.org>
Source record: 123501

Peter O. Brackett wrote:
> ROTFLMAO...

I sincerely hope you can re-attach it. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4663. Re: End Fed Zepp Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:34:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F4AD.80107@ieee.org>
Source record: 123502

Tony Angerame wrote:
> Aha, I didn't know it was only a single band antenna. Hmmm maybe I better
> try feeding the middle.

That would certainly be the intelligent thing to do. Of course, that would
go against the grain of this newsgroup.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4664. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:42:47 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E63F5E1.7416ECD1@attbi.com>
Source record: 123503

I object to the following statement from Yuri.

>Yuri Blanarovich wrote:

> No half boiled ham would operate his antennas with SWR over 5. Try with with
> "modern" solid state rig :-)

Before I moved QTH my 75/80 meter doublet ran a VSWR somewhere between
30:1 and 40:1. My rig is a solid state Icom 746. This spring, after Ice
out, my 75/80 meter doublet will be re-installed with a very high VSWR.
Everything will work just great!

I'm not half boiled, I'm not fully boiled, I'm not par boiled!

I did assemble an antenna system that works just fine! Just think about
it!

Deacon Dave, W1MCE
+ + +

4665. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:42:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F687.3030406@ieee.org>
Source record: 123504

Robert Lay (W9DMK) wrote:
> In the first diagram, the quarter wave stub does in fact produce a
> short at the point where it connects to the main line.

So if it continues straight out, it is not a short? But if it bends
at a 90 degree angle, it is a short? Shirley, you jest!

> The second diagram is obviously designed to confuse the observer.

Nope, from my standpoint, the second diagram is obviously designed
to enlighten the observer.

> It is NO different than the first diagram.

Exactly my point!

> The reason why no reflections occur at the + sign is because
> 1) there is no discontinuity there;

Exactly my point!

> 2) the transmission line sections all have the same Zo;
> 3) putting in right angle bends has no effect on non-radiating lines

Exactly my point! Thanks, Bob.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4666. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:45:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F716.1080807@ieee.org>
Source record: 123506

Jimmy wrote:
> Yep on the EFZ, But reguardless of what it is called it will still work
> pretty much as well as a inverted V. I did this to appease the XYL. She did
> not like the feedlines hanging down from the middle of the dipoles.

Ever consider getting a new XYL who understands physics? That's exactly
what I did.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4667. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:45:42 UTC
From: k3bu@aol.com
Message-ID: <20030303194542.11325.00000658@mb-bd.aol.com>
Source record: 123505

KB9MZ wrote stuff not worth repeating.
.....
Art,
Seems that somebody was creating Empire way back, screwing the world and now have odacity to dump on the nation that liberated and freed the millions of people and showed the way.
People vote with their feet. Why are you still here? Take the Hollywoodskies and commie peacenicks with you and play the human shield in Baghdad.

My XYL almost didn't make it from NYC on 911 and I "see" almost daily the missing Twin Towers, cut the crap and stick to your incoherent antenna "lectures".

73 Yuri

4668. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:51:27 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E63F7E7.10B1EAC1@attbi.com>
Source record: 123507

> OC_CAM's Razor wrote:
>
> >
> > Does the virtual short actually short out anything in reality?

Yes it does!

It shorts out all out of band transients and signals from natural and non natural adverse environments.

Think about it. If you have a virtual short circuit in a line at 29.0 MHz, how much 29.0 MHz signal is going to get past the short circuit?

Deacon Dave, W1MCE

4669. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:51:44 UTC
From: k3bu@aol.com
Message-ID: <20030303195144.11325.00000659@mb-bd.aol.com>
Source record: 123508

>Before I moved QTH my 75/80 meter doublet ran a VSWR somewhere between
>30:1 and 40:1. My rig is a solid state Icom 746. This spring, after Ice
>out, my 75/80 meter doublet will be re-installed with a very high VSWR.
>Everything will work just great!

And you are not using antenna tuner to match doublet to 50 ohm finals Eh?
And how does your built in antenna tuner know when to stop? At SWR of 31:1?
I'd like to know how do you fool your finals to deliver full power to
mismatched antenna, if that is the case.

Yuri

4670. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:51:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F8AC.6010008@ieee.org>
Source record: 123509

Peter O. Brackett wrote:
> Cecil: Virtual what?

Heh, heh, typical non-answer. It's not rocket science, Peter. Is a virtual impedance capable of causing anything to happen? If a virtual impedance can *cause* something to happen, exactly how is a virtual impedance different from an actual physical impedance?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4671. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:54:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63F935.4030108@ieee.org>
Source record: 123510

William E. Sabin wrote:
> The term "virtual" refers to something that seems to be real, but isn't
> real.
>
> A virtual short is not, itself, a point of reflection, because its
> existence *requires* the existence of a true hardware short farther
> along the line.

Thanks Bill, I assumed you would agree with me if you ever spoke up.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4672. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 00:58:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63FA18.1020209@ieee.org>
Source record: 123511

Dr. Fred Hambrecht Sr wrote:
> The SWR meter is the absolute bane of amateur radio. It has caused more old
> wives tales and problems than it has ever solved.

> How in the world did we ever get on the air without them?

Of course, we had pi-net matching circuits built into our transmitters.
Dip & Load, Dip & Load. Who ever came up with transmitters with fixed
matching to 50 ohms anyway? :-) Whoever it was, certainly did a dis-service
to ham radio.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4673. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 01:04:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63FB94.9030108@ieee.org>
Source record: 123512

Yuri Blanarovich wrote:
> Yea but those were the days of "integrated" TX and PAs and wire antennas. Then
> came the open wire feeders, then coax and SWR bridges, and the experts arguing
> about re-re-reflections. Such is the progress :-)

Yuri, I don't know how old you are but there was essentially no coax before
WWII. Before WWII, most hams used open-wire feeders. Does that make you feel
somewhat young and naive? My Elmer used Popcycle sticks for spacers on his
open-wire feeders - varnished, of course.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4674. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 01:12:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63FD6A.7000500@ieee.org>
Source record: 123513

Dave Shrader wrote:
>>OC_CAM's Razor wrote:
>>>Does the virtual short actually short out anything in reality?
>>
> Think about it. If you have a virtual short circuit in a line at 29.0
> MHz, how much 29.0 MHz signal is going to get past the short circuit?

This is so sad, Dave. Every bit of the 29.0 MHz signal is going to
get past the virtual short circuit! Virtual impedances are virtual!
They cannot cause anything to happen in reality. Is the virtual image
of yourself that you see in the mirror really two feet behind the mirror?
I trust that in a fleeting moment of sanity, you will say "no".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4675. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 01:15:55 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63FE4B.2040403@ieee.org>
Source record: 123515

Yuri Blanarovich wrote:
>>Before I moved QTH my 75/80 meter doublet ran a VSWR somewhere between
>>30:1 and 40:1. My rig is a solid state Icom 746. This spring, after Ice
>>out, my 75/80 meter doublet will be re-installed with a very high VSWR.
>>Everything will work just great!
>
> And you are not using antenna tuner to match doublet to 50 ohm finals Eh?
> And how does your built in antenna tuner know when to stop? At SWR of 31:1?
> I'd like to know how do you fool your finals to deliver full power to
> mismatched antenna, if that is the case.

If his Z0 is about 1750 ohms, an SWR of 35:1 will cause a feedpoint impedance
of about 50 ohms at the current maximum point. Is that good enough?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4676. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 01:16:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <kqv76v8grn2c2bcblhi51pf6rr30oi1unc@4ax.com>
Source record: 123514

On Mon, 03 Mar 2003 18:21:06 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> On Mon, 03 Mar 2003 12:31:09 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Does the virtual short actually short out anything in reality?
>>
>> It would "seem" so.
>
>Would you please define "seem"?

sure:
>On Sun, 02 Mar 2003 14:54:40 -0600, OC_CAM's Razor
><Cecil.A.Moore@ieee.org> wrote:
>
>>Seems to me

>Does "seem" have anything to do
>with reality?

Depends on whom is seeming I suppose.

73's
Richard Clark, KB7QHC

4677. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 01:22:41 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E63FFE1.3030101@ieee.org>
Source record: 123516

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Does "seem" have anything to do with reality?
>
> Depends on whom is seeming, I suppose.

So are you omniscient or omnipotent? It's hard to tell which.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4678. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 01:34:41 UTC
From: richardharrison@webtv.net
Message-ID: <2596-3E6402B1-661@storefull-2317.public.lawson.webtv.net>
Source record: 123419

CAM wrote:
"Is that a "yes" or a "no" answer?"

A virtual short is a very low impedance created at a point where there is no real short, but where the forward and reflected waves combine to create a voltage null. A virtual short is not real. A real short is real.

A real short on a transmission line turns a wave around to travel in the opposite direction on the line. In a lossless line, the zero impedance of the short is repeated every 1/2-wavelength back from the real short. The repetitions of the short-circuit conditions at 1/2-wave intervals back from the real short, are the "virtual shorts".

Virtual shorts don`t cause reflections. They result from reflections.

Best regards, Richard Harrison, KB5WZI

4679. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 01:36:32 UTC
From: Zoran Brlecic <...WA7AA...@get.lost>
Message-ID: <3E640313.6080203@get.lost>
Source record: 123517

Yuri Blanarovich wrote:

> Seems that somebody was creating Empire way back, screwing the world and now
> have odacity to dump on the nation that liberated and freed the millions of
> people and showed the way.

That does not give anyone a blank check to do whatever they damn please
in the world. This argument from authority is identical to what Stalin
used in order to swallow up half of Europe.

> People vote with their feet. Why are you still here? Take the Hollywoodskies
> and commie peacenicks with you and play the human shield in Baghdad.

And this is a false dichotomy argument with a Jesus/McCarthy twist: he
who is not with me is against me, and that makes him a commie. It can be
played the other way, too: why are *you* still here? Take your sons and
play the human sacrifice for Bush's oil cronies in Iraq.

> My XYL almost didn't make it from NYC on 911 and I "see" almost daily the
> missing Twin Towers,

And this has got to do with Iraq what exactly? None of the 9/11
religious fanatics was an Iraqi. Al Qaida - Iraq connection is
non-existent. Zero. Nada. You are simply parroting the primitive White
House propaganda that the Bush-Rumsfeld war machine dishes out in
quantities which would shame Goebbels.

Instead of catching the real fanatic Islamic terrorists, this
administration uses the tragic events of 9/11 to trample the
Constitution and promote the parochial interests of the oil barons and
the war criminal that currently runs Israel. This is what American lives
will be wasted for? Shame.

73 .... WA7AA

--

Anti-spam measure: look me up on qrz.com if you need to reply directly

4680. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 01:52:13 UTC
From: "J. Harvey" <JM002.Harvey_SPAM*IS*VERY*BAD_@Sympatico.ca>
Message-ID: <eFT8a.1194$KJ3.338354@news20.bellglobal.com>
Source record: 123420

"OC_CAM's Razor"
> Is the virtual image of yourself that
> you see in the mirror really two feet
> behind the mirror?

If I see a virtual image of you (for example) reflected in a mirror, and I shoot at the image with my Laser Blaster, will the virtual image react to the intense radiation ? Will they shield their eyes with their left or right hand ?

;-)

4681. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 01:59:05 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E6407B5.59F2FF87@attbi.com>
Source record: 123421

I don't use the built in antenna tuner! It's OFF and Programmed OFF.

My concern was not your context. It was the derogatory 'half boiled' statement.

Now, relative to high VSWR.

Any manner used by an 'Antenna System' to achieve 50 ohms at the transceiver is acceptable. An matched antenna system can be achieved by single stub or double stub matching, using a dedicated 'L' network, a tuner, choosing a length of transmission line, etc.

My point is, there is no problem with VSWR! I'll agree with you that any VSWR Meter in the shack is basically inappropriate as a true indicator of the mismatch at the antenna. I operated for almost 30 years and never used one! Heaven, I never even owned one!!
[Mea Culpa! today I do own one :-( ]

Example, I can center feed a 1/2 wavelength dipole, assume 50 ohm load, with 1/2 wavelength 600 ohm open wire feeders, VSWR 12:1, and a 1:1 balun, and have a 50 ohm match at my 746 IF the 600 ohm line is any multiple of a 1/2 wavelength long!! No tuner and I have a 50 ohm unbalanced load.

I can make a hole in a piece of moderately conductive plastic radiate efficiently [slot antennas, circular antennas, etc.]. End fed 1/2 wavelength long antennas, high VSWR, are used by many amateurs and radiate effectively.

The 1:1 VSWR, AKA 50 ohm syndrome, is only a convenience for those who do not have the resources, money, technical expertise, education, to solve the details of their particular installation. [It's much easier to use 50 ohm coax and a 50 ohm load].

Another example of mis-information, at HRO within the past year I had an 'HRO expert' advise me that a VSWR > 1.5:1 was 'BAD'. His language was not technically accurate! He meant to say that the 746 VSWR protection circuits will start to limit the power output IF the VSWR is >1.5:1. I smiled and walked away.

Deacon Dave, W1MCE
Manager, Textron Antenna Range [for 5 years], retired

Excursis:

Back in the 'Olden Days' [1950s] I used a General Radio Slotted line, 1/2 wavelength, with a probe to measure the Vmax and Vmin in UHF/SHF systems. Now if I could only get a 160 meter long 50 ohm slotted line

... Hmmm?

4682. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:05:13 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E640924.B17DC6@attbi.com>
Source record: 123422

I suspect today's built in tuners are simply Tee networks that match
from 15 to 150 ohms. The Tee is just a dual of the Pi-network.

I suspect the basic difference is that a small computer accomplishes the
'Dip-Load' sequence.

Deacon Dave, W1MCE

OC_CAM's Razor wrote:
>
> Dr. Fred Hambrecht Sr wrote:
> > The SWR meter is the absolute bane of amateur radio. It has caused more old
> > wives tales and problems than it has ever solved.
>
> > How in the world did we ever get on the air without them?
>
> Of course, we had pi-net matching circuits built into our transmitters.
> Dip & Load, Dip & Load. Who ever came up with transmitters with fixed
> matching to 50 ohms anyway? :-) Whoever it was, certainly did a dis-service
> to ham radio.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4683. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:11:15 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E640A8B.35BA4618@attbi.com>
Source record: 123423

I didn't read the full thread. My error. Five years ago I designed an antenna system that used a 1/4 wave stub to eliminate out of band very high level transients.

That was a shunt 'virtual' short circuit.

I now see the theme of the thread is that the 1/2 wave repeated Vmin = 0 in a very high VSWR system is the subject. It is a virtual short circuit. I guess I need more time on that old General Radio Slotted line.

DD

OC_CAM's Razor wrote:
>
> Dave Shrader wrote:
> >>OC_CAM's Razor wrote:
> >>>Does the virtual short actually short out anything in reality?
> >>
> > Think about it. If you have a virtual short circuit in a line at 29.0
> > MHz, how much 29.0 MHz signal is going to get past the short circuit?
>
> This is so sad, Dave. Every bit of the 29.0 MHz signal is going to
> get past the virtual short circuit! Virtual impedances are virtual!
> They cannot cause anything to happen in reality. Is the virtual image
> of yourself that you see in the mirror really two feet behind the mirror?
> I trust that in a fleeting moment of sanity, you will say "no".
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4684. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:12:42 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v682spj2k2cca1@corp.supernews.com>
Source record: 123424

In the case of a waveguide, to use your example, a short at the entrance to the pipe leading to the receiver would turn nothing around. The virtual short is reflected to the entrance as if it were shorted.

If the result is the same, does it matter if it is virtual or real?

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:2596-3E6402B1-661@storefull-2317.public.lawson.webtv.net...
> CAM wrote:
> "Is that a "yes" or a "no" answer?"
>
> A virtual short is a very low impedance created at a point where there
> is no real short, but where the forward and reflected waves combine to
> create a voltage null. A virtual short is not real. A real short is
> real.
>
> A real short on a transmission line turns a wave around to travel in the
> opposite direction on the line. In a lossless line, the zero impedance
> of the short is repeated every 1/2-wavelength back from the real short.
> The repetitions of the short-circuit conditions at 1/2-wave intervals
> back from the real short, are the "virtual shorts".
>
> Virtual shorts don`t cause reflections. They result from reflections.
>
> Best regards, Richard Harrison, KB5WZI
>

4685. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:21:50 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <gc286vgk5r19g14djl6pkp42itl7dm2gnr@4ax.com>
Source record: 123425

On Mon, 03 Mar 2003 12:31:09 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Does the virtual short actually short out anything in reality? Does
>the virtual short cause any reflections?

Dear Cecil,

Deacon Dave brings up a very good point that I don't think anyone else
has mentioned.

A REAL, ideal short would be frequency independant - i.e., it would do
a good job of shorting signals at all frequencies. Your "virtual
short", on the other hand, is a narrow band short. At anything other
than the fundamental and odd harmonics, it is not a short at all. In
fact, at even harmonics, it's a "virtual open".

Is that of concern in your problem domain?
==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

4686. A newby aproach to combined antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:22:33 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303031822.528a4804@posting.google.com>
Source record: 123426

In the last thread I talked of antenna circuit diagrams and what they contained.
When deciding to play with antennas I thought that maybe by putting a wrotten apple in a barrel it would not necessarily make every thing bad. So I looked at a 'small' loop antenna which had an awefull things about it that I liked even tho most pointed to the bad things, and cojoined it with a straight dipole in the hope I would get the best of everything for a range of frequencies but without the wastage of length that other varible frequencies antennas had. Also at the back of my mind was to add a capacity hat at the ends because it boiled down to a lot of room and little benefit. I must add that a capacity hat has not been explained yet so we will put that to one side.
So we draw a circuit of a loop which contains a capacitor,a resistance and an inductance formed in a circle, this ofcourse is the antenna alone without a energy feed system. Now the resistance of a metal loop really is a non brainer
since all has a resistance. The capacitor is shown as a variable capacitance so it can cover a lot of eventualities. But no inductance is shown on a picture of a loop antenna,fortunately we know that even a straight portion of a conductive
material can be called a inductor.
Now the dipole, as we stated earlier length is not
an overiding factor so since the loop antenna does 10 thru 20 metres prudence tells us to start with a dipole of around 200 inches per side.
Now we join them together as a a married couple becomes one which means the wife has her hands in your pockets. Thus with a bit of massaging we finish up
with a straight line with a parallel circuit at its center containing a capacitor. We have no idea how to feed this contraption or where so the safest aproach is to form a gamma match and let the computor we have do what it does best. Ofcourse the computor needs some more information as it wants to know what
resistance it has to deal with.Actually when making these sort of circuits we call it impedance instead of resistance. Fortunately Moxons book had a similar
type antenna like this but the background of 'disapearing inductance' was beyond me but it did state an impedance of 220 to be used for every possible frequency used to provide a consistent match.
So now to the computor, there are many programs out there but in all you have to describe parts of the antenna such that you give it a length, height and depth as well as the diameter of the part that you are listing. This is done continuously until all the portions of the antenna have been completed.

Since we somehow decided on a 200 inch dimension for the dipole we can start from there so we have 200 then we put in a length which we don't know so we can just call it 'A' and at the beginning of the program we can say start initially
with A = 4 or 5 or what ever. since we have an antenna that is flat we can put
'0' or zero for the depth. Then comes the next descision which is height, well let us say h and state at the top that h = 820 inches for starters.
The next thing required is the diameter of the portion described of which we really have no idea, especially since we learned earlier that dimensions reflect not only physical things but could also affect both inductance as well as capacitance we can tell the computor the diameter is X1 which for starters
we will state is 1 inch. The next portion we describe to the computor is handled
in a similar way since we only have our sketch with a lot of blank dimension
plus each diameter is an unknown.Now those skilled in the art could easily jump to a judgement that all we have is a straight line with a parallel circuit combined BUT care is to be made not to jump to assumptions after all at the joined point we can also have two straight lines on top of each other which is something like two inductors all mixed up!Now the question of the capacitor value which is the only thing we have to change if we want to have a different frequency to use. This is where we can tell the computor that the capacitor has an impedance that is compatible with any frequency used,change frequency then the capacitor must be changed accordingly to an impeadance which is a constant regardless of frequency. We can now tell the computor to find suitable values for the range chosen i.e. 14,18,20 and so on up to say 30 MHz,we then let the computor do its work. Imediately you will see that the computor really works hard at each and every diameter even to the point of being rediculous so in some cases you have to rein in the computor and stop it at four inches diameter for a particular diameter segment or even stop it at say .010 diameter if it really wants a thin diameter. Eventually with the constraints that you put upon it the computor will come up with widely varying diameters for every portion described so that a near constant SWR can be obtained at all frequencies because mechanical engineering is not it's bag. Now is the time to get the computor to draw a current flow drawing to show what is really happenning.
Imediately you will see that the current started at the ends with zero value
with a sinosoidal curve that abruptly stops when the loop circuit is reached and the repeats itself on the other side of the loop in an opposite fashion.
In the center loop portion it will show TWO current flows where the two antennas are joined and clearly shows that we still have two separate antennas
and circuits. From this it can be deduced that the loop when it gets

its energy from the feed just resonates like a tuning fork with little energy supplied which in turn then resonates the total combination at this same frequency.
This pattern is repeated regardless of what frequency is chosen or length of dipole chosen.We can then ask the computor to show us the radiation pattern for each frequency chosen and instantly we see that for a consistant impedance
(swr) we not only get consistantly a figure 8 pattern but we use all of the mechanical parts to radiate regardles of frquency in use, two portions of a
sinosoidal wave pattern in phase which in each case consists of the maximum area per length portions. Complete review shows that we have found a method of removing reactance from the antenna and be left to deal with only a resistive value that the computor has dealt us. Certainly we have found a way to have
a antenna that is usable for a frequency range where all the physical parts
are active. All of this seems to come about by NOT making firm descisions on physical diameters and configurations except for one more added thing, the width of the parallel circuit is chosen to be a minimum so that the closenes of its sides give an alternate current flow by virtue of what we call stray capacitance, six inches seems to do the job unless the adjacent component becomes a large diameter.
Next time we talk about this combination we will start by drawing an electric circuit or circuits that will match the above findings and then study the implications of "coupling" which amateurs normally do not enjoy between antennas.
Remember now, do NOT presume or be tempted to insert a constant figure for anything unless you have decided that it is a 'must do'. Let the computor do its job without outside constrictions imposed. Note also that dimensions can vary radically dependant on pulses assigned or a constriction of a final dimension in another area.
Have fun with the above program and just accept for the moment the gain figures
supplied by the computor which are not maximum because of restrictions applied.
Also see how the current flow across the capacitor varies as frequency is changed plus the contribution that the loop and the delta feed supplies to the over all feed pattern. I will not move on to the next subject until this one is fully digested argued about, denounced e.t.c. as we analyse it in depth if one chooses to do so.
Regards
Art

4687. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:25:05 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v683jtj3mjm77b@corp.supernews.com>
Source record: 123427

She probably got tired of your claiming that you could prove the top of the corn flake was really the bottom in endless daily tirades. ;>}

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E63F716.1080807@ieee.org...
Ever consider getting a new XYL who understands physics? That's exactly
> what I did.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4688. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:29:10 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303031829.328f793f@posting.google.com>
Source record: 123428

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:<b40mpfatp1@slb5.atl.mindspring.net>...
> Art:
>
> Thank God! You've now stopped whining.
>
> Great!
>
> Now you'r gonna teach the NG how to get a patent I guess.
>
> Good luck with the lurkers... I hope you find what you are after.
>
> BTW... FWIW... What exactly are you looking for anyway?

To become the reciprocal Chipster . . . zzzzzz . . .

>
> Regards,
> --
> Peter K1PO
> Indialantic By-the-Sea, FL.

w3rv

4689. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:35:58 UTC
From: Bruce Raymond <raymondb@dma.org>
Message-ID: <iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com>
Source record: 123518
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

I'll show my ignorance here - is there a convenient way to calculate the temperature rise in the core that Jason originally referred to? I'd end up pulling out an old textbook and calculating Grashof and Nusselt numbers for laminar flow from a vertical plate, and then finding the thermal equilibrium
point. I imagine that there's an easier method for standard components.

Thanks,
- Bruce/ND8I

"John Eckert" <john_eckert@agilent.com> wrote in message news:1046732849.277635@cswreg.cos.agilent.com...
> I'm with Roy. Once you determine your desired coupling ratio, that will
> dictate the turns ratio. 10:1 for 20db, 31:1 for 30db... You then need to
> choose a core material that yields enough reactance at your lowest
> frequency (i.e. 4x Zo) with those turns. Then choose one large enough to
> handle the power.
> Regards,
> JE
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:v3ortfkfuffr4c@corp.supernews.com...
<snip>
> >
> > A graduate student should be able to calculate the necessary value of
> > winding impedance based on the design requirements. You can find the
> > impedances of cores of various sizes and materials at the Fair-Rite web
> > site. Estimation of temperature rise based on physical size and mounting
> > is also something a grad student should be able to handle, at least
> > approximately. (A simple lab test to show the validity of the
> > calculations or approximations would be a plus.) If you submitted your
> > work to me as evidence of your ability when interviewing for an
> > engineering job, I'd put a lot of weight on how you came to make the
> > choices you did. Perhaps your professors use different criterion for
> > judging work, however.
> >
<snip>

4690. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:39:50 UTC
From: tdonaly@aol.com
Message-ID: <20030303213950.15554.00000292@mb-cs.aol.com>
Source record: 123429

Cecil wrote,
>
>Ever consider getting a new XYL who understands physics? That's exactly
>what I did.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
Hi Cecil,
I thought up at least ten different smartass comments to the above, but none of them matched the self-referential absurdity of the original.
73,
Tom Donaly, KA6RUH

4691. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:49:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ha586v42n3g8c7uh9b943i8ja3r8m751jj@4ax.com>
Source record: 123430

On Mon, 03 Mar 2003 19:22:41 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Does "seem" have anything to do with reality?
>>
>> Depends on whom is seeming, I suppose.
>
>So are you omniscient or omnipotent? It's hard to tell which.

So it seems.

73's
Richard Clark, KB7QHC

4692. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 02:51:20 UTC
From: John Eckert <john_eckert@agilent.com>
Message-ID: <1046746312.168775@cswreg.cos.agilent.com>
Source record: 123431
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Well OK. I'll help you with your homework. :)

First let me address one of the things I've read here. "Most SWR meters are
square law". Well- that would be nice but it's
not true. Square law implies a linear detector output(voltage or current)
vs. input power. Square law power meters therefor
have linear scales. Most amateur power meters operate in the linear region
of the detector. This is easy to verify by looking
at the meter scale. The half scale deflection indicates one forth the
fullscale power. Doubling the measured current(voltage)
yields four times(two squared) the power. The meter movement responds
linearly to current, but the scale is anotated as the
square of its input.

Why are SWR meters most accurate at Zo? Two reasons:
They are calibrated a Zo, that is they are nulled with a Zo load. Second,
there are three error terms when measuring reflected
power with a directional couple(ie SWR meter). They are source match error,
load match error and directivity. As you move
further from Zo the source and load match errors grow. At Zo these go to
zero and you're left with the directivity error term
only.

Regards,
John
k2ox

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0303031423.5fac29de@posting.google.com...
> OK, OK, so the diode detectors operate in the square law region and
> the forward/reverse power meter scales are logarithmic.
>
> However, I still can't understand why people aren't interested in SWR
> measurements above 5. Don't many HF operators use nonresonant
> antennas? What about those using a random wire? G5RV? Or a mobile
> antenna with bandwidth narrower than Ally McBeal's waistline? Come
> on, I don't see how anyone can hold the SWR under 5 over the entire
> 160m or 75/80m bands, especially those who don't have room for a
> 65-130-foot vertical antenna or a 130-260-foot dipole as well as those
> who use one antenna for multiple bands.
>
> How do you keep your transmitter SWR under 5 for the entire band?
> Come on, SWR bandwidth is so tight on 160m and 75/80m that it would be
> easy to miss the resonant settings when twisting those tuner knobs. I

> would think you would want to know when you have brought your SWR of
> 20 down to single digits so that you know it's time to slow down your
> knob-twisting.
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com

4693. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 03:03:28 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v685rs1hbmvn06@corp.supernews.com>
Source record: 123432

Way harsh dude!

"Brian Kelly" <kelly@dvol.com> wrote in message
news:d22b54c3.0303031829.328f793f@posting.google.com...
> "Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:<b40mpfatp1@slb5.atl.mindspring.net>...
> > Art:
> >
> > Thank God! You've now stopped whining.
> >
> > Great!
> >
> > Now you'r gonna teach the NG how to get a patent I guess.
> >
> > Good luck with the lurkers... I hope you find what you are after.
> >
> > BTW... FWIW... What exactly are you looking for anyway?
>
> To become the reciprocal Chipster . . . zzzzzz . . .
>
> >
> > Regards,
> > --
> > Peter K1PO
> > Indialantic By-the-Sea, FL.
>
> w3rv

4694. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 03:13:11 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303031913.3ab4b9f8@posting.google.com>
Source record: 123433

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:<b40mpfatp1@slb5.atl.mindspring.net>...
> Art:
>
> Thank God! You've now stopped whining.
>
> Great!
>
> Now you'r gonna teach the NG how to get a patent I guess.
>
> Good luck with the lurkers... I hope you find what you are after.
>
> BTW...
BTW means by the way...

FWIW...No idea of that one.

What exactly are you looking for anyway?
Initially I wasn't looking for anything except to lay horizontal and
sleep or dream for reasons there is no need to get into. The dreaming
which was on antennas became the starting point of overcoming total
inertia in that I got a book on antennas. Unfortunately tho I was an
engineer previously I now was a
person of zero memory but also unable to digest a single line in the
book as I had forgotton what it said at the beginnining. Armed with
this I started to go outside going thru the motions of antenna work
but achieving nothing except going thru a series of stupid self made
accidents. As time passed by (more than a year) it became obvious that
my brain was undergoing a sort of test known as a rat race with repair
of brain against an aging brain but above all I had a lifeline to hang
onto.
Antenna work then evolved in a way totally divorced from the normal
academic
or college approach in that I could not accept or put to memory
different academic factors. Thus I did not have a path to follow which
I feel now isn't to bad because many times I had to climb a rediculous
mountain to see in perspective the path that was in front of me that I
did not see.
Antenna work continued, what else was there? True I may have come to
incorrect conclusions but even so I was able to make antennas that
reflected what I was
expecting yet I was fearfull of my brains true ability. Yes I
discussed it at length, put it on the net and even got a patent
thinking comments would come,
but I was so wrong. I continued in this fashion with another antenna

and again with my present one but still the question of my veracity stayed with me.
Now I am at a point where things are reversed from the norm. uncoordinated self learning which may be absurd regardless of my former field but an added wrestling with computors with the overiding knoweledge that it can also relect garbage because of what I put in.
Now I am at the Rubicon, I have done a lot
but is it total garbage or has my experiences provided me with a fresh new aproach ? There is no doubt that I am alot better than I was but am I at a point where I can rejoin mankind? Yes my comumication is atrocious at times
as is my spelling and people skills but the time has come to present my antennas
learn to accept darts in the hope that maybe, just maybe, I really have arrived at something really new. No, I am not trying to be a martyr or anything, even when an article was written about my antenna work I thought I was doing the hobby some good but in the end suggested that it shouldnt be printed as surely nobody had a interest in antennas, only to be told that" Art, this is not about antennas, it is all about you and your sharing of feelings."
Maybe we are at the same point in time where I think I am sharing antennas but instead unconciously showing my feelings in the worst possible way.
Only time will tell, hopefully brain repair will overcome age losses in the final run.
Regards
Art
> --
> Peter K1PO
> Indialantic By-the-Sea, FL.
>
snip> > Art

4695. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 03:32:58 UTC
From: k3bu@aol.com
Message-ID: <20030303223258.11231.00001140@mb-dh.aol.com>
Source record: 123434

>Yuri Blanarovich wrote:
>> Yea but those were the days of "integrated" TX and PAs and wire antennas.
>Then
>> came the open wire feeders, then coax and SWR bridges, and the experts
>arguing
>> about re-re-reflections. Such is the progress :-)
>
>Yuri, I don't know how old you are but there was essentially no coax before
>WWII. Before WWII, most hams used open-wire feeders. Does that make you feel
>somewhat young and naive? My Elmer used Popcycle sticks for spacers on his
>open-wire feeders - varnished, of course.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

When I said wire antennas, that is wire antennas, not even open wire feeders. I feel young, but not naive. Heck, we couldn't even afford spacers, had to use Windom and LW. The power meter was neon bulb, transformer was hand wound on the upside down stool and the "commercial" equipment was what Hitler left in a hurry. Everything else was home brewed or modified Wehrmacht. Got RF burns to prove it. Proud to say that I built my first transceiver when only KWM was around. We didn't know what the "Popcycles" were, we had bicycles :-)
My Elmer used lightbulb and Lecher wires for "frequency counter" on 144.
Sooo, that makes me ....ty one
.
73 Yuri oK3BU/m

4696. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 03:51:52 UTC
From: k3bu@aol.com
Message-ID: <20030303225152.11231.00001141@mb-dh.aol.com>
Source record: 123435

>
>And this has got to do with Iraq what exactly? None of the 9/11
>religious fanatics was an Iraqi. Al Qaida - Iraq connection is
>non-existent. Zero. Nada. You are simply parroting the primitive White
>House propaganda that the Bush-Rumsfeld war machine dishes out in
>quantities which would shame Goebbels.
>
>Instead of catching the real fanatic Islamic terrorists, this
>administration uses the tragic events of 9/11 to trample the
>Constitution and promote the parochial interests of the oil barons and
>the war criminal that currently runs Israel. This is what American lives
>will be wasted for? Shame.
>

That shows your (red) colors. Enjoy your "true" journalism from the commie networks, looks like they got your brains "converted". Appears that there might be too much propaganda in your head left from Josip Broz Tito days?

I and my sons will go to defend freedom, so people like you can spew their garbage without being sent to gulag.

Primitive White House propaganda was coming out under Rapist in Chief and constitution trimming dummycRATS.

Gor more stupid slogans?

73 and enjoy the freedoms while they last!

Yuri

4697. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 04:05:16 UTC
From: richardharrison@webtv.net
Message-ID: <13253-3E6425FC-705@storefull-2314.public.lawson.webtv.net>
Source record: 123436

Art Unwin wrote:
"---we gave the Islamic Holy Places to the Jews---."

We, being the British with a WW-1 pledge to gain the world-wide support of Jews against Kaiser Bill, Queen Victoria`s grandson. Parliament passed a resolution promising jews a homeland. It didn`t happen after WW-1, but Churchill reprised the promise in WW-2. Who were the Jews going to support; Hitler?

The U.S. had no part in this nonsense. It was the British who partitioned Palestine to create a refuge for Jews. Only then did the U.S. join in to help transport Jews from war-torn Europe.

The U.S. can`t now be even-handed in the fiasco which followed. Its politics have been subverted and corrupted by Zionists.

Bush does not have dictatorial power. He is free at the moment to go to war on his own initiative because congress abdicated its power to declare war. They`ve already passed an enabling resolution requested by Bush. This was an easy sell because congress could escape blame if the war were not to go well. They let Bush make the call. It`s all Bush`s fault if it goes wrong. Congress can stop the war at any time by cutting off funds for its execution. But, that would seem a betrayal of our valiant fighters.

The military always avoids blame for any outcome by opposing military action. Colin Powell`s hangup is based on loyality to his army background. Soldiers always say the land is occupied by giants. The enemy is always formidable. It`s imprudent to say otherwise. Soldiers also get about the same pay on the battlefield as they do in the barracks somewhere.

Parliament can vote no-confidence and change leaders quickly. That doesn`t seem to be the best way for us to change leaders after more than 200 years of the American experiment.

France, Russia, and Turkey are not paragons. They are expressing perceived economic interests first, as most nations do most of the time. All three are also smarting from loss of empire and resent U.S. power.

France is especially chafed. The U.S. was discouraging imperialism and refused help to France in Indo-China. The French were convinced the U.S. wanted to replace them as beneficiaries of spoils from the Orient. Some spoils, a Viet Nam war to check Communism. Then there was Egypt`s take-over of Suez. When French and British troops arrived, Eisenhower told Britain and France to withdraw the troops, or the U.S. would come take them out. France was offended and it still is. But, the troops were

withdrawnn.

The last 50 years have been intolerable in the Middle East. It`s now spilled-over into the U.S. with the World Trade Center destruction. Continuing the failed policies of the last 50 years almost guarantees the same results. Bush wants to reshuffle the deck for a new deal. The new hands may be better or they may be worse. But the trial of something else is way overdue.

Best regards, Richard Harrison, KB5WZI

4698. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 04:33:33 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3E642CA5.9080604@adelphia.net>
Source record: 123438

Art Unwin KB9MZ wrote:

> FWIW...No idea of that one.

For What Its Worth.

- Mike KB3EIA -

4699. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 04:34:34 UTC
From: k3bu@aol.com
Message-ID: <20030303233434.11231.00001142@mb-dh.aol.com>
Source record: 123437

>My concern was not your context. It was the derogatory 'half boiled'
>statement.
>

What's derogatory? Half boiled? OK. Fully boiled (or baked?)! I am so sorry!

>Now, relative to high VSWR.
>Any manner used by an 'Antenna System' to achieve 50 ohms at the
>transceiver is acceptable. An matched antenna system can be achieved by
>single stub or double stub matching, using a dedicated 'L' network, a
>tuner, choosing a length of transmission line, etc.
>
>My point is, there is no problem with VSWR! I'll agree with you that any
>VSWR Meter in the shack is basically inappropriate as a true indicator
>of the mismatch at the antenna. I operated for almost 30 years and never
>used one! Heaven, I never even owned one!!
>[Mea Culpa! today I do own one :-( ]
>
>
>Deacon Dave, W1MCE
>Manager, Textron Antenna Range [for 5 years], retired

You are agreeing that you need to achieve 50 ohm or within 1.5:1 SWR at the transceiver.

Here we go again, taking off on tangent from the subject or point of discussion. Jason was asking about SWR bridge and scale calibration or grading. Sure SWR doesn't really matter that much when you (and Cecil) are using your unknown (or known) length of dipoles, doublets, triplets, whatever. I am sure you are all happy with them, SWR doesn't matter and SWR meter is bla, bla, bla.... I have respect for your years without SWR bridge, I have done it myself.

But we are in today's situation, where we have that "useless" 50 ohm standard, where radios are built to have input/output impedance 50 ohm, coaxes used are (mostly) 50 (or 75) ohm, antennas are designed to match the feedlines and be around 50 ohms in order to minimize the losses. So the fully cooked fresh ham is presented with "problem" of checking or matching his antenna/feedline to his "screwy" 50 ohm transceiver. What simplest (cheapest) or built-in instrument does he have to measure the load and to trim the antenna? SWR bridge.
The argument was about calibration or scale graduation. For me, and I trust many others, the calibration is just fine, it blows up the lower edge of the scale, and this is what is most useful. I do not care if the SWR is 35:1 or 32.5:1. I want it to be around 1:1. I and most of serious contester strive to have their antennas "flat" which means matched throughout the system with minimum losses. That means 50 ohm antenna to 50 ohm coax to 50 ohm radio. That

applies to most of the directional, and phased antenna systems. Yes, for Rhombic or Curtain arrays I would use open wire feeders, but because I use already 50 ohm rest of the system, I would have to bring that to 50ohm so I can do switching and other bitching conveniently. Just check around what competitve contesters are using.
So go ahead and pick another tangent in the above and take off on another tangent!

Beacon Yuri, K3BU
Owner and operator of VE3BMV Razor Antenna Range

Exorcis:
Back in 50's we used Lecher wires to measure wevelength on 2m, we could not afford slotted line.

PS:
It is only a hobby/sport, if you are retired enjoy it. I will never retire, too much to do.

4700. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 04:44:41 UTC
From: k3bu@aol.com
Message-ID: <20030303234441.11231.00001143@mb-dh.aol.com>
Source record: 123439

snips

> Bush wants to reshuffle the deck for a new deal. The
>new hands may be better or they may be worse. But the trial of something
>else is way overdue.
>
>Best regards, Richard Harrison, KB5WZI
>
>

Very well put Richard, but brainwashed liberal dumkopfts are not open to any reasoning and facts, they follow their propaganda and keep repeating their mantra until they get burned and wake up.
Thank goodnes for internet and talk show "revolution" for some sanity and reporting. Liberals look more and more pathetic.
There are no more places to run to, time to stand up and fight for what is right!

73 and God Bless America!

Yuri

4701. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 04:50:31 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E641C7B.CF296041@att.net>
Source record: 123440
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Worthwhile meters aren't calibrated in SWR ratio anyway. They're calibrated
in watts forward and
reverse. You'd have to calculate the ratio if you were interested. I'm not.
I just want that reverse wattmeter
reading to be low.

Dick

Jimmy wrote:

> If you want to see the effect of tuning when SWR is high you should be
> watching reflected power not SWR.
>
> "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
> news:f7d9a152.0303011208.4bb127c9@posting.google.com...
> > I would particularly like to hear what Reg, Roy, and Doc have to say.
> >
> > I'm working on a super SWR/wattmeter for a graduate school project.
> > Why are the SWR meters (MFJ, Radio Shack, built-in) set up to provide
> > good resolution only at low SWR levels? The reflection co-efficient
> > (reflected voltage divided by forward voltage) is .5 at an SWR of 3.
> > But for all of the SWR meters I have seen (including my cross-needle
> > MFJ 945E), an SWR of 3 is NOT in the middle of the scale but well past
> > it. In fact, the middle of the scale is usually an SWR of more like
> > 2. But a transmitter SWR under 2 is good enough. Does it really
> > matter if your SWR is 1.0 or 1.1? However, when your SWR is high, it
> > would help to know if you are tuning in the right direction. On my
> > SWR meter, it's hard to tell the difference between an SWR of 5 and an
> > SWR of infinity. I would rather have the good resolution at high SWR
> > levels, and that is the inspiration for my project. I may seem
> > strange to you, but I would like to know if I have lowered my SWR from
> > 15 to 10. At least I would know I'm going in the right direction, and
> > I would know if I passed up the low SWR point.
> >
> > An SWR of 5 corresponds to a reflection ratio of 2/3. An SWR of 2
> > corresponds to a reflection ratio of 1/3. Showing an SWR of 5 should
> > be as easy as showing an SWR of 2, but an SWR of 5 is usually
> > portrayed as a hair away from infinity. An SWR of 1.5 corresponds to
> > a reflection ratio of .2 while an SWR of 9 corresponds to a reflection
> > ratio of .8. But in my MFJ meter, an SWR of 1.5 is easily readable,
> > while an SWR of 9 is indistinguishable from infinity. An SWR of 1.2
> > corresponds to a reflection ratio of .09, and an SWR of 21 corresponds
> > to a reflection ratio of .91.
> >

> > So why do SWR meter designs have to be skewed so greatly?
> >
> >
> >
> > Jason Hsu, AG4DG
> > usenet@@@jasonhsu.com

4702. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 04:50:33 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E641D4A.1DE77049@att.net>
Source record: 123441
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Reg Edwards wrote:

> "Jimmy" wrote -
> > If you want to see the effect of tuning when SWR is high you should be
> > watching reflected power not SWR.
>
> ================================
>
> Of what possible use is swr OR reflected power to an HF amateur?
>
> He needs to know only whether or not the transmitter is loaded with a
> resistance of approximately 50 ohms.

The reflected power reading serves to confirm that the antenna system is tuned and working as planned.

Other than that, I agree

Dick

4703. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 05:06:13 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E643445.3485573C@cwis.net>
Source record: 123442

Art,
FWIW = For What It's Worth.
'Doc

4704. Re: Aluminum Tubing Sources

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 05:07:14 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <6wW8a.12704$ki.788471@twister.southeast.rr.com>
Source record: 123443

I used to live near an aluminum extrusion plant. You could go through their scrap pile and pick up what you wanted at scrap prices.

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:ksudnVtQn_QxSP6jXTWcqQ@comcast.com...
> Try Texas Towers at http://www.texastowers.com/aluminum.htm
>
> Tam/WB2TT
> "KB1FLR" <kb1flr@hotmail.com> wrote in message
> news:7c04d49.0303031225.18718744@posting.google.com...
> > There are several antenna projects that I am planning that require
> > aluminum tubing of various dimensions. Home Depot and Lowe's do not
> > carry any stock that would do the trick. Where do group members find
> > their antenna building stock?
> >
> > Best Regards,
> > Rick, KB1FLR
>
>

4705. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 05:09:34 UTC
From: richardharrison@webtv.net
Message-ID: <2596-3E64350E-683@storefull-2317.public.lawson.webtv.net>
Source record: 123445

Dr. Fred Hambrecht, Sr. wrote:
"In the case of a wave guide, to use your example, a short at the entrance to the pipe leading to the receiver would turn nothing around."

I`ve worked on radar, first in the navy in WW-2, then about 15 years later in Tierra del Fuego on one of my company`s tug boats. That was the coldest I`ve ever been atop thet mast. I could stay only about five minutes and had to come down to the wheel house to warm up for about ten minutes before climbing the mast again. But I fixed it. Radar repairman wasn`t my regular job in either instance. It was just a necessity.

Reflection works on wireless as well as on wired signals. We have parabolic and many other reflectors that make specific patterns by interference, cancelling signals in one direction by reinforcing signals in another direction.

I`ve gone to a radar book to confirm my statement. It was exactly correct, according to the book. It has a sketch and a block diagram. "ATR" and "TR" tubes are shown. The ATR tube disconnects the transmitter after the pulse is transmitted so as not to affect reception when the pulse has gone out. It isn`t a part of the example I gave. The TR tube is sited 1/4-wavelength down the receiver waveguide from the Tee connecting it with the transmiter to antenna path.

The text says:
"The TR box shorts the receiver input during the transmit pulse. Therefore, the transmit energy cannot do any harm to the receiver."

In another place, the text says:
"Inasmuch as the TR tube then acts as a microwave short, it reflects a maximum impedance to the junction point."

I rest my case.

Best regards, Richard Harrison, KB5WZI

4706. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 05:09:58 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E643526.D8055465@cwis.net>
Source record: 123444

"Dr. Fred Hambrecht Sr" wrote:
>
> Way harsh dude!
>

Possibly, but remember, he is talking about a
series of random discharges of neurons...
'Doc

4707. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 05:59:30 UTC
From: Zoran Brlecic <...WA7AA...@get.lost>
Message-ID: <3E64409B.6000506@get.lost>
Source record: 123446

Yuri Blanarovich wrote:

> That shows your (red) colors.

Yes, of course it does. Just like I am generally accused by communists of being a right-wing Nazi, a right winger never fails to spot my red colors. I wonder why: either I'm a right-wing communist Nazi or people labeling me have no real arguments.

I see you failed to address the fallacies in your "arguments", from the authority argument to a false dilemma to ad hominem, but what else is new...

> Enjoy your "true" journalism from the commie
> networks, looks like they got your brains "converted". Appears that there might
> be too much propaganda in your head left from Josip Broz Tito days?

Follow the proven recipe, huh: when you have nothing to say, attack the person? Hey, it works on the average TV zombie with a 3 minute attention span. Attack Iraq, gassed his own people, weapons of mass destruction, bla bla bla, let's see what's on Joe Millionaire.

> I and my sons will go to defend freedom, so people like you can spew their
> garbage without being sent to gulag.

Some pathos (allow me: yeah, sure you will), except that stealing other people's oil fields and making sure Israel is around for the second coming has nothing to do with American freedom. Once again: Iraq had nothing to do with 9/11. Zero. Nada. All together now: gassed his own people, weapons of mass destruction, let's see what's on Joe Millionaire.

> Primitive White House propaganda was coming out under Rapist in Chief and
> constitution trimming dummycRATS.

When these four nightmare years are over, just ask yourself "are you better off now or before the Son of Bush". Then remember the "horrible" days when the biggest problem was a jizz stain on a bimbo's dress. That's all that will count.

> Gor more stupid slogans?

Gassed his own people, weapons of mass destruction, whoever is not with us is against us, axis of evil, let's see what's on Joe Millionaire.

> 73 and enjoy the freedoms while they last!

If you think we have a terrorism problem now, wait and see what happens after the Iraq mess is over, after the continuing Palestine mishandling and a continued reliance on Arab oil. We're lucky the sheiks are more

hungry for money than the Wall Street and the religious fanatics have more Kurans than brain cells. We topple one petty dictator and pay huge blackmail money to another. North Korea is a much, much greater danger to our freedom, but hush now, there's no oil there and Israel is far away.

73 .... WA7AA

--

Anti-spam measure: look me up on qrz.com if you need to reply directly

4708. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 06:20:39 UTC
From: dplatt@radagast.org
Message-ID: <v68hdntij06n76@corp.supernews.com>
Source record: 123447

In article <85ed38d.0303031913.3ab4b9f8@posting.google.com>,
Art Unwin KB9MZ <aunwin@insightbb.com> wrote:

> Now I am at the Rubicon, I have done a lot but is it total garbage or
> has my experiences provided me with a fresh new aproach ? There is no
> doubt that I am alot better than I was but am I at a point where I can
> rejoin mankind? Yes my comumication is atrocious at times as is my
> spelling and people skills but the time has come to present my
> antennas learn to accept darts in the hope that maybe, just maybe, I
> really have arrived at something really new.

There's only one way to know for sure, Art.

Present some results. Describe an antenna of your design in terms
sufficiently clear (which probably means "using conventional language
in straightforward ways") that other people can understand well enough
to replicate the antenna and measure its performance. It doesn't have
to be patent-application-grade language - just clear and unambiguous
enough that somebody can build one (or a scale model) and accurately
test it.

Then, and only then, can somebody tell you if your design:

- is something truly new and unexpected - e.g. its performance is
substantially better than traditional models would predict (e.g. a
real "new discovery"), or

- is a new variant or application of known theoretical models, and
has benefits which make it superior to other antennas in at least
some ways (e.g. a "new niche"), or

- doesn't work very well, and its actual measured performance is
accurately predicted by existing models (e.g. "a dud").

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4709. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 06:37:12 UTC
From: Repeating Decimal <SalmonFly@attbi.com>
Message-ID: <BA898998.45154%SalmonFly@attbi.com>
Source record: 123448
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

in article iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com, Bruce Raymond at raymondb@dma.org wrote on 3/3/03 6:35 PM:

> I'll show my ignorance here - is there a convenient way to calculate the
> temperature rise in the core that Jason originally referred to? I'd end up
> pulling out an old textbook and calculating Grashof and Nusselt numbers
> for laminar flow from a vertical plate, and then finding the thermal
> equilibrium
> point. I imagine that there's an easier method for standard components.

When the core breaks, you have reached the curie temperature.

Bill

4710. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 07:23:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E645465.8070700@ieee.org>
Source record: 123449

Robert Lay (W9DMK) wrote:
> A REAL, ideal short would be frequency independant - i.e., it would do
> a good job of shorting signals at all frequencies. Your "virtual
> short", on the other hand, is a narrow band short. At anything other
> than the fundamental and odd harmonics, it is not a short at all. In
> fact, at even harmonics, it's a "virtual open".
>
> Is that of concern in your problem domain?

It is now. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4711. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 07:30:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E64561F.90400@ieee.org>
Source record: 123450

Richard Harrison wrote:
> Bush does not have dictatorial power.

Executive Orders come pretty close.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4712. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 07:35:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E645755.3090705@ieee.org>
Source record: 123451

Richard Harrison wrote:
> "Inasmuch as the TR tube then acts as a microwave short, it reflects a
> maximum impedance to the junction point."
>
> I rest my case.

Where are the actual reflections taking place?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4713. Johnson Matchbox Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 08:45:53 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <5JZ8a.18$1v.590@bgtnsc04-news.ops.worldnet.att.net>
Source record: 123452

I have the smaller version of this matchbox.
Is the efficiency of this unit only maximized by
the use of ladder line? Can i get efficient use by
using coax as feed line? What about a direct
connection using a 1/2 wave length of wire on
80 mtrs on the rear where it says "single wire"?
Maybe there are preferable matching devices (tuners)
other than the one i'm referring to?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.459 / Virus Database: 258 - Release Date: 2/25/03

4714. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 11:30:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b422og$1v1$1@sparta.btinternet.com>
Source record: 123453
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Dick Carroll" wrote -
> Reg Edwards wrote:
> > "Jimmy" wrote -
> > > If you want to see the effect of tuning when SWR is high you should be
> > > watching reflected power not SWR.
> >
> > Of what possible use is swr OR reflected power to an HF amateur?
> >
> > He needs to know only whether or not the transmitter is loaded with a
> > resistance of approximately 50 ohms.
>
> The reflected power reading serves to confirm that the antenna system is
tuned
> and working as planned.
>
> Other than that, I agree
==========

Dick, well, you could hardly disagree with yourself. ;o)

The system is PLANNED to provide the transmitter with a resistive load of 50 ohms and that's all the meter is required to indicate. And the meter should be named appropriately.

As there IS no reflected power, neither is there a transmission line on which an swr can be indicated, why bother to introduce misleading fictional quantities to novices?

That's how 'old wives' tales are initiated. ;o)

Reg, G4FGQ

4715. Re: Johnson Matchbox Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 11:58:39 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6494EF.206661F8@cwis.net>
Source record: 123454

Marvin,
Since it's a balanced tuner, I would think you
would get maximum benefit from using a balanced
feed line. But, if it has the proper connectors,
coax or a single wire will work also (you'll need
a very good ground for the single wire feed line).
'Doc

4716. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 13:02:58 UTC
From: richardharrison@webtv.net
Message-ID: <1695-3E64A402-260@storefull-2315.public.lawson.webtv.net>
Source record: 123455

CAM wrote:
"Where are the real reflections taking place?"

At the real "short". The real short is the conducting TR tube.

1/4-wavelength back from the short-circuit, the waveguide presents a very high impedance to energy entrance to the receiver waveguide.

A waveguide with a short-circuit at one end presents an open-circuit 1/4-wavelength back from the short-circuit just as a short on a transmission-line does.

Best regards, Richard Harrison, KB5WZI

4717. Re: new ham needs help

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 13:40:13 UTC
From: conconemail@libero.it
Message-ID: <bcd1b798.0303040540.599dcdc@posting.google.com>
Source record: 123456

Steve
give a look over here, there are many antenna plans you may find usefull

http://www.dxzone.com/catalog/Technical_Reference/Antennas/

if you do not have much space you should consider these too...
http://www.dxzone.com/catalog/Technical_Reference/Antennas/Stealth/

Max

4718. Re: Need Help Finding Design Info for Coaxial Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 13:48:00 UTC
From: conconemail@libero.it
Message-ID: <bcd1b798.0303040548.3c1be677@posting.google.com>
Source record: 123457

you can find some plans on coax antennas here

http://www.dxzone.com/cgi-bin/search/search.cgi?Category=Technical_Reference&query=coax&type=keyword&bool=or

http://www.dxzone.com/catalog/Technical_Reference/Antennas/

max

4719. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 13:52:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b42b28$14n$1@knossos.btinternet.com>
Source record: 123458

Welcome back Art. Not a single mention of swr!

Reg.

4720. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 14:14:08 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <3E64B4B0.4010503@psu.edu>
Source record: 123459

OC_CAM's Razor wrote:
> ...
> Of course, we had pi-net matching circuits built into our transmitters.
> Dip & Load, Dip & Load. Who ever came up with transmitters with fixed
> matching to 50 ohms anyway? :-) Whoever it was, certainly did a dis-service
> to ham radio.
Well, matching the low impedance collector output of a bipolar
transistor power
amplifier to an antenna turned out to be a bit different from matching
the high
impedance output of a tube amplifier to one. Pi networks (these days you
really
need a Pi-L network for enough harmonic suppression) work well for hi-Z
to low-Z, but not for low to high (at least using realistic component
values.) So manufacturers took the broad band approach of transforming
the low impedance collector circuit to 50 ohms and then using lowpass
and bandpass filters for harmonic suppression. That means that if you
are using a non resonant or non 50 ohm antenna you need an external
matching network of some sort. What a lot of people don't realize is
that these bandpass filters are doubly terminated filters - they need to
see the proper impedance looking in both directions to perform as they
were designed. So the matching issue is not just getting power out of
the amplifier, but also getting the bandpass filters to do their job as
well.

73,
Bob AD3K
--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

4721. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 14:23:31 UTC
From: richardharrison@webtv.net
Message-ID: <2596-3E64B6E3-731@storefull-2317.public.lawson.webtv.net>
Source record: 123460

Reg, G4FGQ wrote:
"As there is no reflected power, neither is there a transmission line on which an SWR can be indicated, why bother to introduce misleading fictional quantities to novices?"

As I`m only driving 1/3 mile down the street and returning in 10 minutes, why bother with MPH and a misleading speedometer? Bet I can hit 50 if there`s no traffic enroute!

Best regards, Richard Harrison, KB5WZI

4722. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 14:55:35 UTC
From: richardharrison@webtv.net
Message-ID: <2596-3E64BE67-733@storefull-2317.public.lawson.webtv.net>
Source record: 123461

CAM wrote:
"Executive Orders come pretty close (to dictatorial power)."

Except for two checks.

First, a constitutional challenge in the courts.

Second, a congressional review and repeal. A president can veto a congressional act, but congress can override a veto with a 2/3 vote.

A president is powerful, but ultimate power resides in a popularly elected congress. The lower house is 100% subject to change by election every 2 years. All appropriation bills for spending must originate in the lower house. Maximum power is the power of the purse.

Best regards, Richard Harrison, KB5WZI

4723. Re: Johnson Matchbox Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 15:09:44 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87vfyztbgn.fld@barrow.com>
Source record: 123463

"marvin rosen" <raghead@worldnet.att.net> wrote:
>I have the smaller version of this matchbox.
>Is the efficiency of this unit only maximized by
>the use of ladder line?

You can maximize efficiency by using low loss feed line. Open wire feed line can operate with high a SWR and still be relatively low loss. That is measurably less true for twin lead. Coax is lossy compared to open wire line. That is true even when well matched, but the difference is really significant when the SWR is high.

All of the above is relative too... Does it make any difference at all if the loss is 1 dB higher? Probably not. So a 10 foot run of RG-8 coax with a high SWR on 80m may not be a problem. Certainly a 200 foot run of RG-58 to a 10m antenna needs to operate with a low SWR, or there will be huge losses!

>Can i get efficient use by
>using coax as feed line? What about a direct
>connection using a 1/2 wave length of wire on
>80 mtrs on the rear where it says "single wire"?

End feeding a 1/2 wave length may be difficult, because it is a very high impedance and will probably exceed the range of the tuner. But the concept is correct. You can feed virtually any length of wire that way; and if it is a bit longer (or shorter) than 1/2 wavelength, it might be easier to match, and will function much the same as if it were exactly 1/2 wavelength. The problem with that arrangement is clearly not loss in the feed line! (Note that center feeding a 1 wavelength antenna presents the same problem as end feeding a 1/2 wavelength wire. And if either are fed with low loss feed line that high impedance can be transformed by selecting an appropriate length for the feed line. Hence there are many options.)

As to choosing to end feed or to use a transmission line, the loss in 100 feet of feed line might well be less than the gain from having the same length of antenna 100 feet off the ground. That would be particularly true if the low elevation portions of the directly fed wire are necessarily close to objects that will interfere with the wire as an antenna.

For example, if you are in an apartment on the top floor of a 100' high building and this antenna can only be mounted 10 feet above the roof... end feed the wire! But if your wire must be

laid along a wire-mesh fence for 40 feet before it can go up to
the top of a 40 foot support (tree, tower, pole, whatever),
you'll find the loss from a feed line will be less than the poor
performance of a the antenna at a low elevation.

Which is to say, it all depends... ;-)

>Maybe there are preferable matching devices (tuners)
>other than the one i'm referring to?

The Johnson Matchbox units are pretty good. But they lack one
feature that I would insist on. The Matchbox uses a switched
inductor, rather than a continuously variable inductor. That
limits the range of impedances and the frequencies which can be
used.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

4724. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 15:29:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b42go0rvp1@venus.btinternet.com>
Source record: 123462

> What a lot of people don't realize is
> that these bandpass filters are doubly terminated filters - they need to
> see the proper impedance looking in both directions to perform as they
> were designed.

==========

No they don't.

They need to be correctly terminated only at the output, as indicated by the
TLA.

In practice, they are often severely mismatched at the input.

Try another comic paper, ;o)

Reg.

4725. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 15:55:49 UTC
From: k3bu@aol.com
Message-ID: <20030304105549.09246.00000003@mb-ba.aol.com>
Source record: 123464

>WA7AA
>>K3BU

I didn't want to engage in politics here at the antenna forum, but if you are accusing me of
>"I see you failed to address the fallacies in your "arguments", from the authority argument to a false dilemma to ad hominem, but what else is new..."<
here I go one more time in hope of pointing out some of your fallacies:

>
>> Seems that somebody was creating Empire way back, screwing the world and
>now
>> have odacity to dump on the nation that liberated and freed the millions of
>> people and showed the way.
>
>That does not give anyone a blank check to do whatever they damn please
>in the world. This argument from authority is identical to what Stalin
>used in order to swallow up half of Europe.
>

It is quite pathetic to compare US system of governing to Stalin. Blank check? Obviously you have no understanding what US is based on, how it works and with past history of liberation and being the place where people come to from all those other "gardens of Eden" Just wait few weeks and you will see how pathetic your drivel is.

>> People vote with their feet. Why are you still here? Take the
>Hollywoodskies
>> and commie peacenicks with you and play the human shield in Baghdad.
>
>And this is a false dichotomy argument with a Jesus/McCarthy twist: he
>who is not with me is against me, and that makes him a commie. It can be
>played the other way, too: why are *you* still here? Take your sons and
>play the human sacrifice for Bush's oil cronies in Iraq.
>

I lived in commie empire, lost my father and sister to prosecution, I fought for freedom, suffered for my convictions and when had opportunity to vote with my feet I did and escaped the red hell. I can smell red rat when I see it. I will do my share of supporting efforts to make this country safe and free. If "Bush oil cronies" were after just taking over the oil, why didn't they stay in Kuwait, claim the prize and suck all the oil? Seems to me that US liberated invaded country from sycopath, drove him away and gave the country back to sheiks, who will probably soon forget it, just like French, Germans and others doing business with Iraq, pretending to protect innocent children, while butcher is killing own people. And Russian archives confirmed that McCarthy was

right and helped to slow the communization of this country. But seems that they are rearing their ugly heads again. Protesting Bush for what? While defending butcher of Baghdad who is striving for WMD and their distribution to wild turbanites?

>> My XYL almost didn't make it from NYC on 911 and I "see" almost daily the
>> missing Twin Towers,
>
>And this has got to do with Iraq what exactly? None of the 9/11
>religious fanatics was an Iraqi. Al Qaida - Iraq connection is
>non-existent. Zero. Nada. You are simply parroting the primitive White
>House propaganda that the Bush-Rumsfeld war machine dishes out in
>quantities which would shame Goebbels.
>

Have you followed latest arrest of #3 AQ mastermind? Stand by, you will hear more and some connections. Looks like you are totally brainwashed by Commie News Network. I know someone who works in intelligence and you have no idea what is going on and how hard they work to nail the bastards that are working on blowing up your neighborhood. Saw the tanker blow up in NYC harbor? I am not for war, but I wish Americans didn't stop in Germany, but continued east as Gen. Patton wanted. Would have spared millions of lives from Stalin's "liberation".

>Instead of catching the real fanatic Islamic terrorists, this
>administration uses the tragic events of 9/11 to trample the
>Constitution and promote the parochial interests of the oil barons and
>the war criminal that currently runs Israel. This is what American lives
>will be wasted for? Shame.
>

One step at a time. Take care of source of WMD and butcher of Baghdad, catch one by one Al-Quiada (you missed Sheikh Muhhammad arrest?), sort out Palestinian state - Israel problem and shut off Korean sycopath. President has its plate full from screwups by previous occupant of the White House. Maybe local commies will see the light and find out where the real problems are.

If you would like to find out what is really going, there are some sources like www.freerepublic.com, Fox News Network where you can get a bit more balanced picture. Sure is diferent from Dan Rather interview with "nice" Mr. Saddam.

Sorry NG, this is last discussion on the subject from my end, lets get back to antennas and SWR.

Yuri

4726. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 16:02:23 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <7si96vgcaths5l1isdjj1fddb8vbqtvd7r@4ax.com>
Source record: 123465

On Tue, 4 Mar 2003 15:29:04 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

|> What a lot of people don't realize is
|> that these bandpass filters are doubly terminated filters - they need to
|> see the proper impedance looking in both directions to perform as they
|> were designed.
|
|==================================
|
|No they don't.

Yes they do.
|
|They need to be correctly terminated only at the output, as indicated by the
|TLA.

No.
|
|In practice, they are often severely mismatched at the input.

In practice they are severely mismatched at the output... at the
frequencies they are designed to surpress.

If the amplifier generated no products that needed filtering, we
wouldn't need the filter. In practice, there are harmonics that
needed to be filtered. The filter is designed to work into 50 ohm and
we wind up presenting it a 50 ohm load at Fo, where it doesn't have to
work and some wildly varying impedance at 2 or 3 Fo where it does need
to work.

4727. Test

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 16:04:01 UTC
From: Deni <deni1@tiscali.fr>
Message-ID: <newscache$uaf8bh$8zc$1@news.tiscali.fr>
Source record: 123466

- . ... -

4728. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 16:06:10 UTC
From: richardharrison@webtv.net
Message-ID: <6135-3E64CEF2-720@storefull-2312.public.lawson.webtv.net>
Source record: 123467

Jason Hsu wrote:
"As you know, SWR meters use transformers as sensors to sample load current and voltage. Type 43 material looked like the best choice."

The Model 43 Bird wattmeter is the most successful SWR indicator of all time. It has no transformer core material. A simple tiny loop serves to capture both capacitive and inductively coupled samples of voltage and current in the coax line.

These samples are adjusted in the sensing element to equally deflect the meter. Since volts and amps are made out-of-phase by one reflection, the meter can be switched to respond to either the forward wave or to the reflected wave, and the opposite traveling wave cancels. In one direction, samples add. In the opposite direction, equal samples subtract and as they are equal in amplitude, their remainder is zero.

Bird uses the KISS principle. I would, too. Oh! The Bird Model 43 operates 0.45-2300 MHz, and works with 0.1- 10,000 watts.

Best regards, Richard Harrison, KB5WZI

4729. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 16:47:48 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <9cAJuLC0iNZ+EAuu@ifwtech.co.uk>
Source record: 123322

Richard Harrison wrote:
>Jason Hsu wrote:
>"As you know, SWR meters use transformers as sensors to sample load
>current and voltage. Type 43 material looked like the best choice."
>
>The Model 43 Bird wattmeter is the most successful SWR indicator of all
>time. It has no transformer core material. A simple tiny loop serves to
>capture both capacitive and inductively coupled samples of voltage and
>current in the coax line.
>
The "simple tiny loop" is only used in the VHF/UHF elements.

The 2.5kW HF (2500H) element does include a ferrite-cored current transformer *inside* the main pickup loop. Obviously the main line does not pass through the core, as it does with a Bruene bridge, but the purpose is still to sample the current in the main line..

>These samples are adjusted in the sensing element to equally deflect the
>meter. Since volts and amps are made out-of-phase by one reflection, the
>meter can be switched to respond to either the forward wave or to the
>reflected wave, and the opposite traveling wave cancels. In one
>direction, samples add. In the opposite direction, equal samples
>subtract and as they are equal in amplitude, their remainder is zero.
>
In these respects, the Bird element works in exactly the same way as every other "SWR bridge", "SWR meter", "directional wattmeter", G4FGQ's "Three Letter Invention", or whatever you wish to call that thing you hook into a transmission line.

>Bird uses the KISS principle. I would, too. Oh! The Bird Model 43
>operates 0.45-2300 MHz, and works with 0.1- 10,000 watts.

With the aid of 61 different elements... this is "simple"?

The Bird 43 has many acknowledged virtues. It doesn't need to be over-sold.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4730. Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 16:57:52 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <kW49a.391$Oz1.25152@bgtnsc05-news.ops.worldnet.att.net>
Source record: 123468

Some years ago i had a Dentron kw T-match antenna tuner.
I wanted to vary the inductance of the above without having
to add more taps to the inductor. One idea that "partially"
worked was the addition of a 1/2" diameter ferrite rod. This
rod (7" length) was placed dead center in the inductor &
slid back & forth. It actually worked! I could now use the
taps & the rod for a better match. Unfortunately the rod
started getting hot even though i was only using a hundred watts
output. I now wonder if i should have tried a 1" length rod or toroid
placed in the middle of the coil & use it like a variometer?
I do not have that tuner any more but i do have my small
johnson matchbox! Hmmm......Has anybody tried something
similar? It's the heating of the ferrite material that is giving me the
problem.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.459 / Virus Database: 258 - Release Date: 2/25/03

4731. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 17:09:32 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b42mkc$789$1@venus.btinternet.com>
Source record: 123319

An iron dust rod would not have overheated.

4732. Re: Johnson Matchbox Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 17:21:44 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b42nb8$hp3$1@knossos.btinternet.com>
Source record: 123320

```
> >Is the efficiency of this unit only maximized by
> >the use of ladder line?
====================
No. Efficiency is exactly same with any sort of line.
====================
>>Coax is lossy compared to open wire line.
====================
Only if the coax is thin.
1" diameter coax is fine even with high swr.
```

4733. Re: SWR Problem with Butternut HV-6

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 17:33:54 UTC
From: daveblighty@yahoo.co.uk
Message-ID: <a1d63203.0303040933.2cfb8a29@posting.google.com>
Source record: 123321

I put my Butternut up again recently, got the same problem. With mine
it was caused by one of the capacitors broken at the point where the
little screw fixes it to the antenna. It was not noticeable straight
away as the wire strip held it firm against the ant most of the time,
and the guy ropes helped to keep the connection. Only when i pulled at
the ant and checked it closely did i find the problem.

I suggest if you can't find a broken cap, it may be a fault with one
that look physically fine.

I simply soldered it back together, and its holding for now.

Manuals are available here

http://www.bencher.com/pdf_download.html

Good luck

> "Dave Nissen" <mcsok9@winco.net> wrote in message
> news:b3sthp$4iqm$1@news3.infoave.net...
> > I need some advice from the group. I have a Butternut HV-6 that has been
> in
> > operation for several years without problem. Tonight I attempted to use it
> > and discovered that the SWR would "jump" from 10:1 to 1.5:1 without
> warning.
> >
> > I tried to tune it using a Heathkit SA-2060A without any luck. I connected
> > the MFJ 259B up to the antenna and watched the meter. It also showed the
> SWR
> > " jumping" around. I checked the 259 connection at the tuner and it
> appeared
> > OK, and I was unable to change it or cause the "jumping" by moving the
> coax
> > inside the shack.
> >
> > I went outside and could find nothing that looked out of line, but it was
> > dark and the only light was a flashlight.
> >
> > Has anyone had a similar experience? Suggestions? Tuner is OK after
> checking
> > a 10 meter beam, and agrees with the MFJ on that antenna. I looked for
> the
> > manual, but after a move from a divorce it seems that the manual is gone
> but
> > not forgotten.
> >

> > TNX
> > Dave de W9COP
> >
> >
> >
> >

4734. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 18:15:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E64ED46.3010709@ieee.org>
Source record: 123323

Richard Harrison wrote:
> CAM wrote:
> "Where are the real reflections taking place?"
>
> At the real "short". The real short is the conducting TR tube.
>
> 1/4-wavelength back from the short-circuit, the waveguide presents a
> very high impedance to energy entrance to the receiver waveguide.

If it presents a very high impedance to energy entrance, why
don't the reflections occur at that very high impedance point?
What are the values of the forward current and reflected current
at the actual short? 1/4WL away, that same forward current is
flowing into the waveguide and that same reflected current is
flowing out of the waveguide. The "very high impedance" is not
blocking the flow of either one of those two currents.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4735. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 18:23:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E64EF0C.1080003@ieee.org>
Source record: 123324

Yuri Blanarovich wrote:
> When I said wire antennas, that is wire antennas, not even open wire feeders.

Sorry, I misinterpreted your meaning. When you said antennas, I assumed
you were talking about coax-fed antennas.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4736. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 18:30:21 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v69s5q39f592cc@corp.supernews.com>
Source record: 123325

Richard, what is the impedance of a shorted 1/4 wave length?

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:2596-3E64350E-683@storefull-2317.public.lawson.webtv.net...
> Dr. Fred Hambrecht, Sr. wrote:
> "In the case of a wave guide, to use your example, a short at the
> entrance to the pipe leading to the receiver would turn nothing around."
>
> I`ve worked on radar, first in the navy in WW-2, then about 15 years
> later in Tierra del Fuego on one of my company`s tug boats. That was the
> coldest I`ve ever been atop thet mast. I could stay only about five
> minutes and had to come down to the wheel house to warm up for about ten
> minutes before climbing the mast again. But I fixed it. Radar repairman
> wasn`t my regular job in either instance. It was just a necessity.
>
> Reflection works on wireless as well as on wired signals. We have
> parabolic and many other reflectors that make specific patterns by
> interference, cancelling signals in one direction by reinforcing signals
> in another direction.
>
> I`ve gone to a radar book to confirm my statement. It was exactly
> correct, according to the book. It has a sketch and a block diagram.
> "ATR" and "TR" tubes are shown. The ATR tube disconnects the transmitter
> after the pulse is transmitted so as not to affect reception when the
> pulse has gone out. It isn`t a part of the example I gave. The TR tube
> is sited 1/4-wavelength down the receiver waveguide from the Tee
> connecting it with the transmiter to antenna path.
>
> The text says:
> "The TR box shorts the receiver input during the transmit pulse.
> Therefore, the transmit energy cannot do any harm to the receiver."
>
> In another place, the text says:
> "Inasmuch as the TR tube then acts as a microwave short, it reflects a
> maximum impedance to the junction point."
>
> I rest my case.
>
> Best regards, Richard Harrison, KB5WZI
>

4737. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 18:52:12 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303041052.17324f58@posting.google.com>
Source record: 123326

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<2596-3E64BE67-733@storefull-2317.public.lawson.webtv.net>...
> CAM wrote:
> "Executive Orders come pretty close (to dictatorial power)."
>
> Except for two checks.
>
> First, a constitutional challenge in the courts.

But that is already ongoing and we may well have a response in the
next couple of years HMMMM I see no movement to await the court
hearing before action is taken

>
> Second, a congressional review and repeal. A president can veto a
> congressional act, but congress can override a veto with a 2/3 vote.

True, but you must also know that congressional review has already
been performed and the Congress has clearly stated do what you want.

>
> A president is powerful, but ultimate power resides in a popularly
> elected congress. The lower house is 100% subject to change by election
> every 2 years. All appropriation bills for spending must originate in
> the lower house. Maximum power is the power of the purse.

Yes that is very true but that is an action after the fact with Bush
having no concerns about money. He learned from Enron if you are at
the top you can do anything and get away from conviction if you have
enough money and fleet of foot.

The U.K. position is one that interests me, naturaly of course.
Parliament has imposed a restriction on Blair that he must follow the
dictates of the U.N.
Would Blair withdraw the British troops or will he ignore the law by
telling Parliament after the fact? It is for this reason alone that we
are awaiting
the next resolution to determine if the U.S. has to go it alone and
carry the costs for the next 10 years. So will Blair take a chance of
not going to trial for treason which will be difficult to avoid as the
body bags come home?
As I stated earlier the populace of the U.S. is totally powerless at
this time
and Bush knows that during the event all must rally around our forces
regardless of the General incharge. If there was a draft then the
'peoples will' would have to be taken into account, but that has been

thwarted by grabbing the American defence forces for action elsewhere.
My fear is that if the victory is easy we will move on and attack
somebody else who may well surprise us by already being positioned
with nuclear weapons in advance of an attack. They certainly will not
destroy them knowing no matter what they do an attack is inevitable.
Perhaps one will launch a preventitive attack as in Pearl Harbour now
that such actions are now considered acceptable.
Art
>
> Best regards, Richard Harrison, KB5WZI

4738. Aluminium wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 18:53:59 UTC
From: Deni <deni1@tiscali.fr>
Message-ID: <newscache$67n8bh$xgg$1@news.tiscali.fr>
Source record: 123327

I noticed a 400M reel of solid aluminium wire in the DIY store selling electric fencing stuff it, looks about 18SWG and says it's 0.3 ohms per metre anyone tried this for antenna work?

Deni, GM3SKN

4739. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 19:07:03 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303041107.2120b0f6@posting.google.com>
Source record: 123328

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b42b28$14n$1@knossos.btinternet.com>...
> Welcome back Art. Not a single mention of swr!
> ---
> Reg.

Reg, you know as well as I that SWR can be anything you want it to be,
I am looking at antennas. I prefer to work towards a 'loss less
system' which includes everything after a generator and I am proceding
in that direction
with these disclosures. Ofcourse I may get derailed because of
allegations
of garbage which will leave me sharing loss less systems with no one!
Cheers
Art

4740. Rare earth mag-mount for HT when mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 19:07:19 UTC
From: "Robert A. Book" <rbook1@mochamail.com>
Message-ID: <3E64F967.274697EA@mochamail.com>
Source record: 123329

This is sort of a newbie question.

I'm about to get my first HT for 2M/220/440, and of course I want to be able to use it in the car. So, I've been looking at mag-mount antennas.

I saw some "rare earth" magnetic-mount antennas at a hamfest recently. The selling point it that they have a much smaller footprint than "traditional" mag-mounts, they are much lighter, and they are almost (but not quite) as strong. I compared a rare-earth with about a half-inch diameter to a traditional with about a 3-inch diameter, and while the 3-inch did feel "stickier" it was not by as much as I'd expect.

What do y'all think of these rare-earth mag-mounts? I'm concerned not only about antenna performance, but also about scratching the paint on the roof of my car. (Not just for car-vanity; I get rust whenever the paint scratches.)

Thanks!

--Robert
KD6NRI/4

4741. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 19:17:56 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <hsu96voeng4er3e62bv5vt658i2t0sjl74@4ax.com>
Source record: 123330

On Tue, 4 Mar 2003 13:30:21 -0500, "Dr. Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

|Richard, what is the impedance of a shorted 1/4 wave length?

Zin = Zo * tan(90)

4742. Re: Rare earth mag-mount for HT when mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 19:19:11 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <zPmcnS3iCZKzYfmjXTWcpw@comcast.com>
Source record: 123331

Robert,

It's the bending moment that gets you, not the pulling. I had a 2m 5/8 (3 or 4 inch footprint) come off while driving across a high bridge. You want the largest possible footprint. I would not use the small magnet for anything bigger than a 2m 1/4 wave.

Tam/WB2TT
"Robert A. Book" <rbook1@mochamail.com> wrote in message news:3E64F967.274697EA@mochamail.com...
> This is sort of a newbie question.
>
> I'm about to get my first HT for 2M/220/440, and of course I want to be
> able to use it in the car. So, I've been looking at mag-mount antennas.
>
> I saw some "rare earth" magnetic-mount antennas at a hamfest recently.
> The selling point it that they have a much smaller footprint than
> "traditional" mag-mounts, they are much lighter, and they are almost
> (but not quite) as strong. I compared a rare-earth with about a
> half-inch diameter to a traditional with about a 3-inch diameter, and
> while the 3-inch did feel "stickier" it was not by as much as I'd
> expect.
>
> What do y'all think of these rare-earth mag-mounts? I'm concerned not
> only about antenna performance, but also about scratching the paint on
> the roof of my car. (Not just for car-vanity; I get rust whenever the
> paint scratches.)
>
> Thanks!
>
> --Robert
> KD6NRI/4

4743. Re: Rare earth mag-mount for HT when mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 19:28:21 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E64FE55.5030605@ieee.org>
Source record: 123332

Robert A. Book wrote:
> What do y'all think of these rare-earth mag-mounts? I'm concerned not
> only about antenna performance, but also about scratching the paint on
> the roof of my car. (Not just for car-vanity; I get rust whenever the
> paint scratches.)

I once saw the picture of a van upon which a mag-mount had been
used. It was rusted everywhere except where the mount had been. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4744. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 19:33:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E64FF73.6010305@ieee.org>
Source record: 123334

Wes Stewart wrote:
> On Tue, 4 Mar 2003 13:30:21 -0500, "Dr. Fred Hambrecht Sr"
> <w4jle@charter.net> wrote:
>
> |Richard, what is the impedance of a shorted 1/4 wave length?
>
> Zin = Zo * tan(90)

Zin = (Vin + Vout)/(Iin + Iout) phasor addition, of course

Zin = virtual so can Zin cause reflections at the Zin point?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4745. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 19:35:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6a00sl04inv70@corp.supernews.com>
Source record: 123333

Nor a wooden rod. And neither would have any appreciable effect on the inductance, either.

Incidentally, I don't believe I've ever seen a powdered iron rod. Does Micrometals sell them?

Roy Lewallen, W7EL

Reg Edwards wrote:
> An iron dust rod would not have overheated.
>
>

4746. Re: Rare earth mag-mount for HT when mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 19:38:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6500B0.5060905@ieee.org>
Source record: 123335

Tarmo Tammaru wrote:
> It's the bending moment that gets you, not the pulling. I had a 2m 5/8 (3 or
> 4 inch footprint) come off while driving across a high bridge. You want the
> largest possible footprint. I would not use the small magnet for anything
> bigger than a 2m 1/4 wave.

Just as a point of perspective - I had a Larson square mag-mount on top
of my pickup with NO antenna attached. During a driving rain/wind storm,
I met an 18-wheeler on a narrow two-lane highway. Each of our speeds was
around 70 mph. The wind from the 18-wheeler blew the mag-mount right off
my truck.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4747. Re: Why are SWR meters designed for low SWRs?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 20:10:55 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303041210.76a7a4f@posting.google.com>
Source record: 123336

Dave Shrader <david.shrader@attbi.com> wrote in message
news:<3E63F5E1.7416ECD1@attbi.com>...
> I object to the following statement from Yuri.
>
> >Yuri Blanarovich wrote:
>
> > No half boiled ham would operate his antennas with SWR over 5. Try with with
> > "modern" solid state rig :-)
>
> Before I moved QTH my 75/80 meter doublet ran a VSWR somewhere between
> 30:1 and 40:1. My rig is a solid state Icom 746. This spring, after Ice
> out, my 75/80 meter doublet will be re-installed with a very high VSWR.
> Everything will work just great!
>
> I'm not half boiled, I'm not fully boiled, I'm not par boiled!
>
> I did assemble an antenna system that works just fine! Just think about
> it!
>
> Deacon Dave, W1MCE

Shouldn't one review what type of 'SWR' they are dealing with?
For instance, if the SWR was due to a resistive out of balance alone
without reactance in any form I suspect it could be handled better
than one say that is loaded with reactance. Maybe a guru will come
along and explain how this has no connection whatsoever to this
present dispute.
Art

> + + +

4748. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 21:27:32 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b435o4$8fj$1@knossos.btinternet.com>
Source record: 123337

Roy, there's enough people round here trying to start arguments without you joining in.

I doubt if anybody makes iron dust rods these days. The last I saw were used in ganged pairs (antenna and local oscillator tuning) in MF and LF domestic broadcast toob-type receivers.

There were fixed-value silver-mica tuning capacitors. Oscillator tracking was accomplished by uneven spacing of coil turns.

I imagine the circuits were less costly to manufacture than two-gang tuning capacitors. When used in car radios vibration was liable to modulate the local oscillator frequency.

There was a WW2 military portable DF loop antenna wound on a 6" by 2" dust-iron cylinder. The winding of a few turns was wound in a groove around the cylinder's centre. Could have been useful if lost in enemy territory.

Dust-iron has a permeability of roughly 12 and a coil Q around 200 at several MHz.

Amidon (certainly up to relatively recently) make toroidal dust-iron cores up to 3" diameter which run cool in tuned-tanks at 100 watts. The smaller sizes make nice filter and interstage components without suffering non-linearity.

The great advantage over ferrites is its linearity.

The disadvantage is low permeability - a largeish number number of turns of thin wire are needed at frequencies below 7 MHz.

A cylinder sliding inside a solenoid will cover a wide frequency range. Superior to wood.

Reg.

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v6a00sl04inv70@corp.supernews.com...
> Nor a wooden rod. And neither would have any appreciable effect on the
> inductance, either.
>
> Incidentally, I don't believe I've ever seen a powdered iron rod. Does
> Micrometals sell them?
>
> Roy Lewallen, W7EL
>
> Reg Edwards wrote:

> > An iron dust rod would not have overheated.
> >
> >
>

4749. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 21:30:22 UTC
From: Ed Senior <eseniorsREMOVE@earthlink.net>
Message-ID: <OV89a.2701$gF3.288303@newsread1.prod.itd.earthlink.net>
Source record: 123338

There may be something less than universal agreement on the definition
of an "end fed Zepp."

In the ARRL Antenna Handbook (19th Edition, p. 7-2), the end-fed Zepp
is described as an inherently multiband antenna; and the writeup
specifically
cautions AGAINST feedline lengths that are multiples of 1/4 WL.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E636751.6050301@ieee.org...
> Tony Angerame wrote:
> > Any opinions on the end fed Zepp? I plan on 1/2 wave at 3.9 (120 Ft)
> > supported from a tree at the middle and fed at the end with 45 feet of
> > twinnlead. Anohter Hindenburg?
>
> That's not an end-fed Zepp. For it to be an end-fed Zepp, your feedline
> needs to be about 57 feet. The EFZ feedline is 1/4WL long and it's an
> EFZ on only one band.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----
>

4750. Another Johson Matchbox question.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 21:47:03 UTC
From: Eskay <sieb_kNOS@PAMyahoo.ca>
Message-ID: <3E651ED7.5080909@PAMyahoo.ca>
Source record: 123339

Hello all.
I also own a 275 Watt Matchbox..Has anyone made mods to include 160
meters? How could it be done?
73 de Sieb VE3JUA.. ve3jua@rac.ca

4751. Another Johnson Matchbox question.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 21:47:44 UTC
From: Eskay <sieb_kNOS@PAMyahoo.ca>
Message-ID: <3E651F00.30805@PAMyahoo.ca>
Source record: 123340

Hello all.
I also own a 275 Watt Matchbox..Has anyone made mods to include 160
meters? How could it be done?
73 de Sieb VE3JUA.. ve3jua@rac.ca

4752. Re: Rare earth mag-mount for HT when mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 21:53:47 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <If99a.2366$Xo3.393908@news20.bellglobal.com>
Source record: 123341

"Robert A. Book" asked about
> ...mag-mount antennas.

Make sure that the maximum extended length (exterior coax cable plus the whip) isn't long enough for the end to get pinched under the rear wheel when the magnet mount antenna eventually comes off (and it ~will~ eventually come off). You won't be worried about paint scratches if the antenna gets pinched between the tire and the ground.

Have you ever seen a transceiver "exit stage left" at well over (ahem) 100 kmh ? Me neither....in my case I had about one cm to spare between the antenna and the left rear wheel.

Betcha didn't think about that possibly-expensive, potentially-fatal failure mode...

4753. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 21:59:51 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303041359.5940201a@posting.google.com>
Source record: 123342

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303041107.2120b0f6@posting.google.com>...
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b42b28$14n$1@knossos.btinternet.com>...
> > Welcome back Art. Not a single mention of swr!
> > ---
> > Reg.
>
> Reg, you know as well as I that SWR can be anything you want it to be,
> I am looking at antennas. I prefer to work towards a 'loss less
> system' which includes everything after a generator and I am proceding
> in that direction
> with these disclosures.

I didn't mean the following statement like I just read it.
I am not withdrawing because of any forthcoming allegations of garbage.
What I meant to state that possibly nobody would be left around to listen.
Even that doesn't sound quite right... Please assume that I am trying to be my best
Art

Ofcourse I may get derailed because of
> allegations
> of garbage which will leave me sharing loss less systems with no one!
> Cheers
> Art

4754. Re: Aluminium wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 22:02:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b437p0bhj1@knossos.btinternet.com>
Source record: 123343

If it's DC resistance is 0.3 ohms per metre then it is an aluminium alloy to improve its mechanical properties. Its resistance is about 14 times that of copper.

Would be useful as an MF antenna in a Titanic emergency situation. But useless in a PA tank coil.

Button your sporan.

Reg, G4FGQ

4755. home amde for 125 kHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 22:16:20 UTC
From: Dubravko <dubravko.antonic@zg.tel.hr>
Message-ID: <b438is$4887$1@as201.hinet.hr>
Source record: 123345

I need air winded antenna 1.35mH at 125kHz for verl low power application
for but I'm inexperienced in calculating the values so if anyone has idea or
knowledge to advise me how many turns i nad to wind the wire around the
profile circle radius of 5 cm

thnx

4756. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 22:20:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6526B2.9040509@ieee.org>
Source record: 123344

Ed Senior wrote:
> There may be something less than universal agreement on the definition
> of an "end fed Zepp."
>
> In the ARRL Antenna Handbook (19th Edition, p. 7-2), the end-fed Zepp
> is described as an inherently multiband antenna; and the writeup
> specifically
> cautions AGAINST feedline lengths that are multiples of 1/4 WL.

The "end fed Zepp" is the antenna used by the Zeppelin airships prior to WWII and the definition was well known. My 1957 ARRL Handbook describes end-fed wire antennas but does not call them Zepps. Neither does my 1976 ARRL Handbook. It is unfortunate that a perfectly good definition was corrupted sometime after 1976. My 15th Edition of the ARRL Antenna Book (1988) at least had the courtesy to put "Zepp" in quotations, indicating that it was not a literal use of the identifier. Here's a quote from the 15th Edition of the ARRL Antenna Book:

"In the early days of short-wave communications an antenna consisting of a 1/2WL radiator, end-fed through a 1/4WL transmission line, was developed as a trailing antenna for Zeppelin airships."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4757. Re: home amde for 125 kHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 22:34:40 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e6529fd$0$141$edfadb0f@dtext02.news.tele.dk>
Source record: 123346

Hello Dubravko

> I need air winded antenna 1.35mH at 125kHz for verl low power application
> for but I'm inexperienced in calculating the values so if anyone has idea
or
> knowledge to advise me how many turns i nad to wind the wire around the
> profile circle radius of 5 cm

You can calculate it here http://www.vwlowen.demon.co.uk/java/coil.htm

Regards Max

4758. Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 22:49:56 UTC
From: Iain <iain@spamtrap.pompeydreamteam.net>
Message-ID: <b43ail$1r7j6q$1@ID-118009.news.dfncis.de>
Source record: 123347

I have a 4 stack dipole uhf antenna that consists of a pole with 4 antennas bolted around it at each of the compass points. The bolts go all the way through the pole they are mounted to. We have gusts of about 80 MPH up here but I would like to attach a vertical HF antenna to the top and am worried about the weakness caused by the bolts.

Question is, what product could I fill the hollow pole with to strengthen it. This would preferably be a liquid solution to save me having to remove all four antenna.

TIA

Iain

4759. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 22:54:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gqba6vkg0ept5fvba5ka22fgig79iqmfor@4ax.com>
Source record: 123348

On Tue, 04 Mar 2003 13:33:07 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Zin = (Vin + Vout)/(Iin + Iout) phasor addition, of course

Hi Cecil,

Really (not just Virtually)? Or is this more seeming?

Where is the phase of these "phasors?"

73's
Richard Clark, KB7QHC

4760. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 22:54:35 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e652ea8$0$137$edfadb0f@dtext02.news.tele.dk>
Source record: 123349

Hello Lain

> I have a 4 stack dipole uhf antenna that consists of a pole with 4
antennas
> bolted around it at each of the compass points. The bolts go all the way
> through the pole they are mounted to. We have gusts of about 80 MPH up
here
> but I would like to attach a vertical HF antenna to the top and am worried
> about the weakness caused by the bolts.
>
> Question is, what product could I fill the hollow pole with to strengthen
> it. This would preferably be a liquid solution to save me having to remove
> all four antenna.

The holes throgh the pole makes the pole more fragile to colapse, so if
you fill the pole with plain sand from the beach, it should prevent the
pole from colapsing.

Regards Max

4761. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 22:56:19 UTC
From: "Dr. Fred Hambrecht Sr" <w4jle@charter.net>
Message-ID: <v6aboerqtmvmf2@corp.supernews.com>
Source record: 123350

Thank you Richard Stuart and Richard Moore

I am so pleased that both of you were able to answer in Richards stead. It is nice to know that Richard now has no need to continue the conversation.

Did the two of you shout out answers in grammar school as well?

Seldom do I address something to a specific individual, however when I do, there is a specific reason.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E64FF73.6010305@ieee.org...
> Wes Stewart wrote:
> > On Tue, 4 Mar 2003 13:30:21 -0500, "Dr. Fred Hambrecht Sr"
> > <w4jle@charter.net> wrote:
> >
> > |Richard, what is the impedance of a shorted 1/4 wave length?
> >
> > Zin = Zo * tan(90)
>
> Zin = (Vin + Vout)/(Iin + Iout) phasor addition, of course
>
> Zin = virtual so can Zin cause reflections at the Zin point?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4762. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 22:58:48 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <lca9a.2822$gF3.297689@newsread1.prod.itd.earthlink.net>
Source record: 123351

With this one I've got to stick my nose in. Cecil, Dave is correct, there is NO 29.0 MHz signal going to get past the virtual short if the line producing the short is lossless. Assume a main 50-ohm transmission line fed with a 29.0 MHz source terminated with a 50-ohm resistance. The 50-ohm resistance will absorb all of the energy delivered by the source. Now we place a lossless open-circuited 1/4 wl line in shunt with the main line at any place on the line. What will happen? No energy from the source will ever see the 50-ohm line, because the virtual short established at the end connected to the main line is effective identically with that of a physical short. As another poster pointed out, while a physical short is a short at all frequencies, the virtual short is a short only at the resonant frequency where the virtual short is established. At frequencies away from the resonant frequency the virtual short becomes a reactance.

Cecil, if you'll recall, I made this same explanation of the effectiveness of the virtual short at the single frequency, while the physical short is a short at all frequencies. Do you not recall this discussion?

Walt, W2DU

> Dave Shrader wrote:
> >>OC_CAM's Razor wrote:
> >>>Does the virtual short actually short out anything in reality?
> >>
> > Think about it. If you have a virtual short circuit in a line at 29.0
> > MHz, how much 29.0 MHz signal is going to get past the short circuit?
>
> This is so sad, Dave. Every bit of the 29.0 MHz signal is going to
> get past the virtual short circuit! Virtual impedances are virtual!
> They cannot cause anything to happen in reality. Is the virtual image
> of yourself that you see in the mirror really two feet behind the mirror?
> I trust that in a fleeting moment of sanity, you will say "no".
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>

4763. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 23:00:33 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E653011.F2752BB1@uci.edu>
Source record: 123356

OC_CAM's Razor wrote:
> The "end fed Zepp" is the antenna used by the Zeppelin airships prior
> to WWII and the definition was well known. My 1957 ARRL Handbook describes
> end-fed wire antennas but does not call them Zepps. Neither does my 1976
> ARRL Handbook. It is unfortunate that a perfectly good definition was
> corrupted sometime after 1976. My 15th Edition of the ARRL Antenna Book
> (1988) at least had the courtesy to put "Zepp" in quotations, indicating
> that it was not a literal use of the identifier. Here's a quote from the
> 15th Edition of the ARRL Antenna Book:
>
> "In the early days of short-wave communications an antenna consisting of
> a 1/2WL radiator, end-fed through a 1/4WL transmission line, was developed
> as a trailing antenna for Zeppelin airships."

The handbook also describes the J-pole as being taken from one of the
iterations of the Zepp antenna.

73, ac6xg

4764. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 23:10:45 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <olca6vopof05tqcm8gjvue3rbqntm4c3mu@4ax.com>
Source record: 123352

On Tue, 04 Mar 2003 22:58:48 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>
>Cecil, if you'll recall, I made this same explanation of the effectiveness
>of the virtual short at the single frequency, while the physical short is a
>short at all frequencies. Do you not recall this discussion?
>
>Walt, W2DU

Hi Walt,

Didn't the bait have that same familiar taste? ;-)

73's
Richard Clark, KB7QHC

4765. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 23:23:17 UTC
From: k1bqt@aol.com
Message-ID: <20030304182317.13595.00000018@mb-cr.aol.com>
Source record: 123354

>Sure is diferent from Dan Rather interview with "nice" Mr. Saddam.<

Sure hope Saddam paid in advance for that nausiating hour of oral sex he received from Daffy Dan compliments of the friendly guys at ABC. If Art has a problem with "Corporate America", perhaps he should investigate who's running that corporate slag-heap and leaped at the opportunity to lick a mass murder's butt for ratings during sweeps week. Eating a bowl of live maggets in cheese dip on Fear Factor should be a cake walk after viewing Dan's culinary extravaganza!

Rick K1BQT

4766. J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 23:23:19 UTC
From: James Cook <j.l.cook@mindspring.com>
Message-ID: <b43cgo$q8l$1@slb0.atl.mindspring.net>
Source record: 123353

I am a new ham trying to get a base antenna. What is the difference (operationally) between a jpole and a groundplane. I think the jpole doesn't require any ground, but what does that do? Does it have better gain or shape? A jpole is not symmetrical in physical shape, is the radiation pattern purely omnidirectional?

I have a mobile dual bander (alinco dr-605tq). Any suggestions? I like the Arrow Antennas for price, and simplicity.

JLC

4767. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 23:29:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gsda6vosb1qacjar23osaa5l9qpk150kjm@4ax.com>
Source record: 123355

On Tue, 4 Mar 2003 18:23:19 -0500, "James Cook"
<j.l.cook@mindspring.com> wrote:

>I am a new ham trying to get a base antenna. What is the difference
>(operationally) between a jpole and a groundplane. I think the jpole
>doesn't require any ground, but what does that do? Does it have better
>gain or shape? A jpole is not symmetrical in physical shape, is the
>radiation pattern purely omnidirectional?
>
>
>I have a mobile dual bander (alinco dr-605tq). Any suggestions? I like the
>Arrow Antennas for price, and simplicity.
>
>JLC
>

Hi OM,

Go for the Arrow. Differences there may be, but could you tell? Only
if one really sucks because of installation (more often a J-Pole than
not).

73's
Richard Clark, KB7QHC

4768. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-04 23:43:45 UTC
From: richardharrison@webtv.net
Message-ID: <1694-3E653A31-699@storefull-2315.public.lawson.webtv.net>
Source record: 123357

CAM wrote:
"---why don`t the reflections occur at that very high impedance point?"

There is no physical or electrical discontinuity to cause a serious reflection at the high impedance point. It`s just a high voltage point.

The short-circuit, 1/4-wavelength back from the high-impedance point, demands high current at a low voltage. This is inconsistent with the E/H and V/I capabilities of the traveling wave. The wave has excess volts and insufficient amps capability to supply a short. So there is an almost complete reflection at the TR tube. The wave can supply excess volts but lacks amps.

The reflected wave is turned around, and 1/4-wave back from the reflection point, it has very nearly the same magnitude as the incident wave.

The reflected wave is also shifted in phase by 360 degrees. It gets 180 decrees from its round trip in the 1/4-wave of the guide. It gets the other 180 degrees from its reflection at the near-short which puts its volts and amps out of phase. Back at the Tee, Incident and reflected waves are in-phase but confront each other.

So, at the high-impedance point, 1/4-wavelength back from the reflection, we have two equally phased waves of the same magnitude confronting each other. That`s what makes a high impedance. Little or no current flows, but there is plenty of voltage. This happens when you put a very high-Z load on your transmitter output.

The analogy of two identically charged C-cells connected in parallel is applicable. No current flows between cells because they have identical voltages.

A complete short on a transmission line does the same. Back, 1/4-wave from a short you get double the volts. and this indicates a high impedance point because there`s no current there.

The reflected radar pulse arrives from the TR tube back at the Tee and produces a very high impedance which thereafter allows only about enough energy into the receiver waveguide to keep the TR tube ionized until the pulse ends.
Where does the energy go if not to the TR tube and back? It goes to the easier path that leads to the antenna where it is wanted.

Best regards, Richard Harrison, KB5WZI

4769. Re: Another Johnson Matchbox question.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 00:16:25 UTC
From: Roger Leone <arleonexxblockxx@inreach.com>
Message-ID: <zlb9a.7$FU1.0@news.inreach.com>
Source record: 123358

Sieb:

Electric Radio #142 (March 2001) had an article on this. Was written by WC3K.

Roger K6XQ

4770. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 00:25:30 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <7oga6vggml4crc74bhv16r99je9vhaf0hf@4ax.com>
Source record: 123359

On Tue, 4 Mar 2003 17:56:19 -0500, "Dr. Fred Hambrecht Sr"
<w4jle@charter.net> wrote:

|Thank you Richard Stuart and Richard Moore

It's Stewart, Dr.

|
|I am so pleased that both of you were able to answer in Richards (sic) stead. It
|is nice to know that Richard now has no need to continue the conversation.
|
|Did the two of you shout out answers in grammar school as well?
|
|Seldom do I address something to a specific individual, however when I do,
|there is a specific reason.

If you want a private answer, send a @#*%(* private email.

|
|
|"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
|news:3E64FF73.6010305@ieee.org...
|> Wes Stewart wrote:
|> > On Tue, 4 Mar 2003 13:30:21 -0500, "Dr. Fred Hambrecht Sr"
|> > <w4jle@charter.net> wrote:
|> >
|> > |Richard, what is the impedance of a shorted 1/4 wave length?
|> >
|> > Zin = Zo * tan(90)
|>
|> Zin = (Vin + Vout)/(Iin + Iout) phasor addition, of course
|>
|> Zin = virtual so can Zin cause reflections at the Zin point?
|> --
|> cheers, CAM http://www.qsl.net/w5dxp
|>
|>
|>
|> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
|> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
|> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
|

4771. Re: Aluminium wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 00:27:16 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <Bnb9a.25657$Xa4.24772@fe01.atl2.webusenet.com>
Source record: 123360

Also, if it is soft drawn , most likely will sag, or stretch in time-
translation: if you going for a 1:1 match on 80, or 160 meters, odds are it
wont be at 1:1 for long! and, to solder to it you will need to literally
scrape it, and apply solder at the same time . alumium solders quite easily,
BUT ALUMIUM OXIDE doesn't accept solder worth a *^&$* , and it gets worse:
alumium oxidizes almost instataniously! and if you use copper to alumium ,
as dis-similar metals, tends to corode, and also cause noise from the
electrolytic interaction of these 2 metals. Jim nn7k

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b437p0bhj1@knossos.btinternet.com...
> If it's DC resistance is 0.3 ohms per metre then it is an aluminium alloy
to
> improve its mechanical properties. Its resistance is about 14 times that
of
> copper.
>
> Would be useful as an MF antenna in a Titanic emergency situation. But
> useless in a PA tank coil.
>
> Button your sporan.
> ---
> Reg, G4FGQ
>
>

4772. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 00:43:12 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <AKb9a.10183$hj.2494394@nnrp1.ptd.net>
Source record: 123362

Just a WAI, but how about filling it with some sort of resin?

Is the mast steel or aluminum? You might need to consider
the heating and/or expansion of some sort of resin, but I
would think you should be able to find a suitable "potting"
resin that would give strength and probably be lighter than
sand ...

The downside is that it would be more expensive and you
might have to make multiple "pours" ... you could also think
about putting some modest diameter fiberglass rods down
the mast before the pour to add strength (but you'd have to
make sure you didn't get significan "voids."

Again, just a WAI ...

Carl - wk3c

"Max" <Max_Jens@post9.tele.dk> wrote in message
news:3e652ea8$0$137$edfadb0f@dtext02.news.tele.dk...
> Hello Lain
>
> > I have a 4 stack dipole uhf antenna that consists of a pole with 4
> antennas
> > bolted around it at each of the compass points. The bolts go all the way
> > through the pole they are mounted to. We have gusts of about 80 MPH up
> here
> > but I would like to attach a vertical HF antenna to the top and am
worried
> > about the weakness caused by the bolts.
> >
> > Question is, what product could I fill the hollow pole with to
strengthen
> > it. This would preferably be a liquid solution to save me having to
remove
> > all four antenna.
>
> The holes throgh the pole makes the pole more fragile to colapse, so if
> you fill the pole with plain sand from the beach, it should prevent the
> pole from colapsing.
>
> Regards Max
>
>

4773. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 00:47:32 UTC
From: k3bu@aol.com
Message-ID: <20030304194732.24151.00000047@mb-dh.aol.com>
Source record: 123361

>
>The holes throgh the pole makes the pole more fragile to colapse, so if
>you fill the pole with plain sand from the beach, it should prevent the
>pole from colapsing.
>
>Regards Max
>

That would help in tubing without holes but would not prevent mast from getting bent.
The best way is to insert sleeves about 3 diameters long inside or on the outside of the area where the screws go through. Even better way is to use another tubing inserted inside for whole length or bottom half of the mast.
To be sure, the best way is to calculate the size of the tubing for wind load of the additional antenna. Your maximum bending momentum is the bottom where the mast is attached or clamped to support structure.

Yuri, K3BU

4774. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 01:11:04 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <7via6v0b37p716qk2ffs4evnufdqso7fdu@4ax.com>
Source record: 123363

On Tue, 4 Mar 2003 22:49:56 -0000, "Iain"
<iain@spamtrap.pompeydreamteam.net> wrote:

|I have a 4 stack dipole uhf antenna that consists of a pole with 4 antennas
|bolted around it at each of the compass points. The bolts go all the way
|through the pole they are mounted to. We have gusts of about 80 MPH up here
|but I would like to attach a vertical HF antenna to the top and am worried
|about the weakness caused by the bolts.

If the bolts are tight fitting, there probably isn't as much weakening
as you might think. But have you performed an analysis of the
strength without the holes? If this is a commercial antenna, it was
probably designed just strong enough to hold itself up and no
stronger.
|
|Question is, what product could I fill the hollow pole with to strengthen
|it. This would preferably be a liquid solution to save me having to remove
|all four antenna.

It's very hard to add strength from the inside. You might get a little
bit by filling it with expanding foam.

4775. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 01:16:09 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <5gha6vk78s7e8n7g427e3dp6aa1u5a8egc@4ax.com>
Source record: 123364

On Tue, 04 Mar 2003 11:35:56 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

|Nor a wooden rod. And neither would have any appreciable effect on the
|inductance, either.

Actually, wood has a relative permeability of slightly less than one
so there would be some effect on the inductance. :)

However, Art Collins used permeability-tuned inductors by the hundreds
of thousands, quite successfully.

|Incidentally, I don't believe I've ever seen a powdered iron rod. Does
|Micrometals sell them?
|
|Roy Lewallen, W7EL
|
|Reg Edwards wrote:
|> An iron dust rod would not have overheated.
|>
|>

4776. transmit loop antenna for 160 meter, possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 01:21:18 UTC
From: Robert Casey <wa2ise@ix.netcom.com>
Message-ID: <3E65510E.C644A7C2@ix.netcom.com>
Source record: 123365

Well, "anything" is "Possible", but would a loop antenna
built for 160 be practical? For my kenwood transceiver,
which produces about a hundred watts. Thinking a loop
about 10 feet square, using about 6 turns, a high voltage
tuning cap of around 50pF (to make an LC circuit at 1900
KHz), and coupling the coax to
one of the 6 turns of wire. I have heard that the RF
will develop very high voltages at the tuning cap. So I would
need to be careful about using enough spacing to avoid arc over.

Which polarization do they use on 160 SSB?

4777. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 01:39:31 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <hzc9a.2054$KJ3.526577@news20.bellglobal.com>
Source record: 123366

"Walter Maxwell" W2DU:
> ...there is NO 29.0 MHz signal going to
> get past the virtual short if the line
> producing the short is lossless.

If one were to place one's tongue (for example) across the transmission line at a point about halfway between the virtual short circuit and the real short circuit, would one get a jolt ? For the purposes of this question, you may assume that the tongue is very high impedance (but still sensitive).

Another way to ask the same question: If there is really nothing in the line at all, then how do the demons that control such things know that the short circuit still exists at the far end ? Wouldn't they need to probe it once in a while to make sure that nobody has borrowed the real short ?

Obviously, there really is a standing wave in the line. In that sense the signal does "get past", but it gets reflected. Another way of looking at it: there is some voltage and some current both getting past, but not much power getting past.

I know you know. Just a minor clarification for the record.

4778. Re: Aluminium wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 01:57:07 UTC
From: "Gregory L. Dome" <gldome@livingston.net>
Message-ID: <v6ambgh4bsmc59@corp.supernews.com>
Source record: 123367

I've used electric fence wire for receive loop capabilities. Worked great
in a 235' loop at 10' high with a tuner. Never tried to tx, though.
"Deni" <deni1@tiscali.fr> wrote in message
news:newscache$67n8bh$xgg$1@news.tiscali.fr...
> I noticed a 400M reel of solid aluminium wire in the DIY store selling
> electric fencing stuff it, looks about 18SWG and says it's 0.3 ohms per
> metre anyone tried this for antenna work?
>
> Deni, GM3SKN
>
>
>
>
>
>

4779. Re: SWR Problem with Butternut HV-6

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 02:11:58 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <O1d9a.20223$ki.909188@twister.southeast.rr.com>
Source record: 123368

neighbor had one of these with a similar problem. I think his SWR became constantly high. His fix was to diassemble , clean all the corroded Aluminum and reassemble.

"Dave Nissen" <mcsok9@winco.net> wrote in message news:b3sthp$4iqm$1@news3.infoave.net...
> I need some advice from the group. I have a Butternut HV-6 that has been in
> operation for several years without problem. Tonight I attempted to use it
> and discovered that the SWR would "jump" from 10:1 to 1.5:1 without warning.
>
> I tried to tune it using a Heathkit SA-2060A without any luck. I connected
> the MFJ 259B up to the antenna and watched the meter. It also showed the SWR
> " jumping" around. I checked the 259 connection at the tuner and it appeared
> OK, and I was unable to change it or cause the "jumping" by moving the coax
> inside the shack.
>
> I went outside and could find nothing that looked out of line, but it was
> dark and the only light was a flashlight.
>
> Has anyone had a similar experience? Suggestions? Tuner is OK after checking
> a 10 meter beam, and agrees with the MFJ on that antenna. I looked for the
> manual, but after a move from a divorce it seems that the manual is gone but
> not forgotten.
>
> TNX
> Dave de W9COP
>
>
>
>

4780. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 02:14:42 UTC
From: richardharrison@webtv.net
Message-ID: <1695-3E655D92-295@storefull-2315.public.lawson.webtv.net>
Source record: 123269

CAM wrote:
"It is unfortunate that a perfectly good definition was corrupted
sometime after 1976."

I agree. Bring back the Zepp to the Antenna Book. So a quarter-wave
feeder radiates. Who cares? I want a genuine article!

My 1970 edition of the ARRL Antenna Book has a "Zepp" diagram on page
103. It`s a 1/2-wave end-fed radiator. This is fed with a quarter-wave
of open-wire line. One side feeds the radiator.

On page 220 of this book is a 1/2-wave vertical radiator end-fed with a
quarter-wave of open-wire line. It`s called a J-pole.

The difference is the whole antenna has been rotated by 90-degrees to
make it vertical. Feed alternatives have been suggested. Coax is shown
connected to the bottom of the Q-section, or parallel-line feed is shown
clipped to some spot other than the bottom of the Q-section. Since the
antennas are really the same, there`s really no reason they can`t be fed
exactly the same ways.

Best regards, Richard Harrison, KB5WZI

4781. Re: Aluminium wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 02:53:12 UTC
From: richardharrison@webtv.net
Message-ID: <1694-3E656698-720@storefull-2315.public.lawson.webtv.net>
Source record: 123270

Deni, GM3SKN wrote:
"---18SWG and says it is 0.3 ohms per metre anyone tried this for antenna work?"

Aluminium is used for electrical power transmission, at d-c and low-frequency a-c,everywhere. Aluminium is preferred because its conductivity, as used in powerlines, is better than copper by weight.

Connection problems are eliminated by Nicopress sleeves applied with monsterous hydraulic pressure tools. Special hand plier compression tools are available for small wire such as 18SWG.

My advice for r-f; Nicopress is great for copper, too. Aluminum is for the birds, not for ham wire antennas. Aluminum tubes, structures, and members are OK.

Best regards, Richard Harrison, KB5WZI

4782. Re: Aluminium wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 03:03:44 UTC
From: robrk <robrkx@nidhog.net>
Message-ID: <3E656910.FDCEB2C9@nidhog.net>
Source record: 123271

80 meter antenna (inv V) up for five years with no problems.

4783. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 03:08:33 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <83qa6vcden2u9qq04aeap9u1kchbar5iko@4ax.com>
Source record: 123272

On Tue, 4 Mar 2003 18:23:19 -0500, "James Cook"
<j.l.cook@mindspring.com> wrote:

>I am a new ham trying to get a base antenna. What is the difference
>(operationally) between a jpole and a groundplane. I think the jpole
>doesn't require any ground, but what does that do? Does it have better
>gain or shape? A jpole is not symmetrical in physical shape, is the
>radiation pattern purely omnidirectional?
>
>
>I have a mobile dual bander (alinco dr-605tq). Any suggestions? I like the
>Arrow Antennas for price, and simplicity.
>
>JLC
>
Allen at Arrow makes a fine high quality product.

A *properly* installed j-pole will work very well for you and has, for
all practical purposes, the same gain as a ï¿½-wave dipole. By
properly that I mean you would be best served if you use an common
mode choke on the coax transmission line and, although lore has that
it is not necessary, insolate from a conductive mast. Otherwise you
will be increasing you radiation at higher takeoff angles (not where
you want it - unless you are talking to air planes).

73
Danny, K6MHE

4784. Re: E/H antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 03:51:38 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303041951.39577d3c@posting.google.com>
Source record: 123273

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<13253-3E6425FC-705@storefull-2314.public.lawson.webtv.net>...
> Art Unwin wrote:
> "---we gave the Islamic Holy Places to the Jews---."
>
> We, being the British with a WW-1 pledge to gain the world-wide support
> of Jews against Kaiser Bill, Queen Victoria`s grandson. Parliament
> passed a resolution promising jews a homeland. It didn`t happen after
> WW-1, but Churchill reprised the promise in WW-2. Who were the Jews
> going to support; Hitler?
.
snip.
Interesting question Richard. Britain was nearly bankrupt at the
beginning of the first world war and went to the large bankers for
money to help finance the resistance by the British.. Britain was told
that only if they gave an agreement for a jewish homeland would the
money be forthcoming. Britain thus was over a barrel and thus
reluctantly agreed.This I believe was called the Balfour Treaty
Since Hitler was a corporal during that war I have often wondered if
he was ticked off at the lengthening of the war that this treaty
created and thus carried a chip on his shoulder thru the second world
war with respect to jews.
I am unaware that there was a "problem" between the Kaiser and jews
prior to that time.
Art

Best regards, Richard Harrison, KB5WZI

4785. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 04:34:45 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <F7f9a.3271$gF3.272256@newsread1.prod.itd.earthlink.net>
Source record: 123274

J. Harvey wrote
> "Walter Maxwell" W2DU:
> > ...there is NO 29.0 MHz signal going to
> > get past the virtual short if the line
> > producing the short is lossless.
>
> If one were to place one's tongue (for example) across the transmission
line
> at a point about halfway between the virtual short circuit and the real
> short circuit, would one get a jolt ? For the purposes of this question,
> you may assume that the tongue is very high impedance (but still
sensitive).

If you'll refer back to my original post you'll see I stated that the 1/4 wl lossless line was open-circuited on the end away from where it joined the main line. There is no physical short involved. With the lossless line the energy reflected from the open circuit returns to the input with the voltage 180 degrees out of phase and equal magnitude with respect to the energy entering the 1/4 wl line. Since the voltage (and current) at any point on the line can be replaced analytically with a point generator delivering voltage and current identical to that appearing at that point on the line, the two equal and oppositly-phased voltages establish a short circuit at the end joining the main line. Since the 1/4 wl line is lossless the impedance shunting the line is zero. With a real line the shunting impedance would be a low value of resistance in the range of a small fraction of an ohm. Of course, this condition is effective only at the frequency where the 1/4 wl line is exactly 1/4 electrical wavelength.

This is not simply my opinion, or paper talk. I have had many years of hands-on use of this concept in designing transmission line filters, and transmission line coupling circuits for connecting multiple transmitters operating on different frequencies simultaneously into one antenna.

I also have a patent on an open-circuited 1/4 wl transmission-line helical resonator that established a near-short circuit on the main transmission line of a spacecraft receiver to isolate it from the signal received from the adjacent transmitter a few KHz away. The single resonator provided 38 dB rejection of the transmitter signal. I'll leave it to you to calculate the actual resistance shunting the 50-ohm line to cause a 38 dB rejection. In other words, the signal from the transmitter that got past the virtual short to reach the receiver is only 1.29 percent of the transmitted signal that entered the receiver line. The patent number if anyone is interested is US Patent 3,437,959.

> Another way to ask the same question: If there is really nothing in the
> line at all, then how do the demons that control such things know that the
> short circuit still exists at the far end ? Wouldn't they need to probe
it
> once in a while to make sure that nobody has borrowed the real short ?
>
> Obviously, there really is a standing wave in the line. In that sense the
> signal does "get past", but it gets reflected. Another way of looking at
> it: there is some voltage and some current both getting past, but not much
> power getting past.

Sorry folks, if the 1/4 wl line is lossless, NO signal gets past the virtual short established by the 1/4 wl line. sHoweverk, with a real 1/4 wl line the resistance of the near-short is determined by the attenuation of the line, but is still in the fraction of an ohm range when our usual low-loss lines are used for this purpose.

One must distinguish the condition I described above from that where a line is terminated in a short circuit and the zero voltage and maximum current repeat every half wavelength, and the max voltage and min current repeat at every half wave, but at intervals 1/4 wl from the respective zero voltage and min current points on the line.

I hope this helps in understanding the situation.

Walt, W2DU

4786. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 04:45:26 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e6583ff_1@news1.prserv.net>
Source record: 123275

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:7via6v0b37p716qk2ffs4evnufdqso7fdu@4ax.com...

<snip>
>
> It's very hard to add strength from the inside. You might get a little
> bit by filling it with expanding foam.
>

Wes,

I hate to dispute that, but if you can reach the original chief engineer of DB Products, Ray Trott, he will tell you that back in 1960, the original DB-224 mast wasn't quite strong enough, so it was strengthened with an internal press fit sleeve. The bottom half of the two piece mast, about 10 feet long. I have installed a few of the original single walled models, and a whole lot of the later versions. The problem with the originals, which survived hurricanes on the Gulf Coast, was encountered on Sandia Crest above Albuquerque.

--
Crazy George
Remove NO and SPAM from return address

4787. Re: transmit loop antenna for 160 meter, possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 05:33:00 UTC
From: whagen6@cs.com
Message-ID: <20030305003300.15513.00000036@mb-ms.news.cs.com>
Source record: 123276

ground wave is vertical,skywave don't matter, the ionosphere mucks it up anyway.

4788. Re: Aluminium wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 05:45:39 UTC
From: Bill Brannick <wmlb@attbi.com>
Message-ID: <ae3b6vcj5rtkn67odsfoisc24jm38p10hd@4ax.com>
Source record: 123277

On Tue, 4 Mar 2003 18:53:59 -0000, "Deni" <deni1@tiscali.fr> wrote:

>I noticed a 400M reel of solid aluminium wire in the DIY store selling
>electric fencing stuff it, looks about 18SWG and says it's 0.3 ohms per
>metre anyone tried this for antenna work?
>
>Deni, GM3SKN
>

The Lightning Bolt line of quad antennas uses a aluminum alloy wire
for all elements and I and many others will vouch for the quality of
those antennas. Perhaps some have problems if near a salt air
environment.

4789. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 06:15:04 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <795b6vscsg5ropcictn12utaqur97u9uk8@4ax.com>
Source record: 123278

On Tue, 4 Mar 2003 22:45:26 -0600, "Crazy George"
<munschNO@attglobal.net.SPAM> wrote:

|
|
|"Wes Stewart" <n7ws@#arrl.net> wrote in message
|news:7via6v0b37p716qk2ffs4evnufdqso7fdu@4ax.com...
|
|<snip>
|>
|> It's very hard to add strength from the inside. You might get a little
|> bit by filling it with expanding foam.
|>
|
|Wes,
|
|I hate to dispute that, but if you can reach the original chief engineer of
|DB Products, Ray Trott, he will tell you that back in 1960, the original
|DB-224 mast wasn't quite strong enough, so it was strengthened with an
|internal press fit sleeve. The bottom half of the two piece mast, about 10
|feet long. I have installed a few of the original single walled models, and
|a whole lot of the later versions. The problem with the originals, which
|survived hurricanes on the Gulf Coast, was encountered on Sandia Crest above
|Albuquerque.

Alright, poor choice of words. What I was trying to say that if one
is adding wall thickness, it is better to add it to the OD rather than
the ID.

4790. Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 06:24:38 UTC
From: dstalk@exculink.com
Message-ID: <GKg9a.18530$cB3.105497@nnrp1.uunet.ca>
Source record: 123279

Since Kraus's antenna book was recently mentioned, how does it
compare to other popular antenna books such as those by Stutzman
and Thiele, Johnson (Antenna Engineering Handbook), and Balanis?

Which would be most suitable as a ham reference/text?

Thanks and 73,

Don ve3hur

dstalk@execulink.com

4791. Re: End fed Zepp?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 06:26:41 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E644201.8FB78963@att.net>
Source record: 123280

OC_CAM's Razor wrote:

> Ever consider getting a new XYL who understands physics?

Virtually no XYL understands physics, only appearances necessitating cosmetics
:)

Dick

4792. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 07:07:06 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <fd8b6voiu7ckmho1gq274ftjnetq7m6s60@4ax.com>
Source record: 123281

On Tue, 04 Mar 2003 11:35:56 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Nor a wooden rod. And neither would have any appreciable effect on the
>inductance, either.
>
>Incidentally, I don't believe I've ever seen a powdered iron rod. Does
>Micrometals sell them?

I don't know who sells them any more, but I used to use some that were
a half inch in diameter and 6 inches long as the core for filament
chokes in gro\unded grid amps.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>Roy Lewallen, W7EL
>
>Reg Edwards wrote:
>> An iron dust rod would not have overheated.
>>
>>

4793. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 07:14:26 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E65A3D2.6A191E13@cwis.net>
Source record: 123282

Don,
'Kraus' is about theory, not much 'hands-on' stuff.
'Doc

4794. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 07:15:35 UTC
From: richardharrison@webtv.net
Message-ID: <6137-3E65A417-113@storefull-2312.public.lawson.webtv.net>
Source record: 123283

Crazy George wrote:
"The problem with the originals (DB-224 mast), which survived hurricanes on the Gulf Coast, was encountered on Sandia Crest above Albuquerque."

Sand abrasion, lightning, wind? What could be worse than a Gulf Coast hurricane on an antenna mast? Solar radiation, ice, flora, fauna? I`m stumped.

This reminds me of what`s wrong with Windchargers on unattended off-shore platforms. Lots of boat people are tipped-off by the advertisement of batteries on-board made by the highly visible turbine on the topside. Thieves repeatedly put you out of business. Solar panels are the only way to go.

What`s with the DB Products stuff other than all we could ever get was aluminum and Stainless steel worked much better for us?

Best regards, Richard Harrison, KB5WZI

4795. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 07:57:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6bbf0isopmm41@corp.supernews.com>
Source record: 123284

Each book has its own orientation. For a ham reference/text, my first recommendation would be the ARRL Antenna Handbook. But for a deeper understanding of the principles involved, presented in the clearest and most straightforward manner possible, Kraus would definitely be my choice if I had to choose just one.

Roy Lewallen, W7EL

dstalk@exculink.com wrote:
> Since Kraus's antenna book was recently mentioned, how does it
> compare to other popular antenna books such as those by Stutzman
> and Thiele, Johnson (Antenna Engineering Handbook), and Balanis?
>
> Which would be most suitable as a ham reference/text?
>
> Thanks and 73,
>
> Don ve3hur
>
> dstalk@execulink.com
>

4796. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 08:03:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6bbqspr70q626@corp.supernews.com>
Source record: 123285

Roger Halstead wrote:
> On Tue, 04 Mar 2003 11:35:56 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>Nor a wooden rod. And neither would have any appreciable effect on the
>>inductance, either.
>>
>>Incidentally, I don't believe I've ever seen a powdered iron rod. Does
>>Micrometals sell them?
>
>
> I don't know who sells them any more, but I used to use some that were
> a half inch in diameter and 6 inches long as the core for filament
> chokes in gro\unded grid amps.
>
> Roger Halstead (K8RI EN73 & ARRL Life Member)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)

Are you sure they weren't ferrite? A high frequency powdered iron has permeability of less than 10, and with the large air gap in the magnetic path, the effective permeability of a rod would be considerably less. It would be extremely difficult to get enough impedance to do an effective job with a powdered iron rod.

A lot of people don't seem to understand the difference between powdered iron and ferrite. For starters, powdered iron is just that, iron powder mixed into a non-metallic binder material. Ferrite, on the other hand, is a ceramic. They have very different properties, both mechanically and electrically. If you mistakenly use one in place of the other, you'll almost certainly be disappointed in the results.

Roy Lewallen, W7EL

4797. Re: transmit loop antenna for 160 meter, possible?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 11:38:49 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b44nk9piu1@venus.btinternet.com>
Source record: 123286

A small loop antenna for 160m is entirely practical. The lower the frequency the greater the advantages.

With small loops you can have whatever polarisation you like, from vertical to horizontal and anything in between.

The most efficient model has a single, self-supporting turn in the vertical plane. Easy to construct. Unobtrusive outdoors. Can be used in the attic.

Disadvantage - high capacitance, high voltage, slow motion tuning capacitor essential.

For a given small backyard, Magloops are the most power-efficient and least noise-collecting of all small antennas.

Electrical design of magloops, from triangular to circular, is fully covered by small, single file program MAGLOOP4, the most accurate performance prediction software available.

Download MAGLOOP4 in a few seconds from website below and run immediately on a 'what-if?' basis. A three-week training course is unnecessary. You won't regret it. Money-back guarantee.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

"Robert Casey" wrote
> Well, "anything" is "Possible", but would a loop antenna
> built for 160 be practical? For my kenwood transceiver,
> which produces about a hundred watts. Thinking a loop
> about 10 feet square, using about 6 turns, a high voltage
> tuning cap of around 50pF (to make an LC circuit at 1900
> KHz), and coupling the coax to
> one of the 6 turns of wire. I have heard that the RF
> will develop very high voltages at the tuning cap. So I would
> need to be careful about using enough spacing to avoid arc over.
>
> Which polarization do they use on 160 SSB?
>

4798. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 11:45:12 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <6rl9a.2742$6z.593423@news20.bellglobal.com>
Source record: 123287

"Walter Maxwell" W2DU
> I hope this helps in understanding the situation.

Sorry, I had misunderstood the circuit. You have nicely clarified it.

You're using a stub to transform a real open into a virtual short and then you apply that virtual short to the main line. Nothing (very little) going along the main line gets past the point where you have applied the virtual short. Except of course, the whole thing is frequency dependant and therefore forms a narrow band stop filter along the main line. All done with a bit of transmission line and a T connector.

Thank you.

4799. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 13:00:26 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3E65F4EA.1993@wt.net>
Source record: 123288

James Cook wrote:
>
> I am a new ham trying to get a base antenna. What is the difference
> (operationally) between a jpole and a groundplane. I think the jpole
> doesn't require any ground, but what does that do? Does it have better
> gain or shape? A jpole is not symmetrical in physical shape, is the
> radiation pattern purely omnidirectional?
>
> I have a mobile dual bander (alinco dr-605tq). Any suggestions? I like the
> Arrow Antennas for price, and simplicity.
>
> JLC

As one mentioned, the degree of decoupling from the mast and feedline
will usually determine which is best. Assuming both were installed to
the best standards, there would be very little difference. Maybe .3 db
or so. But in the real world, usually the antenna with the best
decoupling will win. On VHF/UHF, I usually prefer the GP as it's fairly
easy to decouple. But you can decouple the 1/2 wave. The arrow is a good
antenna. Also, check on his website about J poles. There are different
ways to feed those, "IE: closed and open stub", and I think he noted
that one is definitely better as far as the decoupling from the mast and
feedline. But I forgot which was better...:/ I think "closed stub", but
I forgot. I think he's got that info on his web site. MK
--
http://web.wt.net/~nm5k

4800. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 13:35:45 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <p8vb6v8imqkunc2a488pnf6oslrr4v1ufg@4ax.com>
Source record: 123289

On Wed, 05 Mar 2003 07:07:06 GMT, Roger Halstead <rdhalste@tm.net>
wrote:

|On Tue, 04 Mar 2003 11:35:56 -0800, Roy Lewallen <w7el@eznec.com>
|wrote:
|
|>Nor a wooden rod. And neither would have any appreciable effect on the
|>inductance, either.
|>
|>Incidentally, I don't believe I've ever seen a powdered iron rod. Does
|>Micrometals sell them?
|
|I don't know who sells them any more, but I used to use some that were
|a half inch in diameter and 6 inches long as the core for filament
|chokes in gro\unded grid amps.

Those were ferrite, not powered iron.

4801. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 13:53:42 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <9OicndXN58H7nPujXTWcrg@comcast.com>
Source record: 123290

Krause is a textbook, and covers about every conceivable antenna. There is next to nothing about Yagis, nothing about matching, but more about helical antennas than you will see anywhere else.

Tam/WB2TT
<dstalk@exculink.com> wrote in message
news:GKg9a.18530$cB3.105497@nnrp1.uunet.ca...
> Since Kraus's antenna book was recently mentioned, how does it
> compare to other popular antenna books such as those by Stutzman
> and Thiele, Johnson (Antenna Engineering Handbook), and Balanis?
>
> Which would be most suitable as a ham reference/text?
>
> Thanks and 73,
>
> Don ve3hur
>
> dstalk@execulink.com
>

4802. How to feed a Marine MF/HF antenna in a backyard?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 14:20:24 UTC
From: William PA3GUW <pa3guw@dutchhamradio.com>
Message-ID: <1046874357.660783@gold.noc.iaf.nl>
Source record: 123292

Dear OM's,

Via my QRL I have been donated with a COMROD (www.comrod.com) HF MArine Antenna. The bottom section is 3 meters and the top section is 4 meters long. A total lenght of 7m (yes I can add ;-).
The feeding point is a bult of approx. 5mm diameter. (I assume for the 'hot' side of a COAX feed??)
The spec's of the antenna say's it's freq. range is 1.6-30 MHz.

How to feed this antenna? I have a MFJ tuner, lots of wire, coax, baluns, but how to start. What about the RF ground (there is no steel ship in my backyard....)?

Any tips or hint is appreciated.

Kindest regards,

William - PA3GUW
email: pa3guw@dutchhamradio.com
web: www.dutchhamradio.com

4803. Re: Aluminium wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 14:23:06 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <UAudneECf6PXlfujXTWcpg@comcast.com>
Source record: 123291

Nothing wrong with aluminum wire, but .3 Ohm/m is equivalent to about #30 AWG wire. #12 Al is about equivalent to #14 Cu, but lighter.

Tam/WB2TT
"Bill Brannick" <wmlb@attbi.com> wrote in message
news:ae3b6vcj5rtkn67odsfoisc24jm38p10hd@4ax.com...
> On Tue, 4 Mar 2003 18:53:59 -0000, "Deni" <deni1@tiscali.fr> wrote:
>
> >I noticed a 400M reel of solid aluminium wire in the DIY store selling
> >electric fencing stuff it, looks about 18SWG and says it's 0.3 ohms per
> >metre anyone tried this for antenna work?
> >
> >Deni, GM3SKN
> >
>
> The Lightning Bolt line of quad antennas uses a aluminum alloy wire
> for all elements and I and many others will vouch for the quality of
> those antennas. Perhaps some have problems if near a salt air
> environment.

4804. 6:1Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 14:58:30 UTC
From: Imageinaction <imageinaction@hotmail.com>
Message-ID: <qgo9a.179878$ZE.5390584@twister2.libero.it>
Source record: 123293

Hello,
can anyone give me some info on 6:1 balun homebrewing?
I want to build it for a windom antenna.

Many thanks

73 de IT9VVM Vittorio

4805. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 15:05:53 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b453of$i2t$1@slb6.atl.mindspring.net>
Source record: 123294

Don:

Amateurs need no more than the ARRL and RSGB publications.

That said, no one with a deep interest in antennas should be without Kraus.

However... IMHO Kraus is not very "tutorial" rather that "tome" is more
in the nature of a "reference" work.

For a first time "learner" who is starting the study of antennas after the
equivalent of a first "fields" course there are better texts and tutorials
than
Kraus.

Once you are past equivalent of a first "semester" studying antennas though
you will find Kraus' "bible" to be invaluable.

--
Peter K1PO
Indialantic By-the-Sea, FL.

<dstalk@exculink.com> wrote in message
news:GKg9a.18530$cB3.105497@nnrp1.uunet.ca...
> Since Kraus's antenna book was recently mentioned, how does it
> compare to other popular antenna books such as those by Stutzman
> and Thiele, Johnson (Antenna Engineering Handbook), and Balanis?
>
> Which would be most suitable as a ham reference/text?
>
> Thanks and 73,
>
> Don ve3hur
>
> dstalk@execulink.com
>

4806. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 15:19:34 UTC
From: richardharrison@webtv.net
Message-ID: <12120-3E661586-66@storefull-2314.public.lawson.webtv.net>
Source record: 123296

Art, KB9MZ wrote:
"two antennas stuck together must be better than one"

That depends on your goal and how well you meet it.

Two antennas are bigger than one. Few desire taking more space, material, wind-loading, etc. Already, two antennas are worse than one.

Art suggests somebody, anybody, take some arbitrary configuration and model it for him. If a better antenna doesn`t result, change the configuration and try, try again. This presumes a host of chimps at typewriters eventually will produce a Shakespearian sonnet.

A better way is to list what you want in an antenna, then use your knowledge and search the literature for ideas leading to a successful confluence which meets your goals.

Saying an antenna is spectacular in 16 wonderful ways only stands the test of time when it`s true. Someone will compare with the actual antenna and other antennas. Even baloney spoils, no matter how it is sliced.

Best regards, Richard Harrison, KB5WZI

4807. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 15:25:21 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6616E1.9090703@ieee.org>
Source record: 123295

J. Harvey wrote:
> You're using a stub to transform a real open into a virtual short and then
> you apply that virtual short to the main line.

I published such an example last week and didn't get many comments.

```
Source-------------feedline-----------+
|
|1/4WL feedline
|
open
```

I agree that there is a virtual short at the bend at '+'.
But I simply cannot agree that no signal gets past the
bend in the coax. In fact, nothing of note occurs at the
bend except that the superposition of the forward waves
and the reflected waves yields a V/I ratio of zero. All
the action occurs at the open end of the transmission
line where there is a physical impedance discontinuity.
Nothing exists at the bend to keep the forward wave from
flowing unobstructed into the stub and being reflected
from the open circuit at the very end.

Consider the irony if we make the stub 3/4WL long and the
new bend blocks the signals from reaching the old bend.
Exactly how do the signals inside a piece of coax know
that the coax is bent? If we bend it at a 45 degree angle
instead of a 90 degree angle, does the virtual short go
away? If we don't bend it at all, does the virtual short
disappear? The V/I ratio remains virtually the same whether
the feedline is bent or not.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4808. Re: Another Johnson Matchbox question.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 16:41:07 UTC
From: Eskay <sieb_kNOS@PAMyahoo.ca>
Message-ID: <3E6628A3.1070006@PAMyahoo.ca>
Source record: 123297

Could anyone scan this article and send it to me please?
73 de Sieb VE3JUA..ve3jua@rac.ca

Roger Leone wrote:
> Sieb:
>
> Electric Radio #142 (March 2001) had an article on this. Was written by
> WC3K.
>
> Roger K6XQ
>
>

4809. Re: How to feed a Marine MF/HF antenna in a backyard?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 17:01:25 UTC
From: richardharrison@webtv.net
Message-ID: <20214-3E662D65-51@storefull-2316.public.lawson.webtv.net>
Source record: 123299

William, PA3GUW wrote:
"What about the RF ground (there is no steel ship in my backyard...)?"

For 1.6 to 30 MHz, a system of radials is needed as a counterpoise for what must be a vertically polarized antenna system if it`s meant for the sea. Ground mounted radials (at or barely below the earth surface) are convenient but many are needed (almost the more the better) up to 120 in number and 1/4-wave, 40 meters for the 160 m band. If you don`t have the space, the most possible short radials do well. For elevated radials, fewer will do to avoid lossy earth currents. Consult a good amateur or professional reference for a recommended number of radials versus height and frequency.

Soil conductivity in the Netherlands is in your favor.

Best regards, Richard Harrison, KB5WZI

4810. Re: Aluminium wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 17:03:13 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e6629b7.396031078@news.galilei.com>
Source record: 123298

Hi Deni

We had electric fences all around and dividing up one of our farms where I lived for a few years. Although most of the fencing was galvanized steel wire, all the new stuff was aluminum.

We used fence stretchers to pull the fences tight and a western union splice for the unions. But when we began using aluminum, we could never pull it as tight, it would just keep stretching and stretching the more you pulled on the stretcher. So we had to compromise and only stretch until it was just taut, it would always have a slight sag between the fence posts.

I made use of the electric fences as dipoles, not ideal since the top wire was only 3-1/2 feet from the ground, but sufficed. At first I never bothered with using any of the aluminum fences, but eventually started doing so and was initially surprised that it worked just fine, as long as there were no splices in the wire.

With a little practice, I learned to braze the aluminum unions together and it's not as hard as it seems. You need a large container, big enough to work in, like a 5 gallon white bucket, which can hang over the wire via two slots, one on each side of the bucket, a little beyond the midpoint of the bucket. An acetyline torch with an air feed tube, aluminum welding rods and a small tank a helium (at least I think it was helium, the tanks were either green or yellow depending upon the supplier.
A small 1/4 inch tube ran from the tank through the side of the bucket and near the brazing area and turned on. Your hands reached up under the top of the bucket, which was pointing downward and you did your brazing job looking through a small hole in the side of the bucket for viewing. All of our aluminum joints were eventually done this way, because even the western union type splice we made could be pulled apart too easily.
I have no idea why or how this riggins worked to braze aluminum with aluminum but it worked just fine and held up perfectly.

TTUL
Gary

4811. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 17:15:52 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e662e7b.397251578@news.galilei.com>
Source record: 123300

Hi Iain

Don't know if this would be beneficial as far as strength is concerned, but at least it's really cheap.

Not that it's relevant, but my late wife used to make candles, and left behind a slow temperature rise melting pot that had an adjustable thermostat on it. But I tried the same thing with an old pot on the stove and it worked just fine too!

Those plastic milk jugs that you toss away melt at a very low temperature, somewhere between 210 and 250 degrees I think, never checked it with a thermometer, but its a lot cooler than what grease has to be for frying in.

Anyhow, I would save milk jugs to melt to use to make anything from tool grips to toy plastic soldiers, and used it in place of potting material on several automotive or wet application devices. I even made a mold to make my own sealed electrical plugs and to make replacement plugs for Yaesu and other HTs.

Although a milk jug is flimsy, the plastic itself is quite hard when it is molded into something, but rather than being brittle, does have some flexibility and resiliance to it. The little soldiers I cast behaved more like a vinyl plastic and were unbreakable.

It may cool to fast pouring it down a long pipe, but you can get it pretty hot before it becomes volatile. In a sense, it's safer to work with than wax which can flash over quite easily. If you get the plastic too hot, about the only thing that happens is it begins to turn amber rather than remaining a milkish color when cool, it is clear when melted.

TTUL
Gary

4812. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 17:17:48 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <b45bfs$2bm$0@216.39.144.81>
Source record: 123301

I find that depending on my need at the time, there are three antenna
books I frequently refer to:

The ARRL Antenna Book
Antenna Engineering Handbook (edited by Jasik)
Antennas (2nd ed.) by Kraus

Bob, N7XY

On Wed, 05 Mar 2003 06:24:38 GMT, dstalk@exculink.com wrote:
> Since Kraus's antenna book was recently mentioned, how does it
> compare to other popular antenna books such as those by Stutzman
> and Thiele, Johnson (Antenna Engineering Handbook), and Balanis?
>
> Which would be most suitable as a ham reference/text?
>
> Thanks and 73,
>
> Don ve3hur
>
> dstalk@execulink.com
>

4813. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 17:21:30 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <umq9a.363734$HN5.1541550@rwcrnsc51.ops.asp.att.net>
Source record: 123302

As several people have already commented, there is a huge gap between the antenna related books that one can get from the ARRL and RSGB and those available in the text-book/research category.

It is my feeling that amateurs are reasonably tolerant of 'windage' factors, whereas academics/professionals are paid not to be. However the problem of accurately modeling the types of antennas that amateurs are interested in is actually very difficult and there is not too much pay-back (for academics/professionals) for doing it. So we are left with this gap. The lack of development in the area is also related to the use of higher and higher frequencies and the introduction of corresponding different topologies.

Malcolm

<dstalk@exculink.com> wrote in message
news:GKg9a.18530$cB3.105497@nnrp1.uunet.ca...
> Since Kraus's antenna book was recently mentioned, how does it
> compare to other popular antenna books such as those by Stutzman
> and Thiele, Johnson (Antenna Engineering Handbook), and Balanis?
>
> Which would be most suitable as a ham reference/text?
>
> Thanks and 73,
>
> Don ve3hur
>
> dstalk@execulink.com
>

4814. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 17:29:56 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e66315e.397990421@news.galilei.com>
Source record: 123303

Hi James

A Ground Plane and a J-Pole are both 1/2 wave vertical antennas and both are grounded through the coax shield. Although you could make them 5/8 wave also if desired.

The mast of a Ground Plane and the mast of a J-Pole may or may not be grounded, but grounding is better in both cases for safety reasons if nothing else.

A Ground Plane uses an artificial ground of 1/4 wavelength affixed horizontally to the mast and insulated from the vertical element.
A J-Pole uses a U-Shaped 1/4 wavelength Matching Transformer.
Visually and at DC it is grounded to the vertical, but at RF the physical components and connections of the antenna are (for all intensive purposes) invisible below the feedpoint.

The feedpoint of a manufactured Ground Plane is normally at 52 ohms as the standard, but the insulation gap can be changed to adjust this if you prefer something else.

The feedpoint of a J-Pole can be adjusted to change it from 52 ohms 300 ohms or even 750 ohms if desired with no modifications to the antenna design.

Most home builders can easily construct a J-Pole that will function perfectly and for low cost. And if need be, make simple adjustments using a pipe cap and brass machine screw to tweek both the center frequency and the Matching section.
Building a Ground Plane poses the problem of obtaining properly sized insulators strong enough to hold the vertical and obtain the correct impedance. There is not much you can do in the way of tweaking.

TTUL
Gary

4815. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 17:54:56 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <QRq9a.3761$wJ1.403492@newsread2.prod.itd.earthlink.net>
Source record: 123304

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E6616E1.9090703@ieee.org...
> J. Harvey wrote:
> > You're using a stub to transform a real open into a virtual short and
then
> > you apply that virtual short to the main line.
>
> I published such an example last week and didn't get many comments.
>
> Source-------------feedline-----------+
> |
> |1/4WL feedline
> |
> open
>
> I agree that there is a virtual short at the bend at '+'.
> But I simply cannot agree that no signal gets past the
> bend in the coax. In fact, nothing of note occurs at the
> bend except that the superposition of the forward waves
> and the reflected waves yields a V/I ratio of zero. All
> the action occurs at the open end of the transmission
> line where there is a physical impedance discontinuity.
> Nothing exists at the bend to keep the forward wave from
> flowing unobstructed into the stub and being reflected
> from the open circuit at the very end.
>
> Consider the irony if we make the stub 3/4WL long and the
> new bend blocks the signals from reaching the old bend.
> Exactly how do the signals inside a piece of coax know
> that the coax is bent? If we bend it at a 45 degree angle
> instead of a 90 degree angle, does the virtual short go
> away? If we don't bend it at all, does the virtual short
> disappear? The V/I ratio remains virtually the same whether
> the feedline is bent or not.
> --
> cheers, CAM http://www.qsl.net/w5dxp

Cecil, are you disputing my post of 3-4-03?

Walt, W2DU

4816. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 18:06:51 UTC
From: Bart Rowlett <BHRowlett@raytheon.com>
Message-ID: <3E663CBB.5D7FE2A0@raytheon.com>
Source record: 123306

dstalk@exculink.com wrote:

> Since Kraus's antenna book was recently mentioned, how does it
> compare to other popular antenna books such as those by Stutzman
> and Thiele, Johnson (Antenna Engineering Handbook), and Balanis?

My feeling is that Balanis is the best of the 'modern' textbooks on antennas. If you are interested in learning the fundamental principals of antenna theory, I recommend Balanis.

Kraus is the classic textbook and certainly a 'must have' for anyone wanting to do serious work with antennas. As is often the case for the groundbreaking work, Kraus isn't as well organized as it could be for textbook use. The latest edition may be significantly improved, especially with regard to notation.

Both Balanis and Kraus assume the student has already had an introduction to engineering electromagnetics, including vector calculus.

Johnson is a handbook and not suitable for learning theory, but quite interesting to browse, and useful for applications engineering. Personally, I prefer the 1st edition (Johnson and Jasik) since it contains all sorts of design material on various longwire antennas which are now commercially obsolete, but an important part of radio history.

> Which would be most suitable as a ham reference/text?

The best is probably the ARRL Antenna Book. Some of the RSGB publications are also excellent, though like many of the ARRL and other popular publications, often contain significant misinformation. My favorite of the RSGB series is HF Antennas for All Locations by Moxon. It's a little difficult reading at times (language difference? :-) but Les really knew his stuff and once you finally figure out what he's saying, so will you!

bart
wb6hqk

4817. Re: 6:1Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 18:12:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E663DF9.70602@ieee.org>
Source record: 123307

Imageinaction wrote:
> Hello,
> can anyone give me some info on 6:1 balun homebrewing?
> I want to build it for a windom antenna.

The feedpoint impedance won't be exactly 300 ohms so the
balun won't see exactly 300 ohms. A 4:1 Balun is a lot
easier to come by and will probably work just as well.
If not, the standard thing to do is add a 1:1.56 balun
ahead of a 1:4 to achieve a 1:6.25 ratio but, IMO, that
is overkill for a "Windom".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4818. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 18:30:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E664252.4030408@ieee.org>
Source record: 123308

Walter Maxwell wrote:
> Cecil, are you disputing my post of 3-4-03?

I'm not sure, Walt. What I am saying is that in a transmission line with an SWR above 1:1, a constant Z0, and no impedance discontinuities, there will be an infinite number of virtual impedances that cause absolutely nothing. The virtual impedances in the above transmission line are the *result* of the V/I ratio and not the *cause* of anything. Only at the ends of the transmission line where there are *physical* impedance discontinuities will anything be caused to happen. For instance, in the following one wavelength transmission line with constant Z0:

Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open

There are virtual impedances at every 'x' but they do not cause any reflections. The only reflections are caused by the open circuit at the very end of the transmission line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4819. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 18:55:35 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303051055.63285067@posting.google.com>
Source record: 123309

Richard,
I know it all sounds absurd and yes even you had to smile at my claims since they are so,so different from anything that you have ever heard. I don't make it easier on myself by sharing the fact that I have gone thru a period of brain damage which puts credence in the possible fact that I have been dreaming for several years, perhaps even in a coma. Looking back over tha past 8 years it seems absurd that I should have done all the things that you and others said I should do, I had no idea what direction this lifeline would take me. I am pretty sure that you have not taken
the slightest step of seriously looking at what I have stated. I don't blame you for that and I suspect most will make a point of giving me advice
regardless of their background...my wife gives me advice all the time on evry thing that you can think off. Now that many years have passed I could now do all the things or at least I think I can, that you tell me I should have done, but who in their right mind (shouldn't have said it that way)could or would have formulated a list that reflect my present statements
But could've, should've and other similar statement have no purpose now.
If I had to make a list of what I wanted in hindsight my defanition of 'Q'
and loss less impedance systems as well as smaller radiators would be right up there but again that is hindsight because now I know that all is achievable.
At the moment it doesn't appear that I do not have a guru or curious person
to look at it the way I suggested which natuaraly is extremely disapointing to me and even tho I suffer from manic depression I certainly am not going
to take my own life. I have told the truth as I know it, I have maintained records, lectured at a ARRLhamfest of the year which was played in Peoria no lessMy hamcluub made a video of a demonstration I gave,I have obtained poatents as you know which to all now seems to be of no importance and have shared it with Gurus many times over the years and have received all the 'what you should do" letters from everybody under the son to which I can now add yours.
One day, somebody, somewhere will either make one like mine in a couple of minuits by tieing a flexible loop to a random length dipole and will feed it in an old standard way with a delta match one sunny afternoon and proove it to himself. Somebody somewhere will spend an hour with a computor program and even in a doodling motion will do what I did after I made my first antenna.

At that time all can jump on the bandwaggon and nobody will remember
past comments. Actually I still have hope that at the present time is
persueing it,
a forlorn hope but still hope. So Richard, thankyou for pointing out
all
the things I should have done which in hindsight I can find little
fault. I might add that I also put a lot of effort in placing the
whole thing on the web for over a year where it got hits from
Universities and Companies
from all over the World but with zero results, so rest assured you are
in extremely good company in the thoughts that you declared.
My computor is going down the drain rather quickly now so soon all
will pass.
Best regards
Art

mrichardharrison@webtv.net (Richard Harrison) wrote in message
news:<12120-3E661586-66@storefull-2314.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "two antennas stuck together must be better than one"
>
> That depends on your goal and how well you meet it.
>
> Two antennas are bigger than one. Few desire taking more space,
> material, wind-loading, etc. Already, two antennas are worse than one.
>
> Art suggests somebody, anybody, take some arbitrary configuration and
> model it for him. If a better antenna doesn`t result, change the
> configuration and try, try again. This presumes a host of chimps at
> typewriters eventually will produce a Shakespearian sonnet.
>
> A better way is to list what you want in an antenna, then use your
> knowledge and search the literature for ideas leading to a successful
> confluence which meets your goals.
>
> Saying an antenna is spectacular in 16 wonderful ways only stands the
> test of time when it`s true. Someone will compare with the actual
> antenna and other antennas. Even baloney spoils, no matter how it is
> sliced.
>
> Best regards, Richard Harrison, KB5WZI

4820. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 19:01:46 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <uQr9a.3047$se1.2087722@newssvr28.news.prodigy.com>
Source record: 123305

I would definitely agree with that list, but I would add several from
RSGB...

Radio Communication Handbook - Volume 2
Amateur Radio Techniques by Pat Hawker
HF Antennas for All Locations - by L.A. Moxon

These are a treasure trove of alternative thinking in many regards from what
we do on this side of the pond.
--
73,
Larry N8LP
www.telepostinc.com

"Bob Nielsen" <nielsen@remove_this.oz.net> wrote in message
news:b45bfs$2bm$0@216.39.144.81...
> I find that depending on my need at the time, there are three antenna
> books I frequently refer to:
>
> The ARRL Antenna Book
> Antenna Engineering Handbook (edited by Jasik)
> Antennas (2nd ed.) by Kraus
>
> Bob, N7XY
>
> On Wed, 05 Mar 2003 06:24:38 GMT, dstalk@exculink.com wrote:
> > Since Kraus's antenna book was recently mentioned, how does it
> > compare to other popular antenna books such as those by Stutzman
> > and Thiele, Johnson (Antenna Engineering Handbook), and Balanis?
> >
> > Which would be most suitable as a ham reference/text?
> >
> > Thanks and 73,
> >
> > Don ve3hur
> >
> > dstalk@execulink.com
> >

4821. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 19:05:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8nhc6vkrgv8c0vnsidu2094210o675hiij@4ax.com>
Source record: 123310

On Wed, 05 Mar 2003 12:30:42 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open
>
>There are virtual impedances at every 'x' but they do not cause
>any reflections. The only reflections are caused by the open
>circuit at the very end of the transmission line.

Hi Cecil,

Eloquent, but hardly conclusive. It could be argued that 4 of the 5
x's don't reflect because the first one is doing all there is to be
done.

73's
Richard Clark, KB7QHC

4822. Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 19:18:37 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E664D8D.497E24E7@osite.com.br>
Source record: 123311
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi Guys,

I decided that the Hex-Beam would be a good bet for the
foreseable future.
I currently own an IC-735.

The question is what are the pros and cons of bamboo and
fiberglass spreaders?
I figure that I could get the bamboo spreaders at NO cost,
but they will eventually rotten and break.
Fiberglass material is expensive, but the way I see it may
last many years.
Then one issue arises... Would it be better to use
telescoping sections of FG tubes or a solid rod would be
better?

Next week I have an appointment with the FG salesman, so I
may have some answers (will post on the NGs r.r.a.a and
r.r.a.h)

Almost forgot to mention... I live in SE Brazil (sunny,
rainy), with a possible move to NE Brazil (really sunny,
quite dry) in the next months

--
Paulo E.P. Marcondes
pepm@osite.com.br

4823. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 19:20:05 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <F5s9a.3868$wJ1.411410@newsread2.prod.itd.earthlink.net>
Source record: 123312

> Walter Maxwell wrote:
> > Cecil, are you disputing my post of 3-4-03?
>
> I'm not sure, Walt. What I am saying is that in a transmission
> line with an SWR above 1:1, a constant Z0, and no impedance
> discontinuities, there will be an infinite number of virtual
> impedances that cause absolutely nothing. The virtual impedances
> in the above transmission line are the *result* of the V/I ratio
> and not the *cause* of anything. Only at the ends of the transmission
> line where there are *physical* impedance discontinuities will
> anything be caused to happen. For instance, in the following one
> wavelength transmission line with constant Z0:
>
> Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open
>
> There are virtual impedances at every 'x' but they do not cause
> any reflections. The only reflections are caused by the open
> circuit at the very end of the transmission line.
> --
> cheers, CAM http://www.qsl.net/w5dxp

Cecil, please re-read my post carefully--you'll see that your transmission-line diagram above in no way represents the one in my description. Consequently, the wave action is totally different, and the point where I connect the open-circuited 1/4 wl lossless line will allow no energy to pass by it to be dissipated in the 50-ohm load, as it would if the stub weren't connected there. At the frequency where the stub is exactly 1/4 wl the virtual short circuit established at the connnecting point on the main line performs exactly the same as a perfect physical short circuit. No electrical measurement at the resonant frequency of the stub can differentiate between the virtual and physical short circuit. This is the point I've been trying to get across for months.

Walt, W2DU

4824. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 19:26:14 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E664F56.B69F8A4D@cwis.net>
Source record: 123313

Let me add one reminder to Gary's post. There are
-no- plastics that have beneficial health properties
when heated or burned. Which just says, if you are
going to melt plastic, do it in a very well ventilated
area. Some plastics are worse than others and I have
no idea what's used for 'milk jugs'. I do know that
it won't be 'good' for you...
'Doc

4825. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 19:35:41 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E66518D.9000306@ieee.org>
Source record: 123314

Richard Clark wrote:
> On Wed, 05 Mar 2003 12:30:42 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open
>>
>>There are virtual impedances at every 'x' but they do not cause
>>any reflections. The only reflections are caused by the open
>>circuit at the very end of the transmission line.
>
> Eloquent, but hardly conclusive. It could be argued that 4 of the 5
> x's don't reflect because the first one is doing all there is to be
> done.

Begging the question, which 'x' is doing all the work? The first
one on the left or the first one on the right? The first one on
the right is a *PHYSICAL* impedance discontinuity and is therefore
indeed doing *ALL* the work. There is no physical impedance discontinuity
at any other point 'x' with the possible exception of the one on
the left depending on the source impedance.(Let's not discuss that :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4826. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 19:48:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E665495.30500@ieee.org>
Source record: 123315

Walter Maxwell wrote:
>>Walter Maxwell wrote:
>>
>>>Cecil, are you disputing my post of 3-4-03?
>>
>>I'm not sure, Walt. What I am saying is that in a transmission
>>line with an SWR above 1:1, a constant Z0, and no impedance
>>discontinuities, there will be an infinite number of virtual
>>impedances that cause absolutely nothing. The virtual impedances
>>in the above transmission line are the *result* of the V/I ratio
>>and not the *cause* of anything. Only at the ends of the transmission
>>line where there are *physical* impedance discontinuities will
>>anything be caused to happen. For instance, in the following one
>>wavelength transmission line with constant Z0:
>>
>>Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open
>>
>>There are virtual impedances at every 'x' but they do not cause
>>any reflections. The only reflections are caused by the open
>>circuit at the very end of the transmission line.
>
> Cecil, please re-read my post carefully--you'll see that your
> transmission-line diagram above in no way represents the one in my
> description. Consequently, the wave action is totally different, and the
> point where I connect the open-circuited 1/4 wl lossless line will allow no
> energy to pass by it to be dissipated in the 50-ohm load, as it would if the
> stub weren't connected there.

So it appears that I am not disputing your post of 3-4-03, just trying
to clarify things and make an additional point.

> At the frequency where the stub is exactly 1/4
> wl the virtual short circuit established at the connnecting point on the
> main line performs exactly the same as a perfect physical short circuit. No
> electrical measurement at the resonant frequency of the stub can
> differentiate between the virtual and physical short circuit. This is the
> point I've been trying to get across for months.

And the point I have been trying to get across for months is that there is no
net energy exchange in an open 1/4WL stub but there is lots of *gross* energy
flowing into, out of, and inside a stub. The voltage wave flowing into the stub
flows unobstructed until it encounters the open circuit and the reflected wave
flowing out of the stub flows unobstructed until it encounters some *physical*
impedance discontinuity.

The phasor sum of the forward voltage flowing into the stub and the reflected voltage flowing out of the stub is indeed zero but the reflected voltage is 90 degrees older than the forward voltage. The SWR inside the stub is infinite. If the reflected wave flowing out of the stub contains modulation components not present on the forward wave flowing into the stub, the two waves will not cancel to zero.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4827. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 20:14:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9umc6vg5p5m93ghob8n19qs25a21h64o6b@4ax.com>
Source record: 123316

On Wed, 05 Mar 2003 13:35:41 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> On Wed, 05 Mar 2003 12:30:42 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>
>>>Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open
>>>
>>>There are virtual impedances at every 'x' but they do not cause
>>>any reflections. The only reflections are caused by the open
>>>circuit at the very end of the transmission line.
>>
>> Eloquent, but hardly conclusive. It could be argued that 4 of the 5
>> x's don't reflect because the first one is doing all there is to be
>> done.
>
>Begging the question, which 'x' is doing all the work? The first
>one on the left or the first one on the right?

On the left.

73's
Richard Clark, KB7QHC

4828. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 20:29:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6cnhk4aori826@corp.supernews.com>
Source record: 123317

The Antenna Engineering Handbook has been edited by Richard C. Johnson
for some time now. It's essentially the same as the Jasik book, but
updated a bit.

Roy Lewallen, W7EL

Bob Nielsen wrote:
> I find that depending on my need at the time, there are three antenna
> books I frequently refer to:
>
> The ARRL Antenna Book
> Antenna Engineering Handbook (edited by Jasik)
> Antennas (2nd ed.) by Kraus
>
> Bob, N7XY

4829. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 20:35:45 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303051235.5fad0798@posting.google.com>
Source record: 123318

richardharrison@webtv.net (Richard Harrison) wrote in message news:

<12120- suggests somebody, anybody, take some arbitrary configuration and
> model it for him. If a better antenna doesn`t result, change the
> configuration and try, try again. This presumes a host of chimps at
> typewriters eventually will produce a Shakespearian sonnet.
>
>
> Best regards, Richard Harrison, KB5WZI

After I read the above caustic comment again and again I now
realise that with such a thing coming from you of all people
shows that I have failed to convince anybody. That I look at
other people like chimps. Well that is not so, I learned a little
bit from everybody all the way down to doc, so the whole thing
was to my gain. Thank you and look after yourself
Bye
Art

4830. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 21:04:02 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b45oo8$77a$1@nyytiset.pp.htv.fi>
Source record: 123119
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

"Bruce Raymond" <raymondb@dma.org> schrieb im Newsbeitrag
news:iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com...
> I'll show my ignorance here - is there a convenient way to calculate the
> temperature rise in the core that Jason originally referred to? I'd end
up
> pulling out an old textbook and calculating Grashof and Nusselt numbers
> for laminar flow from a vertical plate, and then finding the thermal
> equilibrium
> point. I imagine that there's an easier method for standard components.
>
> Thanks,
> - Bruce/ND8I

If you know the core material, you can download the datasheet. There you can find the core losses in mW/cm^3 or W/cm^3, vs the frequency and flux density. With that info, you can estimate the total power loss and temperature rise. Winding losses come extra.

cheers,
- jfw

4831. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 21:09:45 UTC
From: k3bu@aol.com
Message-ID: <20030305160945.05844.00000032@mb-fc.aol.com>
Source record: 123120

>I figure that I could get the bamboo spreaders at NO cost,
>but they will eventually rotten and break.

Not if you impregnate them properly.
I have used latex based driveway surface coating, just paint or dip the rods in the coating and let it dry. Very tough, long lasting and cheap.

73 and GL Yuri, K3BU, VE3BMV, VE1BY

4832. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 21:11:22 UTC
From: Spehro Pefhany <speff@interlog.com>
Message-ID: <8upc6v8opanhp15tqtuuta9q0m1pptiav0@4ax.com>
Source record: 123121
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

On Wed, 5 Mar 2003 23:04:02 +0200, the renowned "Jan Wagner"
<jwagner@cc.hut.fi> wrote:

>
>"Bruce Raymond" <raymondb@dma.org> schrieb im Newsbeitrag
>news:iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com...
>> I'll show my ignorance here - is there a convenient way to calculate the
>> temperature rise in the core that Jason originally referred to? I'd end
>up
>> pulling out an old textbook and calculating Grashof and Nusselt numbers
>> for laminar flow from a vertical plate, and then finding the thermal
>> equilibrium
>> point. I imagine that there's an easier method for standard components.
>>
>> Thanks,
>> - Bruce/ND8I
>
>If you know the core material, you can download the datasheet. There you can
>find the core losses in mW/cm^3 or W/cm^3, vs the frequency and flux
>density. With that info, you can estimate the total power loss and
>temperature rise. Winding losses come extra.

I think his question was- given the mW, how do you determine the
temperature rise of the core?

Best regards,
Spehro Pefhany
--
"it's the network..." "The Journey is the reward"
speff@interlog.com Info for manufacturers: http://www.trexon.com
Embedded software/hardware/analog Info for designers: http://www.speff.com

4833. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 21:48:43 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <%gu9a.4044$wJ1.426068@newsread2.prod.itd.earthlink.net>
Source record: 123122

> Walter Maxwell wrote:
> >>Walter Maxwell wrote:
> >>
> >>>Cecil, are you disputing my post of 3-4-03?
> >>
> >>I'm not sure, Walt. What I am saying is that in a transmission
> >>line with an SWR above 1:1, a constant Z0, and no impedance
> >>discontinuities, there will be an infinite number of virtual
> >>impedances that cause absolutely nothing. The virtual impedances
> >>in the above transmission line are the *result* of the V/I ratio
> >>and not the *cause* of anything. Only at the ends of the transmission
> >>line where there are *physical* impedance discontinuities will
> >>anything be caused to happen. For instance, in the following one
> >>wavelength transmission line with constant Z0:
> >>
> >>Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open
> >>
> >>There are virtual impedances at every 'x' but they do not cause
> >>any reflections. The only reflections are caused by the open
> >>circuit at the very end of the transmission line.
> >
> > Cecil, please re-read my post carefully--you'll see that your
> > transmission-line diagram above in no way represents the one in my
> > description. Consequently, the wave action is totally different, and the
> > point where I connect the open-circuited 1/4 wl lossless line will allow
no
> > energy to pass by it to be dissipated in the 50-ohm load, as it would if
the
> > stub weren't connected there.
>
> So it appears that I am not disputing your post of 3-4-03, just trying
> to clarify things and make an additional point.
>
> > At the frequency where the stub is exactly 1/4
> > wl the virtual short circuit established at the connnecting point on the
> > main line performs exactly the same as a perfect physical short circuit.
No
> > electrical measurement at the resonant frequency of the stub can
> > differentiate between the virtual and physical short circuit. This is
the
> > point I've been trying to get across for months.
>
> And the point I have been trying to get across for months is that there is
no

> *net* energy exchange in an open 1/4WL stub but there is lots of *gross*
energy
> flowing into, out of, and inside a stub. The voltage wave flowing into the
stub
> flows unobstructed until it encounters the open circuit and the reflected
wave
> flowing out of the stub flows unobstructed until it encounters some
physical
> impedance discontinuity.
>
> The phasor sum of the forward voltage flowing into the stub and the
reflected
> voltage flowing out of the stub is indeed zero but the reflected voltage
is 90
> degrees older than the forward voltage. The SWR inside the stub is
infinite.
> If the reflected wave flowing out of the stub contains modulation
components not
> present on the forward wave flowing into the stub, the two waves will not
cancel
> to zero.
> --
> cheers, CAM http://www.qsl.net/w5dxp

Sorry, Cecil, but the reflected wave from the open circuit is 180 degrees, not 90 degrees older than the wave entering the stub, therefore the reflected and entering voltages are 180 degrees out of phase, establishing a short circuit at the frequency where the stub is 1/4 wl. That short circuit, when placed anywhere on the main line, is as true a short at its resonant frequency as if a solid metal short circuit was placed across the line at that point. This is a concept that you're going to have to accept, because it's proven to be true millions of times. In fact, it's the basis for the operation of RF filters.

For example, assume a very simple circuit where you want to totally reject a signal at a fundamental frequency, but totally pass its second harmonic. Placing an open-circuit stub 1/4 wl at the fundamental frequency on the line at the appropriate place on the line will totally reject the fundamental frequency, but will totally pass the second harmonic. This is because the stub establishes a short circuit at the fundamental frequency and an open circuit at the second harmonic frequency. More complex filter circuits are designed using the same virtual short and open circuit concepts.

It appears that you have a problem conceiving of a point generator at any place on the line that develops the voltage and current of the same magnitude and angle that appears at that point on the line. Consider the wave entering the 1/4 wl open stub. It contains a voltage and current, both at zero degrees on entry. By the time that wave has completed the course to the open circuit and back the voltage has lagged by 180 degrees and the current 360 degrees (the current encounters an additional 180-degree phase shift on reflection at the open circuit, while the voltage does not).

Consequently, the reflected voltage at the input (consider it also as developed by a point generator) is 180-degrees out of phase with the new voltage arriving on the mail line (also developed by a point generator), but the returning current is in phase with the incoming current. No one can make a valid statement that the result is not a short circuit developed across the main feed line.

Cecil, once you grasp this concept you'll be able to see why Steve Best is wrong when he calls my description of impedance matching wrong in my QEX article and in my Chapters 4 and 23 in Reflections.

Walt, W2DU

4834. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 21:53:39 UTC
From: Jan Wagner <jwagner@cc.hut.fi>
Message-ID: <b45rl6$8s1$1@nyytiset.pp.htv.fi>
Source record: 123123
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

"Spehro Pefhany" <speff@interlog.com> schrieb im Newsbeitrag
news:8upc6v8opanhp15tqtuuta9q0m1pptiav0@4ax.com...
> On Wed, 5 Mar 2003 23:04:02 +0200, the renowned "Jan Wagner"
> <jwagner@cc.hut.fi> wrote:
>
> >
> >"Bruce Raymond" <raymondb@dma.org> schrieb im Newsbeitrag
> >news:iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com...
> >> I'll show my ignorance here - is there a convenient way to calculate
the
> >> temperature rise in the core that Jason originally referred to? I'd
end
> >up
> >> pulling out an old textbook and calculating Grashof and Nusselt numbers
> >> for laminar flow from a vertical plate, and then finding the thermal
> >> equilibrium
> >> point. I imagine that there's an easier method for standard
components.
> >>
> >> Thanks,
> >> - Bruce/ND8I
> >
> >If you know the core material, you can download the datasheet. There you
can
> >find the core losses in mW/cm^3 or W/cm^3, vs the frequency and flux
> >density. With that info, you can estimate the total power loss and
> >temperature rise. Winding losses come extra.
>
> I think his question was- given the mW, how do you determine the
> temperature rise of the core?

Ah, ok, maybe I misunderstood... Well anyways, after estimating the core power loss, you could use the specific heat to calculate the temperature rise over time. If you're lucky, the specific heat _could_ be given in the datasheet of the material. I just had a quick look at TDK PC40 material specs for high power cores, they specified 600 J/(kg*K) as the specific heat and 420kW/m^3 100kHz 200mT. Just an example. Abraham Pressman's "Switching power supply design" went into very detailed loss analysis, IIRC, though I don't have that book at hand right now and can't check...

OTOH, it might be simpler to just test a core and see if it gets way too hot during a long term run. Then add a huge fan if necessary... ;-)

cheers,
- jfw

4835. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 22:37:42 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E667C36.E195DDE3@uci.edu>
Source record: 123124

Hi Walter,

A short circuit is typified by an extremely low voltage accompanied by
an extremely high current. Are those the exact conditions at the
entrance to the stub?

Regards,

Jim Kelley, AC6XG

Walter Maxwell wrote:
> Sorry, Cecil, but the reflected wave from the open circuit is 180 degrees,
> not 90 degrees older than the wave entering the stub, therefore the
> reflected and entering voltages are 180 degrees out of phase, establishing a
> short circuit at the frequency where the stub is 1/4 wl. That short circuit,
> when placed anywhere on the main line, is as true a short at its resonant
> frequency as if a solid metal short circuit was placed across the line at
> that point. This is a concept that you're going to have to accept, because
> it's proven to be true millions of times. In fact, it's the basis for the
> operation of RF filters.

> For example, assume a very simple circuit where you want to totally reject a
> signal at a fundamental frequency, but totally pass its second harmonic.
> Placing an open-circuit stub 1/4 wl at the fundamental frequency on the line
> at the appropriate place on the line will totally reject the fundamental
> frequency, but will totally pass the second harmonic. This is because the
> stub establishes a short circuit at the fundamental frequency and an open
> circuit at the second harmonic frequency. More complex filter circuits are
> designed using the same virtual short and open circuit concepts.
>
> It appears that you have a problem conceiving of a point generator at any
> place on the line that develops the voltage and current of the same
> magnitude and angle that appears at that point on the line. Consider the
> wave entering the 1/4 wl open stub. It contains a voltage and current, both
> at zero degrees on entry. By the time that wave has completed the course to
> the open circuit and back the voltage has lagged by 180 degrees and the
> current 360 degrees (the current encounters an additional 180-degree phase
> shift on reflection at the open circuit, while the voltage does not).
> Consequently, the reflected voltage at the input (consider it also as
> developed by a point generator) is 180-degrees out of phase with the new
> voltage arriving on the mail line (also developed by a point generator), but
> the returning current is in phase with the incoming current. No one can make
> a valid statement that the result is not a short circuit developed across
> the main feed line.
>
> Cecil, once you grasp this concept you'll be able to see why Steve Best is

> wrong when he calls my description of impedance matching wrong in my QEX
> article and in my Chapters 4 and 23 in Reflections.
>
> Walt, W2DU

4836. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 22:53:20 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <sdv9a.3206$6z.674985@news20.bellglobal.com>
Source record: 123125

"OC_CAM's Razor"
> Source-------------feedline-----------+
> |
> |1/4WL feedline
> |
> open
>
> I agree that there is a virtual short at the bend at '+'.
> But I simply cannot agree that no signal gets past the
> bend in the coax.

If I understand Walt's example, he's saying that the stub is a very good short circuit and therefore it prevents anything getting past it *along the main feedline*. He's NOT saying that there isn't a standing wave *in the stub*.

Of course, what if the feedline continues along to another open circuit a quarter wavelength from the junction (just like the first stub) ? Then the first stub would keep the second empty, and the second stub would keep the first stub empty, and then we're back to my question about the demons needing to check the stubs once in a while. ;-) Of course, Walt did write his assumption that "main 50-ohm transmission line fed with a 29.0 MHz source *terminated with a 50-ohm resistance*" so he's on solid ground (as would be expected I suppose).

4837. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 23:44:38 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E668BE6.3060609@mwci-news>
Source record: 123126

OC_CAM's Razor wrote:
> J. Harvey wrote:
>
>> You're using a stub to transform a real open into a virtual short and
>> then
>> you apply that virtual short to the main line.
>
>
> I published such an example last week and didn't get many comments.
>
> Source-------------feedline-----------+
> |
> |1/4WL feedline
> |
> open
>
> I agree that there is a virtual short at the bend at '+'.
> But I simply cannot agree that no signal gets past the
> bend in the coax.

The short at the junction is a "virtual" short,
not a real short. Any virtual short requires
either a hardware short somewhere or a hardware
open circuit somewhere.

If the load connected to the main line beyond the
junction is also a real short which also reflects
a virtual short at the junction, then there are
two virtual shorts in parallel. The current flow
at the junction then divides equally between the
two paths.

Bill W0IYH

4838. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-05 23:59:59 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E668F7F.11BC0896@uci.edu>
Source record: 123127

"William E. Sabin" wrote:
> The short at the junction is a "virtual" short,
> not a real short. Any virtual short requires
> either a hardware short somewhere or a hardware
> open circuit somewhere.
>
> If the load connected to the main line beyond the
> junction is also a real short which also reflects
> a virtual short at the junction, then there are
> two virtual shorts in parallel. The current flow
> at the junction then divides equally between the
> two paths.
>
> Bill W0IYH

Is Ohms law not applicable to a virtual short?

Jim AC6XG

4839. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 00:20:59 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <jyKdnfro0oz0CfujXTWcqw@comcast.com>
Source record: 123128

"Iain" <iain@spamtrap.pompeydreamteam.net> wrote in message
news:b43ail$1r7j6q$1@ID-118009.news.dfncis.de...
> I have a 4 stack dipole uhf antenna that consists of a pole with 4
antennas
> bolted around it at each of the compass points. The bolts go all the way
> through the pole they are mounted to. We have gusts of about 80 MPH up
here
> but I would like to attach a vertical HF antenna to the top and am worried
> about the weakness caused by the bolts.
>
> Question is, what product could I fill the hollow pole with to strengthen
> it. This would preferably be a liquid solution to save me having to remove
> all four antenna.
>
> TIA
>
> Iain

What you have here is a solution looking for a problem. If you had four 20 m
dipoles on the mast, I would worry about it.

Tam/WB2TT

4840. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 01:35:16 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <oBx9a.4354$wJ1.453830@newsread2.prod.itd.earthlink.net>
Source record: 123129

William E. Sabin <sabinw@mwci-news> wrote in message
> The short at the junction is a "virtual" short,
> not a real short. Any virtual short requires
> either a hardware short somewhere or a hardware
> open circuit somewhere.
>
> If the load connected to the main line beyond the
> junction is also a real short which also reflects
> a virtual short at the junction, then there are
> two virtual shorts in parallel. The current flow
> at the junction then divides equally between the
> two paths.
>
> Bill W0IYH

Right on, Bill, exactly, and thank you for saying that the short established at the junction is a 'virtual' short. This is what I've been trying to get some people on the thread to understand. They believe a 'virtual' short either doesn't exist, or has no effect on a circuit, which just ain't true. I omitted calling the virtual short 'virtual' in my post because whenever I use that term everyone's hackles get all a'quiver.

Walt, W2DU

4841. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 01:48:58 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e66aa5f_2@news1.prserv.net>
Source record: 123130

Don:

I suspect I will get a lot of flames for this, but if you can find one, Ed LaPort's Antenna Engineering covers commercial versions of wire antennas which hams would like to emulate. Of course it also covers things like Sterba Curtains, but we can dream, can't we?

--
Crazy George
W5VPQ
Remove NO and SPAM from return address
<dstalk@exculink.com> wrote in message
news:GKg9a.18530$cB3.105497@nnrp1.uunet.ca...
> Since Kraus's antenna book was recently mentioned, how does it
> compare to other popular antenna books such as those by Stutzman
> and Thiele, Johnson (Antenna Engineering Handbook), and Balanis?
>
> Which would be most suitable as a ham reference/text?
>
> Thanks and 73,
>
> Don ve3hur
>
> dstalk@execulink.com
>

4842. MW loop antenna coupling/questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 01:57:31 UTC
From: daveaust@pol.net
Message-ID: <225774bd.0303051757.6300c6d1@posting.google.com>
Source record: 123131

I built a small indoor tuned loop (square) for MW AM reception on my communication rx's. It is a dozen turns into a tuning cap and a seperate isolated single "pickup" loop wound with the main loop. I am presently connected to the pickup loop directly (no matching/coupling/balun'ing)with standard 52-ohm coax going into my 52-ohm receivers. Works well but have become curious to learn more about use of these from a ideal setup standpoint. I have read a small amount about these so far but I am a antenna-rookie and still have a few questions:
1. should I insert a simple small balun to couple pickup loop to unbal coax? If so, roughly what would the make-up of this be? toroid? number of turns?
2. What is the approx impedence of the inner pick-up loop of these antennas?
3. If a balun is in order, should it be 1:1, or a impedence matcher based on the impedence of the inner pickup loop to the 52-ohm coax(and 52-ohm)rx input? OR should there be a seperate matching xfrmr and seperate balun?
4. Would it be just about as good to just insert a variable-cap in series (or parallel) with the coax and inner loop to allow variation in the coupling? OR maybe leave as-is.
5. would it also be OK to run twin-lead direct from inner pickup loop to my rx's with two balanced 300-ohm input ant terminals?
Thanks, dave, daveaust@pol.net

4843. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 02:04:41 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Z0y9a.4383$wJ1.442800@newsread2.prod.itd.earthlink.net>
Source record: 123132

Jim Kelley <jwkelley@uci.edu> wrote in message
news:3E668F7F.11BC0896@uci.edu...
>
>
> "William E. Sabin" wrote:
> > The short at the junction is a "virtual" short,
> > not a real short. Any virtual short requires
> > either a hardware short somewhere or a hardware
> > open circuit somewhere.
> >
> > If the load connected to the main line beyond the
> > junction is also a real short which also reflects
> > a virtual short at the junction, then there are
> > two virtual shorts in parallel. The current flow
> > at the junction then divides equally between the
> > two paths.
> >
> > Bill W0IYH
>
> Is Ohms law not applicable to a virtual short?
>
> Jim AC6XG

Yes, Jim, absolutely. If the stub is made of lossless line the virtual short will be exactly R = 0. However, with the effect of attenuation, or loss in real lines, the resistance of the near-short will be in the range of a fraction of an ohm to a somewhat greater resistance, depending on the line attenuation.

As an example, I designed an open-circuited transmission-line 1/4 wl helical resonator to reject 136 MHz and pass 148 MHz, to reduce the power reaching the receiver from the transmitter in a spacecraft application. A single resonator reduced the 136 MHz signal by 28 dB (in a previous post I miscalculated the rejection as 38 dB, my mistake), and the loss at 148 MHz was 0.2 dB. This was enough rejection for some applications, but not for others. What to do?

I used two resonators separated by a 1/4 wl coax, which simulated a two-section filter, result? Rejection greater than 60 dB. Think about it--two virtual shorts separated by 1/4 wl line, with a 50-ohm input impedance load, the receiver input. The resistance of the virtual short obtained by the single 28 dB resonator is 1.991 ohms. In parallel with the 50-ohm line Zo impedance, the resistance at the junction of the stub and main line is 1.914 ohms. The characteristic impedance Zo of the resonator was around 1200 ohms, if my memory serves me correctly. The resonator weight

was 7 oz, with several turns of #20 wire wound on a teflon form for the center conductor. The outer conductor was a 1/2" aluminum tube 3" long.

However, when using stubs of RG-8, etc, the virtual resistance in the VHF range is a small fraction of an ohm, measured.

Walt, W2DU

4844. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 02:17:49 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <b46b4dgtc0@216.39.144.81>
Source record: 123133

I'm not surprised. I bought my copy about 1964 (when it was considerably less expensive!) I wish I would have picked up a copy of Kraus back then as well.

Bob Nielsen, N7XY

On Wed, 05 Mar 2003 12:29:41 -0800, Roy Lewallen wrote:
> The Antenna Engineering Handbook has been edited by Richard C. Johnson
> for some time now. It's essentially the same as the Jasik book, but
> updated a bit.
>
> Roy Lewallen, W7EL
>
> Bob Nielsen wrote:
>> I find that depending on my need at the time, there are three antenna
>> books I frequently refer to:
>>
>> The ARRL Antenna Book
>> Antenna Engineering Handbook (edited by Jasik)
>> Antennas (2nd ed.) by Kraus
>>
>> Bob, N7XY
>

4845. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 03:27:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E66C00D.4010406@ieee.org>
Source record: 123134

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>>>Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open
>>>>
>>Begging the question, which 'x' is doing all the work? The first
>>one on the left or the first one on the right?
>
> On the left.

What does a directional wattmeter in the middle of the line read?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4846. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 03:54:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E66C679.1040207@ieee.org>
Source record: 123135

Walter Maxwell wrote:
> Sorry, Cecil, but the reflected wave from the open circuit is 180 degrees,
> not 90 degrees older than the wave entering the stub, therefore the
> reflected and entering voltages are 180 degrees out of phase, establishing a
> short circuit at the frequency where the stub is 1/4 wl.

Sorry, I meant to say 2x90 degrees, a round-trip in a 90 degree stub.

> That short circuit,
> when placed anywhere on the main line, is as true a short at its resonant
> frequency as if a solid metal short circuit was placed across the line at
> that point.

If there was a solid metal short circuit placed across the line, the
voltage and current in the stub would be zero and it's not.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4847. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 03:55:07 UTC
From: richardharrison@webtv.net
Message-ID: <25681-3E66C69B-12@storefull-2313.public.lawson.webtv.net>
Source record: 123138

George, W5VPQ wrote:
"I suspect I will get a lot of flames for this, but if you can find one, Ed Laport`s "Radio Antenna Engineering" covers commercial versions of wire antennas which hams would like to emulate."

I`ll give a flaming 2nd to George`s motion! Ed gives a great combination of experience, theory, and very practical information. Some formulas are Ed`s own derivations, not seen elsewhere. Ed is prolific with charts, tables, diagrams and photographs. Ed was Chief Engineer of RCA International and also worked with Brown, Lewis, & Epstein of RCA Labs. Ed includes some of BL&E`s revelations not conveniently found elsewhere. This is a book everyone should have if they can possibly find it.

Best regards, Richard Harrison, KB5WZI

4848. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 04:06:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E66C92B.9060204@ieee.org>
Source record: 123136

William E. Sabin wrote:
> OC_CAM's Razor wrote:
>> Source-------------feedline-----------+
>> |
>> |1/4WL feedline
>> |
>> open
>>
>> I agree that there is a virtual short at the bend at '+'.
>> But I simply cannot agree that no signal gets past the
>> bend in the coax.
>
> The short at the junction is a "virtual" short, not a real short. Any
> virtual short requires either a hardware short somewhere or a hardware
> open circuit somewhere.

My point exactly, Bill. I have yet to see an example of a virtual
impedance that causes reflections when it is not located at a
physical impedance discontinuity.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4849. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 04:13:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6dinp20dkn52d@corp.supernews.com>
Source record: 123137

OC_CAM's Razor wrote:
>
> What does a directional wattmeter in the middle of the line read?

"Myself," said I when Cecil started this thread, "this is sooner or later gonna get around to directional power."

Good work, Cecil. You got 'em all sucked in, and managed to hold off for several days before getting around to the real topic.

I can hardly wait for the next part -- the one about Dr. Best. Anyone want to place bets on how long it'll be before that comes up?

There isn't a pit bull somewhere back in your family tree, by any chance?

I return you now to your regularly scheduled programming. Enjoy.

Roy Lewallen, W7EL

4850. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 04:15:32 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E66CB64.4040605@ieee.org>
Source record: 123139

Jim Kelley wrote:
> Is Ohms law not applicable to a virtual short?

Ohm's law is applicable but it appears to me that
the wave reflection model is not applicable to
virtual impedances.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4851. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 04:22:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E66CD1B.2020609@ieee.org>
Source record: 123140

Roy Lewallen wrote:
> OC_CAM's Razor wrote:
>> What does a directional wattmeter in the middle of the line read?
>
> I can hardly wait for the next part -- the one about Dr. Best. Anyone
> want to place bets on how long it'll be before that comes up?

$1000 bet?

> There isn't a pit bull somewhere back in your family tree, by any chance?
>
> I return you now to your regularly scheduled programming. Enjoy.

Hmmmmmmm, I notice you didn't answer that simple question. :-)
If there truly is a short at the other end of a 1/4WL open stub,
then there is no voltage and current flowing in the stub.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4852. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 04:39:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <egkd6vsp3j6nfus5eqv61vflpug3qqv5mb@4ax.com>
Source record: 123141

On Wed, 05 Mar 2003 21:27:09 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>>>Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open
>>>>>
>>>Begging the question, which 'x' is doing all the work? The first
>>>one on the left or the first one on the right?
>>
>> On the left.
>
>What does a directional wattmeter in the middle of the line read?

What color is it?

73's
Richard Clark, KB7QHC

4853. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 04:50:47 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <AsA9a.3520$6z.738469@news20.bellglobal.com>
Source record: 123142

"OC_CAM's Razor"
> If there truly is a short at the other end of a 1/4WL open stub,
> then there is no voltage and current flowing in the stub.

If the end of the feedline meets two such stubs, and if each stub prevents the 'signal' from flowing in the other, then there is no signal flowing in either stub - so how does the signal know that they are stubs ? (I knew that those philosophy courses would come in handy some day...) ;-)

To be fair to Walt, he did say that the feedline was terminated in 50 ohms. I don't think that anyone ever claimed that there is no 'signal' *in the stubs*. It was the stub (the one *with* the standing wave) reflecting the signal passing along the main feedline and reducing it past the junction.

It all makes sense to me (now).

4854. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 07:00:50 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b46rn0jca1@slb6.atl.mindspring.net>
Source record: 123143

Roy:

[snip]
> Good work, Cecil. You got 'em all sucked in, and managed to hold off for
> several days before getting around to the real topic.
>
> I can hardly wait for the next part -- the one about Dr. Best. Anyone
> want to place bets on how long it'll be before that comes up?
>
> There isn't a pit bull somewhere back in your family tree, by any chance?
>
> I return you now to your regularly scheduled programming. Enjoy.
>
> Roy Lewallen, W7EL
>[snip]

Heh, heh... Cecil must have studied Marketing on Madison Avenue.

Where they teach...

Run the same commercial over and over and over and over and over and over
and...

--
Peter K1PO
Indialantic By-the-Sea, FL.

4855. EH Antenna Test - Part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 08:04:43 UTC
From: Michele IZ2EAS <iz2eas@libero.it>
Message-ID: <b46v74$1oilv4$1@ID-149021.news.dfncis.de>
Source record: 123144

The second part of the EH antenna test has been published on AntenneX.com.
Unfortunately, the (very good) article is available only to AntenneX
subscribers.
The author measured "commercial" EH antennas, and found that gain is in the
range of -10 to -20 dBd and efficiency is on average less than 10%.
I encourage the interested reader to contact AntenneX and find out how to
get his/her copy of the article.
With best regards,

Michele IZ2EAS

4856. FS: Hy-Gain Tape Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 08:33:39 UTC
From: K6ME <k6me@adelphia.net>
Message-ID: <DJD9a.5269$aq6.4551121@news3.news.adelphia.net>
Source record: 123145

FS: Hy-Gain Tape Dipole, 3.5 to 30 MHz. Great for FD etc.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4671&item=3011256612&
rd=1

4857. Re: 6:1Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 10:34:45 UTC
From: Imageinaction <imageinaction@hotmail.com>
Message-ID: <9vF9a.181661$YG2.5511492@twister1.libero.it>
Source record: 123146

Hi,
i read about windoms and it seems a 4:1 balun gives me an output impedance
of about 75 ohms (1/3 feed point has an impedance near 300 ohms).
This means i can only have VSWR values near 1.5 at least.

73 de IT9VVM Vittorio

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> ha scritto nel messaggio
news:3E663DF9.70602@ieee.org...
> Imageinaction wrote:
> > Hello,
> > can anyone give me some info on 6:1 balun homebrewing?
> > I want to build it for a windom antenna.
>
> The feedpoint impedance won't be exactly 300 ohms so the
> balun won't see exactly 300 ohms. A 4:1 Balun is a lot
> easier to come by and will probably work just as well.
> If not, the standard thing to do is add a 1:1.56 balun
> ahead of a 1:4 to achieve a 1:6.25 ratio but, IMO, that
> is overkill for a "Windom".
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4858. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 11:01:15 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0603030301150001@bni030qny8kc.bc.hsia.telus.net>
Source record: 123147

In article <3E668BE6.3060609@mwci-news>, "William E. Sabin"
<sabinw@mwci-news> wrote:

> The short at the junction is a "virtual" short,
> not a real short. Any virtual short requires
> either a hardware short somewhere or a hardware
> open circuit somewhere.

Not true. Under certain circumstances, a hardware inductor or capacitor
will do. Consider a lossless transmission line terminated in a pure
reactance. If the reactance, transmission line surge impedance, and line
length (in wavelengths) are appropriately related, the input imperdance
will be zero -- look at the Smith chart, if this isn't otherwise clear.

> If the load connected to the main line beyond the
> junction is also a real short which also reflects
> a virtual short at the junction, then there are
> two virtual shorts in parallel. The current flow
> at the junction then divides equally

Maybe not. Depends upon whether the two zeros are equally zeroish.

> between the two paths.

All this somehow reminds me of some of the nonsense I heard when I tried
to teach freshman calculus to students who weren't capable of
understanding the idea of "limit".

David, ex-W8EZE and ex-SFU mathematician

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

4859. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 11:39:05 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E673359.1000707@mwci-news>
Source record: 123148

David or Jo Anne Ryeburn wrote:
> In article <3E668BE6.3060609@mwci-news>, "William E. Sabin"
> <sabinw@mwci-news> wrote:
>
>
>>The short at the junction is a "virtual" short,
>>not a real short. Any virtual short requires
>>either a hardware short somewhere or a hardware
>>open circuit somewhere.
>
>
> Not true. Under certain circumstances, a hardware inductor or capacitor
> will do. Consider a lossless transmission line terminated in a pure
> reactance. If the reactance, transmission line surge impedance, and line
> length (in wavelengths) are appropriately related, the input imperdance
> will be zero -- look at the Smith chart, if this isn't otherwise clear.

OK.

>
>
>>If the load connected to the main line beyond the
>>junction is also a real short which also reflects
>>a virtual short at the junction, then there are
>>two virtual shorts in parallel. The current flow
>>at the junction then divides equally
>
>
> Maybe not. Depends upon whether the two zeros are equally zeroish.
>>between the two paths.

Lossless lines are assumed in all of this thread.

>
>
> All this somehow reminds me of some of the nonsense I heard when I tried
> to teach freshman calculus to students who weren't capable of
> understanding the idea of "limit".
>
> David, ex-W8EZE and ex-SFU mathematician
>

Thanks(?) for this smug little put-down remark.

Bill W0IYH

4860. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 12:35:28 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E674090.0@ieee.org>
Source record: 123149

Peter O. Brackett wrote:
> Run the same commercial over and over and over and over and over and over
> and...

You seem to have gotten the wrong impression, Peter. To the best of my knowledge, Roy is the only poster who has mentioned you-know-who's name during this entire month. So exactly who is running the same commercial over and over?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4861. Re: 6:1Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 13:00:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E674664.5020201@ieee.org>
Source record: 123150

Imageinaction wrote:
> i read about windoms and it seems a 4:1 balun gives me an output impedance
> of about 75 ohms (1/3 feed point has an impedance near 300 ohms).
> This means i can only have VSWR values near 1.5 at least.

Throw away whatever you read about Windoms. It is wrong. When someone
says "Windom" nowadays, he is usually referring to a 136 ft dipole fed
about 1/3 off one end with 300 ohm twin lead. Modeling such an antenna
at 40 ft using EZNEC yields the following results:

freq feedpoint impedance 300 ohm SWR
3.8 MHz 125+j245 4.2:1
7.2 MHz 149+j67 2.1:1
10.125 MHz 3066+j1695 13:1
14.2 MHz 146-j98 2.3:1
18.14 MHz 169+j101 2.0:1
21.3 MHz 3408-j127 11:1
24.95 MHz 173-j139 2.2:1
28.4 MHz 171-j206 2.8:1

It's a nice antenna but I don't see a 300 ohm feedpoint resistance
anywhere. A 6:1 balun is a waste of time and effort. Use a 4:1 or
a 1:1. Even with a 1:1, your tuner should be able to handle all
the impedances except maybe on 30m and 15m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4862. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 13:04:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E674761.4000902@ieee.org>
Source record: 123151

David or Jo Anne Ryeburn wrote:
> "William E. Sabin" <sabinw@mwci-news> wrote:
>>The short at the junction is a "virtual" short,
>>not a real short. Any virtual short requires
>>either a hardware short somewhere or a hardware
>>open circuit somewhere.
>
> Not true.

Change it to a "physical impedance discontinuity" and it
will be true. I'm sure that's what Bill meant.

The basic question here is whether a virtual impedance
can cause a reflection in the absence of any physical
impedance discontinuity. I say it cannot.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4863. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 13:19:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E674ADF.3000205@ieee.org>
Source record: 123152

Walter Maxwell wrote:
> For example, assume a very simple circuit where you want to totally reject a
> signal at a fundamental frequency, but totally pass its second harmonic.
> Placing an open-circuit stub 1/4 wl at the fundamental frequency on the line
> at the appropriate place on the line will totally reject the fundamental
> frequency, but will totally pass the second harmonic. This is because the
> stub establishes a short circuit at the fundamental frequency and an open
> circuit at the second harmonic frequency. More complex filter circuits are
> designed using the same virtual short and open circuit concepts.

Let's look at the above stub a little closer. Here it is without the load.

Source---------Z0 feedline--------------------x---1/4WL Z0 feedline--open

There is indeed a virtual short at point 'x'. Is it causing any reflections
at point 'x'? No, all the reflections are occurring at the open end of the
feedline where the physical impedance discontinuity exists. For a lossless
system, the voltage at point 'x' will be zero volts but it is not caused by
the virtual short. It is caused by complete cancellation of the forward voltage
wave and the reflected voltage wave. The virtual short is the *result* of wave
cancellation and *not the cause* of anything. A directional wattmeter will
indicate the same forward and reflected power all up and down the feedline
including inside the stub.

Since the voltage at point 'x' is zero, we can engage in a little plumber's
delight connection at that point. Since the voltage is zero at point 'x'
we can attach a load at that point and no current will flow. So let's do that.

Source------Z0 feedline----------------------x---1/4WL Z0 feedline--open
|
+-------------load

Since the voltage at point 'x' is zero, nothing has changed. There still
are not any reflections at point 'x'. All of the reflections are still
at the open end of the feedline where the actual physical impedance
discontinuity exists. The virtual short is still the *result* of wave
cancellation and *not the cause* of anything. A directional wattmeter
will give the same results as before.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4864. Re: 6:1Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 13:28:01 UTC
From: Imageinaction <imageinaction@hotmail.com>
Message-ID: <B1I9a.182652$ZE.5473756@twister2.libero.it>
Source record: 123153

> It's a nice antenna but I don't see a 300 ohm feedpoint resistance
> anywhere. A 6:1 balun is a waste of time and effort. Use a 4:1 or
> a 1:1. Even with a 1:1, your tuner should be able to handle all
> the impedances except maybe on 30m and 15m.

Thank u Cam for your answers, do u think i can use a 4:1 balun even if i don't have any tuner?

Let me know.

Thanks again

73 de IT9VVM Vittorio

4865. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 13:55:25 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E67534D.1060505@mwci-news>
Source record: 123154

OC_CAM's Razor wrote:
> David or Jo Anne Ryeburn wrote:
>
>> "William E. Sabin" <sabinw@mwci-news> wrote:
>>
>>> The short at the junction is a "virtual" short, not a real short. Any
>>> virtual short requires either a hardware short somewhere or a
>>> hardware open circuit somewhere.
>>
>>
>> Not true.
>
>
> Change it to a "physical impedance discontinuity" and it
> will be true. I'm sure that's what Bill meant.

To get a virtual short at some point on a lossless line, the "impedance" that you mention must be a pure reactance. The outer circle of the ordinary Smith chart is the locus of purely reactive impedances, as David points out.

If the load is not a pure reactance, or if the line is not lossless, the transmission line equations (or possibly a Smith chart) can be used to minimize (or maximize) the impedance at some point on the line.

One problem with this (simple?) topic is that it can be expanded exponentially to just about any degree of complexity into an open-ended eternal debate (sound familiar?).

A reactive termination can be replaced by an additional length of line followed by a short (or open) circuit. The Smith chart shows the required length of line

>
> The basic question here is whether a virtual impedance
> can cause a reflection in the absence of any physical
> impedance discontinuity. I say it cannot.

Agree. However, if we measure the impedance at some point ahead of the virtual short (or open) the value is identical to the value that a

physical short (or open) at the location of the virtual short would produce. The Smith chart also shows this. But the true point of reflection should not be misconstrued.

Bill W0IYH

4866. Re: 6:1Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 14:09:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6756A3.5090505@ieee.org>
Source record: 123155

Imageinaction wrote:
>>It's a nice antenna but I don't see a 300 ohm feedpoint resistance
>>anywhere. A 6:1 balun is a waste of time and effort. Use a 4:1 or
>>a 1:1. Even with a 1:1, your tuner should be able to handle all
>>the impedances except maybe on 30m and 15m.
>
> Thank u Cam for your answers, do u think i can use a 4:1 balun even if i
> don't have any tuner?
>
> Let me know.

There is NO balun you can use with a Windom to avoid a tuner. If you
are willing to switch and change the length of your twinlead, you
could probably get by without a tuner. Check out my web page to
see how such is done.

To summarize:
With a fixed length of feedline, a Windom requires a tuner. When
the Windom and it's variations were invented, ham transmitters
had adjustable pi-net outputs so no external tuner was required.
The Windom will work on some bands with the tuner built into
some modern transceivers but probably not on 30m and 15m.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4867. Re: 6:1Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 14:16:14 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67582E.60109@ieee.org>
Source record: 123156

OC_CAM's Razor wrote:
> There is NO balun you can use with a Windom to avoid a tuner. If you
> are willing to switch and change the length of your twinlead, you
> could probably get by without a tuner. Check out my web page to
> see how such is done.
>
> To summarize:
> With a fixed length of feedline, a Windom requires a tuner. When
> the Windom and it's variations were invented, ham transmitters
> had adjustable pi-net outputs so no external tuner was required.
> The Windom will work on some bands with the tuner built into
> some modern transceivers but probably not on 30m and 15m.

However, something just jogged my memory. If you make the Windom
into a folded-dipole with pulleys on each end, clothesline style,
you can tune the antenna by running the folded dipole back and
forth on the pulleys. I read about such an antenna in '73' or 'CQ'
a few years ago and, if I remember correctly, it didn't require
a tuner. I think it used a 4:1 balun.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4868. Re: MW loop antenna coupling/questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 14:24:33 UTC
From: richardharrison@webtv.net
Message-ID: <9458-3E675A21-93@storefull-2317.public.lawson.webtv.net>
Source record: 123158

Dave Austerman wrote:
"It is a dozen turns into a tuning cap and a separate isolated single "pickup" loop---."

Dave`s impedance ratio is 144. Multiply 52 ohms by 144 for the load on the tuned loop. It`s 7488 ohms.

Say 385 pf tunes the loop to 550 KHz. The inductance is 220 microhenry. The loop reactance at 550 KHz is 760 ohms, so the coax load won`t overload the loop`s impedance.

My ARRL coil calculator quits at 5.5-in dia. It says a 5-in form takes 36 turns for 220 microhenry. So, I`ll guess Dave`s diameter is about 15 inches. He has only 12 turns.

1. Dave already has a balun. It is the isolated 12:1 turns-ratio transformer made by the loop and its "pickup".
2. The single-turn impedance is set by the 52-ohm load across it.
3. The impedance ratio of Dave`s "balun" is 144:1, or the turns ratio squared.
4. Fixed coupling is adequate. If the signal is excessive, detune or rotate the loop.
5. Twin-lead is fine but more sensitive to its environment than coax. It loads the loop even less than coax when the load, (a less conductive 300 ohms) the receiver places on it, is less than the more conductive 52 ohms placed on the coax.

Best regards, Richard Harrison, KB5WZI

4869. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 14:33:11 UTC
From: richardharrison@webtv.net
Message-ID: <9457-3E675C27-209@storefull-2317.public.lawson.webtv.net>
Source record: 123157

Iain wrote:
"---what product could I fill the hollow pole with to strengthen it?"

Suggestion: Don`t fill the tube. Clamp an angle member to it with
stainless clamps.

Best regards, Roichard Harrison, KB5WZI

4870. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 15:29:16 UTC
From: Iain <iain@spamtrap.pompeydreamteam.net>
Message-ID: <b47pgd$1rsa1m$1@ID-118009.news.dfncis.de>
Source record: 123159

"> Suggestion: Don`t fill the tube. Clamp an angle member to it with
> stainless clamps.

Richard,
Easy solution, but it might get a bit close to the antennas. What do you think about 4 bits of angle section between the bolts and the inner surface.

Two bolts at right angles to another two within the pole, alternating on the way up and the size of the angle section would be half the internal diameter minus half the bolt shank diameter.

Not as easy but possibly less likely to interfere with the setup, depending on if the bolts are insulated from the pole or grounded.

Iain

4871. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 15:37:06 UTC
From: Iain <iain@spamtrap.pompeydreamteam.net>
Message-ID: <b47pv3$1stj5f$1@ID-118009.news.dfncis.de>
Source record: 123161

Gary,
Thanks for the suggestion. I know recycle these plastics in a similar by crushing them down and then melting them. My only issue is it might take some time to save up that many bottles, we only go through 1 a week.

The theory is good though if I could find some as it would have the correct properties I am looking for, stifening the pole enough not to put strain on the metal left where the holes are but also allowing some give to stop the scaffold poles breaking.

Iain

4872. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 15:41:35 UTC
From: Iain <iain@spamtrap.pompeydreamteam.net>
Message-ID: <b47q7h$1scepr$1@ID-118009.news.dfncis.de>
Source record: 123162

> It's very hard to add strength from the inside. You might get a little
> bit by filling it with expanding foam.
Wes,
I know of many antennas that have been strengthened by cane's and
broom handles as it seems to stop the aluminum sections from collapsing or
bending.

Iain

4873. Re: EH Antenna Test - Part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 16:00:22 UTC
From: k3bu@aol.com
Message-ID: <20030306110022.26349.00000005@mb-mu.aol.com>
Source record: 123166

>The author measured "commercial" EH antennas, and found that gain is in the
>range of -10 to -20 dBd and efficiency is on average less than 10%.

That is approaching the "efficiency" of light bulb or mobile stick. At least
some close to realistic picture of performance of this wunder antenna.

Yuri

4874. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 16:05:12 UTC
From: k3bu@aol.com
Message-ID: <20030306110512.26349.00000006@mb-mu.aol.com>
Source record: 123167

This discussion is really academic without knowing what he has (material, dimensions). He might be OK with what is there, or not. The ideas rehashed here are generallly valid (some of them), but I would not sign off on anything without knowing what is up there.

Yuri

4875. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 16:12:44 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3E67737C.21A3@mindspring.com>
Source record: 123168

Hummmmmm You might restudy the "J" pole and groundplane in the GOOD antenna textbooks. I believe you have made some mistatements. Regards, Sparks W4EAS

4876. RG-11 75 Ohm coax by the foot

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 16:33:44 UTC
From: David Ornee <dornee@sbcglobal.net>
Message-ID: <ILK9a.7356$3g.1077668@newssrv26.news.prodigy.com>
Source record: 123160

Commscope RG-11 75 Ohm coax. New on reel by the foot @ $0.10 per foot plus actual shipping. Please contact David Ornee, KQ9W direct dave@ornee.net

4877. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 16:41:27 UTC
From: richardharrison@webtv.net
Message-ID: <11971-3E677A37-166@storefull-2312.public.lawson.webtv.net>
Source record: 123171

Iain wrote:
"A pole with 4 antennas bolted around it at each of the compass points."

This pole (I assume it is an aluminum tube), and from Iain`s response to the suggestion of a full-length angle reinforcement, it is too slender to accept an angle without interference with one of the four antennas.

How about limiting the length (height) of the reinforcing angle just short of interference with the topmost antenna. The space below the top antenna should be clear.

Below the top antenna, at the level of the next lower antenna (or lower yet if you can go there), start the run up of another angle on the opposite side of the tube. This angle is on the opposite side of the topmost antenna and can extend beyond the antenna tube and be used for attachment of the vertical antenna.

Stainless hose clamps are tough and as many as required may be used.

Best regards, Richard Harrison, KB5WZI

4878. CDE rotors question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 16:46:05 UTC
From: Fred <fred.pollard@snet.net>
Message-ID: <hXK9a.3342$se1.2233107@newssvr28.news.prodigy.com>
Source record: 123164

I have a couple of CDE rotors. How can I tell what the models are? I sent an email to Hygain, but not reply ever came. Thanks

4879. CDE rotors question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 16:46:06 UTC
From: Fred <fred.pollard@snet.net>
Message-ID: <iXK9a.3343$se1.2233449@newssvr28.news.prodigy.com>
Source record: 123163

I have a couple of CDE rotors. How can I tell what the models are? I sent an email to Hygain, but not reply ever came. Thanks

4880. CDE rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 16:47:51 UTC
From: Fred <fred.pollard@snet.net>
Message-ID: <XYK9a.3346$se1.2233696@newssvr28.news.prodigy.com>
Source record: 123165

I have a couple of CDE rotors. How can I tell what the models are? I sent an email to Hygain, but not reply ever came. Thanks

4881. Re: 6:1Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 16:48:07 UTC
From: Imageinaction <imageinaction@hotmail.com>
Message-ID: <bZK9a.182570$YG2.5531287@twister1.libero.it>
Source record: 123169

Thank u very much

IT9VVM

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> ha scritto nel messaggio
news:3E67582E.60109@ieee.org...
> OC_CAM's Razor wrote:
> > There is NO balun you can use with a Windom to avoid a tuner. If you
> > are willing to switch and change the length of your twinlead, you
> > could probably get by without a tuner. Check out my web page to
> > see how such is done.
> >
> > To summarize:
> > With a fixed length of feedline, a Windom requires a tuner. When
> > the Windom and it's variations were invented, ham transmitters
> > had adjustable pi-net outputs so no external tuner was required.
> > The Windom will work on some bands with the tuner built into
> > some modern transceivers but probably not on 30m and 15m.
>
> However, something just jogged my memory. If you make the Windom
> into a folded-dipole with pulleys on each end, clothesline style,
> you can tune the antenna by running the folded dipole back and
> forth on the pulleys. I read about such an antenna in '73' or 'CQ'
> a few years ago and, if I remember correctly, it didn't require
> a tuner. I think it used a 4:1 balun.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4882. Help finding radio antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 17:24:13 UTC
From: g.j.westfall@att.net
Message-ID: <c9452225.0303060015.6b00effa@posting.google.com>
Source record: 123172

Folks,

I am new to HF radios, but I recnetly came across some older equipment that I would like to get back in working order. I have a Kachina MP-25 HF Manpack Tranceiver with 2 batteries that is in great shape but no antenna. Although I could use the front panel connector to hook it up to a pole antenna, I would like to find the antenna that goes with it. In the leterature I read it lists the antenna as a MP-25 AW Folding Whip Antenna. Does anyone know where I can get this antenna or a suitable substitute?

Regards,
George J Westfall
US Embassy, Nairobi

4883. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 17:37:19 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <oKScnZiHN8PSGvqjXTWcpw@comcast.com>
Source record: 123173

Ian,

I didn't notice the part where you said you wanted to add an HF vertial to the stack. I would think that your priorities of worry should be:

1. Is the mast without holes strong enough to support the antenna. Check with the antenna manufacturer what size mast they recommend for a particulat height. I suspect a 10' piece of TV mast is not what they had in mind

2. Is the mast supporting structure strong enough to hold up the mast and vertical. If you have a chimney mount, 10 feet of mast and 25 feet of GAP antenna seems like asking for trouble.

Putting 4 #8 bolts through a mast of any decent size is not going to make a real difference, except that it might start to rust around the holes.

Might help everybody if you told what length and diameter mast you have, how big are the holes, how is it fastened down, and what antenna do you want to put on the top.

Tam/WB2TT
"Iain" <iain@spamtrap.pompeydreamteam.net> wrote in message news:b43ail$1r7j6q$1@ID-118009.news.dfncis.de...
> I have a 4 stack dipole uhf antenna that consists of a pole with 4 antennas
> bolted around it at each of the compass points. The bolts go all the way
> through the pole they are mounted to. We have gusts of about 80 MPH up here
> but I would like to attach a vertical HF antenna to the top and am worried
> about the weakness caused by the bolts.
>
> Question is, what product could I fill the hollow pole with to strengthen
> it. This would preferably be a liquid solution to save me having to remove
> all four antenna.
>
> TIA
>
> Iain
>
>

4884. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 17:39:34 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e6785ee.485174718@news.galilei.com>
Source record: 123174

Thanks Doc

Yes, most plastics do put off harmful gasses when heated, especially styrenes.

Many plastics cannot be cooled and reheated and end up with the same plastic properties either.

I have been using clean DRY melted milk jugs for all types of projects. I do run the exhaust fan but never noticed much of an odor eminating from the heating vessel unless I overheat the plastic.

I also never start with a cooled chunk of unused previously melted plastic either. For some reason it seems to scorch rather than melt very quickly. The milk jugs are cut up with a scissors and a disposable seamless metal pot (old flea market soup pan) is used to melt the plastic in.

I've never tried melting other types of plastics, such as soda bottles, etc. Other than some styrene a few times. You NEVER want to head ABS or PVC type plastics, now they really are toxic.

Thanks again for the reminder Doc!

TTUL
Gary

4885. Re: CDE rotors question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 17:41:15 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <C7OcnXyNCc-mFfqjXTWc3g@comcast.com>
Source record: 123175

Do you have both the roter and control box?
How many wires in the cable?

Tam/WB2TT
"Fred" <fred.pollard@snet.net> wrote in message
news:hXK9a.3342$se1.2233107@newssvr28.news.prodigy.com...
> I have a couple of CDE rotors. How can I tell what the models are? I sent
an
> email to Hygain, but not reply ever came. Thanks
>
>

4886. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 17:42:11 UTC
From: richardharrison@webtv.net
Message-ID: <11971-3E678873-173@storefull-2312.public.lawson.webtv.net>
Source record: 123180

Sparks, W4EAS wrote:
"You might restudy the "J" pole and groundplane in GOOD antenna
textbooks."

The ARRL edition 19 Antenna Book is good.
It has J-pole coverage on page 16-22. You find this indexed under
"super" for some odd reason.

VHF ground-planes can be found on page 18-17.

James Cook asked if the J-pole has more gain or better-shaped radiation.

The answer is: not much.

Best regards, Richard Harrison, KB5WZI

4887. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 17:51:22 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E678A9A.279D8858@uci.edu>
Source record: 123176

OC_CAM's Razor wrote:
>
> Jim Kelley wrote:
> > Is Ohms law not applicable to a virtual short?

> Ohm's law is applicable but it appears to me that
> the wave reflection model is not applicable to
> virtual impedances.

The current through the virtual short does not seem to be a function of the voltage across the virtual short. So is the current at the maximum determined by the current limit of source? If not, then I'd argue that Ohm's law may be irrelevant to the analysis of a virtual short. No doubt it's a short in the sense that the voltage across it is low. But it appears that the current path is not actually through the virtual short. Perhaps instead as common mode currents in both conductors of the 1/4 WL stub?

73, Jim AC6XG

4888. Re: CDE rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 17:51:44 UTC
From: Fred <fred.pollard@snet.net>
Message-ID: <QUL9a.3358$se1.2244033@newssvr28.news.prodigy.com>
Source record: 123170

Sorry...I hit the send button too many times.
"Fred" <fred.pollard@snet.net> wrote in message
news:XYK9a.3346$se1.2233696@newssvr28.news.prodigy.com...
> I have a couple of CDE rotors. How can I tell what the models are? I sent
an
> email to Hygain, but not reply ever came. Thanks
>
>

4889. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 17:58:22 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303060617.549697d0@posting.google.com>
Source record: 123177
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Paulo Marcondes <pepm@osite.com.br> wrote in message
news:<3E664D8D.497E24E7@osite.com.br>...
> Hi Guys,
>
> I decided that the Hex-Beam would be a good bet for the
> foreseable future.
> I currently own an IC-735.
>
> The question is what are the pros and cons of bamboo and
> fiberglass spreaders?
> I figure that I could get the bamboo spreaders at NO cost,
> but they will eventually rotten and break.
> Fiberglass material is expensive, but the way I see it may
> last many years.
> Then one issue arises... Would it be better to use
> telescoping sections of FG tubes or a solid rod would be
> better?
>
> Next week I have an appointment with the FG salesman, so I
> may have some answers (will post on the NGs r.r.a.a and
> r.r.a.h)
>
> Almost forgot to mention... I live in SE Brazil (sunny,
> rainy), with a possible move to NE Brazil (really sunny,
> quite dry) in the next months

Here's a link to the primary U.S. supplier of fiberglass tubing for
ham antennas.

http://www.mgs4u.com/fiberg.htm

You might find it useful for cost comparisons. Prices are in U.S.
Dollars, dimensionss are in inches/feet, weights are pounds.

w3rv

4890. Re: CDE rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 17:59:09 UTC
From: wa5bdu@yahoo.com
Message-ID: <ca1a467b.0303060959.78a4b2eb@posting.google.com>
Source record: 123178

Be careful on this (at least before buying). It's not that easy to tell. I bought a HAM-2 on eBay that turned out to be a heavy duty TV rotor CDE-44 or something like that. (To be fair, the seller said he wasn't sure it was a Ham 2.)

When the brake didn't work, I took it apart and ... no brake.

So here's a way to tell the difference between brake and no-brake type. With the brake, the bottom of the rotor is bowl shaped. The bowl contains the brake components. The TV type (no brake) rotor had a flat bottom. Both rotors (as I received them) had identical control boxes with brake switches.

73--Nick, WA5BDU
in Arkansas

"Fred" <fred.pollard@snet.net> wrote in message
news:<XYK9a.3346$se1.2233696@newssvr28.news.prodigy.com>...
> I have a couple of CDE rotors. How can I tell what the models are? I sent an
> email to Hygain, but not reply ever came. Thanks

4891. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:05:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E678DDF.9010207@ieee.org>
Source record: 123179

Jim Kelley wrote:
> But it appears that the current path is not actually through the virtual
> short. Perhaps instead as common mode currents in both conductors of
> the 1/4 WL stub?

Yep it is, at a perfect virtual short the voltage is zero (minimum
sum of the two voltages) and the current is the maximum sum of
the two currents.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4892. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:16:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nb4f6vc3ersdshj36t7pofc09o3pf7u8mu@4ax.com>
Source record: 123181

On Thu, 06 Mar 2003 12:05:19 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Jim Kelley wrote:
>> But it appears that the current path is not actually through the virtual
>> short. Perhaps instead as common mode currents in both conductors of
>> the 1/4 WL stub?
>
>Yep it is, at a perfect virtual short the voltage is zero (minimum
>sum of the two voltages) and the current is the maximum sum of
>the two currents.

Hi Cecil,

>Yep
?

When did Common Mode enter into the picture?

73's
Richard Clark, KB7QHC

4893. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:30:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6793C0.B8B7332B@uci.edu>
Source record: 123182

OC_CAM's Razor wrote:
>
> Jim Kelley wrote:
> > But it appears that the current path is not actually through the virtual
> > short. Perhaps instead as common mode currents in both conductors of
> > the 1/4 WL stub?
>
> Yep it is, at a perfect virtual short the voltage is zero (minimum
> sum of the two voltages) and the current is the maximum sum of
> the two currents.

Or a current, whose magnitude is determined by the source voltage....and perhaps by coincidence, two 50 Ohm impedances in parallel?

Just ttrying to get the model to fit with Ohms law.

Jim AC6XG

4894. Re: *** !!! KILL SADDAM !!! *** -- Military Action In Iraq NOW! _____ yqotzeq

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:32:04 UTC
From: jder8745@aol.com
Message-ID: <20030306133204.21376.00000007@mb-cp.aol.com>
Source record: 123183

0kay

4895. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:33:30 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E67947A.46130DD8@uci.edu>
Source record: 123186

Richard Clark wrote:
> When did Common Mode enter into the picture?

You may be right....common mode may not be the correct descriptor. What is?

73, Jim AC6XG

4896. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:35:39 UTC
From: jder8745@aol.com
Message-ID: <20030306133539.21376.00000008@mb-cp.aol.com>
Source record: 123184

Someone sed...

"However, differential calculus indicates that the steady-state value
is never reached."

It is reached and it doesn't take long.

Jack K9CUN

4897. Re: CDE rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:37:54 UTC
From: wb4una@aol.com
Message-ID: <20030306133754.24646.00000008@mb-dd.aol.com>
Source record: 123185

if you look on the bottom of the rotore they will have a set of numbers ...the small no brk rotors will have tr-44 on the outer most ring on the bottom of the rotor..the older ham-m that had the old square bakelite box will have nothing on the bottom..the newer ham ll, lll,iv..will have the markings on them also a date stamped in the bottom of the rotors...you will have to look hard if the rotor is real tarnished..you might have to take a wire brush to it to see..it is near the 8 wire connector...
hope that helps someone...

Randy

ARS: WB4UNA
Randy Chavis
247 Goff Court
West Columbia
S.C. 29172

4898. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:48:34 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b48561$5ds$1@slb6.atl.mindspring.net>
Source record: 123187

Cecil:

[snip]
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E674090.0@ieee.org...
> Peter O. Brackett wrote:
> > Run the same commercial over and over and over and over and over and
over
> > and...
>
> You seem to have gotten the wrong impression, Peter. To the best of my
> knowledge, Roy is the only poster who has mentioned you-know-who's name
> during this entire month. So exactly who is running the same commercial
> over and over?
> --
> cheers, CAM http://www.qsl.net/w5dxp
[snip]

Uhh, OK Cecil... I appologize.

But you gotta cut me some slack for jumping in here cuz, in the past you
had actually been beating that [nameless] dead horse more that a few times.
;-)

Best,
--
Peter K1PO
Indialantic By-the-Sea, FL.

4899. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:52:57 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pe6f6v4gs5n26k73b6sol9dl5o83fcpb6r@4ax.com>
Source record: 123188

On Thu, 06 Mar 2003 10:33:30 -0800, Jim Kelley <jwkelley@uci.edu>
wrote:

>
>
>Richard Clark wrote:
>> When did Common Mode enter into the picture?
>
>You may be right....common mode may not be the correct descriptor. What
>is?
>
>73, Jim AC6XG

Hi Jim,

If you want to differentiate, then Transverse Mode; but there is no
issue of a third terminal (the Common of Common Mode) and that would
be an unnecessary elaboration.

73's
Richard Clark, KB7QHC

4900. How to i.d. a balun ratio

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 18:57:36 UTC
From: don bryant <dba@yebo.co.za>
Message-ID: <b49cpmlmp1@ctb-nnrp2.saix.net>
Source record: 123240

I have an old W2AU balun and I need to know the step up ratio. Is there a measurement method using a simple VOM? Or how could I determine. There are no external markings.
Don ZS6BTP

4901. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 19:00:00 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <j14f6vsv6q5pqgcck3duue38n7fg9q5ak1@4ax.com>
Source record: 123189

On Wed, 05 Mar 2003 21:27:09 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>>>Source-x---1/4WL---x---1/4WL---x---1/4WL---x---1/4WL---x-open
>>>>>
>>>Begging the question, which 'x' is doing all the work? The first
>>>one on the left or the first one on the right?
>>
>> On the left.
>
>What does a directional wattmeter in the middle of the line read?

Dear Cecil,

I am a little tardy in getting in on this particular branch of the thread, but I would like to throw in my 2 cents, although, the context of this question seems to be very blurred already.

It would seem to me that before we even question "what" the wattmeter reads, it should be fairly obvious that will read essentially the same no matter where in the line you make the measurement. Second, the actual reading of the wattmeter will be the same for forward and reflected, whatever value it reads. Third, the actual values read will be indicative of the losses in the real world line. I doubt that an "ideal", "theoretical", "lossless" line would give any indication of power in either direction.

Let's step back into the cozy world of theory again. In theory there is no energy entering the line from the source, because in theory, the reflection coefficient is infinite. I think it would be safe to say that the open circuit emf of the generator would appear on the line at any point you cared to measure it, but it would be difficult to account for any current flow anywhere on the ideal line.

Again, in summary, there is no way that any net flow of energy can occur on such a line, so the wattmeter can only indicate equal amounts of forward and reflected power, and the "amount" of such power is in theory, zero.
==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html

==========

4902. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 19:08:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E679CA8.373002E@uci.edu>
Source record: 123190

Richard Clark wrote:
>
> On Thu, 06 Mar 2003 10:33:30 -0800, Jim Kelley <jwkelley@uci.edu>
> wrote:
>
> >
> >
> >Richard Clark wrote:
> >> When did Common Mode enter into the picture?
> >
> >You may be right....common mode may not be the correct descriptor. What
> >is?
> >
> >73, Jim AC6XG
>
> Hi Jim,
>
> If you want to differentiate, then Transverse Mode; but there is no
> issue of a third terminal (the Common of Common Mode) and that would
> be an unnecessary elaboration.

Yikes, Richard. That's almost as bad as your guess on the reflection
point.

ac6xg

4903. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 19:19:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E679F2F.5010104@ieee.org>
Source record: 123191

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>
>>Jim Kelley wrote:
>>>But it appears that the current path is not actually through the virtual
>>>short. Perhaps instead as common mode currents in both conductors of
>>>the 1/4 WL stub?
>>
>>Yep it is, at a perfect virtual short the voltage is zero (minimum
>>sum of the two voltages) and the current is the maximum sum of
>>the two currents.
>
> When did Common Mode enter into the picture?

I didn't say anything about common mode. I responded to the first
sentence, not the second sentence. Sorry if that wasn't clear. I
probably should have trimmed some more.
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4904. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 19:23:29 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67A031.4040500@ieee.org>
Source record: 123192

Jim Kelley wrote:
> OC_CAM's Razor wrote:
>
>>Jim Kelley wrote:
>>>But it appears that the current path is not actually through the virtual
>>>short.
>>
>>Yep it is, at a perfect virtual short the voltage is zero (minimum
>>sum of the two voltages) and the current is the maximum sum of
>>the two currents.
>
> Or a current, whose magnitude is determined by the source voltage....and
> perhaps by coincidence, two 50 Ohm impedances in parallel?
>
> Just trying to get the model to fit with Ohms law.

The voltage is zero so it doesn't matter what the current is.
Zero divided by anything real is still zero. R=V/I and V=R*I
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4905. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 19:26:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67A0E9.3070808@ieee.org>
Source record: 123193

Peter O. Brackett wrote:
> Cecil wrote:
>>You seem to have gotten the wrong impression, Peter. To the best of my
>>knowledge, Roy is the only poster who has mentioned you-know-who's name
>>during this entire month. So exactly who is running the same commercial
>>over and over?

> Uhh, OK Cecil... I appologize.
>
> But you gotta cut me some slack for jumping in here cuz, in the past you
> had actually been beating that [nameless] dead horse more that a few times.
> ;-)

You seem to have gotten the wrong impression again, Peter. I'm good,
but I can't change the past. :-)
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4906. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 19:27:44 UTC
From: richardharrison@webtv.net
Message-ID: <20218-3E67A130-35@storefull-2316.public.lawson.webtv.net>
Source record: 123195

Art, KB9MZ wrote:
"---I have failed toconvince anybody."

This is a skeptical crowd.

To sell them, offer a repeatable antenna with an exceptional
quantitative charateristic.

An old envelope just popped out of a book here.. I don`t remember it,
but on it I`d listed 15 qualities that might interest me in an antenna:
1.Frequency
2. Gain
3. Polarization
4. Pattern
5. Bandwidth
6. Impedance
7. Power handling
8. Steering
9. Construction
10. Environment
11. Efficiency
12. Size
13. Cost
14. Ease
15. Probability of success
This list may be good, bad, or indifferent. I just made it up, so the
order means nothing. In fact, the list make make sense to no one. I
haven`t taken any time to rethink or edit the list.

Best regards, Richard Harrison, KB5WZI

4907. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 19:33:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67A28F.1090101@ieee.org>
Source record: 123194

Robert Lay (W9DMK) wrote:
> Let's step back into the cozy world of theory again. In theory there
> is no energy entering the line from the source, because in theory, the
> reflection coefficient is infinite.

Well, that certainly depends upon the source doesn't it? Let's assume
the source is a lab signal generator with a perfect circulator and load
such that the internal source always sees it's designed-for impedance.
Now how much energy is flowing into and out of the transmission line?

> Again, in summary, there is no way that any net flow of energy can
> occur on such a line, so the wattmeter can only indicate equal amounts
> of forward and reflected power, and the "amount" of such power is in
> theory, zero.

Even with the above generator? I would say the forward power is the full
output of the signal generator and the reflected power is the energy
dissipated by the load resistor in the perfect circulator.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4908. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 19:48:03 UTC
From: richardharrison@webtv.net
Message-ID: <20214-3E67A5F3-279@storefull-2316.public.lawson.webtv.net>
Source record: 123198

Art, KB9MZ wrote:
"That I look at other people as chimps."

Art inferred something that I did not mean to imply. I am sorry.

Chimps producing a classic was hyperbole meaning success of randomly producing something complex is almost nil.

Best regards, Richard Harrison, KB5WZI

4909. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 19:55:50 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E67A7C6.DB9FCFD9@uci.edu>
Source record: 123197

OC_CAM's Razor wrote:
> The voltage is zero so it doesn't matter what the current is.
> Zero divided by anything real is still zero. R=V/I and V=R*I

Of course. But if there is no reflection at that point (and there isn't), then there must be at least one physical exception to the short circuit idea. I just haven't seen it illucidated yet.

73, Jim AC6XG

4910. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 20:29:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67AF91.4090900@ieee.org>
Source record: 123200

Jim Kelley wrote:
> OC_CAM's Razor wrote:
>
>>The voltage is zero so it doesn't matter what the current is.
>>Zero divided by anything real is still zero. R=V/I and V=R*I
>
> Of course. But if there is no reflection at that point (and there
> isn't), then there must be at least one physical exception to the short
> circuit idea. I just haven't seen it illucidated yet.

One exception is that if there is only one wave, the virtual short
disappears. The virtual short is not caused by an actual short. The
virtual short is caused by the interference of two waves traveling
in opposite directions resulting in a zero E-field.

It's a simple matter of cause and effect. A physical short causes the
collapse of the E-field. A virtual short is the result of the collapse
of the E-field caused by wave interference. Chicken/Egg

1. Physical short ===> collapse of the E-field

2. Wave interference ===> collapse of the E-field ===> virtual short.

A physical short is the cause of something. A virtual short is the
result of something.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4911. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 20:31:18 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E67B016.94F9716D@uci.edu>
Source record: 123199

OC_CAM's Razor wrote:
>
> Robert Lay (W9DMK) wrote:
> > Let's step back into the cozy world of theory again. In theory there
> > is no energy entering the line from the source, because in theory, the
> > reflection coefficient is infinite.
>
> Well, that certainly depends upon the source doesn't it? Let's assume
> the source is a lab signal generator with a perfect circulator and load
> such that the internal source always sees it's designed-for impedance.
> Now how much energy is flowing into and out of the transmission line?

Equal amounts.

> > Again, in summary, there is no way that any net flow of energy can
> > occur on such a line, so the wattmeter can only indicate equal amounts
> > of forward and reflected power, and the "amount" of such power is in
> > theory, zero.
>
> Even with the above generator?

In one instance there's no load in the circuit, in this new example
there is a load in the circuit. In either case, with respect to the
transmission line, the answer is yes. But if at the same time you shift
the frame of reference from the transmission line back to include the
wall outlet, then you have a point.

> I would say the forward power is the full
> output of the signal generator and the reflected power is the energy
> dissipated by the load resistor in the perfect circulator.

Which has nothing to do with the fact that in the transmission line, the
energy flowing to the right equals the energy flowing to the left. The
circulator simply redirects the reflected energy away from the output of
the generator and lets it act like the 'perfect generator' it was
assumed to be in the first place.

73, Jim AC6XG

4912. Re: CDE rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 20:31:52 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <b48b8a$qk8$1@f04n12.cac.psu.edu>
Source record: 123201

Hi Guys:

I'm not sure but I think that rotors without breaks do not use 8 wires. I think they use only 4 or 6 wires. If this is true then that's an easy way to tell them apart.

--
John Passaneau, W3JXP
Physics Dept. Electronics Shop
Penn State University
104 Davey Lab, University Park , Pa. 16802
814.863.4297, jxp16@psu.edu

"Randy Chavis" <wb4una@aol.com> wrote in message
news:20030306133754.24646.00000008@mb-dd.aol.com...
> if you look on the bottom of the rotore they will have a set of numbers
...the
> small no brk rotors will have tr-44 on the outer most ring on the bottom
of the
> rotor..the older ham-m that had the old square bakelite box will have
nothing
> on the bottom..the newer ham ll, lll,iv..will have the markings on them
also a
> date stamped in the bottom of the rotors...you will have to look hard if
the
> rotor is real tarnished..you might have to take a wire brush to it to
see..it
> is near the 8 wire connector...
> hope that helps someone...
>
> Randy
>
> ARS: WB4UNA
> Randy Chavis
> 247 Goff Court
> West Columbia
> S.C. 29172
>

4913. Re: CDE rotors question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 20:52:00 UTC
From: Fred <fred.pollard@snet.net>
Message-ID: <QxO9a.3402$se1.2270279@newssvr28.news.prodigy.com>
Source record: 123196

I have both (rotor and box) all 8 wire. One has TRA-4 on it. The other I haven't looked at yet as it is snowing to beat the band and it's out in the barn. Thanks
Fred
"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:C7OcnXyNCc-mFfqjXTWc3g@comcast.com...
> Do you have both the roter and control box?
> How many wires in the cable?
>
> Tam/WB2TT
> "Fred" <fred.pollard@snet.net> wrote in message
> news:hXK9a.3342$se1.2233107@newssvr28.news.prodigy.com...
> > I have a couple of CDE rotors. How can I tell what the models are? I sent
> an
> > email to Hygain, but not reply ever came. Thanks
> >
> >
>
>

4914. Re: Rare earth mag-mount for HT when mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 20:53:11 UTC
From: JamesWilson <AGRAY6@NEO.RR.COM>
Message-ID: <XyO9a.12115$jP2.1121079@twister.neo.rr.com>
Source record: 123202

I like my 2 meter version very well. Never blew off and seems almost
invisible. I am concerned however about the efficiency of the very small
feedline. (Also, the feedline is just a bit short) But the SWR is
excellent...

"Robert A. Book" <rbook1@mochamail.com> wrote in message
news:3E64F967.274697EA@mochamail.com...
> This is sort of a newbie question.
>
> I'm about to get my first HT for 2M/220/440, and of course I want to be
> able to use it in the car. So, I've been looking at mag-mount antennas.
>
> I saw some "rare earth" magnetic-mount antennas at a hamfest recently.
> The selling point it that they have a much smaller footprint than
> "traditional" mag-mounts, they are much lighter, and they are almost
> (but not quite) as strong. I compared a rare-earth with about a
> half-inch diameter to a traditional with about a 3-inch diameter, and
> while the 3-inch did feel "stickier" it was not by as much as I'd
> expect.
>
> What do y'all think of these rare-earth mag-mounts? I'm concerned not
> only about antenna performance, but also about scratching the paint on
> the roof of my car. (Not just for car-vanity; I get rust whenever the
> paint scratches.)
>
> Thanks!
>
> --Robert
> KD6NRI/4

4915. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 20:55:21 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E67B5B9.4D6DD229@osite.com.br>
Source record: 123203
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Brian Kelly wrote:

> You might find it useful for cost comparisons. Prices are in U.S.
> Dollars, dimensionss are in inches/feet, weights are pounds.

Thanks Brian, and the other who answered.

My impressions on this project are on
http://hamstuff.blogspot.com

--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

4916. T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 20:57:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67B63D.9010606@ieee.org>
Source record: 123205

Here's a brainteaser for you transmission line gurus.

Source---50 ohm feedline---x---150 ohm feedline---Load

Forward power on the 50 ohm feedline is measured as 100W.
Reflected power on the 50 ohm feedline is measured as 30W.

Forward power on the 150 ohm feedline is measured as 150W
using a directional wattmeter calibrated for 150 ohms.

Source and load impedances are unknown. Lengths of lossless
feedlines are unknown.

What is the relative phase angle between Pfwd1 and Pref1?
--
enjoy, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4917. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 21:01:16 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E67B71C.831CE0EB@uci.edu>
Source record: 123204

OC_CAM's Razor wrote:
>
> Jim Kelley wrote:
> > OC_CAM's Razor wrote:
> >
> >>The voltage is zero so it doesn't matter what the current is.
> >>Zero divided by anything real is still zero. R=V/I and V=R*I
> >
> > Of course. But if there is no reflection at that point (and there
> > isn't), then there must be at least one physical exception to the short
> > circuit idea. I just haven't seen it illucidated yet.
>
> One exception is that if there is only one wave, the virtual short
> disappears. The virtual short is not caused by an actual short.

It could be.

```
source----------+
|
| 1/2 wl
|
|
short
```

< The
> virtual short is caused by the interference of two waves traveling
> in opposite directions resulting in a zero E-field.

That has already been well established. A virtual short is basically a
null in a standing wave pattern.

> It's a simple matter of cause and effect. A physical short causes the
> collapse of the E-field. A virtual short is the result of the collapse
> of the E-field caused by wave interference. Chicken/Egg
>
> 1. Physical short ===> collapse of the E-field
>
> 2. Wave interference ===> collapse of the E-field ===> virtual short.
>
> A physical short is the cause of something. A virtual short is the
> result of something.

Let me put the question yet another way:

Is the set which includes all of the electrical circuit characteristics
of a real short equal to the set which includes all of the electrical

circuit characteristics of a virtual short? If not, what are the differences between the two sets?

73, Jim AC6XG

4918. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 21:01:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67B720.1030406@ieee.org>
Source record: 123207

Jim Kelley wrote:
> Is the set which includes all of the electrical circuit characteristics
> of a real short equal to the set which includes all of the electrical
> circuit characteristics of a virtual short? If not, what are the
> differences between the two sets?

You can't measure a virtual short with an ohm-meter.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4919. Re: CDE rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 21:05:23 UTC
From: wb4una@aol.com
Message-ID: <20030306160523.24681.00000007@mb-dd.aol.com>
Source record: 123206

even the TR-44 rotor is a 8 wire rotor but has no brake on it...go figure......

ARS: WB4UNA
Randy Chavis
247 Goff Court
West Columbia
S.C. 29172

4920. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 21:19:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67BB6A.7000409@ieee.org>
Source record: 123208

OC_CAM's Razor wrote:
> Here's a brainteaser for you transmission line gurus.
>
> Source---50 ohm feedline---x---150 ohm feedline---Load
>
> Forward power on the 50 ohm feedline is measured as 100W.
> Reflected power on the 50 ohm feedline is measured as 30W.
>
> Forward power on the 150 ohm feedline is measured as 150W
> using a directional wattmeter calibrated for 150 ohms.
>
> Source and load impedances are unknown. Lengths of lossless
> feedlines are unknown.
>
> What is the relative phase angle between Pfwd1 and Pref1?

Darn, I already blew it. The question should be:

What is the relative phase angle between the forward voltage
on the 50 ohm feedline and the reflected voltage on the 50
ohm feedline at the impedance discontinuity point?
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4921. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 21:38:42 UTC
From: Ian <cls119@lycos.co.uk>
Message-ID: <wdP9a.1075$Yj5.535@newsfep3-gui.server.ntli.net>
Source record: 123209

Why on earth would you ever need to know that!

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E67B63D.9010606@ieee.org...
> Here's a brainteaser for you transmission line gurus.
>
> Source---50 ohm feedline---x---150 ohm feedline---Load
>
> Forward power on the 50 ohm feedline is measured as 100W.
> Reflected power on the 50 ohm feedline is measured as 30W.
>
> Forward power on the 150 ohm feedline is measured as 150W
> using a directional wattmeter calibrated for 150 ohms.
>
> Source and load impedances are unknown. Lengths of lossless
> feedlines are unknown.
>
> What is the relative phase angle between Pfwd1 and Pref1?
> --
> enjoy, Cecil, W5DXP
>
>
>
> ----------== Posted via Newsfeed.Com - Uncensored Usenet News
==----------
> http://www.newsfeed.com The #1 Newsgroup Service in the World!
> -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers
=-----

4922. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 21:42:19 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67C0BB.9030509@ieee.org>
Source record: 123211

Ian wrote:
> Why on earth would you ever need to know that!

To solve the brainteaser, of course. :-) I cut and
pasted something from an email and goofed on the
requirement. Please see my followup posting.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4923. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 21:48:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rmgf6v0q1npm69dic76k7nlj98igr8ngho@4ax.com>
Source record: 123210

On Thu, 06 Mar 2003 11:19:11 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>>Jim Kelley wrote:
>>>>But it appears that the current path is not actually through the virtual
>>>>short. Perhaps instead as common mode currents in both conductors of
>>>>the 1/4 WL stub?
>>>
>>>Yep it is, at a perfect virtual short the voltage is zero (minimum
>>>sum of the two voltages) and the current is the maximum sum of
>>>the two currents.
>>
>> When did Common Mode enter into the picture?
>
>I didn't say anything about common mode. I responded to the first
>sentence, not the second sentence. Sorry if that wasn't clear. I
>probably should have trimmed some more.

Hi Cecil,

Well, I note you did not trim to a specific answer, are you affirming:
>>>>But it appears that the current path is not actually through the virtual
>>>>short.
with the
>>>Yep it is
or is that "Yep" a denial?

73's
Richard Clark, KB7QHC

4924. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 21:58:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i4hf6vo66odbov5vf2v4l45ao8djvmj941@4ax.com>
Source record: 123213

On Thu, 06 Mar 2003 13:01:20 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Jim Kelley wrote:
>> Is the set which includes all of the electrical circuit characteristics
>> of a real short equal to the set which includes all of the electrical
>> circuit characteristics of a virtual short? If not, what are the
>> differences between the two sets?
>
>You can't measure a virtual short with an ohm-meter.

Hi Cecil,

Elegant, again; but, again, it does not make a compelling case for OR
against anything.

If you did measure a short circuit with an ohm-meter, that does not
mean that the system will respond to it as a short circuit. Another
point of view would offer that you may not be able to measure an open
with an ohm-meter either for the same reason. This is simply a case
of the wrong tool for the job.

73's
Richard Clark, KB7QHC

4925. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 21:58:12 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e67c46f$0$147$edfadb0f@dtext02.news.tele.dk>
Source record: 123212
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hello Paulo

> My impressions on this project are on
> http://hamstuff.blogspot.com

Just want to say that a good place to look for glasfiber
roods is compagnys that is making fishing poles,
kites and ultra light aeroplanes.

Regards Max

4926. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 22:00:22 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E67C4F6.652C4396@uci.edu>
Source record: 123214

OC_CAM's Razor wrote:
>
> Jim Kelley wrote:
> > Is the set which includes all of the electrical circuit characteristics
> > of a real short equal to the set which includes all of the electrical
> > circuit characteristics of a virtual short? If not, what are the
> > differences between the two sets?
>
> You can't measure a virtual short with an ohm-meter.

Not even if the wavelength of it's current source was four times the
electrical length of the stub?

ac6xg

4927. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 22:08:46 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67C6EE.50700@ieee.org>
Source record: 123215

Richard Clark wrote:
> or is that "Yep" a denial?

> Jim Kelley wrote:
>> But it appears that the current path is not actually
>> through the virtual short.

Yep it is, i.e. the current path is through the virtual
short. Consider the middle of a transmission line with
reflections. Forward current and reflected current flow
unmolested right through the virtual short.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4928. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 22:47:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67D01D.3010609@ieee.org>
Source record: 123217

Jim Kelley wrote:
> Are you claiming there are no currents flowing in the stub?

Of course not, unless the key is up. :-)
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4929. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 22:48:07 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E67D027.862E2E5E@uci.edu>
Source record: 123216

OC_CAM's Razor wrote:
>
> Richard Clark wrote:
> > or is that "Yep" a denial?
>
> > Jim Kelley wrote:
> >> But it appears that the current path is not actually
> >> through the virtual short.
>
> Yep it is, i.e. the current path is through the virtual
> short. Consider the middle of a transmission line with
> reflections. Forward current and reflected current flow
> unmolested right through the virtual short.

Are you claiming there are no currents flowing in the stub?

4930. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 23:15:04 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <k6lf6vkkcf9h3tt7hropf6k47iukvf1rd1@4ax.com>
Source record: 123218

On Thu, 06 Mar 2003 13:19:38 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>OC_CAM's Razor wrote:
>> Here's a brainteaser for you transmission line gurus.
>>
>> Source---50 ohm feedline---x---150 ohm feedline---Load
>>
>> Forward power on the 50 ohm feedline is measured as 100W.
>> Reflected power on the 50 ohm feedline is measured as 30W.
>>
>> Forward power on the 150 ohm feedline is measured as 150W
>> using a directional wattmeter calibrated for 150 ohms.
>>
>> Source and load impedances are unknown. Lengths of lossless
>> feedlines are unknown.
>>
>> What is the relative phase angle between Pfwd1 and Pref1?
>
>Darn, I already blew it. The question should be:
>
>What is the relative phase angle between the forward voltage
>on the 50 ohm feedline and the reflected voltage on the 50
>ohm feedline at the impedance discontinuity point?

Dear Cecil,

The phase angle between incident and reflected voltages at point x on
the 50 ohm line is 0 degrees.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

4931. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 23:23:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67D86E.6040807@ieee.org>
Source record: 123219

Robert Lay (W9DMK) wrote:
> The phase angle between incident and reflected voltages at point x on
> the 50 ohm line is 0 degrees.

How did you arrive at that conclusion?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4932. Re: CDE rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 23:35:15 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <n70aa.17475$mC6.15084@fe04.atl2.webusenet.com>
Source record: 123245

I have 2 TR-4's. Flat bottom, 8-wire. Just sitting in the shed.

--
73,
Chuck
KE4ETH
USA-NA

"John Passaneau" <jxp16@psu.edu> wrote in message
news:b48b8a$qk8$1@f04n12.cac.psu.edu...
> Hi Guys:
>
> I'm not sure but I think that rotors without breaks do not use 8 wires. I
> think they use only 4 or 6 wires. If this is true then that's an easy way
to
> tell them apart.
>
>
>
> --
> John Passaneau, W3JXP
> Physics Dept. Electronics Shop
> Penn State University
> 104 Davey Lab, University Park , Pa. 16802
> 814.863.4297, jxp16@psu.edu
>
> "Randy Chavis" <wb4una@aol.com> wrote in message
> news:20030306133754.24646.00000008@mb-dd.aol.com...
> > if you look on the bottom of the rotore they will have a set of numbers
> ...the
> > small no brk rotors will have tr-44 on the outer most ring on the bottom
> of the
> > rotor..the older ham-m that had the old square bakelite box will have
> nothing
> > on the bottom..the newer ham ll, lll,iv..will have the markings on them
> also a
> > date stamped in the bottom of the rotors...you will have to look hard if
> the
> > rotor is real tarnished..you might have to take a wire brush to it to
> see..it
> > is near the 8 wire connector...
> > hope that helps someone...
> >
> > Randy
> >

> > ARS: WB4UNA
> > Randy Chavis
> > 247 Goff Court
> > West Columbia
> > S.C. 29172
> >
>
>

4933. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 23:38:08 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b48m48srk1@slb6.atl.mindspring.net>
Source record: 123220
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I just looked over the 'Max' site. It is very nice and I think cheap for fiberglass. I saw a single 20 spreader for 19.95. That totals 160 bux. Plus shipping. If you order from one of the 'major' quad companies they wanted 320 bucks.

Think I found my spreaders.

Thanks guys.

Dan/W4NTI

"Max" <Max_Jens@post9.tele.dk> wrote in message news:3e67c46f$0$147$edfadb0f@dtext02.news.tele.dk...
> Hello Paulo
>
> > My impressions on this project are on
> > http://hamstuff.blogspot.com
>
> Just want to say that a good place to look for glasfiber
> roods is compagnys that is making fishing poles,
> kites and ultra light aeroplanes.
>
> Regards Max
>
>

4934. Re: *** !!! KILL SADDAM !!! *** -- Military Action In Iraq NOW! _____ yqotzeq

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 23:48:27 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E67DE4C.2DD1752F@silverstar.com>
Source record: 123221

He's just another dips__t who believes in the tooth fairy and the Constitution!

4935. Re: Aluminum Tubing Sources

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 23:52:43 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E67DF4C.63317BE2@silverstar.com>
Source record: 123222

Check your local library for the Thomas Register. A set of about 35 1,000 page volumes giving info on all kinds of subject matter. Aluminum in every kind, size, shape and alloy. Most sources will have 800-numbers. You can even get your own set for the 29.95 ship cost. They offer the catalogs on CDs too.

4936. Re: Antennas from a newby

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-06 23:54:21 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303061554.31cfa9cf@posting.google.com>
Source record: 123223

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303051055.63285067@posting.google.com>...

> At the moment it doesn't appear that I do not have a guru or curious
> person
> to look at it the way I suggested which natuaraly is extremely
> disapointing to me and even tho I suffer from manic depression I
> certainly am not going
> to take my own life.

Oh, I'm sure many have looked at it, but you can't make a cat bark
like a dog.

I have told the truth as I know it, I have
> maintained records, lectured at a ARRLhamfest of the year which was
> played in Peoria no lessMy hamcluub made a video of a demonstration I
> gave,I have obtained poatents as you know which to all now seems to be
> of no importance and have shared it with Gurus many times over the
> years and have received all the 'what you should do" letters from
> everybody under the son to which I can now add yours.

What is a "guru"? I've always thought those were the little fat guys
that sit on the floor and hold incense.

> One day, somebody, somewhere will either make one like mine in a
> couple of minuits by tieing a flexible loop to a random length dipole
> and will feed it in an old standard way with a delta match one sunny
> afternoon and proove it to himself.

Why would you need to add a delta match to feed another delta match?

Somebody somewhere will spend an
> hour with a computor program and even in a doodling motion will do
> what I did after I made my first antenna.

I did, and it didn't work as you described. "steerable" Fairly cut
and dry. No wishy-washy involved at all. Yes, the antenna works, but
is no different in performance than any other equal length dipole fed
in an equally efficient manner.

> At that time all can jump on the bandwaggon and nobody will remember
> past comments. Actually I still have hope that at the present time is
> persueing it,
> a forlorn hope but still hope. So Richard, thankyou for pointing out
> all
> the things I should have done which in hindsight I can find little
> fault. I might add that I also put a lot of effort in placing the

> whole thing on the web for over a year where it got hits from
> Universities and Companies
> from all over the World but with zero results, so rest assured you are
> in extremely good company in the thoughts that you declared.

I can put up a web site for nearly anything and get hits every day.
Doesn't mean too much.

> My computor is going down the drain rather quickly now so soon all
> will pass.

Time to fix it. I had to fix my monitor the other day...Either that or look at an old VGA display in 640x480. :(A defective 25 cent electrolytic cap "2.2 mf at 50 volts" can really gum up the works...I'd say about 83% of the monitors and TV's I fix are acting goofy due to a single lousy flaky electrolytic cap. Too much heat from power resisters nearby...In your case, you need to determine if the computer hardware is really bad, or if it's software, or cockpit problems. Puters themselves don't go bad very often. MK

4937. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 00:13:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67E422.3080405@ieee.org>
Source record: 123225

Robert Lay (W9DMK) wrote:
> Sorry, I screwed up and forgot something. The correct answer is 180
> degrees.

Again, how did you come up with that?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4938. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 00:18:42 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <m9pf6vk3mdaf9kuoe6o9rke7oid0uhr3p1@4ax.com>
Source record: 123224

On Thu, 06 Mar 2003 13:19:38 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>OC_CAM's Razor wrote:
>> Here's a brainteaser for you transmission line gurus.
>>
>> Source---50 ohm feedline---x---150 ohm feedline---Load
>>
>> Forward power on the 50 ohm feedline is measured as 100W.
>> Reflected power on the 50 ohm feedline is measured as 30W.
>>
>> Forward power on the 150 ohm feedline is measured as 150W
>> using a directional wattmeter calibrated for 150 ohms.
>>
>> Source and load impedances are unknown. Lengths of lossless
>> feedlines are unknown.
>>
>> What is the relative phase angle between Pfwd1 and Pref1?
>
>Darn, I already blew it. The question should be:
>
>What is the relative phase angle between the forward voltage
>on the 50 ohm feedline and the reflected voltage on the 50
>ohm feedline at the impedance discontinuity point?

Dear Cecil,

Sorry, I screwed up and forgot something. The correct answer is 180
degrees.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

4939. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 00:26:50 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <kdpf6v8fk1rp6v81kbllefgn7cevv3vulp@4ax.com>
Source record: 123226

On Thu, 06 Mar 2003 15:23:26 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Robert Lay (W9DMK) wrote:
>> The phase angle between incident and reflected voltages at point x on
>> the 50 ohm line is 0 degrees.
>
>How did you arrive at that conclusion?

Dear Cecil,

Immediately upon posting my corrected response, I see that you were going to ask for an explanation of the answer. So, I will give you my explanation of my later, correct answer of 180 degrees.

The answer is based upon the locus of possible points on the Smith Chart for Line 2, which will be plotted on a Smith Chart normalized for 150 ohms.

That circle then has to be transcribed point by point to a new Smith Chart that is normalized for 50 ohms. After doing that, the circle for the locus of points that will satisfy Line 1 is drawn. Where the two circles intersect are the only two possible points that will satisfy all of the constrains. Since both of those points describe an impedance seen a point x that is less than 50 ohms, then we can say that for either of those points, the voltages, incident and reflected, follow the rule of being 180 degrees out of phase at the point of reflection.

Almost everything you need to know to do this is on 3 pages of the ARRL Antenna Book, 17th Ed., pages 24-6, 24-7 and 28-2.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

4940. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 00:28:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E67E7A1.7010805@ieee.org>
Source record: 123227

Robert Lay (W9DMK) wrote:
> Since both of those points describe an
> impedance seen a point x that is less than 50 ohms, then we can say
> that for either of those points, the voltages, incident and reflected,
> follow the rule of being 180 degrees out of phase at the point of
> reflection.
>
> Almost everything you need to know to do this is on 3 pages of the
> ARRL Antenna Book, 17th Ed., pages 24-6, 24-7 and 28-2.

Why did you assume that the virtual impedance seen by the
forward wave is resistive?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4941. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 01:43:34 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <dvtf6vgv9v2mv6nv28uck1581h4dm1c4ct@4ax.com>
Source record: 123228

On Thu, 06 Mar 2003 16:28:17 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Robert Lay (W9DMK) wrote:
>> Since both of those points describe an
>> impedance seen a point x that is less than 50 ohms, then we can say
>> that for either of those points, the voltages, incident and reflected,
>> follow the rule of being 180 degrees out of phase at the point of
>> reflection.
>>
>> Almost everything you need to know to do this is on 3 pages of the
>> ARRL Antenna Book, 17th Ed., pages 24-6, 24-7 and 28-2.
>
>Why did you assume that the virtual impedance seen by the
>forward wave is resistive?

Dear Cecil,

I did some fudging in order to get off dead center. But the locus of
points that I mention above should theoretically cover ALL possible
values that would give the power readings given. One thing that is
certain about the load at the end of the line, it is capable of
absorbing 70 watts. From that and knowing the scalar magnitude of the
load impedance, you can draw a lot of helpful inferences.

Bottom line is that I did the best I could in the short time that I
spent on it. I did not want to be in second place. - Hi!

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

4942. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 02:33:14 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <m51g6v43lc0fgq3ufjkpkems8f36u6acl5@4ax.com>
Source record: 123229

On Wed, 05 Mar 2003 00:03:37 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Roger Halstead wrote:
>> On Tue, 04 Mar 2003 11:35:56 -0800, Roy Lewallen <w7el@eznec.com>
>> wrote:
>>
>>
>>>Nor a wooden rod. And neither would have any appreciable effect on the
>>>inductance, either.
>>>
>>>Incidentally, I don't believe I've ever seen a powdered iron rod. Does
>>>Micrometals sell them?
>>
>>
>> I don't know who sells them any more, but I used to use some that were
>> a half inch in diameter and 6 inches long as the core for filament
>> chokes in gro\unded grid amps.
>>
>> Roger Halstead (K8RI EN73 & ARRL Life Member)
>> www.rogerhalstead.com
>> N833R World's oldest Debonair? (S# CD-2)
>
>Are you sure they weren't ferrite? A high frequency powdered iron has

Now that gets a bit confusing as ferrite is iron. Ferrite is the
latin word for iron.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>permeability of less than 10, and with the large air gap in the magnetic
>path, the effective permeability of a rod would be considerably less. It
>would be extremely difficult to get enough impedance to do an effective
>job with a powdered iron rod.
>
>A lot of people don't seem to understand the difference between powdered
>iron and ferrite. For starters, powdered iron is just that, iron powder
>mixed into a non-metallic binder material. Ferrite, on the other hand,
>is a ceramic. They have very different properties, both mechanically and
>electrically. If you mistakenly use one in place of the other, you'll
>almost certainly be disappointed in the results.
>
>Roy Lewallen, W7EL

4943. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 02:46:33 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <dKT9a.6118$wJ1.619267@newsread2.prod.itd.earthlink.net>
Source record: 123230

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E674ADF.3000205@ieee.org...
> Walter Maxwell wrote:
> > For example, assume a very simple circuit where you want to totally
reject a
> > signal at a fundamental frequency, but totally pass its second harmonic.
> > Placing an open-circuit stub 1/4 wl at the fundamental frequency on the
line
> > at the appropriate place on the line will totally reject the fundamental
> > frequency, but will totally pass the second harmonic. This is because
the
> > stub establishes a short circuit at the fundamental frequency and an
open
> > circuit at the second harmonic frequency. More complex filter circuits
are
> > designed using the same virtual short and open circuit concepts.
>
> Let's look at the above stub a little closer. Here it is without the load.
>
> Source---------Z0 feedline--------------------x---1/4WL Z0 feedline--open

Cecil, I was talking oranges above, but you are talking apples. By removing
the load you have changed the circuit so that it is no longer viable to
discuss the concept I discussed above.

> There is indeed a virtual short at point 'x'.

The virtual short you imply at point 'x' has no bearing on the
stub-established short shunting a matched line, or even a somewhat
mismatched line that still dissipates energy in the termination. The
impedance a point 'x' is simply the zero impedance transferred 1/4 wl back
from the open-circuited line termination. As we all know, this zero
impedance will be repeated at every half wave in the direction of the
source. This xmsn line circuit is not equivalent to one where a 1/4 wl
open-circuited stub is shunted across an active line terminated with a
dissipative load.

> Is it causing any reflection at point 'x'? No, all the reflections are
occurring at the open end of the
> feedline where the physical impedance discontinuity exists. For a lossless
> system, the voltage at point 'x' will be zero volts but it is not caused
by
> the virtual short.

Again, Cecil, the virtual short you find at point 'x' does not perform in
the same manner as an open-circuited 1/4 wl stub connected in shunt with the

terminated line.

> It is caused by complete cancellation of the forward voltage
> wave and the reflected voltage wave. The virtual short is the *result* of
wave
> cancellation and *not the cause* of anything.

You're right, the virtual short you described above does not 'cause
anything', But I repeat, this is not the virtual short performance provided
by a shunt stub.

> A directional wattmeter will
> indicate the same forward and reflected power all up and down the feedline
> including inside the stub.

This is true, but only because the simple line is terminated in an open
circuit. The result is that the reflected power and the forward power are
identical in magnitude, but travelling in opposite directions. Naturally a
directional wattmeter will read the same amount of power in both directions.

> Since the voltage at point 'x' is zero, we can engage in a little
plumber's
> delight connection at that point. Since the voltage is zero at point 'x'
> we can attach a load at that point and no current will flow. So let's do
that.
>
> Source------Z0 feedline----------------------x---1/4WL Z0 feedline--open
> |
> +-------------load
>
> Since the voltage at point 'x' is zero, nothing has changed. There still
> are not any reflections at point 'x'.

Not true, Cecil, there will be reflections at point 'x'. Although you say
'nothing has changed', you have changed the circuit so that it is not the
circuit I discussed earlier. You have put a load at point 'x', which is now
the dissipative termination on the main line, and the1/4 wl extension from
point 'x' to the open-circuit end of the line is now a 1/4 wl open-circuited
stub shunting the line. No current flows into the load because the 1/4 wl
open-circuit stub has shunted a short circuit across the load, but the
virual short established at the load (point 'x') by the stub does indeed
establish a reflection on the line.

> All of the reflections are still
> at the open end of the feedline where the actual physical impedance
> discontinuity exists. The virtual short is still the *result* of wave
> cancellation and *not the cause* of anything. A directional wattmeter
> will give the same results as before.

Cecil, when you say the virtual short is not the cause of anything it is not
true. Consider that a line of any length continued the main line from point
'x' to the dissipative load. Again, the 1/4 wl open-circuited line to the
right of point 'x' is the shunt stub across the line. If you remove the stub

the main line supplies energy to the load where is is absorbed. (The resulting 'bend' in the line does not change it from being the main line.) On reconnecting the (lossless) stub, the short circuit established by the stub now prohibits energy from passing point 'x' to arrive at the load. This virtual short circuit indeed 'caused the energy to not be allowed to reach the load.' This is not a 'cause'?

Walt, W2DU

PS--I'm writing a more comprehensive response to the virtual short concept that will provide much more clarity than has been previously reported.

4944. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 02:54:19 UTC
From: dplatt@radagast.org
Message-ID: <v6g2erke0d0v99@corp.supernews.com>
Source record: 123231

In article <m51g6v43lc0fgq3ufjkpkems8f36u6acl5@4ax.com>,
Roger Halstead <rdhalste@tm.net> wrote:

>Now that gets a bit confusing as ferrite is iron. Ferrite is the
>latin word for iron.

It does seem unfortunate that the same word is used both for
alpha-iron, and for a family of sintered ceramics which contain iron,
oxygen, and any of a handful of other metals and non-metals.

In the context of discussions about radio applications, I doubt that
anyone uses "ferrite" to mean "a- or alpha-iron" - I've always heard
it used to refer to the ceramic.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4945. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 04:18:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E681D8A.6020408@ieee.org>
Source record: 123232

Walter Maxwell wrote:
>>Source------Z0 feedline----------------------x---1/4WL Z0 feedline--open
>> |
>> +-------------load
>>
>>Since the voltage at point 'x' is zero, nothing has changed. There still
>>are not any reflections at point 'x'.
>
> Not true, Cecil, there will be reflections at point 'x'.

Why Walt? This is exactly the way a plumber's delight antenna connection
works. Are there reflections in the boom of a plumber's delight Yagi?
If so, we would have radiation off the sides of the Yagi.

> No current flows into the load because the 1/4 wl
> open-circuit stub has shunted a short circuit across the load, but the
> virual short established at the load (point 'x') by the stub does indeed
> establish a reflection on the line.

What causes the reflection at point 'x'? No current flows into the load
because the voltage at point 'x' is zero due to destructive interference
between the single forward wave and the single reflected wave.

> If you remove the stub
> the main line supplies energy to the load where is is absorbed.

Of course, because removing the stub removes the reflected waves
that are engaging in destructive interference and the voltage at
point 'x' is no longer zero.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4946. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 04:39:16 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E682274.9060805@ieee.org>
Source record: 123233

OC_CAM's Razor wrote:
> Walter Maxwell wrote:
>
>>> Source------Z0 feedline----------------------x---1/4WL Z0 feedline--open
>>> |
>>> +-------------load
>>>
>>> Since the voltage at point 'x' is zero, nothing has changed. There still
>>> are not any reflections at point 'x'.
>>
>> Not true, Cecil, there will be reflections at point 'x'.
>
> Why Walt? This is exactly the way a plumber's delight antenna connection
> works. Are there reflections in the boom of a plumber's delight Yagi?
> If so, we would have radiation off the sides of the Yagi.

Just to be sure that everyone understands, there is reflected energy flowing through point 'x' caused by reflections from the open end of the stub. But there are no reflections occurring *at* point 'x'. When a solid piece of 1/2WL aluminum is shorted to the boom and used as a passive Yagi element, there is no current flowing into the boom because the voltage at that midpoint is zero. There are no reflections at the middle of a 1/2WL piece of aluminum shorted to the boom.

>> No current flows into the load because the 1/4 wl
>> open-circuit stub has shunted a short circuit across the load, but the
>> virual short established at the load (point 'x') by the stub does indeed
>> establish a reflection on the line.
>
> What causes the reflection at point 'x'? No current flows into the load
> because the voltage at point 'x' is zero due to destructive interference
> between the single forward wave and the single reflected wave.
>
>> If you remove the stub
>> the main line supplies energy to the load where is is absorbed.
>
> Of course, because removing the stub removes the reflected waves
> that are engaging in destructive interference and the voltage at
> point 'x' is no longer zero.

The voltage at point 'x' in the diagram above is zero because of wave interference between the forward wave and the reflected wave returned from the open end of the stub. The voltage being zero at point 'x' is what causes the virtual short, not vice versa. There are no reflections occurring *at* point 'x'. The only reflections are occurring at the open

end of the stub. The forward voltage at point 'x' is V. The reflected
voltage from the open end of the stub at point 'x' is -V. Thus there is
zero voltage driving the load.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4947. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 04:58:15 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6g9na3a6td773@corp.supernews.com>
Source record: 123234

Roger Halstead wrote:
>
> Now that gets a bit confusing as ferrite is iron. Ferrite is the
> latin word for iron.

Hm. According to my Webster's, ferrum is Latin for iron, but I'm certainly no authority.

But I suppose some people are easily confused anyway, and think alumina is metal, a wolf is something you make light bulb filaments from, and that plumbers must be something made from lead. I'm afraid they'll just have to muddle through life as best they can, always being just a little confused. Once again it's shown that ignorance is indeed bliss.

Roy Lewallen, W7EL

4948. Stub thought experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 05:04:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E682866.5080908@ieee.org>
Source record: 123236

Here's a thought experiment about stubs. Let's say we have a dipole with
a feedpoint impedance of 50 ohms and we hang a 1/4WL open stub at the
feedpoint. Everyone agrees that will "short out" the antenna. The question
is exactly where are the reflections occurring? Are any reflections occurring
at '+', the "shorted out feedpoint"? (Everything is lossless.)

```
|
| dipole
|
Source---coax------------+---1/4WL stub---open
|
|
|
```

Let's say we measure ten watts forward power and ten watts reflected
power on the coax. If we move the wattmeter to the midpoint of the
stub, what will we read? I say we will read the same ten watts
forward and ten watts reflected indicating that all the reflections
are occurring at the open end of the stub and no reflections
are occurring *at* the '+' connection to the dipole. The forward
voltage between the source and the open is 22.4V. The reflected
voltage between the open and the source is 22.4V. Those two voltages
are 180 degrees out of phase at the '+' connection point and thus
vectorially add to zero volts at that point.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4949. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 05:05:47 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <LMV9a.6398$wJ1.638485@newsread2.prod.itd.earthlink.net>
Source record: 123235

Walt said:
> > That short circuit,
> > when placed anywhere on the main line, is as true a short at its
resonant
> > frequency as if a solid metal short circuit was placed across the line
at
> > that point.
>
> If there was a solid metal short circuit placed across the line, the
> voltage and current in the stub would be zero and it's not.
> --
> cheers, CAM

Cecil, your argument above is a non-argument, because if a physical short replaces the virtual short established by the stub, then the stub is no longer needed. The only difference is that a physical short is a short at all frequencies, but the virtual short established by the stub is a short only at the frequency where the stub is exactly a 1/4 wl. At frequencies away from 1/4 wl resonance a lossless open-circuited stub will establish a reactance shunting the line at the stub point. If the stub is less than 1/4 wl it will introduce an inductive reactance, but if longer than 1/4 wl it will introduce a capacitive reactance.

I am working on a dissertation that will explain the nature of the virtual near-short when the stub is real coax rather than lossless line. I'm sure it will help clarify the issue.

Walt, W2DU

>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>

4950. WHY IS THIS SO HARD TO FIND?????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 05:11:44 UTC
From: sean@seanmusic.net
Message-ID: <53e4b2b4.0303062111.1d8426ed@posting.google.com>
Source record: 123237

all i need is a cheap small antenna to replace my 7.5" piece of ugly
wire sticking up crookedly from my Laipac RLP433A (433.92MHz)
please help.

4951. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 05:12:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E682A2B.30901@ieee.org>
Source record: 123238

Walter Maxwell wrote:
> I am working on a dissertation that will explain the nature of the virtual
> near-short when the stub is real coax rather than lossless line. I'm sure it
> will help clarify the issue.

One minute before you made your posting, Walt, I made one titled
"Stub thought experiment". The forward voltage is a constant 22.4V
all the way to the end of the open stub. The reflected voltage is
a constant 22.4V all the way from the end of the open stub back to
the source. There are no reflections at the connection point.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4952. Re: WHY IS THIS SO HARD TO FIND?????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 05:15:30 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E682AF2.6000801@ieee.org>
Source record: 123239

Sean Bartholomew wrote:
> all i need is a cheap small antenna to replace my 7.5" piece of ugly
> wire sticking up crookedly from my Laipac RLP433A (433.92MHz)
> please help.

Try a hobby store, one with radio-controlled stuff.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4953. Re: EH Antenna Test - Part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 06:13:56 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3E6838A4.1518@wt.net>
Source record: 123241

Michele IZ2EAS wrote:
>
> The second part of the EH antenna test has been published on AntenneX.com.
> Unfortunately, the (very good) article is available only to AntenneX
> subscribers.
> The author measured "commercial" EH antennas, and found that gain is in the
> range of -10 to -20 dBd and efficiency is on average less than 10%.
> I encourage the interested reader to contact AntenneX and find out how to
> get his/her copy of the article.
> With best regards,
>
> Michele IZ2EAS

Ouch...What happened to the nearly 90-100% efficiency that the builders
claimed? I guess the lack of feedline radiation in the "I assume"
properly conducted tests must have took a healthy bite. No matter
really. The things are too ugly to use anywhere around here. My
neighbors would lynch me if I mounted a "UFO" on the house. MK
--
http://web.wt.net/~nm5k

4954. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 06:19:16 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <3E6839E4.1F3@wt.net>
Source record: 123242

Yuri Blanarovich wrote:
>
> >I figure that I could get the bamboo spreaders at NO cost,
> >but they will eventually rotten and break.
>
> Not if you impregnate them properly.
> I have used latex based driveway surface coating, just paint or dip the rods in
> the coating and let it dry. Very tough, long lasting and cheap.
>
> 73 and GL Yuri, K3BU, VE3BMV, VE1BY

They also sell that liquid rubber stuff like you dip pliers, wrench
handles, etc, in. You could probably paint that stuff on in the same
way. I don't know if it's as cheap, but you can buy smaller quantities
of it I think.
Most auto parts and hardware stores carry it. MK
--
http://web.wt.net/~nm5k

4955. Re: How to i.d. a balun ratio

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 06:22:53 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6gem3s5mjje05@corp.supernews.com>
Source record: 123243

Sorry, there's no way to do it with a VOM. You'll need some sort of RF source and detector. For example, you could do it with a transmitter, dummy load, and SWR meter. (Connect the balun between the transmitter and dummy load, and the SWR meter between the transmitter and balun. The indicated SWR is the balun impedance ratio.

Roy Lewallen, W7EL

don bryant wrote:
> I have an old W2AU balun and I need to know the step up ratio. Is there a
> measurement method using a simple VOM? Or how could I determine. There are
> no external markings.
> Don ZS6BTP
>
>

4956. Re: EH Antenna Test - Part II

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 06:27:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6geukkp8noe90@corp.supernews.com>
Source record: 123244

There shouldn't be any excitement about this. It just goes to confirm
one more time that existing antenna theory is sound, confirmation that
some of us don't really feel is necessary.

CAREFUL EXPERIMENTS FAIL TO SHOW EXISTENCE OF GHOSTS! MIRACLE 200 MPG
CARBURETOR GIVES 20 MPG IN TESTS! CAREFUL MEASUREMENTS SHOW NO INCREASE
IN PENIS SIZE AFTER TAKING MIRACLE DRUGS!

Ho hum.

Roy Lewallen, W7EL

Mark Keith wrote:
> Michele IZ2EAS wrote:
>
>>The second part of the EH antenna test has been published on AntenneX.com.
>>Unfortunately, the (very good) article is available only to AntenneX
>>subscribers.
>>The author measured "commercial" EH antennas, and found that gain is in the
>>range of -10 to -20 dBd and efficiency is on average less than 10%.
>>I encourage the interested reader to contact AntenneX and find out how to
>>get his/her copy of the article.
>>With best regards,
>>
>>Michele IZ2EAS
>
>
>
> Ouch...What happened to the nearly 90-100% efficiency that the builders
> claimed? I guess the lack of feedline radiation in the "I assume"
> properly conducted tests must have took a healthy bite. No matter
> really. The things are too ugly to use anywhere around here. My
> neighbors would lynch me if I mounted a "UFO" on the house. MK

4957. Re: Aluminum Tubing Sources

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 12:47:43 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <635h6v4332mrdrh5d3go7git5a3tfgca89@4ax.com>
Source record: 123246

On Thu, 06 Mar 2003 16:52:43 -0700, Dean Arthur
<dearthur@silverstar.com> wrote:

>Check your local library for the Thomas Register. A set of about 35
>1,000 page volumes giving info on all kinds of subject matter. Aluminum
>in every kind, size, shape and alloy. Most sources will have
>800-numbers. You can even get your own set for the 29.95 ship cost. They
>offer the catalogs on CDs too.

They also have everything online - http://www.thomasregister.com

-fb-

4958. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 13:10:28 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <0d6h6vkan4c0bdj8ktfofok9l1301lo1cd@4ax.com>
Source record: 123247

On Thu, 06 Mar 2003 16:28:17 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Robert Lay (W9DMK) wrote:
>> Since both of those points describe an
>> impedance seen a point x that is less than 50 ohms, then we can say
>> that for either of those points, the voltages, incident and reflected,
>> follow the rule of being 180 degrees out of phase at the point of
>> reflection.
>>
>> Almost everything you need to know to do this is on 3 pages of the
>> ARRL Antenna Book, 17th Ed., pages 24-6, 24-7 and 28-2.
>
>Why did you assume that the virtual impedance seen by the
>forward wave is resistive?

Dear Cecil,

I doubt if I will get away with anything less than the full, step by step explanation of how to solve this problem, so here goes!

Step 1 - On the 50 ohm line, we know the reflection coefficient, rho1 = sqrt(Pr/Pf) = .5477

Step 2 - We also know that the net power level on the 50 ohm line is 100 - 30 = 70 watts

Step 3 - Since the net power on the 50 ohm line has no where else to go, the net power on the 150 ohm line is also 70 watts.

Step 4 - The reflection coefficient on the 150 ohm line, rho2 = sqrt(Pr/Pf) = .7303

Step 5 - We draw a circle on a Smith Chart for a reflection coefficient of .7303. This Smith Chart will be normalized for 150 ohms - i.e., the center point of the Smith Chart represents 150 + j0. That circle will pass through ALL of the possible load values at the end of the 150 ohm line that could result in a reflection coefficient of .7303. For Example it passes through 6.415 + j0 and .1558 + j 0 and 0.3 + j .92, etc. (All points normalized to 150 ohms.)

Step 6 - We draw a circle on a 2nd Smith Chart for a reflection coefficient of .5477. This Smith Chart will be normalized for 50 ohms - i.e., the center point of the Smith Chart represents 50 + j0. That circle will pass through ALL of the possible load values at the end of the 50 ohm line that could result in a reflection coefficient of .5477. For Example it passes through 4.422 + j0 and .2922 + j 0 and

0.54 + j .90, etc. (All points normalized to 50 ohms.)

Step 6 - Theoretically, we should transfer ALL points from the first Chart to the second chart, but for purposes of this exercise, we only need a few of the points to show where the locus of transferred points from the 150 ohm chart will intersect with the locus of points on the 50 ohm chart. The points that we will transfer will be arranged in 3 columns, as follows:

From 150 ohm Chart(Norm) Ohms On 50 ohm Chart(Norm)
0.2 + j 0.5 30 + j 75 .6 + j 1.5
0.16 + j 0.2 24 + j 30 .48 + j .6
0.17 + j 0.27 25.5 + j 40.5 0.51 + j .81
0.18 + j 0.35 27 + j 52.5 .54 + j 1.05

Those 4 points are sufficient to show the intersection of the two plots, and the 3rd point is sufficiently close to the intersection as to declare it as a possible solution to the problem. The other solution would be in the lower hemisphere at 0.51 - j .81. Regardless of which intersection is considered to be the solution (and both are valid solutions), the impedance seen looking to the right at the junction of the two lines is 25.5 + j 40.5, which is an impedance of 47.8 ohms at 64 degrees,

Step 7 - We apply the rule that says that the relative phase angle between incident and reflected voltages at the point where the reflection occurs will be 180 degrees when the load impedance is less than the characteristic impedance of the line. The converse rule is that for an impedance greater than the characteristic impedance, the relative phase angle between forward and reflected voltages is zero. Since 47.8 ohms is clearly less than 50 ohms, we declare that the relative phase angle between forward and reflected is 180 degrees.

It should also be noted that there is a circle on the Smith Chart known as the Unity Resistance Circle. Any impedance on the chart lying inside of that circle is an impedance greater than the line impedance, and conversely, any impedance lying outside of that circle is an impedance less than the line impedance. So, all we have to do is show whether the possible solutions lie inside of, or outside of, the Unity Resistance Circle.

Another point of interest is the question, "what are the possible values of the load impedance that is terminating the line?" The answer is that it depends on how long the 150 ohm line is. For example, if it is exactly 1/4 wave, then the load could be 45 + or - j 142.5 ohms. In fact, there are an infinite number of possible load impedances and line lengths that would satisfy the boundary conditins of the problem.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784

http://www.geocities.com/w9dmk/W9DMK.html
==========

4959. Re: Stub thought experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 13:21:54 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <vv6h6vcc6684d9uk9stgml3lrui8qs04kk@4ax.com>
Source record: 123248

On Thu, 06 Mar 2003 23:04:38 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Here's a thought experiment about stubs. Let's say we have a dipole with
>a feedpoint impedance of 50 ohms and we hang a 1/4WL open stub at the
>feedpoint. Everyone agrees that will "short out" the antenna. The question
>is exactly where are the reflections occurring? Are any reflections occurring
>*at* '+', the "shorted out feedpoint"? (Everything is lossless.)
>
> |
> | dipole
> |
>Source---coax------------+---1/4WL stub---open
> |
> |
> |
>
>Let's say we measure ten watts forward power and ten watts reflected
>power on the coax. If we move the wattmeter to the midpoint of the
>stub, what will we read? I say we will read the same ten watts
>forward and ten watts reflected indicating that all the reflections
>are occurring at the open end of the stub and no reflections
>are occurring *at* the '+' connection to the dipole. The forward
>voltage between the source and the open is 22.4V. The reflected
>voltage between the open and the source is 22.4V. Those two voltages
>are 180 degrees out of phase at the '+' connection point and thus
>vectorially add to zero volts at that point.

Dear Cecil,

Looks good to me. I agree with your conclusions. As to the question of
whether or not there are any reflections occurring at "+", I would
say, no. The reflections are originating at the open circuited end,
and the dipole just happens to be positioned on top of a virtual
short. So, at the single frequency involved, "this dog don't hunt".
==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

4960. Re: Stub thought experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 13:48:56 UTC
From: richardharrison@webtv.net
Message-ID: <9457-3E68A348-360@storefull-2317.public.lawson.webtv.net>
Source record: 123251

CAM wrote:
"Here`s a thought experiment about stubs."

No responses appear on my screen. The subject may be exhausted, or perhaps it`s the respondents. Cecil asks, where do reflections occur?

There is no reflection at the junction of a matched load and the coax from the load (the dipole).

There is a reflection at the open-circuit end of the 1/4-wave stub.

It could be argued that there is a transient period starting when the wave hits the junction of stub and load. Initially this appears as 25 ohms across the transmission line. But the transient period is quickly ended for practical purposes.

When the steady-state is reached at the junction of the stub, load, and source line, the volts reflected by the stub will be 180-degrees out-of-phase with the equal-amplitude source volts. Their sum is zero volts, leaving nothing to power the load.

One could insert a length of matched coax between the stub junction and the load (dipole).
Zero volts would still appear at the stub junction with the line and thus zero energy would flow in the extended coax to the load (dipole).

Best regards, Richard Harrison, KB5WZI

4961. Re: CDE rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 14:03:55 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <b4a8rqltq1@f04n12.cac.psu.edu>
Source record: 123249

Well I guess my memory is not much good on that point......

--
John Passaneau, W3JXP
Physics Dept. Electronics Shop
Penn State University
104 Davey Lab, University Park , Pa. 16802
814.863.4297, jxp16@psu.edu

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:n70aa.17475$mC6.15084@fe04.atl2.webusenet.com...
> I have 2 TR-4's. Flat bottom, 8-wire. Just sitting in the shed.
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "John Passaneau" <jxp16@psu.edu> wrote in message
> news:b48b8a$qk8$1@f04n12.cac.psu.edu...
> > Hi Guys:
> >
> > I'm not sure but I think that rotors without breaks do not use 8 wires.
I
> > think they use only 4 or 6 wires. If this is true then that's an easy
way
> to
> > tell them apart.
> >
> >
> >
> > --
> > John Passaneau, W3JXP
> > Physics Dept. Electronics Shop
> > Penn State University
> > 104 Davey Lab, University Park , Pa. 16802
> > 814.863.4297, jxp16@psu.edu
> >
> > "Randy Chavis" <wb4una@aol.com> wrote in message
> > news:20030306133754.24646.00000008@mb-dd.aol.com...
> > > if you look on the bottom of the rotore they will have a set of
numbers
> > ...the
> > > small no brk rotors will have tr-44 on the outer most ring on the

bottom
> > of the
> > > rotor..the older ham-m that had the old square bakelite box will have
> > nothing
> > > on the bottom..the newer ham ll, lll,iv..will have the markings on
them
> > also a
> > > date stamped in the bottom of the rotors...you will have to look hard
if
> > the
> > > rotor is real tarnished..you might have to take a wire brush to it to
> > see..it
> > > is near the 8 wire connector...
> > > hope that helps someone...
> > >
> > > Randy
> > >
> > > ARS: WB4UNA
> > > Randy Chavis
> > > 247 Goff Court
> > > West Columbia
> > > S.C. 29172
> > >
> >
> >
>
>
>

4962. long wire questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 14:11:55 UTC
From: Bill Grimwood <bill@grimwood.net>
Message-ID: <v6ha52buuk8bc8@corp.supernews.com>
Source record: 123250

I plan to put up a long wire for 80 meters tomorrow and I have a few questions.

1. Do I include the wire length running from the end feed insulator into my shack in the total length?

2. Should I use a piece of coax for the lead in and if so do I attach the shield to the ground?

3. I am a new ham and have several articles on end fed long wires but none of them answer these questions. I plan to use an MFJ antenna tuner. If I use coax I know how to attach it but if I just use a wire I am not sure.

Thanks

Bill Grimwood
K1WEG

4963. Re: long wire questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 14:45:39 UTC
From: k3bu@aol.com
Message-ID: <20030307094539.12392.00000062@mb-ba.aol.com>
Source record: 123252

>
>I plan to put up a long wire for 80 meters tomorrow and I have a few
>questions.
>
>1. Do I include the wire length running from the end feed insulator into
>my shack in the total length?
>
>2. Should I use a piece of coax for the lead in and if so do I attach the
>shield to the ground?
>
>3. I am a new ham and have several articles on end fed long wires but
>none of them answer these questions. I plan to use an MFJ antenna tuner.
>If I use coax I know how to attach it but if I just use a wire I am not
>sure.
>
>
>Thanks
>
>
>Bill Grimwood
>K1WEG
>
>
>

Look at Windom antenna, it has a feedpoint at 1/3 of its length, if you cut it for 80m (halfwave) it will resonate on higher bands. You can feed it with single wire and tuner, or use twinlead (insulator at feed point), tuner or balun and coax.

Otherwise long wire and tuner are fine. To use coax you need 50 ohm feedpoint (tuner or balun).

Yuri

4964. Re: long wire questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 14:52:37 UTC
From: richardharrison@webtv.net
Message-ID: <25679-3E68B235-309@storefull-2313.public.lawson.webtv.net>
Source record: 123254

Bill Grimwood wrote:

"Do I include the wire length running from the end feed insulator into my shack in the total lrngth?"

A current-carrying wire in the clear can radiate regardless of its position, so the total length counts.

Bill also wrote:
"Should I use a piece of coax for the lead in and if so do I attach the shield to the ground?"

Use coax if you need shielding. If you use coax, it will only act as a shielded cable if the shield is grounded. Otherwise, it radiates almost as if the shield were not there.

Best regards, Richard Harrison, KB5WZI

4965. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 15:02:41 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E68B491.F93BBC39@osite.com.br>
Source record: 123253
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Dan/W4NTI wrote:
>
> I just looked over the 'Max' site. It is very nice and I think cheap for
> fiberglass. I saw a single 20 spreader for 19.95. That totals 160 bux.
> Plus shipping. If you order from one of the 'major' quad companies they
> wanted 320 bucks.

Iï¿½ve found a local fiberglass company... 1" OD solid rods
are
USD 4.53/ meter (USD 1.38/ft). I haven't asked them about
shipping charges, but since they are in the same city, it
may be even free.
--
Paulo E.P. Marcondes
pepm@osite.com.br

4966. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 15:15:38 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e68b4ab.562675890@news.galilei.com>
Source record: 123255

Hi Sparks

It may very well be that I made some erroneous statements regarding ground planes as I don't normally build them! J-Poles on the other hand I was quite adept at designing and constructing back when it was my center of attention, one might say I wrote the book on them!

I do have several unconventional antennas in use that outperform all other conventional types I have tried. They work in some areas for some, and for others they don't work at all.

Do you support the ARRL and their publications?
The BASIC ELECTRONICS publication by the ARRL has over 9 grossly incorrect formulas in it and they are still publishing it that way! Gotta get those newbies off on the wrong foot from day one!

TTUL
Gary

4967. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 15:25:31 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93374B88C8576pookster@216.168.3.50>
Source record: 123256

raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote in
news:3e68b4ab.562675890@news.galilei.com:

> The BASIC ELECTRONICS publication by the ARRL has over 9 grossly
> incorrect formulas in it and they are still publishing it that way!
>

Care to point out which ones?

--
Bill, W7TI

4968. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 15:26:20 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e68b8a7.563696203@news.galilei.com>
Source record: 123257

richardharrison@webtv.net (Richard Harrison) verbositized:

>Sparks, W4EAS wrote:
>"You might restudy the "J" pole and groundplane in GOOD antenna
>textbooks."
>
>The ARRL edition 19 Antenna Book is good.
>It has J-pole coverage on page 16-22. You find this indexed under
>"super" for some odd reason.

How about so they don't infringe on the name "Stacked-J"

The ARRL publications also do not make reference to "Mirror-Image-Js"
or multi-band J-Poles like the Copper Cactus.

TTUL
Gary

4969. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 16:54:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <fqjh6vgcasq6dt49kfo9vrme0b1e1vjmm1@4ax.com>
Source record: 123258

On Fri, 07 Mar 2003 08:10:28 -0500, "Robert Lay (W9DMK)"
<w9dmk@crosslink.net> wrote:

> In
>fact, there are an infinite number of possible load impedances and
>line lengths that would satisfy the boundary conditins of the problem.

Hi Bob,

Sh/Could we have expected less?

73's
Richard Clark, KB7QHC

4970. Re: Advice on antenna strengthening

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 17:00:27 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303070601.7413e65d@posting.google.com>
Source record: 123259

Wes Stewart <n7ws@#arrl.net> wrote in message
news:<795b6vscsg5ropcictn12utaqur97u9uk8@4ax.com>...

>
> Alright, poor choice of words. What I was trying to say that if one
> is adding wall thickness, it is better to add it to the OD rather than
> the ID.

>
> Alright, poor choice of words. What I was trying to say that if one
> is adding wall thickness, it is better to add it to the OD rather than
> the ID.

By a *long* shot Wes and here's why by the numbers. Example:

Assume a "ham standard" mast or antenna element made of one of the
lengths readily available telescoping 0.059" thick wall of aluminum
tubing. Start with a 1" diameter mast which fails in bending at some
point or another along it's length. Comes the question of whether to
reinforce the mast by sliding the next size smaller diameter tubing
inside the 1" tube -or- sliding the next size larger tubing over the
1" mast.

The critical parameter is the "cross sectional moment of inertia" of
the tubing which is a fourth power function of the diameters of the
tubing. OD = Outside diameter. ID = Inside diameter. In the case of a
7/8" OD x (approx.) 3/4" ID tube which would fit inside the mast the
moment of inertia is 0.014 inches^4. A 1 1/8" OD x (approx) 1" ID tube
slid over the outside of the mast has a moment of inertia of 0.030
inches^4. In other words a reinforcing tube slid over the mast is over
twice as "strong" as a reinforcing tube inside the mast.

w3rv

4971. Re: long wire questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 17:05:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4ajhh$23q$1@venus.btinternet.com>
Source record: 123260

Bill, erect a high horizontal or sloping length of wire.

Continue the wire downwards from one end into the shack through a small 1/4", insulated hole in wood, metal, glass or plastic. Or use a few inches of coax inner conductor + polythene.

You are now the proud ownwer of an Inverted-L antenna. The down-coming end length is just as much a part of the radiating system as is the horizontal length. This is the best of the multi-band, all-direction wire antennas. But remember all end-fed antennas need a reasonable ground connection.

Ideally, make overall length (vertical + horizontal sections) roughly 1/3 wavelengths at the lowest frequency you want to transmit on. But it's very non-critical. Just get some wire high into the air. Avoid overall lengths exact multiples of 1/2-wave.

Plug the end of the wire into the inner conductor of the coax socket on the tuner. The ONLY coax in the system should be between the tuner and the transmitter which can be of any physically convenient length.

Connect the tuner case to a reasonable ground such as the domestic plumbing / heating system + power ground.

Ideally, also connect some shallow buried straight wires spread around your back yard. Length of ground wires need be no greater than 30 or 40 feet. If anyone suggests 120 buried wires, each 1/2-wave long, try not to die laughing.

A single ground rod is waste of time and energy.

To ensure the tuner is able to do its job at all frequencies it may be useful to have a variable capacitor and one or two home-made coils to connect between antenna and tuner. Wind coils on toilet roll tubes with 18 awg or similar enamelled wire.

Whatever ambitious ideas you may have for the future the above Inverted-L is a MUST to begin with. More will be learned in a fraction of the time than by building a dozen HF beams.

If the weather is OK you should be on the air tomorrow afternoon. The following day you can try an Inverted-U. If overall length is 120 feet or more you should do well on the 160 metre band.

Reg, G4FGQ

==========

"Bill Grimwood" <bill@grimwood.net> wrote in message
news:v6ha52buuk8bc8@corp.supernews.com...
> I plan to put up a long wire for 80 meters tomorrow and I have a few
> questions.
>
> 1. Do I include the wire length running from the end feed insulator
into
> my shack in the total length?
>
> 2. Should I use a piece of coax for the lead in and if so do I attach
the
> shield to the ground?
>
> 3. I am a new ham and have several articles on end fed long wires but
> none of them answer these questions. I plan to use an MFJ antenna tuner.
> If I use coax I know how to attach it but if I just use a wire I am not
> sure.
>
>
> Thanks
>
>
> Bill Grimwood
> K1WEG
>
>

4972. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 17:15:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E68D3A0.7090301@ieee.org>
Source record: 123262

Robert Lay (W9DMK) wrote:
> Those 4 points are sufficient to show the intersection of the two
> plots, and the 3rd point is sufficiently close to the intersection as
> to declare it as a possible solution to the problem. The other
> solution would be in the lower hemisphere at 0.51 - j .81. Regardless
> of which intersection is considered to be the solution (and both are
> valid solutions), the impedance seen looking to the right at the
> junction of the two lines is 25.5 + j 40.5, which is an impedance of
> 47.8 ohms at 64 degrees,

Probably close enough for a graphic solution.

> Step 7 - We apply the rule that says that the relative phase angle
> between incident and reflected voltages at the point where the
> reflection occurs will be 180 degrees when the load impedance is less
> than the characteristic impedance of the line. The converse rule is
> that for an impedance greater than the characteristic impedance, the
> relative phase angle between forward and reflected voltages is zero.
> Since 47.8 ohms is clearly less than 50 ohms, we declare that the
> relative phase angle between forward and reflected is 180 degrees.

That only applies to resistive situations. You already told us that
the impedance is 25.5 + j 40.5. What effect do you think the Gamma
angle has on the phase of the reflected voltage?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4973. Re: long wire questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 17:17:53 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E68D441.92B18F7F@cwis.net>
Source record: 123261

Bill Grimwood wrote:
>
> I plan to put up a long wire for 80 meters tomorrow and I have a few
> questions.
>
> 1. Do I include the wire length running from the end feed insulator into
> my shack in the total length?
>
Yes.

> 2. Should I use a piece of coax for the lead in and if so do I attach the
> shield to the ground?
>
You can, but it really isn't necessary (to use the coax). If you
ground
the shield of the coax it will radiate less than if it isn't
grounded.

> 3. I am a new ham and have several articles on end fed long wires but
> none of them answer these questions. I plan to use an MFJ antenna tuner.
> If I use coax I know how to attach it but if I just use a wire I am not
> sure.
>
If your tuner has a connection for a 'single' wire and a ground,
that's
what I'd use to connect the antenna to. If it doesn't, then use the
center
pin of the coax connector on the tuner. The tuner still needs to be
grounded.

> Thanks
> Bill Grimwood
> K1WEG

4974. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 17:17:57 UTC
From: richardharrison@webtv.net
Message-ID: <3983-3E68D445-451@storefull-2315.public.lawson.webtv.net>
Source record: 123264

Gary Deutschmann, Sr. wrote:
"J-Poles on the other hand I was quite adept at designing and constructing back when it was my center of attention, one might say I wrote the book on them!"

Al Gore invented the Internet!

Then explain dBd claims for the J-poles when they are 1/2-wave antennas. "CQ Antenna Roundup Vol.2".

Arnold B. Bailey rates the J-pole as a 2dbd loser. The advantage is that it increases the bandwidth a tad. The culprit is the radiation from the 1/4-wave matching section. A multilobe pattern is shown in the vertical radiation. It looks like a butterfly. A good VHF antenna at least concentrates energy in the horizontal plane. A conventional 1/2-wave antenna produces the classic figure-8.

There is a commercial source of J-poles. MFJ sells one made of twin-lead. It is cheap. I bought one.

Best regards, Richard Harrison, KB5WZI

4975. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 17:25:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E68D5F6.9030404@ieee.org>
Source record: 123263

Richard Clark wrote:
> "Robert Lay (W9DMK)" <w9dmk@crosslink.net> wrote:
>>In
>>fact, there are an infinite number of possible load impedances and
>>line lengths that would satisfy the boundary conditins of the problem.
>
> Sh/Could we have expected less?

Although Bob's statement is true, it is irrelevant. Nowhere
in the brainteaser did I ask for the load impedance or the
line length. What was asked for in the brainteaser is the
phase angle between the forward voltage and the reflected
voltage at the impedance discontinuity on the 50 ohm line.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4976. Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 17:53:52 UTC
From: Gary Rotter <GR120994@ncr.com>
Message-ID: <3e68dcb1$1@rpc1284.daytonoh.ncr.com>
Source record: 123265

I saw a description of a shielded balanced feed line in an older edition of the ARRL antenna book. The grounds of two coax cables are connected to the station ground. The center conductors are attached to the balanced output of an antenna tuner. At the antenna end, the coax shields are connected together. The center conductor for one of the coax cables is attached to one side of the antenna. The center conductor for the other cable is attached to the other side of the antenna. Both coax cables must be taped together to keep them parallel.

I thought that such an arrangement would work, but would have higher losses than the traditional ladder line, yet the ARRL antenna book did not say anything about the efficiency of this setup.

Is such a setup efficient?

If so, is it better to build the cable or to buy it?

4977. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 18:02:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <gonh6vk95h5cgduqfeb5atsmq3tq4u2lug@4ax.com>
Source record: 123266

On Fri, 7 Mar 2003 09:53:52 -0800, "Gary Rotter" <GR120994@ncr.com>
wrote:

>I saw a description of a shielded balanced feed line in an older edition of
>the ARRL antenna book. The grounds of two coax cables are connected to the
>station ground. The center conductors are attached to the balanced output of
>an antenna tuner. At the antenna end, the coax shields are connected
>together. The center conductor for one of the coax cables is attached to one
>side of the antenna. The center conductor for the other cable is attached to
>the other side of the antenna. Both coax cables must be taped together to
>keep them parallel.
>
>I thought that such an arrangement would work, but would have higher losses
>than the traditional ladder line, yet the ARRL antenna book did not say
>anything about the efficiency of this setup.
>
>Is such a setup efficient?
>
>If so, is it better to build the cable or to buy it?
>

Hi Gary,

There is no particular reason to go this direction except where it
meets some issue of passing the line into the shack (using
conventional feedthru hardware that is coaxial based).

You get no break on losses (it's the same any way you look at it).

73's
Richard Clark, KB7QHC

4978. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 18:05:16 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <j1oh6v094nsq33g1k30vihotghet62d7vg@4ax.com>
Source record: 123267

On Fri, 07 Mar 2003 09:25:10 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> "Robert Lay (W9DMK)" <w9dmk@crosslink.net> wrote:
>>>In
>>>fact, there are an infinite number of possible load impedances and
>>>line lengths that would satisfy the boundary conditins of the problem.
>>
>> Sh/Could we have expected less?
>
>Although Bob's statement is true, it is irrelevant. Nowhere
>in the brainteaser did I ask for the load impedance or the
>line length. What was asked for in the brainteaser is the
>phase angle between the forward voltage and the reflected
>voltage at the impedance discontinuity on the 50 ohm line.

Hi Cecil,

Given the flood of queries that followed Bob's answer (speaking of
what was asked for, and what was not), it begs the question: who cares
anyway?

73's
Richard Clark, KB7QHC

4979. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 18:07:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <06oh6vkqeojbmc6t73r7e00rfn89psr4bv@4ax.com>
Source record: 123268

On Fri, 7 Mar 2003 11:17:57 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Al Gore invented the Internet!
>
And for the Grand Round question

"Who invented Saddam?"

73's
Richard Clark, KB7QHC

4980. Re: CDE rotor question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 18:39:49 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <AZ9aa.63991$7Z4.28225@fe08.atl2.webusenet.com>
Source record: 123089

No problem, John. It's old technology, not even on the clotting edge of technology. I forget points about the older stuff too. Especially if it is something minor.

--
73,
Chuck
KE4ETH
USA-NA

"John Passaneau" <jxp16@psu.edu> wrote in message
news:b4a8rqltq1@f04n12.cac.psu.edu...
> Well I guess my memory is not much good on that point......
>
>
>
> --
> John Passaneau, W3JXP
> Physics Dept. Electronics Shop
> Penn State University
> 104 Davey Lab, University Park , Pa. 16802
> 814.863.4297, jxp16@psu.edu
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
> news:n70aa.17475$mC6.15084@fe04.atl2.webusenet.com...
> > I have 2 TR-4's. Flat bottom, 8-wire. Just sitting in the shed.
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> > USA-NA
> >
> > "John Passaneau" <jxp16@psu.edu> wrote in message
> > news:b48b8a$qk8$1@f04n12.cac.psu.edu...
> > > Hi Guys:
> > >
> > > I'm not sure but I think that rotors without breaks do not use 8
wires.
> I
> > > think they use only 4 or 6 wires. If this is true then that's an easy
> way
> > to
> > > tell them apart.
> > >

> > >
> > >
> > > --
> > > John Passaneau, W3JXP
> > > Physics Dept. Electronics Shop
> > > Penn State University
> > > 104 Davey Lab, University Park , Pa. 16802
> > > 814.863.4297, jxp16@psu.edu
> > >
> > > "Randy Chavis" <wb4una@aol.com> wrote in message
> > > news:20030306133754.24646.00000008@mb-dd.aol.com...
> > > > if you look on the bottom of the rotore they will have a set of
> numbers
> > > ...the
> > > > small no brk rotors will have tr-44 on the outer most ring on the
> bottom
> > > of the
> > > > rotor..the older ham-m that had the old square bakelite box will
have
> > > nothing
> > > > on the bottom..the newer ham ll, lll,iv..will have the markings on
> them
> > > also a
> > > > date stamped in the bottom of the rotors...you will have to look
hard
> if
> > > the
> > > > rotor is real tarnished..you might have to take a wire brush to it
to
> > > see..it
> > > > is near the 8 wire connector...
> > > > hope that helps someone...
> > > >
> > > > Randy
> > > >
> > > > ARS: WB4UNA
> > > > Randy Chavis
> > > > 247 Goff Court
> > > > West Columbia
> > > > S.C. 29172
> > > >
> > >
> > >
> >
> >
> >
>
>

4981. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 18:40:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E68E7AC.1010905@ieee.org>
Source record: 123069

Richard Clark wrote:
> Given the flood of queries that followed Bob's answer (speaking of
> what was asked for, and what was not), it begs the question: who cares
> anyway?

People who like brainteasers. Your mileage may vary.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4982. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 18:47:26 UTC
From: richardharrison@webtv.net
Message-ID: <26714-3E68E93E-433@storefull-2311.public.lawson.webtv.net>
Source record: 123071

Richard Clark wrote:
"Who invented Saddam?"

We know he has "weapons of mass destruction". We have receipts for the components we sold him.

Best regards, Richard Harrison, KB5WZI

4983. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 19:08:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4aqn3dfb1@venus.btinternet.com>
Source record: 123070

Why would anybody want to shield a balanced feedline to a radio antenna ?

What advantage would be gained by using a double-shielded coax feedline?

Reg, G4FGQ

==========

"Gary Rotter" <GR120994@ncr.com> wrote in message
news:3e68dcb1$1@rpc1284.daytonoh.ncr.com...
> I saw a description of a shielded balanced feed line in an older edition
of
> the ARRL antenna book. The grounds of two coax cables are connected to the
> station ground. The center conductors are attached to the balanced output
of
> an antenna tuner. At the antenna end, the coax shields are connected
> together. The center conductor for one of the coax cables is attached to
one
> side of the antenna. The center conductor for the other cable is attached
to
> the other side of the antenna. Both coax cables must be taped together to
> keep them parallel.
>
> I thought that such an arrangement would work, but would have higher
losses
> than the traditional ladder line, yet the ARRL antenna book did not say
> anything about the efficiency of this setup.
>
> Is such a setup efficient?
>
> If so, is it better to build the cable or to buy it?
>
>

4984. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 19:18:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E68F09B.3080701@ieee.org>
Source record: 123072

Richard Harrison wrote:
> Richard Clark wrote:
> "Who invented Saddam?"
>
> We know he has "weapons of mass destruction". We have receipts for the
> components we sold him.

We gave stinger missiles to the Taliban to use against the Russians.
Now we would give stinger missiles to the Russians if they would use
them against the Taliban.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4985. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 19:22:47 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E68F187.9ED9249C@uci.edu>
Source record: 123073

Cecil,

It looks to me like the only reason you and Walt have been batting this around for so long is because of a lack of precision in terminology. You say there are no reflections there; Walt says there are reflections there, but it's for two different reasons. You say there aren't reflections at some point, meaning that point is not the cause of reflections. Walt says there are reflections there because reflection current is passing through that point. If you guys would agree to terms like 'point of reflection' it would save everyone a lot of agony. You guys are saying the same thing, but simply refuse to see it.

73, AC6XG

OC_CAM's Razor wrote:
>
> OC_CAM's Razor wrote:
> > Walter Maxwell wrote:
> >
> >>> Source------Z0 feedline----------------------x---1/4WL Z0 feedline--open
> >>> |
> >>> +-------------load
> >>>
> >>> Since the voltage at point 'x' is zero, nothing has changed. There still
> >>> are not any reflections at point 'x'.
> >>
> >> Not true, Cecil, there will be reflections at point 'x'.
> >
> > Why Walt? This is exactly the way a plumber's delight antenna connection
> > works. Are there reflections in the boom of a plumber's delight Yagi?
> > If so, we would have radiation off the sides of the Yagi.
>
> Just to be sure that everyone understands, there is reflected energy flowing
> through point 'x' caused by reflections from the open end of the stub. But
> there are no reflections occurring *at* point 'x'. When a solid piece of 1/2WL
> aluminum is shorted to the boom and used as a passive Yagi element, there is
> no current flowing into the boom because the voltage at that midpoint is zero.
> There are no reflections at the middle of a 1/2WL piece of aluminum shorted
> to the boom.
>
> >> No current flows into the load because the 1/4 wl
> >> open-circuit stub has shunted a short circuit across the load, but the
> >> virual short established at the load (point 'x') by the stub does indeed
> >> establish a reflection on the line.
> >

> > What causes the reflection at point 'x'? No current flows into the load
> > because the voltage at point 'x' is zero due to destructive interference
> > between the single forward wave and the single reflected wave.
> >
> >> If you remove the stub
> >> the main line supplies energy to the load where is is absorbed.
> >
> > Of course, because removing the stub removes the reflected waves
> > that are engaging in destructive interference and the voltage at
> > point 'x' is no longer zero.
>
> The voltage at point 'x' in the diagram above is zero because of wave
> interference between the forward wave and the reflected wave returned
> from the open end of the stub. The voltage being zero at point 'x' is
> what causes the virtual short, not vice versa. There are no reflections
> occurring *at* point 'x'. The only reflections are occurring at the open
> end of the stub. The forward voltage at point 'x' is V. The reflected
> voltage from the open end of the stub at point 'x' is -V. Thus there is
> zero voltage driving the load.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4986. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 20:13:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E68FD7F.8030306@ieee.org>
Source record: 123074

Jim Kelley wrote:
> Cecil,
>
> It looks to me like the only reason you and Walt have been batting this
> around for so long is because of a lack of precision in terminology.
> You say there are no reflections there; Walt says there are reflections
> there, but it's for two different reasons. You say there aren't
> reflections at some point, meaning that point is not the cause of
> reflections. Walt says there are reflections there because reflection
> current is passing through that point. If you guys would agree to terms
> like 'point of reflection' it would save everyone a lot of agony. You
> guys are saying the same thing, but simply refuse to see it.

You and I infer different meanings but I could be wrong and will
let Walt speak for himself.

The basic question is: In the absence of a physical impedance discontinuity
at a virtual impedance point, can the virtual impedance cause a reflection
at that point?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

4987. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 20:18:21 UTC
From: richardharrison@webtv.net
Message-ID: <102-3E68FE8D-421@storefull-2318.public.lawson.webtv.net>
Source record: 123079

Cecil, W5DXP wrote:
"Now we would give stinger missles to the Russians if they would use
them against the Taliban."

Reminds one of Iran and Iraq.

Best regards, Richard Harrison, KB5WZI

4988. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 20:21:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6hvq2h7p9r71e@corp.supernews.com>
Source record: 123075

Gary V. Deutschmann, Sr. wrote:
> . . .
> Do you support the ARRL and their publications?
> The BASIC ELECTRONICS publication by the ARRL has over 9 grossly
> incorrect formulas in it and they are still publishing it that way!
> Gotta get those newbies off on the wrong foot from day one!

You could do a lot to help those newbies by pointing out the errors to the editor of the ARRL book. Or have you already done so?

They can't fix the problem if they don't know there is one.

Roy Lewallen, W7EL

4989. Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 20:21:52 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E68FF60.A3F01356@osite.com.br>
Source record: 123076
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi guys,

Dave has emailed me in PVT, and I liked his thoughts very
much.
Maybe one may come to this point after reading the whole
thread, but this was the earlier reply (I think).
Obviously he has given me permission to repost his email to
the NG.
On another mail, he also said he liked Yuri's idea of
coating the bamboo spreaders with latex driveway paint...

well, to Dave's reply:

Subject: Re: Spreader materials for Hex-Beam
Date: 5 Mar 2003 19:48:31 -0000
From: "Dave Platt" <dplatt@radagast.org>

<snip header>

>The question is what are the pros and cons of bamboo and
>fiberglass spreaders?
>I figure that I could get the bamboo spreaders at NO cost,
>but they will eventually rotten and break.

True 'nuff. If you do use bamboo, you would probably want
to dry it
well, and then apply a couple of coats of a good outdoor
varnish.
This would probably extent its lifetime by quite a bit by
sealing out
moisture. Probably best to varnish it _after_ bending it to
shape and
installing the wires, so that the varnish doesn't crack.

>Fiberglass material is expensive, but the way I see it may
>last many years.

Also true _if_ it's shielded from sunlight.

You might want to build one out of bamboo to see how well it
works for
you. This would reduce the cost of making mistakes during
construction and would give you more of a chance to make
adjustments.

Then, if it works well in practice, you could rebuild in
fiberglass
(either immediately, or when you first decide/need to do
some rework
on the antenna for other reasons).

>Then one issue arises... Would it be better to use
>telescoping sections of FG tubes or a solid rod would be
>better?

Telescoping sections will need some additional work at the
overlap
points. In this respect, rods would be simpler.

On the other hand, rods would probably be heavier for any
given amount
of stiffness.

>Almost forgot to mention... I live in SE Brazil (sunny,
>rainy), with a possible move to NE Brazil (really sunny,
>quite dry) in the next months

Rain will be hard on the bamboo.

Sunshine will be hard on both. I've been told that
fiberglass exposed
to direct sunlight will age fairly quickly.

Spraypainting the spreaders with an opaque sun-resistant
outdoor paint
after installing the wires would probably be a very good
idea. A
black enamel spraypaint would do the job (and would also
make the
antenna somewhat less visible).

--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

4990. Re: Another Johnson Matchbox question.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 20:31:14 UTC
From: starsekr@aol.com
Message-ID: <f2828edc.0303071231.4ffd46ae@posting.google.com>
Source record: 123077

Eskay <sieb_kNOS@PAMyahoo.ca> wrote in message news:<3E651F00.30805@PAMyahoo.ca>...
> Hello all.
> I also own a 275 Watt Matchbox..Has anyone made mods to include 160
> meters? How could it be done?
> 73 de Sieb VE3JUA.. ve3jua@rac.ca

Sieb,
The pictures I've seen of this show a coil that has about twice the inductance of the present coil in your matchbox. I think I was looking at a 275 watt coil assembly inside of a KiloWatt chassis, since there just isn't that much spare room inside the 275 W MB. There is an excellent tutorial about matchboxes at http://www.cebik.com/radio.html (L.B.Cebik, W4RNL) , scan down the page to the heading dealing with transmission lines and matching. One of the links there is: http://www.cebik.com/link/link.html, and below that he has a 5 part tutorial. On the last section of his tutorial he gives computed values for a MB. One of the problems with the net is the volumn of great info put up by some fine people, just not enough time in life to learn everything interesting.

Jim, KA6TPR

4991. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 20:32:39 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6901E7.98304386@uci.edu>
Source record: 123078

OC_CAM's Razor wrote:
> You and I infer different meanings but I could be wrong and will
> let Walt speak for himself.
>
> The basic question is: In the absence of a physical impedance discontinuity
> at a virtual impedance point, can the virtual impedance cause a reflection
> at that point?

Walt already agreed with you that a virtual short is not the cause of
anything.

What meaning did you infer when he said that?

73, Jim AC6XG

4992. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 20:54:51 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <vG7aa.7753$gF3.726880@newsread1.prod.itd.earthlink.net>
Source record: 123080

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E68D3A0.7090301@ieee.org...
> Robert Lay (W9DMK) wrote:
> > Those 4 points are sufficient to show the intersection of the two
> > plots, and the 3rd point is sufficiently close to the intersection as
> > to declare it as a possible solution to the problem. The other
> > solution would be in the lower hemisphere at 0.51 - j .81. Regardless
> > of which intersection is considered to be the solution (and both are
> > valid solutions), the impedance seen looking to the right at the
> > junction of the two lines is 25.5 + j 40.5, which is an impedance of
> > 47.8 ohms at 64 degrees,
>
> Probably close enough for a graphic solution.
>
> > Step 7 - We apply the rule that says that the relative phase angle
> > between incident and reflected voltages at the point where the
> > reflection occurs will be 180 degrees when the load impedance is less
> > than the characteristic impedance of the line. The converse rule is
> > that for an impedance greater than the characteristic impedance, the
> > relative phase angle between forward and reflected voltages is zero.
> > Since 47.8 ohms is clearly less than 50 ohms, we declare that the
> > relative phase angle between forward and reflected is 180 degrees.
>
> That only applies to resistive situations. You already told us that
> the impedance is 25.5 + j 40.5. What effect do you think the Gamma
> angle has on the phase of the reflected voltage?
> --
> 73, Cecil, W5DXP

Cecil, the Gamma angle IS the phase of the reflected voltage, relative to
the forward voltage.

Walt, W2DU

4993. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 21:05:45 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <POWdnTrG-rw0lPSjXTWcqA@comcast.com>
Source record: 123081

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b4aqn3dfb1@venus.btinternet.com...
> Why would anybody want to shield a balanced feedline to a radio antenna ?

I have seen is used as balance 100 or 150 ohm transmission line. Alternative
is flat electrical appliance cord. I once measured some as 110 ohms.

Tam/WB2TT
>
> What advantage would be gained by using a double-shielded coax feedline?
> ---
> Reg, G4FGQ
>
> ============================

4994. Re: CDE rotors question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 21:08:30 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <UGOdnc1h7O_QI_SjXTWcpQ@comcast.com>
Source record: 123082

I guess you figured it out. I think the TRA4 is what became the TR44.
Probably changed numbers when CD sold the businesss to Telex.

Tam/WB2TT

4995. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 22:15:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E691A0A.70700@ieee.org>
Source record: 123085

Walter Maxwell wrote:
>>That only applies to resistive situations. You already told us that
>>the impedance is 25.5 + j 40.5. What effect do you think the Gamma
>>angle has on the phase of the reflected voltage?
>
> Cecil, the Gamma angle IS the phase of the reflected voltage, relative to
> the forward voltage.

Yep, the Gamma angle is what is needed to solve the brainteaser and it's
not zero or 180 degrees. The brainteaser has not been solved yet.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4996. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 22:15:56 UTC
From: arrow146@aol.com
Message-ID: <20030307171556.29597.00000027@mb-me.aol.com>
Source record: 123083

<< Then explain dBd claims for the J-poles when they are 1/2-wave antennas.
"CQ Antenna Roundup Vol.2".

Arnold B. Bailey rates the J-pole as a 2dbd loser. The advantage is that
it increases the bandwidth a tad. The culprit is the radiation from the
1/4-wave matching section. A multilobe pattern is shown in the vertical
radiation. It looks like a butterfly. A good VHF antenna at least
concentrates energy in the horizontal plane. A conventional 1/2-wave
antenna produces the classic figure-8. >>

Biggest problem with what most think of J-Poles is the
closed stub type made with copper pipe.
If you look at the ARRL Antenna Book, they are made
to be fed with twin line. Problem is trying to use
coax.
To use a J-Pole with coax, it should be an
Open Stub Type. Then you don't have all the
problems mentioned above.

73 Al Lowe N0IMW

4997. Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 22:16:05 UTC
From: k3bu@aol.com
Message-ID: <20030307171605.12283.00000105@mb-cu.aol.com>
Source record: 123084

>
>>The question is what are the pros and cons of bamboo and
>>fiberglass spreaders?
>>I figure that I could get the bamboo spreaders at NO cost,
>>but they will eventually rotten and break.
>
>True 'nuff. If you do use bamboo, you would probably want
>to dry it
>well, and then apply a couple of coats of a good outdoor
>varnish.
>This would probably extent its lifetime by quite a bit by
>sealing out
>moisture. Probably best to varnish it _after_ bending it to
>shape and
>installing the wires, so that the varnish doesn't crack.
>

Interesting!
Why people ignore good tested sultion-advice and go for some "theoretical probably" thing.

There is no cheaper and better solution as treating the bamboo with dirveway sealant (black latex based coating). It is cheap compare to any coatings or warnishes. It is resistant to wear, cars drive on it people walk, lasts for years. It is black, shields the wood from UV. It is flexible, no problem with bending. I discovered it by accident. Mixed my bucket of sealant with bamboo stick, threw it in the pile of spare parts. Couple years later, this stick was like new, while others deteriorated and cracked.

You can lead horse to the water.....

73 and GL
Yuri

4998. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 22:22:02 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E691B8A.5010100@ieee.org>
Source record: 123086

Reg Edwards wrote:
> Why would anybody want to shield a balanced feedline to a radio antenna ?
> What advantage would be gained by using a double-shielded coax feedline?

I can think of a few, Reg. If the balanced line was laid on top of a
tin roof, shielding would be good. If the balanced line was buried,
shielding would be good. If shielded balanced line were used to vary
the length of the feedline, like I do for matching, the line could be
coiled upon itself and put in a box. I just wish they made 300 ohm coax
that I could parallel. The best that I can do is about Z0=180 ohms.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4999. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 23:16:58 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <KL9aa.7909$gF3.779880@newsread1.prod.itd.earthlink.net>
Source record: 123087

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E68FD7F.8030306@ieee.org...
> Jim Kelley wrote:
> > Cecil,
> >
> > It looks to me like the only reason you and Walt have been batting this
> > around for so long is because of a lack of precision in terminology.
> > You say there are no reflections there; Walt says there are reflections
> > there, but it's for two different reasons. You say there aren't
> > reflections at some point, meaning that point is not the cause of
> > reflections. Walt says there are reflections there because reflection
> > current is passing through that point. If you guys would agree to terms
> > like 'point of reflection' it would save everyone a lot of agony. You
> > guys are saying the same thing, but simply refuse to see it.
>
> You and I infer different meanings but I could be wrong and will
> let Walt speak for himself.
>
> The basic question is: In the absence of a physical impedance
discontinuity
> at a virtual impedance point, can the virtual impedance cause a reflection
> at that point?
> --
> 73, Cecil, W5DXP

It sure can, Cecil, whatever low value of resistance appears at the input of the open circuited stub can be replaced by a physical resistor at the same point with the same results. And we know that a resistor of any value unequal to Zo shunting a main transmission line will cause a reflection.

Walt

5000. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 23:19:44 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <kO9aa.7912$gF3.779653@newsread1.prod.itd.earthlink.net>
Source record: 123088

Jim Kelley <jwkelley@uci.edu> wrote in message
news:3E6901E7.98304386@uci.edu...
> OC_CAM's Razor wrote:
> > You and I infer different meanings but I could be wrong and will
> > let Walt speak for himself.
> >
> > The basic question is: In the absence of a physical impedance
discontinuity
> > at a virtual impedance point, can the virtual impedance cause a
reflection
> > at that point?
>
> Walt already agreed with you that a virtual short is not the cause of
> anything.

When did I ever make such a totally inaccurate statement? Somewhere a
statement on that subject must have encountered a 180-degree phase shift.

Walt, W2DU

> What meaning did you infer when he said that?
>
> 73, Jim AC6XG
>

5001. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-07 23:44:56 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <aRaaa.35958$rz3.27979@fe05.atl2.webusenet.com>
Source record: 123090

Stupid question. Wouldn't it be easir to feed the line thru the bottom opening of a window with insulation? For less loss due to the metal in the frame, or if used to feed an antenna on a tower?

Just wondering.

--
73,
Chuck
KE4ETH
USA-NA

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message news:b4aqn3dfb1@venus.btinternet.com...
> Why would anybody want to shield a balanced feedline to a radio antenna ?
>
> What advantage would be gained by using a double-shielded coax feedline?
> ---
> Reg, G4FGQ
>
> ============================
>
> "Gary Rotter" <GR120994@ncr.com> wrote in message
> news:3e68dcb1$1@rpc1284.daytonoh.ncr.com...
> > I saw a description of a shielded balanced feed line in an older edition
> of
> > the ARRL antenna book. The grounds of two coax cables are connected to
the
> > station ground. The center conductors are attached to the balanced
output
> of
> > an antenna tuner. At the antenna end, the coax shields are connected
> > together. The center conductor for one of the coax cables is attached to
> one
> > side of the antenna. The center conductor for the other cable is
attached
> to
> > the other side of the antenna. Both coax cables must be taped together
to
> > keep them parallel.
> >
> > I thought that such an arrangement would work, but would have higher
> losses
> > than the traditional ladder line, yet the ARRL antenna book did not say

> > anything about the efficiency of this setup.
> >
> > Is such a setup efficient?
> >
> > If so, is it better to build the cable or to buy it?
> >
> >
>
>

5002. Re: long wire questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 00:41:40 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <7uei6vo2uq4f3kin75u4vp1f9virihobj7@4ax.com>
Source record: 123091

On Fri, 7 Mar 2003 08:11:55 -0600, "Bill Grimwood" <bill@grimwood.net>
wrote:

>I plan to put up a long wire for 80 meters tomorrow and I have a few
>questions.

>1. Do I include the wire length running from the end feed insulator into
>my shack in the total length?

yes.

>2. Should I use a piece of coax for the lead in and if so do I attach the
>shield to the ground?

you can. you'd only connect the center conductor of the coax,
ignoring the shield.

>3. I am a new ham and have several articles on end fed long wires but
>none of them answer these questions. I plan to use an MFJ antenna tuner.
>If I use coax I know how to attach it but if I just use a wire I am not
>sure.

a random wire was my first antenna as a ham back in 1980-something.
you're likely to run into a lot of rf in the shack. one way to help
eliminate that is to run a series of radials from the ground lug on
the radio around the baseboard in the shack. that and be sure your
rig is properly grounded.

73,

rich, n9dko

5003. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 00:49:12 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <UXaaa.7424$h9.1986@fe09.atl2.webusenet.com>
Source record: 123092

Sorry. I worded that wrong. I MEANT to say, I had a Stuoid Question.

Sorry Gary and Reg.

--
73,
Chuck
KE4ETH
USA-NA

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:aRaaa.35958$rz3.27979@fe05.atl2.webusenet.com...
> Stupid question. Wouldn't it be easir to feed the line thru the bottom
> opening of a window with insulation? For less loss due to the metal in the
> frame, or if used to feed an antenna on a tower?
>
> Just wondering.
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> news:b4aqn3dfb1@venus.btinternet.com...
> > Why would anybody want to shield a balanced feedline to a radio antenna
?
> >
> > What advantage would be gained by using a double-shielded coax feedline?
> > ---
> > Reg, G4FGQ
> >
> > ============================
> >
> > "Gary Rotter" <GR120994@ncr.com> wrote in message
> > news:3e68dcb1$1@rpc1284.daytonoh.ncr.com...
> > > I saw a description of a shielded balanced feed line in an older
edition
> > of
> > > the ARRL antenna book. The grounds of two coax cables are connected to
> the
> > > station ground. The center conductors are attached to the balanced
> output

> > of
> > > an antenna tuner. At the antenna end, the coax shields are connected
> > > together. The center conductor for one of the coax cables is attached
to
> > one
> > > side of the antenna. The center conductor for the other cable is
> attached
> > to
> > > the other side of the antenna. Both coax cables must be taped together
> to
> > > keep them parallel.
> > >
> > > I thought that such an arrangement would work, but would have higher
> > losses
> > > than the traditional ladder line, yet the ARRL antenna book did not
say
> > > anything about the efficiency of this setup.
> > >
> > > Is such a setup efficient?
> > >
> > > If so, is it better to build the cable or to buy it?
> > >
> > >
> >
> >
>
>
>

5004. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 01:16:13 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E69445D.C9FA02B7@cwis.net>
Source record: 123093

Gary,
I'd be interested in knowing what those "9 gross"
errors are too.
'Doc

5005. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 01:24:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E694657.1020905@ieee.org>
Source record: 123094

Walter Maxwell wrote:
> OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote:
>>The basic question is: In the absence of a physical impedance discontinuity
>>at a virtual impedance point, can the virtual impedance cause a reflection
>>at that point?
>
> It sure can, Cecil, whatever low value of resistance appears at the input of
> the open circuited stub can be replaced by a physical resistor at the same
> point with the same results. And we know that a resistor of any value
> unequal to Zo shunting a main transmission line will cause a reflection.

I hate to do this, Walt, but can you provide an example of a virtual
impedance that causes reflections in the complete absence of a physical
impedance discontinuity? What is the physics mechanism by which a V/I
ratio all by itself can cause a reflection without the presence of a
physical impedance discontinuity?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5006. Expert opinion about Antenna Tuners...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 01:52:19 UTC
From: lsasmazel@comcast.net
Message-ID: <882020e3.0303071752.3f2aa107@posting.google.com>
Source record: 123095

Hi Folks,

I do have an interesting condition and I like to get an expert opinion about this. I do use a MFJ-969 roller inductor antenna tuner. It is connected to two radio with one coax switch and two antenna. When I put tuner to dummy load or balance line (even to coax 1 position after disconnecting the antenna connected to this position) I am receiving signals. Signals are not powerful like antenna connected position, but they are not also very weak. S9+40 dB signal can be listen with S7 under this condition. Transmitting stations are not close by I am located in NJ and I can listen a station in West Virginia!!!. When I disconnect my radio from tuner and leave it with only ground I do not hear any thing. I believe that I do have a decent grounding in the shack. Distance between actual grounding rod is not more then 5 feet and I am using 8 feet copper grounding rod. This condition wasn't a problem till I decided to work 80 meter DX. I want to put a receiving loop antenna and try to copy weak signals from Africa and Asia.

My questions ;
1. Is this a problem with so so tuners? Or this is the problem with all tuners ?
2. Is there any other source of RF leakage I need to worry?
3. Any suggestions ?

Thanks in advance
Levent WW2L

5007. How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 01:53:38 UTC
From: Drink <drink@coqui.net>
Message-ID: <b4biee$iv1$1@newsreader.mailgate.org>
Source record: 123096

Hi Folks,
Can someone explain traps and how they're used to shorten dipoles for the layman? I had a chat with a friend the other day and, though he didn't know anything about them, I realized 1) I really don't understand, and 2) I'm really curious.
73's,
Jim, WP3JQ

5008. Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 02:02:33 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E694F39.A1B19033@osite.com.br>
Source record: 123097

Yuri Blanarovich wrote:

> There is no cheaper and better solution as treating the bamboo with dirveway
> sealant (black latex based coating). It is cheap compare to any coatings or
> warnishes. It is resistant to wear, cars drive on it people walk, lasts for
> years. It is black, shields the wood from UV. It is flexible, no problem with
> bending. I discovered it by accident. Mixed my bucket of sealant with bamboo
> stick, threw it in the pile of spare parts. Couple years later, this stick was
> like new, while others deteriorated and cracked.

Yuri, I believe your solution will work pretty well, but I
can't figure what this driveway sealant is made of.

I can look for it in my city. If I can't find it here, I
think nobody else in the coutry may found it too.

If you can supply some information on brands, or
manufacturers, or even chemical composition...I can do some
scrounging in the market...

The main reason it may be hard to find is that we are not
very used to asphalt garages and alikes.

--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

5009. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 02:04:02 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E694F92.242C6DD5@osite.com.br>
Source record: 123098

Paulo Marcondes wrote:
> If you can supply some information on brands, or
> manufacturers, or even chemical composition...I can do some
> scrounging in the market...

Oops, re-reading your first article...

you said "latex based".

That may be enough.

--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

5010. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 02:37:01 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E69574D.80707@ieee.org>
Source record: 123099

Drink wrote:
> Hi Folks,
> Can someone explain traps and how they're used to shorten dipoles for the
> layman? I had a chat with a friend the other day and, though he didn't know
> anything about them, I realized 1) I really don't understand, and 2) I'm
> really curious.

If you shorten a dipole, it's feedpoint impedance becomes resistive plus
capacitive. To neutralize the capacitance, you need to add inductance.
Loading coils in the center of the shortened dipole legs neutralize
the capacitance and resonate the dipole.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5011. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 02:42:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E69589F.4030405@ieee.org>
Source record: 123100

OC_CAM's Razor wrote:
> Drink wrote:
>
>> Hi Folks,
>> Can someone explain traps and how they're used to shorten dipoles
>> for the
>> layman? I had a chat with a friend the other day and, though he
>> didn't know
>> anything about them, I realized 1) I really don't understand, and 2) I'm
>> really curious.
>
> If you shorten a dipole, it's feedpoint impedance becomes resistive plus
> capacitive. To neutralize the capacitance, you need to add inductance.
> Loading coils in the center of the shortened dipole legs neutralize
> the capacitance and resonate the dipole.

Which doesn't explain traps at all, HI! Parallel resonant circuits have
a high impedance. If a parallel resonant circuit (trap) is installed in
a dipole, it is somewhat like installing an insulator at that point but
only for one band. For other bands lower in frequency, it conducts rather
than insulates.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5012. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 03:47:54 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <b4bp5a$rs6$0@216.39.144.81>
Source record: 123101

On Fri, 07 Mar 2003 20:42:39 -0600, OC_CAM's Razor wrote:
> OC_CAM's Razor wrote:
>> Drink wrote:
>>
>>> Hi Folks,
>>> Can someone explain traps and how they're used to shorten dipoles
>>> for the
>>> layman? I had a chat with a friend the other day and, though he
>>> didn't know
>>> anything about them, I realized 1) I really don't understand, and 2) I'm
>>> really curious.
>>
>> If you shorten a dipole, it's feedpoint impedance becomes resistive plus
>> capacitive. To neutralize the capacitance, you need to add inductance.
>> Loading coils in the center of the shortened dipole legs neutralize
>> the capacitance and resonate the dipole.
>
> Which doesn't explain traps at all, HI! Parallel resonant circuits have
> a high impedance. If a parallel resonant circuit (trap) is installed in
> a dipole, it is somewhat like installing an insulator at that point but
> only for one band. For other bands lower in frequency, it conducts rather
> than insulates.

But you weren't completely wrong. At frequencies below the parallel resonance the inductive reactance of the trap is less than the capacitive reactance, so the net reactance is inductive, allowing the length to be shortened. Thus the trapped dipole is resonant on two frequencies and is shorter than a full-length dipole at the lower frequency.

Bob, N7XY

5013. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 06:58:41 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0703032258410001@bni030qny8kc.bc.hsia.telus.net>
Source record: 123102

In article <3E673359.1000707@mwci-news>, "William E. Sabin"
<sabinw@mwci-news> wrote:

> David or Jo Anne Ryeburn wrote:
> > In article <3E668BE6.3060609@mwci-news>, "William E. Sabin"
> > <sabinw@mwci-news> wrote:

...(snip)...

> >>If the load connected to the main line beyond the
> >>junction is also a real short which also reflects
> >>a virtual short at the junction, then there are
> >>two virtual shorts in parallel. The current flow
> >>at the junction then divides equally
> >
> >
> > Maybe not. Depends upon whether the two zeros are equally zeroish.
> >>between the two paths.
>
> Lossless lines are assumed in all of this thread.
>
> >
> >
> > All this somehow reminds me of some of the nonsense I heard when I tried
> > to teach freshman calculus to students who weren't capable of
> > understanding the idea of "limit".
> >
> > David, ex-W8EZE and ex-SFU mathematician
> >
>
> Thanks(?) for this smug little put-down remark.
>
> Bill W0IYH

Bill, it was not meant as a put-down remark, smug or otherwise, and if you
took it that way, I apologize. I have a high regard for the things you
have written that I have read. You and I know that lossless lines are a
fiction, albeit a useful one in some circumstances. If one wants to
investigate the behavior of a system in which there are two virtual shorts
in parallel, one should look at what happens when there are two low but
non-zero impedance items in parallel, and then see what happens when the
impedances in question approach zero. The answer will depend upon *how*
those two impedances approach zero, and is different if say one is always
twice as large as the other, or if one is the square of the other, from
what it is when they are always equal during the limit process.

Remember the old puzzle about the two capacitors of equal capacitance, one charged to a certain voltage and the other uncharged, which are then connected in parallel? If the total energy is calculated before and after the connection is made, the law of conservation of energy appears to have been violated. Talking about zero-resistance situations can be useful, and can also get one in trouble.

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

5014. Re: Antenna Tuner Experiment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 07:43:26 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <ke7j6v890f6mpot0jh65cdl5lugq0opg93@4ax.com>
Source record: 123103

On Thu, 06 Mar 2003 20:58:15 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Roger Halstead wrote:
>>
>> Now that gets a bit confusing as ferrite is iron. Ferrite is the
>> latin word for iron.

That depends on tense. Unlike English Latin uses different forms of
the word.

There is the root, ferrum, or ferrium? At any rate that is the root
for the other derivations such as ferric and ferrous.

Also it tends to be used differently in different countries.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>Hm. According to my Webster's, ferrum is Latin for iron, but I'm
>certainly no authority.
>
>But I suppose some people are easily confused anyway, and think alumina
>is metal, a wolf is something you make light bulb filaments from, and
>that plumbers must be something made from lead. I'm afraid they'll just
>have to muddle through life as best they can, always being just a little
>confused. Once again it's shown that ignorance is indeed bliss.
>
>Roy Lewallen, W7EL

5015. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 08:01:09 UTC
From: tdonaly@aol.com
Message-ID: <20030308030109.17932.00000064@mb-fe.aol.com>
Source record: 123104

Cecil wrote,
>
>I hate to do this, Walt, but can you provide an example of a virtual
>impedance that causes reflections in the complete absence of a physical
>impedance discontinuity? What is the physics mechanism by which a V/I
>ratio all by itself can cause a reflection without the presence of a
>physical impedance discontinuity?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

How does a "physical impedance discontinuity" reflect electromagnetic
waves, Cecil? What is the physical mechanism?
73,
Tom Donaly, KA6RUH

5016. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 08:27:02 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E69A956.AB507461@cwis.net>
Source record: 123105

Soak over night in distilled water.

5017. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 09:30:24 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <nKivLrDwgba+EAVk@ifwtech.co.uk>
Source record: 123106

Paulo Marcondes wrote:
>Paulo Marcondes wrote:
>> If you can supply some information on brands, or
>> manufacturers, or even chemical composition...I can do some
>> scrounging in the market...
>
>Oops, re-reading your first article...
>
>you said "latex based".
>
>That may be enough.
>
...or maybe not, because different countries use the word "latex" in different ways.

In the USA, "latex" is used for all kinds of water-based emulsion paints, many of which would obviously be quite unsuitable for this application. In Britain we call these "emulsion paints", and "latex" is reserved for paints that really do contain natural rubber latex.

Usage in Brazil may be something else again.

The "driveway" part of Yuri's description might be more helpful - look for something that forms a thick, tough, flexible, waterproof skin.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5018. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 09:42:08 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <cLSxLrEwrba+EAzP@ifwtech.co.uk>
Source record: 123107

Chuck/KE4ETH wrote:
>Wouldn't it be easir to feed the line thru the bottom opening of a
>window with insulation? For less loss due to the metal in the frame,

Far less interaction with the metal in the frame for sure. The standard trick is to use two *short* lengths of paralleled heavy coax (RG213) to get through the wall or the window, with the two shields connected at both ends, and grounded to the shack ground. The SWR is probably monstrous but the length of line is very short, so the impedance transformation and the loss in that section of cable are both quite low.

>or if used to feed an antenna on a tower?
>
That's a very different case, because the length is much greater, and shielded balanced feed would not be a good solution.

Therefore the standard trick is a different one - use normal open-wire or ladder line, supported on insulated stand-offs in a symmetrical position relative to the face or corner of the tower, and twisted to further reduce the effects of any imbalance.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5019. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 11:19:51 UTC
From: richardharrison@webtv.net
Message-ID: <26714-3E69D1D7-521@storefull-2311.public.lawson.webtv.net>
Source record: 123110

Days ago I gave an example of radar using resonant lines to route the pulse.

Another example is the hybrid loop your local VHF repeater may use.

A third example is found in "Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and Wing on page 32:
"An open section of line 1/12 WL for the fundamental frequency is 1/4 WL for the third harmonic. Therefore, if such an open section is connected to the output terminals of a transmitter, the output will be short-circuited for the third harmonic. At the fundamental frequency, the open 1/12 WL section has a capacitive impedance, the effects of which are minimized by the inductive impedance of the 1/6 WL closed section placed in parallel. At the fundamental frequency the 1/6 WL closed section will be in parallel resonance with the 1/12 WL open section.

Seems the "virtual short" stops the 3rd harmonic in its tracks.

Best regards, Richard Harrison, KB5WZI

5020. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 11:25:11 UTC
From: richardharrison@webtv.net
Message-ID: <26716-3E69D317-67@storefull-2311.public.lawson.webtv.net>
Source record: 123111

Days ago I gave an example of radar using resonant lines to route the pulse.

Another example is the hybrid loop your local VHF repeater may use.

A third example is found in "Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and Wing on page 32:
"An open section of line 1/12 WL for the fundamental frequency is 1/4 WL for the third harmonic. Therefore, if such an open section is connected to the output terminals of a transmitter, the output will be short-circuited for the third harmonic. At the fundamental frequency, the open 1/12 WL section has a capacitive impedance, the effects of which are minimized by the inductive impedance of the 1/6 WL closed section placed in parallel. At the fundamental frequency the 1/6 WL closed section will be in parallel resonance with the 1/12 WL open section.

Seems the "virtual short" stops the 3rd harmonic in its tracks.

Best regards, Richard Harrison, KB5WZI

5021. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 11:56:23 UTC
From: richardharrison@webtv.net
Message-ID: <25679-3E69DA67-457@storefull-2313.public.lawson.webtv.net>
Source record: 123114

Days ago I gave an example of radar using resonant lines to route the pulse.

Another example is the hybrid loop your local VHF repeater may use.

A third example is found in "Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and Wing on page 32:
"An open section of line 1/12 WL for the fundamental frequency is 1/4 WL for the third harmonic. Therefore, if such an open section is connected to the output terminals of a transmitter, the output will be short-circuited for the third harmonic. At the fundamental frequency, the open 1/12 WL section has a capacitive impedance, the effects of which are minimized by the inductive impedance of the 1/6 WL closed section placed in parallel. At the fundamental frequency the 1/6 WL closed section will be in parallel resonance with the 1/12 WL open section.

Seems the "virtual short" stops the 3rd harmonic in its tracks.

Best regards, Richard Harrison, KB5WZI

5022. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 12:04:07 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <H8WdnZ02_5KiQfSjXTWcpQ@crocker.com>
Source record: 123108

"Walter Maxwell" <w2du@iag.net> wrote in message
news:KL9aa.7909$gF3.779880@newsread1.prod.itd.earthlink.net...
>
> OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
> news:3E68FD7F.8030306@ieee.org...
> > Jim Kelley wrote:
> > > Cecil,
> > >
> > > It looks to me like the only reason you and Walt have been batting
this
> > > around for so long is because of a lack of precision in terminology.
> > > You say there are no reflections there; Walt says there are
reflections
> > > there, but it's for two different reasons. You say there aren't
> > > reflections at some point, meaning that point is not the cause of
> > > reflections. Walt says there are reflections there because reflection
> > > current is passing through that point. If you guys would agree to
terms
> > > like 'point of reflection' it would save everyone a lot of agony. You
> > > guys are saying the same thing, but simply refuse to see it.
> >
> > You and I infer different meanings but I could be wrong and will
> > let Walt speak for himself.
> >
> > The basic question is: In the absence of a physical impedance
> discontinuity
> > at a virtual impedance point, can the virtual impedance cause a
reflection
> > at that point?
> > --
> > 73, Cecil, W5DXP
>
> It sure can, Cecil, whatever low value of resistance appears at the input
of
> the open circuited stub can be replaced by a physical resistor at the same
> point with the same results. And we know that a resistor of any value
> unequal to Zo shunting a main transmission line will cause a reflection.
>
> Walt
>
there are a few caveats on this statement walt that not everyone will
immediately know. this comes from a method of reducing circuits by
substitution using norton or thevenin equivalents. it can only be done in
sinusoidal steady state at a single frequency.

there is also the requirement that when you replace a branch of the circuit with the equivalent impedance that you remove the branch itself, so its not like you leave the stub and add the short and it is the same... you remove the stub and replace it with a short circuit.... just remember though, you can't change frequency, and you can't analyze transients once you do this.

5023. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 12:13:50 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E69DE7E.1030304@mwci-news>
Source record: 123109

David or Jo Anne Ryeburn wrote:

>
>
> Bill, it was not meant as a put-down remark.

I tend to have a short fuse sometimes. It's one of
my many shortcomings. I have always admired math
professors.

>
> Remember the old puzzle about the two capacitors of equal capacitance, one
> charged to a certain voltage and the other uncharged, which are then
> connected in parallel? If the total energy is calculated before and after
> the connection is made, the law of conservation of energy appears to have
> been violated. Talking about zero-resistance situations can be useful, and
> can also get one in trouble.

If there is zero resistance and zero external
circuit inductance, then at the instant of
connection an impulse (dirac function) of wideband
electromagnetic radiation occurs that accounts for
the missing energy. The solution to the
differential equation requires this impulse at
t=0. Charge is conserved, so the radiation is
mandatory.

Bill W0IYH

5024. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 12:36:37 UTC
From: richardharrison@webtv.net
Message-ID: <20218-3E69E3D5-74@storefull-2316.public.lawson.webtv.net>
Source record: 123115

Days ago I gave an example of radar using resonant lines to route the pulse.

Another example is the hybrid loop your local VHF repeater may use.

A third example is found in "Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and Wing on page 32:
"An open section of line 1/12 WL for the fundamental frequency is 1/4 WL for the third harmonic. Therefore, if such an open section is connected to the output terminals of a transmitter, the output will be short-circuited for the third harmonic. At the fundamental frequency, the open 1/12 WL section has a capacitive impedance, the effects of which are minimized by the inductive impedance of the 1/6 WL closed section placed in parallel. At the fundamental frequency the 1/6 WL closed section will be in parallel resonance with the 1/12 WL open section.

Seems the "virtual short" stops the 3rd harmonic in its tracks.

Best regards, Richard Harrison, KB5WZI

5025. FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 12:51:28 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <nhpj6vs1sjh483grn5o8kn89rielajbded@4ax.com>
Source record: 123112
Cross-posted to: rec.radio.amateur.antenna,alt.rv

the following was pulled from the March 7, 2003 edition of "The ARRL Letter" (www.arrl.org/arrlletter)

73,
rich, n9dko

The FCC has told an Oregon couple to stop using its Winegard amplified television antenna (Model Sensar/Roadstar) on their recreational vehicle "until the condition causing harmful interference has been corrected."

The FCC contacted Jimmy and Jan Bowen of Gresham, Oregon, following a February 3, RFI complaint from an Amateur Radio operator to the FCC Portland office. The interference was reported on 447.375 MHz. An FCC agent investigating the allegation tracked the interfering signal to the Bowen's RV in Portland. The FCC cited Part 15 rules and noted that certain Winegard antenna amplifiers "have been the source of radio frequency interference in a number of cases."

Due to the complaints, Winegard <http://www.winegard.com> has agreed to replace defective units at no charge. The FCC advised the couple to contact Winegard to make necessary arrangements.

5026. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 13:01:48 UTC
From: Watcher <observer@thenet.net>
Message-ID: <23qj6vk8ocrbjk6cmcs0joj6up4f0bkj98@4ax.com>
Source record: 123019

On 08 Mar 2003 13:27:02 GMT, vhfradiobuff@aol.comspamme (VHFRadioBuff)
wrote:

>>The FCC has told an Oregon couple to stop using its Winegard amplified
>>television antenna
>
>Sure, if a Ham is interefered with, the FCC jumps right in, but when a non-ham
>is interefered with by a ham, too bad.
>
>My grandparents were getting QRM'ed to death from a neighbor ham with a bunch
>of yagi's, dipoles, verticals, etc.. He'd come over their radio, TV, phone,
>etc... I emailed the FCC and they told me that unless I had proof that he was
>operating illegally, they wouldn't even investigate it. What a double standard,
>huh?!
>=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA! Grid FM29vw
>http://vhfradiobuff.tripod.com

That's the law Andy. The real source of the problem is the poorly
designed, poorly built consumer devices in your grand parents home.
Read the stickers on those devices they cannot cause harmful
interference and must put up with any that they encounter.

It's not a double standard Andy that is the standard.

5027. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 13:14:07 UTC
From: JohnB <john.g8ozh@freeuk.co.uk>
Message-ID: <1047129113.4947.0@ersa.uk.clara.net>
Source record: 123113

"'Doc" <w5lz@cwis.net> wrote in message news:3E69A956.AB507461@cwis.net...
>
>
> Soak over night in distilled water.

I find it much more pleasant to soak overnight in other ditillation
products..... ;-)

JohnB

5028. Re: Is the suppressed sideband a 'Spurious Emission'?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 13:22:09 UTC
From: hamish@cloud.net.au
Message-ID: <3e69ee81$0$16258$afc38c87@news.optusnet.com.au>
Source record: 123116
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.antenna

In rec.radio.amateur.dx Dr. Fred Hambrecht Sr <w4jle@charter.net> wrote:
> Let me make one correction, as an OO., We do not issue citations. We do send

[...]
> Amateur radio equipment is set to read the sideband frequency not the
> carrier frequency. The actual carrier frequency of a 3999.0 LSB signal is
> at 4000.5 (Assuming 1.kHz offset) and the upper sideband above that.

Sorry Fred but I'd take your advisories with a grain of salt. The above
is simply wrong. Transceivers in SSB, AM or FM mode always indicate the
(supressed) carrier frequency.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

5029. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 13:27:02 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030308082702.18913.00000104@mb-mh.aol.com>
Source record: 123117

>The FCC has told an Oregon couple to stop using its Winegard amplified
>television antenna

Sure, if a Ham is interefered with, the FCC jumps right in, but when a non-ham
is interefered with by a ham, too bad.

My grandparents were getting QRM'ed to death from a neighbor ham with a bunch
of yagi's, dipoles, verticals, etc.. He'd come over their radio, TV, phone,
etc... I emailed the FCC and they told me that unless I had proof that he was
operating illegally, they wouldn't even investigate it. What a double standard,
huh?!
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5030. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 13:32:07 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <rhmaa.6363$JR.6073@news1.west.cox.net>
Source record: 123118

TRAPS are L/C circuits used in multiband vertical or beam antennas to divide the antenna into sections for operation on separate bands. Multiband trapped antennas electronically select the proper antenna sections as you change band on your transceiver. They are parallel tuned circuits, thus at resonance they are very high impedance and therefore function as a "switch" to segment the antenna.

More details -- See URL:
http://www.radioelectronicschool.com/reading/reading37.pdf

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Drink" <drink@coqui.net> wrote in message
news:b4biee$iv1$1@newsreader.mailgate.org...
> Hi Folks,
> Can someone explain traps and how they're used to shorten dipoles for
the
> layman? I had a chat with a friend the other day and, though he didn't
know
> anything about them, I realized 1) I really don't understand, and 2) I'm
> really curious.
> 73's,
> Jim, WP3JQ
>
>

5031. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 14:03:18 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <OWqdnWZzMdqwZfSjXTWcrg@crocker.com>
Source record: 123020

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:20218-3E69E3D5-74@storefull-2316.public.lawson.webtv.net...
> Days ago I gave an example of radar using resonant lines to route the
> pulse.
>
> Another example is the hybrid loop your local VHF repeater may use.
>
> A third example is found in "Transmission Lines, Antennas, and Wave
> Guides" by King, Mimno, and Wing on page 32:
> "An open section of line 1/12 WL for the fundamental frequency is 1/4 WL
> for the third harmonic. Therefore, if such an open section is connected
> to the output terminals of a transmitter, the output will be
> short-circuited for the third harmonic. At the fundamental frequency,
> the open 1/12 WL section has a capacitive impedance, the effects of
> which are minimized by the inductive impedance of the 1/6 WL closed
> section placed in parallel. At the fundamental frequency the 1/6 WL
> closed section will be in parallel resonance with the 1/12 WL open
> section.
>
> Seems the "virtual short" stops the 3rd harmonic in its tracks.
>
> Best regards, Richard Harrison, KB5WZI
>

want more examples? check my web site pages on coax stubs:
http://www.k1ttt.net/technote/techref.html#filters

5032. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 14:18:40 UTC
From: richardharrison@webtv.net
Message-ID: <9457-3E69FBC0-443@storefull-2317.public.lawson.webtv.net>
Source record: 123023

Days ago I gave an example of radar using resonant lines to route the pulse.

Another example is the hybrid loop your local VHF repeater may use.

A third example is found in "Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and Wing on page 32:
"An open section of line 1/12 WL for the fundamental frequency is 1/4 WL for the third harmonic. Therefore, if such an open section is connected to the output terminals of a transmitter, the output will be short-circuited for the third harmonic. At the fundamental frequency, the open 1/12 WL section has a capacitive impedance, the effects of which are minimized by the inductive impedance of the 1/6 WL closed section placed in parallel. At the fundamental frequency the 1/6 WL closed section will be in parallel resonance with the 1/12 WL open section.

Seems the "virtual short" stops the 3rd harmonic in its tracks.

Best regards, Richard Harrison, KB5WZI

5033. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 14:40:31 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E6A00DF.50207@mwci-news>
Source record: 123021

Richard Harrison wrote:
>
> Seems the "virtual short" stops the 3rd harmonic in its tracks.
>

It is interesting to note that the *lossless* stub does not actually "absorb" or "dissipate" the harmonic. Nor is it absorbed or dissipated at the junction by the so-called "virtual short". We need to give up the idea that a virtual short physically "shorts" anything. A virtual short does not have that capability.

The hardware short (or open) at the end of the stub reflects the entire wave in a non-dissipative manner. The harmonic component of the reflected wave, phase reversed at the junction, then combines with, and cancels, the harmonic content of the main forward wave, as it travels to the final destination. The reflected harmonic and the main line harmonic remain in opposite phase at all points from the junction to the load.

The virtual short, itself, does not do any of this. It does not actually "short" anything. The harmonic is not really "dissipated", it is phase-cancelled.

Bill W0IYH

5034. Re: Expert opinion about Antenna Tuners...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 14:41:46 UTC
From: jgboyles@aol.com
Message-ID: <20030308094146.26887.00000048@mb-fw.aol.com>
Source record: 123022

>When I
>put tuner to dummy load or balance line (even to coax 1 position after
>disconnecting the antenna connected to this position) I am receiving
>signals.

>Signals are not powerful like antenna connected position, but
>they are not also very weak. S9+40 dB signal can be listen with S7
>under this condition.

Sounds like your coax switch does not have as much port to port isolation that you need. Is it the type switch that grounds all unselected inputs? If 40 over signals drop to S7 when you switch to the dummy load, then you probably have around 50db isolation.
I assume a figure of merit in coax switches is their isolation. I would suggest checking the specs. of various switches and try the one with the best isolation. I just took a quick look in the AES catalog at coax switches, and the ones that do give a spec claim >50 db isolation.
73 Gary N4AST

5035. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 14:43:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A0185.4010101@ieee.org>
Source record: 123024

Tdonaly wrote:
> Cecil wrote,
>
>>I hate to do this, Walt, but can you provide an example of a virtual
>>impedance that causes reflections in the complete absence of a physical
>>impedance discontinuity? What is the physics mechanism by which a V/I
>>ratio all by itself can cause a reflection without the presence of a
>>physical impedance discontinuity?
>
> How does a "physical impedance discontinuity" reflect electromagnetic
> waves, Cecil? What is the physical mechanism?

A good physics book will tell you how reflections happen.
Have you ever seen a reflection occur without a change in
the media?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5036. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 14:48:57 UTC
From: Drink <drink@coqui.net>
Message-ID: <b4cvs3$8uk$1@newsreader.mailgate.org>
Source record: 123025

Wow Folks,
Great explanations. I'm enlightened and indebted. Who wants my son? :)
73's,
Jim, WP3JQ

5037. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 14:58:05 UTC
From: k3bu@aol.com
Message-ID: <20030308095805.26274.00000100@mb-mu.aol.com>
Source record: 123026

> Can someone explain traps and how they're used to shorten dipoles for the
>layman?

Trap is parallel resonant circuit made of coil and capacitor (in various forms) and it's purpose is to "disconnect" the portion of antenna past the trap and make it resonant on design frequency. On lower frequencies trap becomes "transparent" and looks like a loading coil.

To shorten the dipole or any radiator we use loading coil, the size of coil depends on the amount of shortening you need to make the dipole resonant. You can look at it as you wind the wire in the form of coil to shorten the physical size of the dipole. You can achieve the same effect by using tuner and "random" length of dipole, but effciency is better if using loading coils which are about 2/3 of length from the feedpoint. No need for tuner.

So you can make antenna for two or more bands by using traps which would resonate antenna on one band and then act as a partial loading coil on the next lower band.

73 and GL
Yuri, K3BU

5038. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 15:02:44 UTC
From: Bob Schreibmaier <k3ph@ptd.net>
Message-ID: <oCnaa.171$Ad2.194121@nnrp1.ptd.net>
Source record: 123028

In article <20030308082702.18913.00000104@mb-mh.aol.com>,
vhfradiobuff@aol.comspamme says...
>
>
>>The FCC has told an Oregon couple to stop using its Winegard amplified
>>television antenna
>
>Sure, if a Ham is interefered with, the FCC jumps right in, but when a non-ham
>is interefered with by a ham, too bad.
>
>My grandparents were getting QRM'ed to death from a neighbor ham with a bunch
>of yagi's, dipoles, verticals, etc.. He'd come over their radio, TV, phone,
>etc... I emailed the FCC and they told me that unless I had proof that he was
>operating illegally, they wouldn't even investigate it. What a double
standard,
>huh?!

Check the following web sites:

http://www.fcc.gov/cgb/consumerfacts/interference.html
http://ftp.fcc.gov/cgb/consumerfacts/ixphones.html

The reason for the FCC's attitude is that in the overwhelming majority
of cases, the problem is inadequate filtering and shielding of the
home entertainment device that is experiencing the interference.
Think about it for a second. Should a telephone be receiving radio
signals? No. If it is, there is something wrong with the telephone.

I used to have an AT&T Trimline 210 telephone that would produce
room-filling volume when I operated at the legal limit on HF SSB.
Didn't matter what band or antenna I was using. This was easily
solved with a filter put on the telephone. I used K-COM filters,
which used to be available from Radio Shack. Don't know if they
still carry them, but they can be found at:

http://www.k-comfilters.com

The ARRL puts out a pretty good book on radio frequency interference,
The ARRL RFI Book. Costs $20.

73,
Bob
K3PH

+--+
| Bob Schreibmaier K3PH | E-mail: k3ph@ptd.net |
| Kresgeville, PA 18333 | http://home.ptd.net/~k3ph |

5039. Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 15:10:17 UTC
From: k3bu@aol.com
Message-ID: <20030308101017.26274.00000101@mb-mu.aol.com>
Source record: 123027

>
>If you can supply some information on brands, or
>manufacturers, or even chemical composition...I can do some
>scrounging in the market...

Last time I used it was back in Canada. Latex here generally means that it is water soluble while it is still wet. When it dries up, it is water resistant, but it also allows some breathing. Nice when working with it, you can wash spills with water. When it dries, you can drive car or tank over it, it will not peel or blister. Has very good adhesion and endurance. It is thin, you can apply two coats for extra protection.
When I bought new can of this sealant, I needed to mix it, emulsion was on the top, and you can thin it with water if needed. It is more like some kind of carbon powder, rather than tar like substance.
It is cheap and you can resurface your driveway with remainder.
No idea what it would be called elsewhere, maybe we need to set up distribution
:-)

Yuri

5040. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 15:14:05 UTC
From: k3bu@aol.com
Message-ID: <20030308101405.26274.00000102@mb-mu.aol.com>
Source record: 123029

>
>That's the law Andy. The real source of the problem is the poorly
>designed, poorly built consumer devices in your grand parents home.
>Read the stickers on those devices they cannot cause harmful
>interference and must put up with any that they encounter.
>
>It's not a double standard Andy that is the standard.
>
>

...and this case of interference can be cured by using bypass capacitors or ferrite core chokes placed strategicaly. All it needs is cooperation between interferee and interferer, which in most cases is achievable, unless one of the party is a moron and will not cooperate.

Yuri, K3BU

5041. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 15:26:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A0BA0.5050002@ieee.org>
Source record: 123030

Richard Harrison wrote:
> Days ago I gave an example of radar using resonant lines to route the
> pulse.
>
> Another example is the hybrid loop your local VHF repeater may use.
>
> A third example is found in "Transmission Lines, Antennas, and Wave
> Guides" by King, Mimno, and Wing on page 32:
> "An open section of line 1/12 WL for the fundamental frequency is 1/4 WL
> for the third harmonic. Therefore, if such an open section is connected
> to the output terminals of a transmitter, the output will be
> short-circuited for the third harmonic. At the fundamental frequency,
> the open 1/12 WL section has a capacitive impedance, the effects of
> which are minimized by the inductive impedance of the 1/6 WL closed
> section placed in parallel. At the fundamental frequency the 1/6 WL
> closed section will be in parallel resonance with the 1/12 WL open
> section.
>
> Seems the "virtual short" stops the 3rd harmonic in its tracks.

Not "in its tracks", Richard. Third harmonic energy flows forward
into the stub, is reflected at the open end, and arrives back at the
virtual short point 180 degrees out of phase with the forward wave.

The "virtual short" is only a term coined to describe the effects of
destructive interference. Consider the following configuration where
the SGCL source is a signal generator equipped with a circulator load
resistor. The frequency is set to the third harmonic.

```
SGCL--x------1/4WL open stub------
|
+-------------------------------------------------Load
```

The 1/4WL stub causes nearly total destructive interference at point
'x' so the voltage at point 'x' is nearly zero and almost no current
flows toward the Load. An o'scope across the circulator load resistor
will display exactly where the third harmonic energy is winding up.
If the signal generator is sourcing ten watts, a directional wattmeter
in the middle of the stub will indicate ten watts forward power and
ten watts reflected power. The circulator load resistor will dissipate
that ten watts. The third harmonic energy is being dissipated in the
circulator load resistor rather than making it to the Load.

Again, this is similar to plumber's delight construction of Yagis.
No third harmonic energy flows toward the load. The third harmonic
voltage is zero at point 'x' because the third harmonic forward wave

and the third harmonic reflected wave undergo destructive interference
at point 'x'. The destructive interference causes the voltage to go
to zero which results in the virtual short. The virtual short is the
end result and not the cause of anything. The "virtual short" is just
a human concept designed to describe the end result of the destructive
interference process.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5042. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 15:33:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A0D3D.7080702@ieee.org>
Source record: 123031

David Robbins wrote:
> ..., and you can't analyze transients once you do this.

Which is an admission that they are not identical circuits.
If the reflected wave from the end of the stub is not identical
to the forward wave entering the stub, the substitution will
not work correctly. The virtual short is caused by destructive
interference of two waves that are offset in time. In a 1/4WL
stub, the reflected wave is offset in time by 180 degrees
compared to the forward wave with which it is interfering.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5043. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 15:57:21 UTC
From: Ralph Lindberg & Ellen Winnie <rlindber@kendaco.telebyte.com>
Message-ID: <rlindber-34B7D7.07572108032003@news.fu-berlin.de>
Source record: 123032
Cross-posted to: rec.radio.amateur.antenna,alt.rv

In article <nhpj6vs1sjh483grn5o8kn89rielajbded@4ax.com>,
Rich <rk911@ANTISPAM.yahoo.com> wrote:

> the following was pulled from the March 7, 2003 edition of "The ARRL
> Letter" (www.arrl.org/arrlletter)
>
> 73,
> rich, n9dko
> ____
> The FCC has told an Oregon couple to stop using its Winegard amplified
> television antenna (Model Sensar/Roadstar) on their recreational
> vehicle "until the condition causing harmful interference has been
> corrected."
>
> The FCC contacted Jimmy and Jan Bowen of Gresham, Oregon, following a
> February 3, RFI complaint from an Amateur Radio operator to the FCC
> Portland office. The interference was reported on 447.375 MHz. An FCC
> agent investigating the allegation tracked the interfering signal to
> the Bowen's RV in Portland. The FCC cited Part 15 rules and noted that
> certain Winegard antenna amplifiers "have been the source of radio
> frequency interference in a number of cases."
>
> Due to the complaints, Winegard <http://www.winegard.com> has agreed
> to replace defective units at no charge. The FCC advised the couple to
> contact Winegard to make necessary arrangements.
>
Last year the FCC had an RVer in the Seattle area shut down their
Winegard, as it was interfering with government radios (I forget if it
was Fire, Police or...)

--
Ralph Lindberg personal email n7bsn@amsat.org
RV and Camping FAQ http://kendaco.telebyte.com/rlindber/rv
If Windows is the answer I would really like to know what the question is

5044. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 16:02:05 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A13FD.2080908@ieee.org>
Source record: 123033

William E. Sabin wrote:
> The virtual short, itself, does not do any of this. It does not actually
> "short" anything. The harmonic is not really "dissipated", it is
> phase-cancelled.

It is phase-cancelled by waves traveling in opposite directions. In another posting, I suggested the following experiment using a signal generator equipped with a circulator and load resistor (SGCL). The signal generator is putting out ten watts.

```
SGCL--x----1/4WL open stub-----
|
+-----------------------------------------------Load
```

A directional wattmeter in the middle of the stub will read ten watts forward and ten watts reflected. The circulator load resistor in the signal generator will *dissipate* that ten watts.

The voltage at point 'x' is zero because the forward voltage and the reflected voltage vector-add (phase cancel) to zero. But since the two voltages are traveling in opposite directions, they only phase-cancel at a single point, i.e. at point 'x'.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5045. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 16:21:10 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <436k6v0lgq531jsobfg99044pvmae9i2pv@4ax.com>
Source record: 123034

On 08 Mar 2003 13:27:02 GMT, vhfradiobuff@aol.comspamme (VHFRadioBuff)
sent into the ether:

>>The FCC has told an Oregon couple to stop using its Winegard amplified
>>television antenna
>
>Sure, if a Ham is interefered with, the FCC jumps right in, but when a non-ham
>is interefered with by a ham, too bad.
>
>My grandparents were getting QRM'ed to death from a neighbor ham with a bunch
>of yagi's, dipoles, verticals, etc.. He'd come over their radio, TV, phone,
>etc... I emailed the FCC and they told me that unless I had proof that he was
>operating illegally, they wouldn't even investigate it. What a double standard,
>huh?!
>=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA! Grid FM29vw
>http://vhfradiobuff.tripod.com
What a stupid troll, HUH?
Dan, N9JBF
Amateur radio - What a hobby!
Remove left x for direct reply

5046. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 16:31:53 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030308113153.21727.00000043@mb-ft.aol.com>
Source record: 123035

>What a stupid troll, HUH?
>Dan, N9JBF

Anyone without the same opinion as you is a troll, eh?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5047. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 17:22:44 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <EFpaa.10590$S_4.6367@rwcrnsc53>
Source record: 123037

Not at all.
--
CW
KC7NOD

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030308082702.18913.00000104@mb-mh.aol.com...

What a double standard,
> huh?!

5048. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 17:24:58 UTC
From: "Dan, danl, danny boy, Redbeard, actually Greybeard now" <danlx@execpc.com>
Message-ID: <gm9k6vscpfv9aa782os0ek4v8ot98rvoqh@4ax.com>
Source record: 123036

On 08 Mar 2003 16:31:53 GMT, vhfradiobuff@aol.comspamme (VHFRadioBuff)
sent into the ether:

>>What a stupid troll, HUH?
>>Dan, N9JBF
>
>Anyone without the same opinion as you is a troll, eh?
>=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA! Grid FM29vw
>http://vhfradiobuff.tripod.com
No, not at all. Everyone is entitled to an opinion. You did not
state an opinion, you put out a rant. Rants are subject to other
peoples opinion of them :<}

People that make remarks like yours, are, in my opinion, trying to get
a rise out of people and fit the typical profile of a troll. Your
knowledge of amateur radio regulations, if you have any, should have
answered your own remarks long before you put them out on the net.
Your knowledge of FCC rules governing Amateur Radio, which appear to
be lacking, should have covered the reasons the FCC answered you in
the way it did.

If you had stated the ham refused to talk to you about it, as one
respondent brought up, then you might have very a slight reason to
complain. You still have no reason not to have the knowledge about
part 15 and other regulations hams are governed by. You were supposed
to learn those before getting your ticket. You did not reply to
anyone that came back to you with an answer to your troll and there
were several good responses. You only responded to being called a
troll. You sir, in my opinion, are a troll! No, no, don't bother to
answer, see the Plonk below.

Good bye and have a nice day :<}

Plonk! Please ask your friends, offline, what plonk means.
Dan, N9JBF
Amateur radio - What a hobby!
Remove left x for direct reply

5049. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 17:30:35 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <%Mpaa.8826$gF3.897503@newsread1.prod.itd.earthlink.net>
Source record: 123038

Walt Maxwell wrote:
> > It sure can, Cecil, whatever low value of resistance appears at the
input
> of
> > the open circuited stub can be replaced by a physical resistor at the
same
> > point with the same results. And we know that a resistor of any value
> > unequal to Zo shunting a main transmission line will cause a reflection.
> >
> > Walt

Dave Robbins wrote:
> there are a few caveats on this statement walt that not everyone will
> immediately know. this comes from a method of reducing circuits by
> substitution using norton or thevenin equivalents. it can only be done in
> sinusoidal steady state at a single frequency.

You're right, David, but I assumed everyone knew this.

> there is also the requirement that when you replace a branch of the
circuit
> with the equivalent impedance that you remove the branch itself, so its
not
> like you leave the stub and add the short and it is the same... you remove
> the stub and replace it with a short circuit.... just remember though,
you
> can't change frequency, and you can't analyze transients once you do this.

Again, David, I assumed everyone knew this, and I thought stating it would
be redundant.

Thanks for the assist,

Walt, W2DU

5050. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 17:35:18 UTC
From: tdonaly@aol.com
Message-ID: <20030308123518.12465.00000109@mb-ba.aol.com>
Source record: 123039

Cecil wrote,
>
>A good physics book will tell you how reflections happen.
>Have you ever seen a reflection occur without a change in
>the media?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

I've read the explanations in the books. All kinds of waves
are capable of reflection and refraction and such. What I
was getting at was that you seem to be confusing physics
with analysis. Everyone knows that there is no physical short at a
"virtual short." The reason it is called a "virtual" as opposed to
"real" short is that it behaves enough like a real short to make
it useful in the synthesis and analysis of networks. If you want to
know what is the real, yea and verily, God's pure truth about things,
that's fine, but you need to study natural philosophy. Arguing
about whether or not a "virtual short" actually reflects electromagnetic
waves in the same sense as a real piece of wire across a transmission
line is a big waste of time.
73,
Tom Donaly, KA6RUH

5051. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 17:59:20 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e6a2b00.658504000@news.galilei.com>
Source record: 123040

I'll be glad to Bill!

ISBN: 0-87259-398-3 (just so there's no confusion)
Copyright by ARRL

P=page

P2-9, Figure 1, Question f) = 147,100,000 (Answer sheet is wrong Figure 3)

P2-9, Figure 2, Question e) = 2.001(-18) (Answer sheet is wrong Figure 4)

P12-8, Figure 4, Voltage Assumed? Only Resistance is Given. (To agree with the text, the voltage should be 15 volts)

P13-1, Figure 1, I=E/R Therefore 4k+6k+2k+8k=20, 30/20=1.5mA (Not 2mA)

P13-10, Equation 4, ohms/9.30x10(-4)=R4-8, 1075ohms=R4-8 (Not 10.75ohms)

P14-5, Figure 2, Equation #5 at top of 2nd column, P=(0.700A)2x300ohms (Not .750A)

P23-23, Equation 2, 1c=10V/250ohms, 1c=.0500A=50.0mA (Correct math is .04A=40mA

P23-23, Equation 4 continues this error, 1x=+j18mA through the rest of the chapter.

P26-10, 120x2.8=336 (Not 327.6)

One would think the ARRL would not propagate such erroneous information! Much less put their name on it.

TTUL
Gary

5052. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 18:05:44 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e6a2fc0.659719687@news.galilei.com>
Source record: 123041

Hi Roy

The ARRL was notified shortly after the 1st edition was published, and
then again for each reprinting.

As an aside, are you related to Dallas & Lola?

TTUL
Gary

5053. Re: N5QXX/R: The New Orleans linked repeater that isn't

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 18:06:04 UTC
From: Radio Funtimes <stinkyhamops444@yahoo.com>
Message-ID: <3e6a310c@snipnews.snip.net>
Source record: 123042
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.shortwave

They need to see this: http://www.markfiore.com/animation/dictator.html

"Stu Parker" <sparkr@pavillage.net> wrote in message
news:577654515751.1356729F38A@pavillage.net...
> Down there in New Orleans, they brag about N5QXX as the longest echo
> linked repeater. The real truth is that it isn't.
>
> Oh yes, if you take a look in the repeater section of Echolink, you'll
> find N5QXX all right, but you won't be able to link to it. Instead,
> you'll get an "access denied" message, because only a small number of
> people are allowed to use it.
>
> So why is it on Echolink at all? Your guess is as good as mine,
> although I tend to lean toward the explanation that the club wants
> bragging rights without having to actually perform as do other linked
> repeaters.
>
> What a bunch of morons. They should be cut off from Echolink.

5054. Re: J-Pole vs groundplane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 18:06:41 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e6a30e2.660010656@news.galilei.com>
Source record: 123043

Hi Doc

I posted the 9 I remember above, along with the page number, figure, equasion if applicable, along with the correct answers.

TTUL
Gary

5055. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 18:35:18 UTC
From: W6DKN <w6dkn-nospam-@qsl.net>
Message-ID: <OBqaa.15992$Dp.9851@fe01.atl2.webusenet.com>
Source record: 123044

VHFRadioBuff wrote:
>> The FCC has told an Oregon couple to stop using its Winegard
>> amplified television antenna
>
> Sure, if a Ham is interefered with, the FCC jumps right in, but when
> a non-ham is interefered with by a ham, too bad.
>
> My grandparents were getting QRM'ed to death from a neighbor ham with
> a bunch of yagi's, dipoles, verticals, etc.. He'd come over their
> radio, TV, phone, etc... I emailed the FCC and they told me that
> unless I had proof that he was operating illegally, they wouldn't
> even investigate it. What a double standard, huh?!

Not at all. The fact is that the consumer equipment is most likely at fault. If you read the owners manual for these consumer devices, it tells you that the device is prone to receiving unwanted signals and that by operating the equipment you agree to accept the interference (FCC part 15 devices).

Unless the ham operator is operating illegally, the reality is that his equipment is functioning properly and he is operating as per his FCC granted authority. You are a licensed operator and should therefore know how to correct interference problems with consumer devices. Why don't you help your grandparents out and apply a few simple techniques in their home to correct the deficiencies in their equipment?

73 de W6DKN

5056. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 18:38:55 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A38BF.9090902@ieee.org>
Source record: 123045

Tdonaly wrote:
> I've read the explanations in the books. All kinds of waves
> are capable of reflection and refraction and such. What I
> was getting at was that you seem to be confusing physics
> with analysis. Everyone knows that there is no physical short at a
> "virtual short." The reason it is called a "virtual" as opposed to
> "real" short is that it behaves enough like a real short to make
> it useful in the synthesis and analysis of networks.

No doubt it is a useful concept but a virtual short is the end
result of destructive interference. Being an end result, it cannot
be the cause of anything. If the destructive interference is
between two waves traveling in opposite directions, as it is
at a simple 1/4WL open stub, the wave flowing out of the stub
continues flowing until it encounters a physical impedance
discontinuity. It's a simple matter of recognizing cause and
effect. A virtual short is an effect.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5057. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 18:58:41 UTC
From: tdonaly@aol.com
Message-ID: <20030308135841.12427.00000163@mb-ba.aol.com>
Source record: 123046

Cecil wrote,
>
>Tdonaly wrote:
>> I've read the explanations in the books. All kinds of waves
>> are capable of reflection and refraction and such. What I
>> was getting at was that you seem to be confusing physics
>> with analysis. Everyone knows that there is no physical short at a
>> "virtual short." The reason it is called a "virtual" as opposed to
>> "real" short is that it behaves enough like a real short to make
>> it useful in the synthesis and analysis of networks.
>
>No doubt it is a useful concept but a virtual short is the end
>result of destructive interference. Being an end result, it cannot
>be the cause of anything. If the destructive interference is
>between two waves traveling in opposite directions, as it is
>at a simple 1/4WL open stub, the wave flowing out of the stub
>continues flowing until it encounters a physical impedance
>discontinuity. It's a simple matter of recognizing cause and
>effect. A virtual short is an effect.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

Yes, but so what? Are you looking for the cause uncaused
of wave reflection? If so, you'll have go deeper than simple
engineering analysis.
73,
Tom Donaly, KA6RUH

5058. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 19:09:23 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Ddraa.8975$gF3.908908@newsread1.prod.itd.earthlink.net>
Source record: 123048

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E6A38BF.9090902@ieee.org...
> Tdonaly wrote:
> > I've read the explanations in the books. All kinds of waves
> > are capable of reflection and refraction and such. What I
> > was getting at was that you seem to be confusing physics
> > with analysis. Everyone knows that there is no physical short at a
> > "virtual short." The reason it is called a "virtual" as opposed to
> > "real" short is that it behaves enough like a real short to make
> > it useful in the synthesis and analysis of networks.
>
> No doubt it is a useful concept but a virtual short is the end
> result of destructive interference. Being an end result, it cannot
> be the cause of anything. If the destructive interference is
> between two waves traveling in opposite directions, as it is
> at a simple 1/4WL open stub, the wave flowing out of the stub
> continues flowing until it encounters a physical impedance
> discontinuity. It's a simple matter of recognizing cause and
> effect. A virtual short is an effect.
> --
> cheers, CAM http://www.qsl.net/w5dxp

Tom, Cecil and I are having our own discussion concerning cause and effect, and so far we are still disagreeing, probably only on terms.

My viewpoint in Cecil's statement above that the '...the wave flowing out of the stub continues flowing until it encounters a physical impedance discontinuity.' involves two aspects. One, when the wave flowing out of the stub encounters the center conductor of the main line it has encounted a physical discontinuity, and two, the voltage of the wave flowing out of the (lossless) stub is of the same magnitude as that appearing on the main line, but 180 degrees out of phase. Because the voltages from each wave can be considered analytically as being developed by two separate point generators at the junction, the result of the 180-degree phase difference beween the voltages from two separate generators connected together is a short circuit, whether physical or not. The result of this short circuit is then the 'cause' of establishing a reflection at the junction point in the same way as if a physical short were shunted across the main line. This is where Cecil and I disagree--I consider the 'short' resulting from the wave interference the cause of the reflection, not as the end result.

Perhaps you can offer some insight to our dilemma. Is one right and the other wrong, or do we simply have two viewpoints that are equally valid?

Walt, W2DU

5059. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 19:10:21 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E6A401C.89B0A0F@att.net>
Source record: 123047

Reg Edwards wrote:

> Why would anybody want to shield a balanced feedline to a radio antenna ?

Might need to run it underground as I would if using a balanced
feedline

>
>
> What advantage would be gained by using a double-shielded coax feedline?

When using very low loss coax such as CATV hardline you could gain
nearly the
advantages of open wire or ladderline. CATV coax loss is said to be not
much more than
ladderline. If I can come up with another surplus spool of the coax I
think I'll try it.

Dick

5060. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 19:16:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A419C.6010304@ieee.org>
Source record: 123049

Tdonaly wrote:
> Yes, but so what? Are you looking for the cause uncaused
> of wave reflection?

I'm happy with the wave reflection model's explanation
that a physical impedance discontinuity causes reflections
and the Melles-Griot web page assertion that destructive
interference at a physical impedance discontinuity
causes reflections.

http://www.mellesgriot.com/products/optics/oc_2_1.htm

What I am saying is that virtual impedances don't cause
reflections. Virtual impedances are a shortcut concept
and are the *END RESULT* of wave interference and not
the *cause* of anything. If the concept of a virtual
impedance had never been invented, transmission lines
would work exactly the same.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5061. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 19:30:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A44C5.50105@ieee.org>
Source record: 123050

Walter Maxwell wrote:
> My viewpoint in Cecil's statement above that the '...the wave flowing out
> of the stub continues flowing until it encounters a physical impedance
> discontinuity.' involves two aspects. One, when the wave flowing out of the
> stub encounters the center conductor of the main line it has encounted a
> physical discontinuity, and two, the voltage of the wave flowing out of the
> (lossless) stub is of the same magnitude as that appearing on the main line,
> but 180 degrees out of phase. Because the voltages from each wave can be
> considered analytically as being developed by two separate point generators
> at the junction, the result of the 180-degree phase difference beween the
> voltages from two separate generators connected together is a short circuit,
> whether physical or not. The result of this short circuit is then the
> 'cause' of establishing a reflection at the junction point in the same way
> as if a physical short were shunted across the main line. This is where
> Cecil and I disagree--I consider the 'short' resulting from the wave
> interference the cause of the reflection, not as the end result.

Walt, how do you explain the results of the following experiment. The source
(SGCL) is a signal generator equipped with a perfect circulator and internal
resistor. Consider the system to be lossless except for the circulator resistor
and Load. Z0=50 ohms and the signal generator is putting out 50 watts.

```
SGCR--------------------x----1/4WL open stub-----
|
+-----------------------------------Load
```

A directional wattmeter installed between the source and point 'x'
reads 50W forward and 50W reflected. The same wattmeter placed in
the middle of the stub reads 50W forward and 50W reflected. The
same wattmeter placed between point 'x' and the Load reads zero
watts forward and zero watts reflected. The 50 ohm resistor in the
circulator is dissipating 50 watts.

The forward voltage at point 'x' is 50 volts. The reflected voltage
at point 'x' is 50 volts. Those voltages are 180 degrees out of phase
so they add up to zero. On either side of point 'x', they do not add
up to zero. The virtual short at point 'x' seems to have absolutely
no effect. The forward wave and reflected wave blow through it as if
it doesn't even exist. If the concept of a virtual short had never been
invented, the wattmeter readings would still be exactly the same and the
same 50W of power reflected from the open end of the stub would still be
dissipated in the circulator resistor.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5062. Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 19:39:01 UTC
From: fch <na@hle.com>
Message-ID: <3E6A46D5.663501A6@hle.com>
Source record: 123052

Is it even directional?

5063. Re: Expert opinion about Antenna Tuners...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 19:51:25 UTC
From: lsasmazel@comcast.net
Message-ID: <882020e3.0303081151.51f91dcd@posting.google.com>
Source record: 123051

Gary,

Thanks for the replay. This is the selection switch in the MFJ 969
Tuner . I can not change that one. Let me give one more info I can get
the signals even both antennas are disconnected and tuner switch is on
the dummy load pozition.... There is only GND and the radio connected.
If I disconnect the Tuner all radios are OK with Tuner they are
receiving signals....

5064. Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 20:30:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A52F4.9040703@ieee.org>
Source record: 123054

fch wrote:
> Is it even directional?

Yes it is, so you have to rotate it. It is a beam, much
like the X-beams of years past. But like the quad, once
you have the support system, you can add wires for multiple
bands using the same supports. As a single band antenna,
it doesn't have much to offer. As a multi-band antenna,
it is a pretty cute idea.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5065. Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 20:32:41 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v6kkrf69curb02@corp.supernews.com>
Source record: 123053

It might be that these URLs will help:
http://www.apoc.com/Gardner-5-02/datasheets/053.HTM
http://www.fbcchem.com/asphalt/driveway.htm
http://www.handymanclub.com/document.asp?cID=70&dID=755

The latter reference has a long list of manufactures at the end of the
article.

Let us know what such products are in PY-land. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Yuri Blanarovich" <k3bu@aol.com> wrote in message
news:20030308101017.26274.00000101@mb-mu.aol.com...
> >
> >If you can supply some information on brands, or
> >manufacturers, or even chemical composition...I can do some
> >scrounging in the market...
>
> Last time I used it was back in Canada. Latex here generally means
that it is
> water soluble while it is still wet. When it dries up, it is water
resistant,
> but it also allows some breathing. Nice when working with it, you can
wash
> spills with water. When it dries, you can drive car or tank over it,
it will
> not peel or blister. Has very good adhesion and endurance. It is thin,
you can
> apply two coats for extra protection.
> When I bought new can of this sealant, I needed to mix it, emulsion
was on the
> top, and you can thin it with water if needed. It is more like some
kind of
> carbon powder, rather than tar like substance.
> It is cheap and you can resurface your driveway with remainder.
> No idea what it would be called elsewhere, maybe we need to set up
distribution
> :-)
>
> Yuri

5066. Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 20:36:11 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <j1lk6vk6v99lk7gtghg75o99pvefuqbgc7@4ax.com>
Source record: 123057

On Sat, 08 Mar 2003 11:39:01 -0800, fch <na@hle.com> wrote:

>Is it even directional?

Yep

5067. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 20:37:55 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Dwsaa.9067$gF3.918375@newsread1.prod.itd.earthlink.net>
Source record: 123055

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E6A44C5.50105@ieee.org...
> Walter Maxwell wrote:
> > My viewpoint in Cecil's statement above that the '...the wave flowing
out
> > of the stub continues flowing until it encounters a physical impedance
> > discontinuity.' involves two aspects. One, when the wave flowing out of
the
> > stub encounters the center conductor of the main line it has encounted a
> > physical discontinuity, and two, the voltage of the wave flowing out of
the
> > (lossless) stub is of the same magnitude as that appearing on the main
line,
> > but 180 degrees out of phase. Because the voltages from each wave can be
> > considered analytically as being developed by two separate point
generators
> > at the junction, the result of the 180-degree phase difference beween
the
> > voltages from two separate generators connected together is a short
circuit,
> > whether physical or not. The result of this short circuit is then the
> > 'cause' of establishing a reflection at the junction point in the same
way
> > as if a physical short were shunted across the main line. This is where
> > Cecil and I disagree--I consider the 'short' resulting from the wave
> > interference the cause of the reflection, not as the end result.
>
> Walt, how do you explain the results of the following experiment. The
source
> (SGCL) is a signal generator equipped with a perfect circulator and
internal
> resistor. Consider the system to be lossless except for the circulator
resistor
> and Load. Z0=50 ohms and the signal generator is putting out 50 watts.
>
> SGCR--------------------x----1/4WL open stub-----
> |
> +-----------------------------------Load
>
> A directional wattmeter installed between the source and point 'x'
> reads 50W forward and 50W reflected. The same wattmeter placed in
> the middle of the stub reads 50W forward and 50W reflected. The
> same wattmeter placed between point 'x' and the Load reads zero
> watts forward and zero watts reflected. The 50 ohm resistor in the

> circulator is dissipating 50 watts.
>
> The forward voltage at point 'x' is 50 volts. The reflected voltage
> at point 'x' is 50 volts. Those voltages are 180 degrees out of phase
> so they add up to zero. On either side of point 'x', they do not add
> up to zero. The virtual short at point 'x' seems to have absolutely
> no effect. The forward wave and reflected wave blow through it as if
> it doesn't even exist. If the concept of a virtual short had never been
> invented, the wattmeter readings would still be exactly the same and the
> same 50W of power reflected from the open end of the stub would still be
> dissipated in the circulator resistor.
> --
> cheers, CAM http://www.qsl.net/w5dxp

Cecil, let me explain why the forward and reflected wave 'blow through is as if it doesn't even exist'. The open-circuit 1/4 wl lossless stub establishes a short at point 'x', but it also establishes a short at every 1/2 wl along the line toward the generator. Point 'x' is where the main continues, but no energy flows toward the load because at point 'x' the voltage of the standing wave is zero. As far as the waves 'blowing through point 'x', the same condition would exist if the line to the load weren't there and the main line was simply left open circuited. The null in the standing wave would still be at point 'x', and at every 1/2 wl point beyond, and 50 watts would still be dissipated in the load terminating the circulator.

But if you have a main line terminated in the load, the 1/4 wl stub can be placed anywhere on the line, and that would be where your point 'x' would then be located, placing a short at that point and eliminating any further wave travel toward the load. This is just a different way of drawing the line diagram than your's, but it can serve to help understand the problem. With the stub in place at any point 'x', the stub then places the short on the main line at point 'x', and from then on the main line is terminated in a short at point 'x', and the standing wave on the main line from point 'x' back to the circulator will have nulls at every 1/2 wl point from point 'x'. Your 'forward and reflected waves blowing through point 'x' is a non-argument, because that is what the forward and reflected waves do when the main line is terminated with an open circuit.

Walt, W2DU

5068. Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 20:48:42 UTC
From: k1bqt@aol.com
Message-ID: <20030308154842.24504.00000057@mb-dd.aol.com>
Source record: 123056

>Hexbeam<

I built one for 10 meters a while back. I think it had about 5 dBi gain with front-to-back ranging from 12dB to over 20 dB--depending on frequency (dipole has 2.15 dBi). It performed identically to my Moxon rectangle in side-by-side comparisons and the front-to-back was quite helpful for eliminating QRM from the south when the band was open to Europe here on the east coast. My 3-element yagi did perceptibly better both in gain and front-to-back. I like the Hexbeam...think its mechanical design is clever and like the way it blends in.

Rick K1BQT

5069. Re: Expert opinion about Antenna Tuners...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 21:16:40 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6A5DB8.ED9ADC90@cwis.net>
Source record: 123058

Levent,
Doesn't sound like the switch to me. More like
the ground wire is an antenna...
'Doc

5070. Re: Expert opinion about Antenna Tuners...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 21:22:57 UTC
From: jgboyles@aol.com
Message-ID: <20030308162257.08662.00000075@mb-ml.aol.com>
Source record: 123059

>Let me give one more info I can get
>the signals even both antennas are disconnected and tuner switch is on
>the dummy load pozition.... There is only GND and the radio connected.

>If I disconnect the Tuner all radios are OK with Tuner they are
>receiving signals....

I see what you are saying I think. When you have the switch in the dummy load position, is there a dummy load hooked to it? See if you can read 50 ohms at the PL 259 with the coax disconnected from the rig. If you can, that means all the connections and the coax shield are ok all the way to the dummy load. Make sure you have a good rf ground with the shortest ground wire possible connected to your rig.
Try running a piece of coax straight to your dummy load, don't go thru your tuner at all. You will still be able to hear the stronger signals. Are they as strong as with the tuner in the circuit? If they are, then that's about as good as it will get. If you get a marked signal strength increase when you go back thru the tuner, then the tuner is upsetting things enough that you are getting common mode current through the whole arragement. You might try an outboard coax switch, and not use the one inside the tuner and see if this makes any difference.
Antenna tuners don't have to be shielded. The first ones I built were in the open on a board, or in a cigar box. Carefully shielding them can lead to unwanted stray capacitance which will make them less effective as a tuner, especially on the higher bands.
The fact that your tuner lets some small amount of rf get thru to your rig when you don't want it to may not be due to faulty equipment. The signals are still 50 db down, and that could be as good as it will get. Good luck.

73 Gary N4AST

5071. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 21:24:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A5F92.5070906@ieee.org>
Source record: 123061

Walter Maxwell wrote:
> Cecil, let me explain why the forward and reflected wave 'blow through is as
> if it doesn't even exist'. The open-circuit 1/4 wl lossless stub establishes
> a short at point 'x', but it also establishes a short at every 1/2 wl along
> the line toward the generator. Point 'x' is where the main continues, but no
> energy flows toward the load because at point 'x' the voltage of the
> standing wave is zero. As far as the waves 'blowing through point 'x', the
> same condition would exist if the line to the load weren't there and the
> main line was simply left open circuited. The null in the standing wave
> would still be at point 'x', and at every 1/2 wl point beyond, and 50 watts
> would still be dissipated in the load terminating the circulator.

Walt, that is my argument. Please stop using it. :-) If the virtual short at
the mouth of the 1/4WL stub is no different from any other virtual short up
and down the line, then absolutely nothing is being caused by that particular
virtual short compared to any other virtual short, as absolutely nothing is being
caused by any other virtual short up and down the line. Your argument supports
my argument that a virtual short is merely the end result of everything else
and not the cause of anything.

> But if you have a main line terminated in the load, the 1/4 wl stub can be
> placed anywhere on the line, and that would be where your point 'x' would
> then be located, placing a short at that point and eliminating any further
> wave travel toward the load. This is just a different way of drawing the
> line diagram than your's, but it can serve to help understand the problem.

Actually, I think it serves to defeat understanding of the problem. My method
of drawing the diagram leaves nothing for interpretation. It is identical to
the plumber's delight method of mounting Yagi elements.

> With the stub in place at any point 'x', the stub then places the short on
> the main line at point 'x', and from then on the main line is terminated in
> a short at point 'x', and the standing wave on the main line from point 'x'
> back to the circulator will have nulls at every 1/2 wl point from point 'x'.
> Your 'forward and reflected waves blowing through point 'x' is a
> non-argument, because that is what the forward and reflected waves do when
> the main line is terminated with an open circuit.

So it is just a plumber's delight configuration after all and nothing untoward
happens at a virtual short. Like I said, if the "virtual short" concept had
never been invented, transmission lines would respond just the same. The reason
that there is no current/voltage flowing toward the load is that the voltage
at point 'x' is zero because of destructive interference. The "virtual short"
is just a warm and fuzzy concept causing absolutely nothing to happen in reality
and changing reality by an amount equal to zero.
--

cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5072. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 21:25:40 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6A5FD4.3C6DDBC1@cwis.net>
Source record: 123060

Gary,
To answer the question, sure, it's okay to use
it. The 'catch' is, why you would want to use it.
Is it more efficient than ladder line? Depends on
the length, I would think, and the 'why' above.
Another consideration is that you would have to
make your own, I've never seen any advertised. And
unless you just 'happened' across a bunch of 'extra'
coax, it would be much more expensive than a lot of
the alternatives.
'Doc

5073. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 21:29:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A60AB.5080301@ieee.org>
Source record: 123062

'Doc wrote:
> To answer the question, sure, it's okay to use
> it. The 'catch' is, why you would want to use it.
> Is it more efficient than ladder line? Depends on
> the length, I would think, and the 'why' above.
> Another consideration is that you would have to
> make your own, I've never seen any advertised. And
> unless you just 'happened' across a bunch of 'extra'
> coax, it would be much more expensive than a lot of
> the alternatives.

I have seen shielded 300 ohm line before. But for the life
of me, I can't remember when or where. The words "Triax"
comes to mind but at 65, who knows whether my mind is
still working or not.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5074. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 21:32:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6koc62i29gqa8@corp.supernews.com>
Source record: 123063

William E. Sabin wrote:
> David or Jo Anne Ryeburn wrote:
>
>>
>>
>> Bill, it was not meant as a put-down remark.
>
>
> I tend to have a short fuse sometimes. It's one of my many shortcomings.
> I have always admired math professors.
>
>>
>> Remember the old puzzle about the two capacitors of equal capacitance,
>> one
>> charged to a certain voltage and the other uncharged, which are then
>> connected in parallel? If the total energy is calculated before and after
>> the connection is made, the law of conservation of energy appears to have
>> been violated. Talking about zero-resistance situations can be useful,
>> and
>> can also get one in trouble.
>
>
> If there is zero resistance and zero external circuit inductance, then
> at the instant of connection an impulse (dirac function) of wideband
> electromagnetic radiation occurs that accounts for the missing energy.
> The solution to the differential equation requires this impulse at t=0.
> Charge is conserved, so the radiation is mandatory.
>
> Bill W0IYH

That's an interesting conclusion. I've always looked at the problem from the standpoint of limits -- if you put a resistor between the capacitors, the "missing" energy is all accounted for by dissipation in the resistor. This is true for any value of resistor, no matter how arbitrarily small you make it. The integral of I^2 * R dt (the energy) stays constant for all values of R. I've always thought that the integral retains this value, then, at the limit of R = 0. At that point, I is infinite and current flows for zero time. But doesn't the integral stay the same? That is, the "missing" energy can still be accounted for by I^2 * R dissipation (with zero R and infinite I), using the concept of limits described by David. If I'm misapplying the concept, please correct me.

Roy Lewallen, W7EL

5075. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 21:41:46 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A639A.80809@ieee.org>
Source record: 123064

Roy Lewallen wrote:
> That's an interesting conclusion. I've always looked at the problem from
> the standpoint of limits -- if you put a resistor between the
> capacitors, the "missing" energy is all accounted for by dissipation in
> the resistor. This is true for any value of resistor, no matter how
> arbitrarily small you make it. The integral of I^2 * R dt (the energy)
> stays constant for all values of R. I've always thought that the
> integral retains this value, then, at the limit of R = 0. At that point,
> I is infinite and current flows for zero time. But doesn't the integral
> stay the same? That is, the "missing" energy can still be accounted for
> by I^2 * R dissipation (with zero R and infinite I), using the concept
> of limits described by David. If I'm misapplying the concept, please
> correct me.

Sure sounds logical since there's not usually a wire with zero resistance
available. Maybe Bill's theory works with superconductors and yours works
with non-superconductors.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5076. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 21:50:59 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <7Btaa.9150$gF3.926119@newsread1.prod.itd.earthlink.net>
Source record: 123065

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E6A5F92.5070906@ieee.org...
> Walter Maxwell wrote:
> > Cecil, let me explain why the forward and reflected wave 'blow through
is as
> > if it doesn't even exist'. The open-circuit 1/4 wl lossless stub
establishes
> > a short at point 'x', but it also establishes a short at every 1/2 wl
along
> > the line toward the generator. Point 'x' is where the main continues,
but no
> > energy flows toward the load because at point 'x' the voltage of the
> > standing wave is zero. As far as the waves 'blowing through point 'x',
the
> > same condition would exist if the line to the load weren't there and the
> > main line was simply left open circuited. The null in the standing wave
> > would still be at point 'x', and at every 1/2 wl point beyond, and 50
watts
> > would still be dissipated in the load terminating the circulator.
>
> Walt, that is my argument. Please stop using it. :-) If the virtual short
at
> the mouth of the 1/4WL stub is no different from any other virtual short
up
> and down the line, then absolutely nothing is being caused by that
particular
> virtual short compared to any other virtual short, as absolutely nothing
is being
> *caused* by any other virtual short up and down the line. Your argument
supports
> my argument that a virtual short is merely the end result of everything
else
> and not the cause of anything.
>
> > But if you have a main line terminated in the load, the 1/4 wl stub can
be
> > placed anywhere on the line, and that would be where your point 'x'
would
> > then be located, placing a short at that point and eliminating any
further
> > wave travel toward the load. This is just a different way of drawing the
> > line diagram than your's, but it can serve to help understand the
problem.
>

> Actually, I think it serves to defeat understanding of the problem. My
method
> of drawing the diagram leaves nothing for interpretation. It is identical
to
> the plumber's delight method of mounting Yagi elements.
>
> > With the stub in place at any point 'x', the stub then places the short
on
> > the main line at point 'x', and from then on the main line is terminated
in
> > a short at point 'x', and the standing wave on the main line from point
'x'
> > back to the circulator will have nulls at every 1/2 wl point from point
'x'.
> > Your 'forward and reflected waves blowing through point 'x' is a
> > non-argument, because that is what the forward and reflected waves do
when
> > the main line is terminated with an open circuit.
>
> So it is just a plumber's delight configuration after all and nothing
untoward
> happens at a virtual short. Like I said, if the "virtual short" concept
had
> never been invented, transmission lines would respond just the same. The
reason
> that there is no current/voltage flowing toward the load is that the
voltage
> at point 'x' is zero because of destructive interference. The "virtual
short"
> is just a warm and fuzzy concept causing absolutely nothing to happen in
reality
> and changing reality by an amount equal to zero.
> --
> cheers, CAM

But Cecil, the zero voltage resulting from the interference between two equal but opposite-polarity voltages produces zero impedance, which is a short circuit. I refer you to Refs 35 and 39 in Reflections. Ref 35 is J.C.Slater, who was the Chairman of the MIT EE Dep't when he wrote the book "Microwave Transmission". Probably calling it a 'virtual' short is wrong, because it conjures up a non-reality, where the short produced by the interference is a real zero impedance.

Walt, W2DU

5077. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 22:00:08 UTC
From: tdonaly@aol.com
Message-ID: <20030308170008.18356.00000028@mb-mi.aol.com>
Source record: 123066

Cecil wrote,
>
>I'm happy with the wave reflection model's explanation
>that a physical impedance discontinuity causes reflections
>and the Melles-Griot web page assertion that destructive
>interference at a physical impedance discontinuity
>causes reflections.

Is the wave reflection model's explanation a real explanation or
just an assertion? Secondly, in order to have destructive interference
of a wave you have to have another wave doing the interfering, or
a wave has to be reflected in such a way as to interfere with itself.
If Melles-Griot is asserting the latter, then they're stating that
reflection causes reflection.

>
>http://www.mellesgriot.com/products/optics/oc_2_1.htm
>
>What I am saying is that virtual impedances don't cause
>reflections. Virtual impedances are a shortcut concept
>and are the *END RESULT* of wave interference and not
>the *cause* of anything. If the concept of a virtual
>impedance had never been invented, transmission lines
>would work exactly the same.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

I think you're right, but I still can't imagine why you'd want to
make a big deal out of it. What is the point of making your
point?
73,
Tom Donaly, KA6RUH

5078. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 22:08:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6kqfmoikpnhe4@corp.supernews.com>
Source record: 123067

Alas, superconductors are truly superconducting only at DC, and display
a finite and increasing resistance with frequency. Here we've got
infinitely fast rise and fall times, so nothing would behave like a
superconductor when confronted with this pulse.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> That's an interesting conclusion. I've always looked at the problem
>> from the standpoint of limits -- if you put a resistor between the
>> capacitors, the "missing" energy is all accounted for by dissipation
>> in the resistor. This is true for any value of resistor, no matter how
>> arbitrarily small you make it. The integral of I^2 * R dt (the energy)
>> stays constant for all values of R. I've always thought that the
>> integral retains this value, then, at the limit of R = 0. At that
>> point, I is infinite and current flows for zero time. But doesn't the
>> integral stay the same? That is, the "missing" energy can still be
>> accounted for by I^2 * R dissipation (with zero R and infinite I),
>> using the concept of limits described by David. If I'm misapplying the
>> concept, please correct me.
>
>
> Sure sounds logical since there's not usually a wire with zero resistance
> available. Maybe Bill's theory works with superconductors and yours works
> with non-superconductors.

5079. NEW SOFTWARE & SAT FREQ.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 22:15:52 UTC
From: cor <corholland@wanadoo.nl>
Message-ID: <3e6a6b8f$0$23914$8fcfb86b@news.wanadoo.nl>
Source record: 123068

Hello All,

I made a selection of the best software.
We have also a amateur satellite freq table.
And NEW is Coax cable loss table.

Visit our page:

http://www.qsl.net/pd0rkc

Cor

5080. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 22:29:38 UTC
From: tdonaly@aol.com
Message-ID: <20030308172938.18356.00000029@mb-mi.aol.com>
Source record: 122969

>
Walt wrote,
>Tom, Cecil and I are having our own discussion concerning cause and effect,
>and so far we are still disagreeing, probably only on terms.
>
>My viewpoint in Cecil's statement above that the '...the wave flowing out
>of the stub continues flowing until it encounters a physical impedance
>discontinuity.' involves two aspects. One, when the wave flowing out of the
>stub encounters the center conductor of the main line it has encounted a
>physical discontinuity, and two, the voltage of the wave flowing out of the
>(lossless) stub is of the same magnitude as that appearing on the main line,
>but 180 degrees out of phase. Because the voltages from each wave can be
>considered analytically as being developed by two separate point generators
>at the junction, the result of the 180-degree phase difference beween the
>voltages from two separate generators connected together is a short circuit,
>whether physical or not. The result of this short circuit is then the
>'cause' of establishing a reflection at the junction point in the same way
>as if a physical short were shunted across the main line. This is where
>Cecil and I disagree--I consider the 'short' resulting from the wave
>interference the cause of the reflection, not as the end result.
>
>Perhaps you can offer some insight to our dilemma. Is one right and the
>other wrong, or do we simply have two viewpoints that are equally valid?
>
>Walt, W2DU
>
Hi, Walt,
I'm not qualified to judge cause and effect when it comes to
questions of electromagnetics. The fellows who understand quantum
mechanics would probably tell me I was wrong, anyway, to even think in
such terms. It's obvious a quarter wave stub wouldn't work without the
reflections. On the other hand, if you can substitute a real short for a
virtual short and get exactly the same results, -- at the frequency of
interest -- the only reason you would care which caused what is if you
wanted a rousing argument with someone, like Cecil, who wanted to
follow a strictly physical interpretation, as opposed to an analytic
interpretation of the observed phenomenon. I think saying that a
virtual short causes reflections is fine for analysis. Keep in mind, however,
that the virtual short itself is caused by reflections internal to a
quarter wavelength stub. In other words, I don't think you and Cecil
should be arguing, since you agree about the essential points and
only disagree about a point too precious to be worth bothering with.
73,
Tom Donaly, KA6RUH

5081. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 22:31:03 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v6krpdb55v0m94@corp.supernews.com>
Source record: 122970

This has come up before. As before, this is a classic problem/example.
I have been amazed at the Professors who have to have it explained to
them.
The fundamental rule in most human affairs is: follow the money. In
most everything else, it is: follow the energy.
...but, gee whiz boys, has not this thread's transient died out?
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v6koc62i29gqa8@corp.supernews.com...
> William E. Sabin wrote:
> > David or Jo Anne Ryeburn wrote:
> >
> >>
> >>
> >> Bill, it was not meant as a put-down remark.
> >
> >
> > I tend to have a short fuse sometimes. It's one of my many
shortcomings.
> > I have always admired math professors.
> >
> >>
> >> Remember the old puzzle about the two capacitors of equal
capacitance,
> >> one
> >> charged to a certain voltage and the other uncharged, which are
then
> >> connected in parallel? If the total energy is calculated before and
after
> >> the connection is made, the law of conservation of energy appears
to have
> >> been violated. Talking about zero-resistance situations can be
useful,
> >> and
> >> can also get one in trouble.
> >
> >
> > If there is zero resistance and zero external circuit inductance,
then
> > at the instant of connection an impulse (dirac function) of wideband

> > electromagnetic radiation occurs that accounts for the missing
energy.
> > The solution to the differential equation requires this impulse at
t=0.
> > Charge is conserved, so the radiation is mandatory.
> >
> > Bill W0IYH
>
> That's an interesting conclusion. I've always looked at the problem
from
> the standpoint of limits -- if you put a resistor between the
> capacitors, the "missing" energy is all accounted for by dissipation
in
> the resistor. This is true for any value of resistor, no matter how
> arbitrarily small you make it. The integral of I^2 * R dt (the energy)
> stays constant for all values of R. I've always thought that the
> integral retains this value, then, at the limit of R = 0. At that
point,
> I is infinite and current flows for zero time. But doesn't the
integral
> stay the same? That is, the "missing" energy can still be accounted
for
> by I^2 * R dissipation (with zero R and infinite I), using the concept
> of limits described by David. If I'm misapplying the concept, please
> correct me.
>
> Roy Lewallen, W7EL
>

5082. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 22:31:30 UTC
From: dplatt@radagast.org
Message-ID: <v6krq2sfogjh9f@corp.supernews.com>
Source record: 122971
Cross-posted to: rec.radio.amateur.antenna,alt.rv

>The FCC has told an Oregon couple to stop using its Winegard amplified
>television antenna (Model Sensar/Roadstar) on their recreational
>vehicle "until the condition causing harmful interference has been
>corrected."

I believe I saw mention of this basic problem a couple of months ago,
in a different context. Some form of EMI from within the television
antenna amplifier can apparently affect the behavior of certain GPS
receivers, either preventing operation or causing them to calculate
and display an incorrect location. Since some boats (coastal cabin
cruisers, I suppose) may have these sorts of TV antenna amplifiers,
and use GPS as part of their navigation systems, this problem was felt
to present an actual safety hazard.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

5083. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 22:36:23 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <nurk6vceuec95dst455h8ljvb17r4v8nnl@4ax.com>
Source record: 122972

On Sat, 08 Mar 2003 15:29:15 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>'Doc wrote:
>> To answer the question, sure, it's okay to use
>> it. The 'catch' is, why you would want to use it.
>> Is it more efficient than ladder line? Depends on
>> the length, I would think, and the 'why' above.
>> Another consideration is that you would have to
>> make your own, I've never seen any advertised. And
>> unless you just 'happened' across a bunch of 'extra'
>> coax, it would be much more expensive than a lot of
>> the alternatives.
>
>I have seen shielded 300 ohm line before. But for the life
>of me, I can't remember when or where. The words "Triax"
>comes to mind but at 65, who knows whether my mind is
>still working or not.

Radio Shack used to sell it, but apparently they don't carry
it any more.

Triax is like coax with another shield (insulated from the
first). Shielded 300 ohm transmission line would be more
akin to twinax (two conductors, one shield).

-fb-

5084. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 23:19:53 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <tUuaa.9222$gF3.935295@newsread1.prod.itd.earthlink.net>
Source record: 122973

Tdonaly <tdonaly@aol.com> wrote in message
news:20030308172938.18356.00000029@mb-mi.aol.com...
> >
> Walt wrote,
> >Tom, Cecil and I are having our own discussion concerning cause and
effect,
> >and so far we are still disagreeing, probably only on terms.
> >
> >My viewpoint in Cecil's statement above that the '...the wave flowing
out
> >of the stub continues flowing until it encounters a physical impedance
> >discontinuity.' involves two aspects. One, when the wave flowing out of
the
> >stub encounters the center conductor of the main line it has encounted a
> >physical discontinuity, and two, the voltage of the wave flowing out of
the
> >(lossless) stub is of the same magnitude as that appearing on the main
line,
> >but 180 degrees out of phase. Because the voltages from each wave can be
> >considered analytically as being developed by two separate point
generators
> >at the junction, the result of the 180-degree phase difference beween the
> >voltages from two separate generators connected together is a short
circuit,
> >whether physical or not. The result of this short circuit is then the
> >'cause' of establishing a reflection at the junction point in the same
way
> >as if a physical short were shunted across the main line. This is where
> >Cecil and I disagree--I consider the 'short' resulting from the wave
> >interference the cause of the reflection, not as the end result.
> >
> >Perhaps you can offer some insight to our dilemma. Is one right and the
> >other wrong, or do we simply have two viewpoints that are equally valid?
> >
> >Walt, W2DU
> >
> Hi, Walt,
> I'm not qualified to judge cause and effect when it comes
to
> questions of electromagnetics. The fellows who understand quantum
> mechanics would probably tell me I was wrong, anyway, to even think in
> such terms. It's obvious a quarter wave stub wouldn't work without the
> reflections. On the other hand, if you can substitute a real short for a
> virtual short and get exactly the same results, -- at the frequency of

> interest -- the only reason you would care which caused what is if you
> wanted a rousing argument with someone, like Cecil, who wanted to
> follow a strictly physical interpretation, as opposed to an analytic
> interpretation of the observed phenomenon. I think saying that a
> virtual short causes reflections is fine for analysis. Keep in mind,
however,
> that the virtual short itself is caused by reflections internal to a
> quarter wavelength stub. In other words, I don't think you and Cecil
> should be arguing, since you agree about the essential points and
> only disagree about a point too precious to be worth bothering with.
> 73,
> Tom Donaly, KA6RUH

Thanks for the response, Tom, I appreciate it. The reason Cecil and I are continuing is because he apparently agrees with Steve Best on this point. Steve, of course, has been disputing my Chapters 4 and 23 in Reflections on this point for a long time. Steve claims these chapters are incorrect and misleading. To finalize his dispute he published some outrageously incorrect statements about my chapters in Part 3 of his QEX articles on wave mechanics. I wrote a rebuttal manuscript for publication in QEX, but the QEX editorial board rejected it, saying it wasn't acceptable for QEX. So as it stands now, the Dr. appears to be prevailing over a mere BS.

Thanks again, Tom,

Walt, W2DU

5085. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 23:26:32 UTC
From: Mike F <isobars@urxSpamDam.com>
Message-ID: <vVuaa.16077$Dp.3186@fe01.atl2.webusenet.com>
Source record: 122974
Cross-posted to: rec.radio.amateur.antenna,alt.rv

My Winnie came with that amplifier. My 1988 MH has one. They're everywhere; that tiny button you push to activate your crank-up antenna? Winegard amplifier, probably. Goooooood luck shuttin' all those down. Maybe THAT'S why Saddam has all those motor homes: they're part of his smart bomb defense system.

Mike

"Dave Platt" <dplatt@radagast.org> wrote in message news:v6krq2sfogjh9f@corp.supernews.com...
> >The FCC has told an Oregon couple to stop using its Winegard amplified
> >television antenna (Model Sensar/Roadstar) on their recreational
> >vehicle "until the condition causing harmful interference has been
> >corrected."
>
> I believe I saw mention of this basic problem a couple of months ago,
> in a different context. Some form of EMI from within the television
> antenna amplifier can apparently affect the behavior of certain GPS
> receivers, either preventing operation or causing them to calculate
> and display an incorrect location. Since some boats (coastal cabin
> cruisers, I suppose) may have these sorts of TV antenna amplifiers,
> and use GPS as part of their navigation systems, this problem was felt
> to present an actual safety hazard.

5086. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 23:36:48 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4dupm$aa1$1@slb2.atl.mindspring.net>
Source record: 122975

Well Andy......is it everytime you open your mouth or just once in a while
that you come off like some sort of a fool? You claim to have a ham radio
license, correct? And you dont even know the rules and regulations
concerning a licensed service and interference to part 15 devices.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030308082702.18913.00000104@mb-mh.aol.com...
> >The FCC has told an Oregon couple to stop using its Winegard amplified
> >television antenna
>
> Sure, if a Ham is interefered with, the FCC jumps right in, but when a
non-ham
> is interefered with by a ham, too bad.
>
> My grandparents were getting QRM'ed to death from a neighbor ham with a
bunch
> of yagi's, dipoles, verticals, etc.. He'd come over their radio, TV,
phone,
> etc... I emailed the FCC and they told me that unless I had proof that he
was
> operating illegally, they wouldn't even investigate it. What a double
standard,
> huh?!
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5087. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 23:40:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4dv2adco1@helle.btinternet.com>
Source record: 122977

With 'thought experiments' one must NEVER incorporate impossible components
such as zero resistance wires or lossless transmission lines.

Otherwise, imagination is stressed beyond breaking point and silly,
ridiculous, impossible conclusions are GUARANTEED.

To use a mathematical expression -

Infinity * Zero = Indeterminate.

All sensible logical argument comes to a sudden dead stop.

But it's great fun isn't it ?

Incidentally, I've switched from Californian Red to Bordeaux Claret.

Cheers ! Reg

5088. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 23:41:16 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4dv34$87p$1@slb5.atl.mindspring.net>
Source record: 122976

No...its not a troll....He really is that ignorant. Ive dealt with this goof for a while now....believe it.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message news:20030308113153.21727.00000043@mb-ft.aol.com...
> >What a stupid troll, HUH?
> >Dan, N9JBF
>
> Anyone without the same opinion as you is a troll, eh?
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5089. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-08 23:43:39 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4dv7kebf1@slb5.atl.mindspring.net>
Source record: 122978

I remember, and I think you do also, way back when the FCC came to call you
likely got 'quiet hours'. Whether it was your fault or not.

Remember those TVs with the 21 mc IF strips? Wasnt that fun?

Dan/W4NTI

"W6DKN" <w6dkn-nospam-@qsl.net> wrote in message
news:OBqaa.15992$Dp.9851@fe01.atl2.webusenet.com...
> VHFRadioBuff wrote:
> >> The FCC has told an Oregon couple to stop using its Winegard
> >> amplified television antenna
> >
> > Sure, if a Ham is interefered with, the FCC jumps right in, but when
> > a non-ham is interefered with by a ham, too bad.
> >
> > My grandparents were getting QRM'ed to death from a neighbor ham with
> > a bunch of yagi's, dipoles, verticals, etc.. He'd come over their
> > radio, TV, phone, etc... I emailed the FCC and they told me that
> > unless I had proof that he was operating illegally, they wouldn't
> > even investigate it. What a double standard, huh?!
>
> Not at all. The fact is that the consumer equipment is most likely at
> fault. If you read the owners manual for these consumer devices, it tells
> you that the device is prone to receiving unwanted signals and that by
> operating the equipment you agree to accept the interference (FCC part 15
> devices).
>
> Unless the ham operator is operating illegally, the reality is that his
> equipment is functioning properly and he is operating as per his FCC
> granted authority. You are a licensed operator and should therefore know
> how to correct interference problems with consumer devices. Why don't you
> help your grandparents out and apply a few simple techniques in their home
> to correct the deficiencies in their equipment?
>
> 73 de W6DKN
>
>
>

5090. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 00:21:35 UTC
From: JohnB <john.g8ozh@freeuk.co.uk>
Message-ID: <1047169137.7942.0@doris.uk.clara.net>
Source record: 122979

"JohnB" <john.g8ozh@freeuk.co.uk> wrote in message
news:1047129113.4947.0@ersa.uk.clara.net...
>
> "'Doc" <w5lz@cwis.net> wrote in message news:3E69A956.AB507461@cwis.net...
> >
> >
> > Soak over night in distilled water.
>
> I find it much more pleasant to soak overnight in other ditillation
> products..... ;-)
>
> JohnB
>
>
But you may find it affects the ability to spell........

JohnB

5091. Re: HamIV rotor motor start?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 01:13:11 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <lt2cncvx-LdhPvejXTWcog@ctc.net>
Source record: 122993

> Is there a "field expedient" cap I can use
> to replace the motor start cap in my Ham IV rotor?
>
> I guess they're relatively low voltage, but am unsure at what
> capacitance is required (and whether you can configure a pair
> of electrolytics to do the job?

YOu might try doubling the value of the value of the original capacitor and using two electrolytics of that value hooking the two negative leads together and using the positive leads. I have seen this in some magazines and it worked for a u-100 roatator for me. Also you can use two capacitors of the same value as the origional and paralleling them with some diodes placed so the AC will be rectified and applied to each capacitor with the proper polarity.

5092. Re: How do you shorten a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 01:16:43 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6A95FB.B467338@cwis.net>
Source record: 122980

Naaw, my spelling is terrible all the time.
'Doc

5093. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 01:31:14 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b4e5h0$os8$1@slb2.atl.mindspring.net>
Source record: 122982

Reg et al:

[snip]
"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:b4dv2adco1@helle.btinternet.com...
> With 'thought experiments' one must NEVER incorporate impossible
components
> such as zero resistance wires or lossless transmission lines.
>
> Otherwise, imagination is stressed beyond breaking point and silly,
> ridiculous, impossible conclusions are GUARANTEED.
>
> To use a mathematical expression -
>
> Infinity * Zero = Indeterminate.
>
> All sensible logical argument comes to a sudden dead stop.
>
> But it's great fun isn't it ?
>
> Incidentally, I've switched from Californian Red to Bordeaux Claret.
>
> Cheers ! Reg
[snip]

Sort of makes one wonder if circuit-theoretic concepts [Ohm and Kirchoff]
are
really consistent with field-theoretic concepts [Maxwell and Heaviside].

Is circuit-theory [Ohm-Kirchoff] a self-consistent theory within itself, or
does it
lead to contradictions? If so... what further assumptions/axioms can be
incorportated
into circuit theory to "fix" it?

--
As examples, circuit theory does not incorporate "radiation" or "skin
effects" per se,
unless the theory is augmented in an ad hoc way with additional frequency
dependent
resistance, etc... And so we know that circuit theory *is* inconsistent
with field
theory. Back in the 50's - 70's era "active" circuit theorists introduced
new realizable
"active" elements such as the gyrator, circulator, FDNR, GIC, etc.. [FDNR is

the
frequency dependent negative resistance introduced by Len Bruton, etc...]
But these
were/are not fundamentally "new" elements of circuit theory and do not "fix"
the
inconsistencies that occur in limiting situations.

Maybe circuit theory needs the introduction of some new elements which
would be used in combination instead of those "ideal" connecting wires
called conductors. I'll propose two new ones here on the newsgroup...

A) The "radiator" a resistor like element that accounts for the effects of
radiation.

B) The "skinor" a resistor like element that accounts for skin effects.

And so... the "wires" in every schematic should be replaced by a radiator
and a skinor. The problem I have now is, I wonder... should the radiator
be connected in parallel or in series with the skinor?

--

Is field-theory [Maxwell-Heaviside] a self-consistent theory or does
it also lead to contradictions? If so... etc...

Is either field-theory and/or circuit-theory fully consistent with physical
reality?
[Relativity says no!]

How can "practicioners" KNOW when their theory is about to fail them?

These "traps" can be as subtle as the mathematical "classic fallicies" such
as division by zero that trap the unwary.

e.g.

5094. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 01:32:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A99BD.3090608@ieee.org>
Source record: 122983

Walter Maxwell wrote:
> But Cecil, the zero voltage resulting from the interference between two
> equal but opposite-polarity voltages produces zero impedance, which is a
> short circuit. I refer you to Refs 35 and 39 in Reflections. Ref 35 is
> J.C.Slater, who was the Chairman of the MIT EE Dep't when he wrote the book
> "Microwave Transmission". Probably calling it a 'virtual' short is wrong,
> because it conjures up a non-reality, where the short produced by the
> interference is a real zero impedance.

Think about it, Walt. The impedance is zero because the the voltages
add up to zero. The zero impedance is the end result of the voltages
adding up to zero and not the cause of anything. The zero impedance
doesn't cause the voltages to add up to zero. The voltages adding
up to zero causes the zero impedance. The zero impedance doesn't cause
anything. It is the *end result* of the voltages adding up to zero.

True:
Destructive interference causes zero voltage which causes a virtual short

False:
A Virtual short causes zero voltage.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5095. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 01:42:43 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A9C13.3070206@ieee.org>
Source record: 122984

Tdonaly wrote:
> Is the wave reflection model's explanation a real explanation or
> just an assertion?

Please define "real".

> Secondly, in order to have destructive interference
> of a wave you have to have another wave doing the interfering, or
> a wave has to be reflected in such a way as to interfere with itself.
> If Melles-Griot is asserting the latter, then they're stating that
> reflection causes reflection.

They are not asserting that every reflection causes another reflection.
Ordinary non-glare glass simply cannot work without two coherent reflections
of the same light source.

> What is the point of making your point?

To lay to rest one more Old Wives' Tale. We have far too many Old Wives'
Tales in ham radio.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5096. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 01:43:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6A9C58.4080803@ieee.org>
Source record: 122985

Roy Lewallen wrote:
> Alas, superconductors are truly superconducting only at DC, and display
> a finite and increasing resistance with frequency.

I didn't know that, Roy. Thanks for the information.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5097. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 01:54:32 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E6A9ED8.7010404@mwci-news>
Source record: 122986

Roy Lewallen wrote:
>
>
>
>
> That's an interesting conclusion. I've always looked at the problem from
> the standpoint of limits -- if you put a resistor between the
> capacitors, the "missing" energy is all accounted for by dissipation in
> the resistor.

It is true as long as the resistance is greater
than zero. At R=0 it is not true. At R=0 there
is no resistive dissipation. In the "limit" there
is an anomaly in the conventional explanation.

This anomaly can be understood only by
mathematical reasoning, as I have suggested. And
for the benefit of all, this explanation was not
derived by myself but can be found in various
textbooks.

As a matter of fact if you perform the experiment
with a wideband detector present you will pick up
some RF in the detector even if the resistance is
not exactly zero.

Bill W0IYH

5098. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 01:56:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6l7r58vuj42aa@corp.supernews.com>
Source record: 122987

Peter O. Brackett wrote:
> . . .
> Maybe circuit theory needs the introduction of some new elements which
> would be used in combination instead of those "ideal" connecting wires
> called conductors. I'll propose two new ones here on the newsgroup...
>
> A) The "radiator" a resistor like element that accounts for the effects of
> radiation.
>
> B) The "skinor" a resistor like element that accounts for skin effects.
>
> And so... the "wires" in every schematic should be replaced by a radiator
> and a skinor. The problem I have now is, I wonder... should the radiator
> be connected in parallel or in series with the skinor?
> . . .

Outstanding idea! Of course we'll need real and virtual, dissipationless, radiationless, dissipative, and radiative versions of the radiator and skinor. But armed with them, I'm sure we'll finally be able to explain everything.

Roy Lewallen, W7EL

5099. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 02:01:29 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E6AA079.9030003@mwci-news>
Source record: 122988

J. McLaughlin wrote:
>
> ...but, gee whiz boys, has not this thread's transient died out?
>

Transients do not die out, they just fade into
insignificance. But not in these forums.

If the subject is interesting, what the hell?

Bill W0IYH

5100. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 02:02:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6l85n1aunvk6c@corp.supernews.com>
Source record: 122989

You're welcome. Superconductor AC resistance also increases with temperature, up to the critical temperature where the material is no longer a superconductor. Some of the high temperature superconductors have higher resistivity than copper at some frequencies and temperatures. (Copper gets to be a really, really good conductor at cryogenic temperatures.)

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> Alas, superconductors are truly superconducting only at DC, and
>> display a finite and increasing resistance with frequency.
>
>
> I didn't know that, Roy. Thanks for the information.

5101. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 02:06:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6AA1B2.1060705@ieee.org>
Source record: 122990

Walter Maxwell wrote:
> Thanks for the response, Tom, I appreciate it. The reason Cecil and I are
> continuing is because he apparently agrees with Steve Best on this point.

Over a year ago, I decided to do an in-depth study of the differences in your arguments and Dr. Best's arguments. I concentrated on an isolated impedance discontinuity within a transmission line. In the process of integrating the two arguments, I discovered the points of confusion between you and Dr. Best and have bridged the gap in the two arguments. I have probably spent 5000 hours thinking about this narrow subject. Good thing I am retired and unmarried.

Dr. Best is correct when he says that a virtual impedance is an effect and not the cause of anything. Wave interference theory is all that is needed to explain virtual impedances.

You are correct when you say, in a matched system, that all the reflected power is re-reflected back toward the load. There's nowhere else for it to go. Ordinary reflection and wave interference theory is all that is needed to explain 100% re-reflection of reflected power at a match point.

My extensive disagreements with Dr. Best are well known to this newsgroup. Jewish people are prohibited from uttering the name of God. I am prohibited from uttering the name of Dr. Best, presumably for the same reason.
--
73, Cecil, W5DXP http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5102. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 02:09:41 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6AA265.7070006@ieee.org>
Source record: 122992

Reg Edwards wrote:
> With 'thought experiments' one must NEVER incorporate impossible components
> such as zero resistance wires or lossless transmission lines.

Of course not, because everything becomes obvious and all arguments
would cease. Then what would become of r.r.a.a?

> Incidentally, I've switched from Californian Red to Bordeaux Claret.

It better not be French!
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5103. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 02:12:41 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b4e7un$40p$1@slb9.atl.mindspring.net>
Source record: 122991

Roy:

[snip]
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:v6l7r58vuj42aa@corp.supernews.com...
> Peter O. Brackett wrote:
:
:
> > A) The "radiator" a resistor like element that accounts for the effects
of
> > radiation.
> >
> > B) The "skinor" a resistor like element that accounts for skin effects.
:
:
> Outstanding idea! Of course we'll need real and virtual,
> dissipationless, radiationless, dissipative, and radiative versions of
> the radiator and skinor. But armed with them, I'm sure we'll finally be
> able to explain everything.
>
> Roy Lewallen, W7EL
[snip]

Wow! "We'll finally be able to explain everything!"

I love it... that could be the "moto" for this NG...

Maybe we should get the powers who rule the rraa to modify the NG FAQ's.
Perhaps the rraa FAQ's should be augmented with a new lead Q on the FAQ
list as follows:

rraa FAQ's

Q1. What is the purpose of the rec.radio.amateur.antenna USENET News Group.

A1. To finally be able to explain everything!
:
:
Qoo. What is the answer?

Aoo. 42!

;-)

--
Peter K1PO
Indialantic By-the-Sea, FL.

5104. Re: HamIV rotor motor start?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 02:12:50 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e6aa55a_3@news1.prserv.net>
Source record: 122994

They're around 85 Mfd at 50 VAC. A couple of 100 Mfd 100 VDC back to back with protective diodes should at east make it try. AC motor capacitors from a air conditioner or motor store are big, but work. Anything in the 50 to 150 Mfd range at 125 VAC will work.

--
Crazy George
Remove NO and SPAM from return address
"J" <twoube@yahoo.com> wrote in message
news:ou3l6vo5js5mqgn2dojtqnelov7gu7g68o@4ax.com...
> Is there a "field expedient" cap I can use
> to replace the motor start cap in my Ham IV rotor?
>
> I guess they're relatively low voltage, but am unsure at what
> capacitance is required (and whether you can configure a pair
> of electrolytics to do the job?
>
> Thanks for any hints
> J.

5105. Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 02:23:46 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E6AA5B2.172D40D6@osite.com.br>
Source record: 122995

"J. McLaughlin" wrote:
>
> It might be that these URLs will help:

Very helpfull pointers, J. specially the last.

> The latter reference has a long list of manufactures at the end of the
> article.

Unfortunately none of them available at my DIY shop.

> Let us know what such products are in PY-land. 73 Mac N8TT

But, thanks to your post and Ian's explanation of "latex"
meaning, I was able to identify a suitable product.

Well, latex here means exactly (or almost) that: natural
rubber, except when applied to paints, where they are most
of the time PVA based.

The sealant I've found this morning (before even powering
the 'puter) in the DIY shop was described in the label as
water-based asphalt emulsion. Its used over exposed
concrete, to make it more imprevious, as for example under a
garden. It MUST be hidden from UV, so it is covered with
earth or a thin concrete mix. You got it...
The manufacturer is (AFAIK) a local one, Otto Baumgart
Group. The product name is (if I recall correctly) VEDAPREN.
It is a 2 gallon can and costs about US$ 5.

Much cheaper than paint for the bulk. I should not have
other use for it besides treating wooden antenna frames or
prepping the antenna base on the rooftop of the building. I
live in a 19 (how much I said previously) storey building,
with 36 apartments. The rooftop is plain, and over it there
are TV antennas and lightning arrestors (is it the name?),
that Franklyn (Ben Franklyn) type. And warning lights (for
pilots?).

Have been up there just one time. I may have to go there
more often.
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

5106. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 02:27:12 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <jtxaa.10707$ah3.4513@fe10.atl2.webusenet.com>
Source record: 122996

Dan,

Don't tease the boy. Remember he's a Government Rent-A-Cop.

--
73,
Chuck
KE4ETH
USA-NA

"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
news:b4dupm$aa1$1@slb2.atl.mindspring.net...
> Well Andy......is it everytime you open your mouth or just once in a while
> that you come off like some sort of a fool? You claim to have a ham radio
> license, correct? And you dont even know the rules and regulations
> concerning a licensed service and interference to part 15 devices.
>
> Dan/W4NTI
>
> "VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
> news:20030308082702.18913.00000104@mb-mh.aol.com...
> > >The FCC has told an Oregon couple to stop using its Winegard amplified
> > >television antenna
> >
> > Sure, if a Ham is interefered with, the FCC jumps right in, but when a
> non-ham
> > is interefered with by a ham, too bad.
> >
> > My grandparents were getting QRM'ed to death from a neighbor ham with a
> bunch
> > of yagi's, dipoles, verticals, etc.. He'd come over their radio, TV,
> phone,
> > etc... I emailed the FCC and they told me that unless I had proof that
he
> was
> > operating illegally, they wouldn't even investigate it. What a double
> standard,
> > huh?!
> > =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> > 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> > Beachwood, NJ USA! Grid FM29vw
> > http://vhfradiobuff.tripod.com
>
>

5107. Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 02:32:49 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E6AA7D1.B6AC8C70@osite.com.br>
Source record: 122997

Rick Littlefield wrote:

> My 3-element
> yagi did perceptibly better both in gain and front-to-back. I like the
> Hexbeam...think its mechanical design is clever and like the way it blends in.

Yes...

Mechanical design is clever. I think it may be quite easy to
align it properly.

It is my preferred antenna project by now. As said
previoulsy on this NG, I am working to get one built. I
preferred it over a Yagi because ease of construction, since
I have no access to a suitable workshop to fabricate the
aluminium elements.

The HB, on the other hand is just fiberglass (or bamboo, or
doweling) and wire. We all have the tool to work with wire,
and maybe even fiberglass. So... ease of construction is
maximum...Left behind dipoles, of course.

Being a high-dweller, I have no way to put wire dipoles or
big wire antennas, so a beam is a must. The station will
probably never be a big gun but certainly more than enough
for rag-chewing.
--
Paulo E.P. Marcondes
pepm@osite.com.br

5108. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 03:37:04 UTC
From: tdonaly@aol.com
Message-ID: <20030308223704.24032.00000086@mb-cs.aol.com>
Source record: 122998

Reg wrote,
>
>Incidentally, I've switched from Californian Red to Bordeaux Claret.
>
>Cheers ! Reg
>

The unkindest cut of all. No more British suds for me!
Without Reg's support, the California wine industry would have
failed years ago. First Silicon Valley, now this.
73,
Tom Donaly, KA6RUH

5109. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 03:40:49 UTC
From: Gary Rotter <Gary.Rotter@Prodigy.net>
Message-ID: <5Jyaa.365$7K5.29780313@newssvr15.news.prodigy.com>
Source record: 122999

The reason that I was interested in this configuration is that it should not interact with nearby metal objects. I was concerned that the losses in such a feedline when driving an antenna with high swr would be much greater than with the traditional ladder line. Is this true?

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:POWdnTrG-rw0lPSjXTWcqA@comcast.com...
>
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> news:b4aqn3dfb1@venus.btinternet.com...
> > Why would anybody want to shield a balanced feedline to a radio antenna
?
>
> I have seen is used as balance 100 or 150 ohm transmission line.
Alternative
> is flat electrical appliance cord. I once measured some as 110 ohms.
>
> Tam/WB2TT
> >
> > What advantage would be gained by using a double-shielded coax feedline?
> > ---
> > Reg, G4FGQ
> >
> > ==========
>
>
>

5110. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 03:53:32 UTC
From: tdonaly@aol.com
Message-ID: <20030308225332.24032.00000087@mb-cs.aol.com>
Source record: 123000

Cecil wrote,
>
>
>> What is the point of making your point?
>
>To lay to rest one more Old Wives' Tale. We have far too many Old Wives'
>Tales in ham radio.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

Does a capacitor and an inductor in series constitute a short at a
resonant frequency? If I put such across the end of a transmission line
do I have to analyze the field between the plate of the capacitor and the
field surrounding the inductor in order to talk about it? Or can I just call
it a short at the relevant frequency and hope I don't get nitpicked to death
on the newsgroup?
73,
Tom Donaly, KA6RUH

5111. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 04:08:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6ABE2D.6030200@ieee.org>
Source record: 123001

Tdonaly wrote:
> Does a capacitor and an inductor in series constitute a short at a
> resonant frequency? If I put such across the end of a transmission line
> do I have to analyze the field between the plate of the capacitor and the
> field surrounding the inductor in order to talk about it? Or can I just call
> it a short at the relevant frequency and hope I don't get nitpicked to death
> on the newsgroup?

That's a physical impedance which can cause something, not a virtual short
which is only an end result.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5112. W5QJR Loop Book ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 04:26:32 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v6l5nasu4kj541@corp.supernews.com>
Source record: 122981

Anyone have an aold copy of the loop book by W5QJR (think that is the call).
I had one and have apparently lost it.

Doug

N4IJ

5113. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 04:34:36 UTC
From: tdonaly@aol.com
Message-ID: <20030308233436.24032.00000091@mb-cs.aol.com>
Source record: 123002

Cecil wrote,
>
>Tdonaly wrote:
>> Does a capacitor and an inductor in series constitute a short at a
>> resonant frequency? If I put such across the end of a transmission line
>> do I have to analyze the field between the plate of the capacitor and the
>> field surrounding the inductor in order to talk about it? Or can I just
>call
>> it a short at the relevant frequency and hope I don't get nitpicked to
>death
>> on the newsgroup?
>
>That's a physical impedance which can cause something, not a virtual short
>which is only an end result.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>

How do you know?
73,
Tom Donaly, KA6RUH

5114. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 04:42:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6AC649.9050902@ieee.org>
Source record: 123003

Tdonaly wrote:
> Cecil wrote,
>>That's a physical impedance which can cause something, not a virtual short
>>which is only an end result.

> How do you know?

Lack of evidence to the contrary.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5115. Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 05:06:54 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v6livkhoaeu301@corp.supernews.com>
Source record: 123004

Dear Paulo: I can read Spanish, but have some problems with
Portuguese. It appears that VEDAPREN is good for sealing out water.
However, the manufacturer seems to say that VEDAPREN should be covered
with something to keep sun light from its surface. This is unexpected.
Might have a language problem as the product is shown coating a roof.
You may need to cover the VEDAPREN with black, outdoor paint. You
might wish to talk to an engineer at the company to find out what
protection is needed from the sun - if any.

Take a look here:
http://www.vedacit.com.br/produtos/fichas/vedapren.htm

Good luck with your project.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Paulo Marcondes" <pepm@osite.com.br> wrote in message
news:3E6AA5B2.172D40D6@osite.com.br...
> "J. McLaughlin" wrote:
> >
> > It might be that these URLs will help:
>
> Very helpfull pointers, J. specially the last.
>
> > The latter reference has a long list of manufactures at the end of
the
> > article.
>
> Unfortunately none of them available at my DIY shop.
>
> > Let us know what such products are in PY-land. 73 Mac N8TT
>
> But, thanks to your post and Ian's explanation of "latex"
> meaning, I was able to identify a suitable product.
>
> Well, latex here means exactly (or almost) that: natural
> rubber, except when applied to paints, where they are most
> of the time PVA based.
>
> The sealant I've found this morning (before even powering
> the 'puter) in the DIY shop was described in the label as
> water-based asphalt emulsion. Its used over exposed

> concrete, to make it more imprevious, as for example under a
> garden. It MUST be hidden from UV, so it is covered with
> earth or a thin concrete mix. You got it...
> The manufacturer is (AFAIK) a local one, Otto Baumgart
> Group. The product name is (if I recall correctly) VEDAPREN.
> It is a 2 gallon can and costs about US$ 5.
>
> Much cheaper than paint for the bulk. I should not have
> other use for it besides treating wooden antenna frames or
> prepping the antenna base on the rooftop of the building. I
> live in a 19 (how much I said previously) storey building,
> with 36 apartments. The rooftop is plain, and over it there
> are TV antennas and lightning arrestors (is it the name?),
> that Franklyn (Ben Franklyn) type. And warning lights (for
> pilots?).

A great place to place an antenna!
>
> Have been up there just one time. I may have to go there
> more often.
> --
> Paulo E.P. Marcondes
> Geï¿½logo - Mestrando USP
> pepm@osite.com.br

5116. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 05:23:34 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4ej4m$1hv$1@venus.btinternet.com>
Source record: 123005

"Tdonaly" wrote
> Reg wrote,
> >
> >Incidentally, I've switched from Californian Red to Bordeaux Claret.
> >
> >Cheers ! Reg
> >
>
> The unkindest cut of all. No more British suds for me!
> Without Reg's support, the California wine industry would have
> failed years ago. First Silicon Valley, now this.
> 73,
> Tom Donaly, KA6RUH
>
==========

It all comes under the general headings of "Economic Sanctions" and
"Preferred Trading Nations".

88, ;o)
Reg, G4FGQ

5117. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 05:30:46 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E6A8920.81501E98@att.net>
Source record: 123006

"Ian White, G3SEK" wrote:

> The "driveway" part of Yuri's description might be more helpful - look
> for something that forms a thick, tough, flexible, waterproof skin.
>

I question the longevity of any driveway coating compound I've seen
so far. I have an asphalted driveway which I coat each year because
it expands in summer and contracts in winter and each fall is full of
small cracks which would surely leach water and in a few seasons
cause the layer of asphalt to break up. So each year it gets renewed.
Using the stuff on a wooden antenna support may be another story.

5118. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 05:38:43 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E6AD354.885BCC9@att.net>
Source record: 123007

Dick Carroll wrote:

> "Ian White, G3SEK" wrote:
>
> > The "driveway" part of Yuri's description might be more helpful - look
> > for something that forms a thick, tough, flexible, waterproof skin.
> >
>
> I question the longevity of any driveway coating compound I've seen
> so far. I have an asphalted driveway which I coat each year because
> it expands in summer and contracts in winter and each fall is full of
> small cracks which would surely leach water and in a few seasons
> cause the layer of asphalt to break up. So each year it gets renewed.
> Using the stuff on a wooden antenna support may be another story.

I should have added that there are quality variations in the brands of the
compounds and some definitely
are more durable than others. I avoid the mostly pine pitch compounds in
favor of those with
asphalt or latex/rubber ingredients

Dick

5119. Re: Rare earth mag-mount for HT when mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 06:13:01 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <NXAaa.108513$lf5.4560380@twister.southeast.rr.com>
Source record: 123008

XYL uses a magmount for 2m rig in here Cherokee. I use some 100lb test
fishing line to secure it to the roof luggage rack as alittle extra
insurance.

"J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote in message
news:If99a.2366$Xo3.393908@news20.bellglobal.com...
> "Robert A. Book" asked about
> > ...mag-mount antennas.
>
> Make sure that the maximum extended length (exterior coax cable plus the
> whip) isn't long enough for the end to get pinched under the rear wheel
when
> the magnet mount antenna eventually comes off (and it ~will~ eventually
come
> off). You won't be worried about paint scratches if the antenna gets
> pinched between the tire and the ground.
>
> Have you ever seen a transceiver "exit stage left" at well over (ahem) 100
> kmh ? Me neither....in my case I had about one cm to spare between the
> antenna and the left rear wheel.
>
> Betcha didn't think about that possibly-expensive, potentially-fatal
failure
> mode...
>
>

5120. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 06:19:59 UTC
From: Don <rver123@mindspring.com>
Message-ID: <3E6ADD0F.3719@mindspring.com>
Source record: 123009
Cross-posted to: rec.radio.amateur.antenna,alt.rv

Ralph Lindberg & Ellen Winnie wrote:
> >
> Last year the FCC had an RVer in the Seattle area shut down their
> Winegard, as it was interfering with government radios (I forget if it
> was Fire, Police or...)
>
At a Bounder Rally in Tucson a couple of years ago, Winegard had a crew checking everyone's antenna and replacing those with this problem. I imagine this problem has cost them a few bucks.

Don

5121. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 07:25:16 UTC
From: ryeburn@sfu.caz
Message-ID: <ryeburn-0803032325160001@bni030qny8kc.bc.hsia.telus.net>
Source record: 123010

In article <v6koc62i29gqa8@corp.supernews.com>, Roy Lewallen
<w7el@eznec.com> wrote:

> William E. Sabin wrote:

> > If there is zero resistance and zero external circuit inductance, then
> > at the instant of connection an impulse (dirac function) of wideband
> > electromagnetic radiation occurs that accounts for the missing energy.
> > The solution to the differential equation requires this impulse at t=0.
> > Charge is conserved, so the radiation is mandatory.
> >
> > Bill W0IYH
>
> That's an interesting conclusion. I've always looked at the problem from
> the standpoint of limits -- if you put a resistor between the
> capacitors, the "missing" energy is all accounted for by dissipation in
> the resistor. This is true for any value of resistor, no matter how
> arbitrarily small you make it. The integral of I^2 * R dt (the energy)
> stays constant for all values of R. I've always thought that the
> integral retains this value, then, at the limit of R = 0. At that point,
> I is infinite and current flows for zero time. But doesn't the integral
> stay the same? That is, the "missing" energy can still be accounted for
> by I^2 * R dissipation (with zero R and infinite I), using the concept
> of limits described by David. If I'm misapplying the concept, please
> correct me.

I think you're both right. What happens to the energy dissipated in the
resistance (even in the limit case)? Doesn't it get radiated as "heat"?
(Never mind what part of the spectrum the radiation occupies.) If the
resistance approaches zero in any sort of a conductor setup I can imagine,
the product of specific heat and mass of the conductor is going to
approach zero too, and the resulting energy doesn't have any "stuff" to to
raise the temperature of, so it must go somewhere else.

David, ex-W8EZE

--
David or Jo Anne Ryeburn
ryeburn@sfu.caz
To send e-mail, remove the letter "z" from this address.

5122. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 07:51:40 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <k+dv2MBMKva+EAXQ@ifwtech.co.uk>
Source record: 123016

Gary Rotter wrote:
>The reason that I was interested in this configuration is that it
>should not interact with nearby metal objects. I was concerned that the
>losses in such a feedline when driving an antenna with high swr would
>be much greater than with the traditional ladder line. Is this true?
>
The losses *could* be much greater... depending on the SWR, the length
and the matched loss of the line (which in turn is a function of
frequency).

That's why the answer for a short length though the wall is different
from the answer for a long length up the tower.

There are various tools to help quantify this, if you're interested. I
believe one of Reg's programs will do it, and there's an Excel
spreadsheet with graphs in the 'In Practice' part of my site.

(In all cases, you're unlikely to find data for a balanced shielded
feedline because they're not very common. Use the data for the closest
equivalent normal coax, which is probably RG58.)

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5123. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 08:17:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jbul6v4ka54m329oa0taqrgp4klg90fv63@4ax.com>
Source record: 123011

On Sat, 08 Mar 2003 22:42:49 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Tdonaly wrote:
>> Cecil wrote,
>>>That's a physical impedance which can cause something, not a virtual short
>>>which is only an end result.
>
>> How do you know?
>
>Lack of evidence to the contrary.

Hi Cecil,

Really now, evidence? This has been a dream from the beginning. I'm
with Tom, you couldn't possible tell the difference.

73's
Richard Clark, KB7QHC

5124. Items FA - Please take a look.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 10:13:36 UTC
From: ? <Martin@NO_SPAM.g1gyc.demon.co.uk>
Message-ID: <b4f4bukpp1$8300dec7@news.demon.co.uk>
Source record: 123012
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

KiloVac Relay #1
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3011078525

KiloVac Relay #2
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3011079054

Wire Aerial
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3011084363

Speaker
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3011114227

Other Stuff
http://cgi6.ebay.co.uk/ws/eBayISAPI.dll?ViewSellersOtherItems&userid=g1gyc

Thanks

5125. Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 11:59:55 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <%0Gaa.8750$Oz1.602357@bgtnsc05-news.ops.worldnet.att.net>
Source record: 123013

Can a center fed 80 mtr dipole with ladder line be used
with with an L network on 80-10 mtrs?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.459 / Virus Database: 258 - Release Date: 2/25/03

5126. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 12:41:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6B365F.5070101@ieee.org>
Source record: 123014

Richard Clark wrote:
> Really now, evidence? This has been a dream from the beginning. I'm
> with Tom, you couldn't possible tell the difference.

I couldn't possibly tell the difference if there was a transmission
line angel directing the energy traffic in a transmission line.
Adding extraneous layers of explanations like virtual impedances
and transmission line angels only takes us farther away from
the facts of reality. I can describe what happens at a "virtual
short" without once mentioning a "virtual short". It is simply
a conceptual shortcut. It is only useful, however, while we
continue to realize that reality causes math models. Math models
do NOT cause reality.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5127. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 12:43:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6B36FE.6010304@ieee.org>
Source record: 123015

marvin rosen wrote:
> Can a center fed 80 mtr dipole with ladder line be used
> with with an L network on 80-10 mtrs?

If you can reconfigure your L-network and if your L-network
components have sufficient range.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5128. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 13:22:46 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <3EKdne-6ncK03fajXTWcqg@crocker.com>
Source record: 123017

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:b4e5h0$os8$1@slb2.atl.mindspring.net...
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> news:b4dv2adco1@helle.btinternet.com...
> > With 'thought experiments' one must NEVER incorporate impossible
> components
> > such as zero resistance wires or lossless transmission lines.
> >
> > Otherwise, imagination is stressed beyond breaking point and silly,
> > ridiculous, impossible conclusions are GUARANTEED.

ONLY if you don't understand the assumptions and restrictions on using
'perfect' components.

>
> Sort of makes one wonder if circuit-theoretic concepts [Ohm and Kirchoff]
> are
> really consistent with field-theoretic concepts [Maxwell and Heaviside].
>
> Is circuit-theory [Ohm-Kirchoff] a self-consistent theory within itself,
or
> does it
> lead to contradictions? If so... what further assumptions/axioms can be
> incorportated
> into circuit theory to "fix" it?

they are both consistent, as long as you remain in the realm where they are
consistent...

> Maybe circuit theory needs the introduction of some new elements which
> would be used in combination instead of those "ideal" connecting wires
> called conductors. I'll propose two new ones here on the newsgroup...
>

please don't. sufficient components and descriptions are already out there.
you just have to know when to use the appropriate approximations and when
you must use a more rigorous calculation.

> How can "practicioners" KNOW when their theory is about to fail them?

education.

>
> These "traps" can be as subtle as the mathematical "classic fallicies"
such
> as division by zero that trap the unwary.

it is how to handle limiting conditions that is part of the education of electrical engineers. boundaries, high and low frequencies, perfect vs real, replacing parts of circuits with simpler parts for analysis, all of these are parts of the toolbox of an engineer... unfortunately some of them get thrown around in discussions on this newsgroup without the proper caveats always being presented.

A typical example in this discussion was the replacing of the 1/4 wave open stub with a short circuit at the connection to the main line. this is a perfectly good analytic technique to simplify the analysis of a complex system.... however, the unstated assumptions must be known. in this case you can only replace the stub with a short circuit at one frequency and only in sinusoidal steady state. it will not work if you are analyzing a range of frequencies, a signal with harmonics, or a transient (btw, would someone please fix the subject of this thread!).

The use of 'perfect' components is also a very valid technique and is used in most simple analysis because it makes a first order estimation of what a circuit does much, MUCH, easier.... just think of how much uglier a simple l-c circuit would be to analyze if you had to account for interwinding capacitances, series resistance, leakage in the capacitor, inductance in the capacitor leads, and all the other junk that goes into a real circuit. if you really want and need to get into that I suggest you invest in one of the better circuit design packages, most of us don't really need that level of detail because we work in frequency ranges where most of those effects are much smaller than what we are trying to do.

That brings me to the general topic of frequency vs size vs approximations... For the most part when working in HF and even most VHF applications the circuit components are much smaller than a wavelength. as long as you keep circuits reasonably small you can safely ignore radiating wires, skin effect, lead inductance, propagation delays, and a host of other things that make circuit design really ugly at higher frequencies. but again, this is one where you have to know when you can use simple ohm and kirchoff approximations and when you must include maxwell in the mix. yes, ohm's law and kirchoff's laws are only approximations, specifically they are only good for the class of circuits generally called 'lumped' circuits... those where the components and interconnections are much smaller than a wavelength at the highest frequency used. this is why kirchoff's law doesn't work for transmission lines and antennas, and also why you end up with things that you have been refering to as 'virtual shorts' that don't seem to really be short circuits. referring to a 'short circuit' and thinking ohm's law is good when you are using batteries or even low frequencies in lumped circuits, but as you have seen in this thread a short circuit in a 'distributed circuit' (a circuit that is a significant fraction of a wavelength in size) can do very different things from what you expect.

also when you get into distributed circuits such as antennas, feedlines, striplines, design of circuit boards for UHF and up, and even the design of ICs for computers these days you get into the realm where you must also include maxwells laws effects to account for lead inductance, coupling between parallel conductors, propagation delays from one side of a chip to

the other, the dielectric constant of the circuit board or silicon substrate, and all sorts of other ugly effects.

in summary, if you have survived this long... one repeating problem I see in discussions on this group is the different level of comprehension of the approximations necessary to analyze a given problem, or even to state a problem completely in some cases. much of the arguing is often over the basic assumptions that have been made to simplify an analysis, and the often unstated restrictions imposed by those simplifications.. and while these may be valid and obvious to one writer, the next contributor to the thread may (usually unintentionally) violate them and drive the discussion off course because the restrictions imposed by the original simplification of the analysis have been violated. again, a typical example of this is the replacement of the 1/4 wave open stub with a short circuit.... while the writer who proposed this realizes it is an approximation and only valid under certain very limited conditions, not everyone else contributing to the thread knows those restrictions. another example would be that at the point you refer to as a 'virtual short' you could cut off the line past that point and replace it with a real short and the remaining circuit would be unaffected.... again, only valid at a single frequency in sinusoidal steady state... but the next step for someone who doesn't know this is to replace the generator with a battery and note that infinite current flows where in the original circuit no current would flow... an obvious violation of the restrictions of the simplification to the writer who replaced the virtual short with a real short, but not so obvious to anyone else.

of course on the other hand are those who know enough about the assumptions and restrictions to state a problem such that it falls on a dividing line where they can switch assumptions at will and confuse both sides. this seems to be where the endless arguments over matching networks and amplifier tuning end up... there are points where you can logically and properly convert from lumped to distributed models and back again, but you must be very careful to track the simplifications and their restrictions or you end up in a trap that leads to unexplainable results... I think this is where the old conjugate match vs complete reflections argument ends up, they are probably both correct but in different domains that require different sets of assumptions.

5129. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 14:08:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4fht7ltr1@helle.btinternet.com>
Source record: 123018

What's the difference between a balanced line laid across a galvanised iron roof and a screened (shielded) balanced line ?

Reg, G4FGQ

5130. Discone & IC-R1?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 14:18:32 UTC
From: Harry <hprice100@hotmail.com>
Message-ID: <o8jm6v4fce2hf3ub95ut9bn1t1njiqaeji@4ax.com>
Source record: 122919

Has anyone ever used the Discone sold by Radio Shack with an Icom IC-R1? I was informed that it might saturate the front end circuitery of the IC-R1, is this true. I know the IC-R1 is old, but it is still serving its purpose!!

Thanks

Harry

5131. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 14:38:41 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <mrjm6vs17ogrh18g3vdlsgpo462hv53cae@4ax.com>
Source record: 122920

On Sun, 9 Mar 2003 13:22:46 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:
...snip
>
>... I think this is where
>the old conjugate match vs complete reflections argument ends up, they are
>probably both correct but in different domains that require different sets
>of assumptions.

Dear David,

All of your points were very well stated. Amen.
On your last topic, above, I would be interested in your opinions
regarding the necessity for the source to be power limited and
operating at its maximum available power vis-a-vis the conjugate
match, efficiency, and source impedance.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

5132. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 15:04:00 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <gLidnWkY0pt_yvajXTWcoQ@crocker.com>
Source record: 122921

"Robert Lay (W9DMK)" <w9dmk@crosslink.net> wrote in message
news:mrjm6vs17ogrh18g3vdlsgpo462hv53cae@4ax.com...
> On Sun, 9 Mar 2003 13:22:46 -0000, "David Robbins" <k1ttt@arrl.net>
> wrote:
> ...snip
> >
> >... I think this is where
> >the old conjugate match vs complete reflections argument ends up, they
are
> >probably both correct but in different domains that require different
sets
> >of assumptions.
>
> Dear David,
>
> All of your points were very well stated. Amen.
> On your last topic, above, I would be interested in your opinions
> regarding the necessity for the source to be power limited and
> operating at its maximum available power vis-a-vis the conjugate
> match, efficiency, and source impedance.
>
that is more of a question for amp designers... in that area i am able to
use and troubleshoot amps, but have never really looked into the
interactions of design parameters like that.

5133. Re: HamIV rotor motor start?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 15:24:57 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <w4Wcndo8KvNUwfajXTWcpw@comcast.com>
Source record: 122922

>
> YOu might try doubling the value of the value of the original capacitor
and
> using two electrolytics of that value hooking the two negative leads
> together and using the positive leads. ....

I did this with an AR22 rotator, and it works. However, put a 1N4001 diode across each of the electrolytits, polarized so that the arrow on the diode is pointing towards the positive capacior terminal. If you don't use the diodes, the other capacitor acts like a diode and could degrade after a while. Since only one capacitor is ON at a time, you don't have to double the cap value, although they probably skimped on the value to save cost.

Tam/WB2TT

5134. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 15:55:04 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030309105504.18798.00000082@mb-ci.aol.com>
Source record: 122923

>People that make remarks like yours, are, in my opinion, trying to get
>a rise out of people and fit the typical profile of a troll

A troll posts only to stir things up. I don't post to stir things up. I mearly post opinions that you don't share. A troll also posts an original message and then never checks the thread again.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5135. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 15:55:42 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030309105542.18798.00000083@mb-ci.aol.com>
Source record: 122924

>
>No...its not a troll....He really is that ignorant. Ive dealt with this
>goof for a while now....believe it.
>
>Dan/W4NTI

That's only the radiation from the chemical school clouding your brain. Don't worry. The half-life of that stuff over at McClellan is only like 500 years.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5136. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 15:57:35 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030309105735.18798.00000084@mb-ci.aol.com>
Source record: 122925

>Unless the ham operator is operating illegally, the reality is that his
>equipment is functioning properly and he is operating as per his FCC
>granted authority.

And FCC authority also allows for station inspections. I mearly asked them to inspect his station before trying to RF proof the house but they couldn't be bothered, but yet some RV user bothers a ham up on UHF on a single obscure frequency, and the FCC is all over them.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5137. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 15:59:18 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030309105918.18798.00000085@mb-ci.aol.com>
Source record: 122926

>You claim to have a ham radio
>license, correct? And you dont even know the rules and regulations
>concerning a licensed service and interference to part 15 devices

Who needs to learn rules and regulations? All you have to do is memorize a
bunch of questions and answers.

Remember the days when you used to be able to memorize things, before all those
lovely chemicals from McClellan got into your drinking water?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5138. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 16:18:02 UTC
From: tdonaly@aol.com
Message-ID: <20030309111802.27661.00000064@mb-mb.aol.com>
Source record: 122927

Cecil wrote,
>
>Tdonaly wrote:
>> Cecil wrote,
>>>That's a physical impedance which can cause something, not a virtual short
>>>which is only an end result.
>
>> How do you know?
>
>Lack of evidence to the contrary.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

That's what I thought.
73,
Tom Donaly, KA6RUH

5139. Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 17:04:19 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E6B7413.2FE6CD5E@osite.com.br>
Source record: 122928

"J. McLaughlin" wrote:
>
> Dear Paulo: I can read Spanish, but have some problems with
> Portuguese. It appears that VEDAPREN is good for sealing out water.
> However, the manufacturer seems to say that VEDAPREN should be covered
> with something to keep sun light from its surface. This is unexpected.
> Might have a language problem as the product is shown coating a roof.
> You may need to cover the VEDAPREN with black, outdoor paint. You
> might wish to talk to an engineer at the company to find out what
> protection is needed from the sun - if any.
>
> Take a look here:
> http://www.vedacit.com.br/produtos/fichas/vedapren.htm

J., your portuguese reading (or guessing) is pretty good.
The infomation I've read from the label is exactly the same.
I've not browsed the 'net prior to browsing the DIY shop...

It may be an interesting problem to solve... this of using
roof sealant to treat bamboo spreaders...

But... browsing their website...it seems that they may carry
a different product which may better suit the application.

Isn't it funny that the link had to come from you? Thanks
for that.
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

5140. Re: Measuring Potential Difference Above Ground

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 17:16:53 UTC
From: Wayne Watson <mtnviews@earthlink.net>
Message-ID: <3E6B7774.907561D4@earthlink.net>
Source record: 122929

BTW, SA answered my question about the AS column. Iasked about the Feb. 2001 issue for AS. They said
it's available on their site as the last issue, Feb. 2003!!! It took them 10 days to respond. I told
them, no I was looking for the defunct colum and for 2001. That was 5 days ago. Maybe I'll get an
answer in another 5 days!! Geeze! I'll send a message to Shawn Carlson at SAS. He wrote the last 5
or so years of columns.

Dave Platt wrote:

> In article <3E5AF56B.E71E33A0@earthlink.net>,
> Wayne Watson <mtnviews@earthlink.net> wrote:
>
> >Yes, I have the CD and the magazine. Why they pulled the pages, I do not know.
>
> I've read that it was pulled, because it wasn't actually being read
> all that much. The magazine's owners felt that other uses of the
> available pages would be of greater interest to the magazine's
> readers (i.e. greater readership -> more sales -> higher advertising
> revenue, I suppose).
>
> Sad, really, that interest in actually _doing_ science on an
> amateur/homebrew basis has sunk so low.

--
Wayne T. Watson (121.015 Deg. W, 39.262 Deg. N, 2,701 feet), Nevada City, CA

Consumer Tip: Save your gasoline money if you are buying premium gas. It's
unnecessary to use it unless your engine pings. Use regular instead.
-- Dr. Bill Wattenberg, Phd., Physics, KGO radio talkshow host.

Web Page: <home.earthlink.net/~mtnviews>
Imaginarium Museum: <home.earthlink.net/~mtnviews/imaginarium.html>

5141. Spreader Treatment [was: Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)]

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 17:19:57 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E6B77BD.C4BFE561@osite.com.br>
Source record: 122930

"J. McLaughlin" wrote:
> However, the manufacturer seems to say that VEDAPREN should be covered
> with something to keep sun light from its surface. This is unexpected.
> Might have a language problem as the product is shown coating a roof.

This is only for the regular (black) VEDAPREN, there is
another one, white, which does not require shielding from
sunlight.

I am not specialist in this field... It happened just to
know that there was something similar to what Yuri
described... Now, I have a pretty good answer.

--
Paulo E.P. Marcondes
pepm@osite.com.br

5142. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 17:29:30 UTC
From: davearea51@aol.com
Message-ID: <20030309122930.01686.00000060@mb-ca.aol.com>
Source record: 122931

Consider going just one step farther: a Pi-Network. In reality, you have the versatility of a Pi AND a bidirectional L-Network without switches to turn the L-Network around.

Dave - W0LEV

5143. Re: Which ferrite toroid cores should I buy for an SWR/wattmeter?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 18:08:35 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <DqLaa.45154$ki.1709787@twister.southeast.rr.com>
Source record: 122933
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.engineering.electrical,sci.electronics.design,sci.electronics.components

try an Amidon T-68-2,

"Repeating Decimal" <SalmonFly@attbi.com> wrote in message
news:BA898998.45154%SalmonFly@attbi.com...
> in article iiU8a.2750$se1.1850583@newssvr28.news.prodigy.com, Bruce
Raymond
> at raymondb@dma.org wrote on 3/3/03 6:35 PM:
>
> > I'll show my ignorance here - is there a convenient way to calculate the
> > temperature rise in the core that Jason originally referred to? I'd end
up
> > pulling out an old textbook and calculating Grashof and Nusselt numbers
> > for laminar flow from a vertical plate, and then finding the thermal
> > equilibrium
> > point. I imagine that there's an easier method for standard components.
>
> When the core breaks, you have reached the curie temperature.
>
> Bill
>

5144. Re: Expert opinion about Antenna Tuners...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 18:19:37 UTC
From: lsasmazel@comcast.net
Message-ID: <882020e3.0303091019.6380e193@posting.google.com>
Source record: 122934

Garry,

Thanks for the replay. This is a MFJ-969 tuner Dummy Load is in the tuner. Even I change antenna selector to any antenna position with out any antenna connected to this unit this is happening.

5145. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 18:41:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6B8AF5.4040008@ieee.org>
Source record: 122936

Tdonaly wrote:
> Cecil wrote,
>>Lack of evidence to the contrary.
>
> That's what I thought.

That's the way engineers are supposed to think, Tom. When
there is evidence on one side and no evidence on the other
side, it is logical to go with the side with some evidence
rather than the side with no evidence.

Or can you submit an example of a virtual impedance that
causes anything in the absence of a physical impedance
discontinuity pre-existing at the same point?

If there is no physical impedance discontinuity existing
at the point of the virtual impedance, the virtual impedance
causes absolutely nothing.

If there is a physical impedance discontinuity existing
at the point of the virtual impedance, it is the physical
impedance discontinuity along with wave interference that
causes the virtual impedance to exist as an *effect* and
the virtual impedance still causes absolutely nothing.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5146. MR. CAM Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 18:42:34 UTC
From: fch <na@hle.com>
Message-ID: <3E6B8B1A.961C39C0@hle.com>
Source record: 122939

What do you mean the hexbeam doesn't have much to
offer?

Does it even work better than a dipole?

Have you ever modeled one on a program?

Does it work 50% as well as a yagi, 75%??

OC_CAM's Razor wrote:

> fch wrote:
> > Is it even directional?
>
> Yes it is, so you have to rotate it. It is a beam, much
> like the X-beams of years past. But like the quad, once
> you have the support system, you can add wires for multiple
> bands using the same supports. As a single band antenna,
> it doesn't have much to offer. As a multi-band antenna,
> it is a pretty cute idea.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5147. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 18:44:02 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6B8B72.1010604@ieee.org>
Source record: 122937

Dee D. Flint wrote:
> Whether or not you actually learned them, the FCC holds you responsible for
> knowing the requirements. If a person chooses shortcuts, that doesn't get
> them off the hook when problems occur. Ignorance is not accepted as a
> defense.

How can a person possibly be ignorant after passing a ham exam? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5148. Re: Discone & IC-R1?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 18:44:42 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6B8B9A.AF319E33@cwis.net>
Source record: 122935

Harry,
While the Radio Shack discone antenna isn't a
bad performer, I seriously doubt if it's that
good of one either!
'Doc

5149. k1bqt? Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 18:45:10 UTC
From: fch <na@hle.com>
Message-ID: <3E6B8BB6.D4674FC@hle.com>
Source record: 122940

Rick,

How much better did the yagi perform than the hexbeam?

1 s unit??

Rick Littlefield wrote:

> >Hexbeam<
>
> I built one for 10 meters a while back. I think it had about 5 dBi gain with
> front-to-back ranging from 12dB to over 20 dB--depending on frequency (dipole
> has 2.15 dBi). It performed identically to my Moxon rectangle in side-by-side
> comparisons and the front-to-back was quite helpful for eliminating QRM from
> the south when the band was open to Europe here on the east coast. My 3-element
> yagi did perceptibly better both in gain and front-to-back. I like the
> Hexbeam...think its mechanical design is clever and like the way it blends in.
>
> Rick K1BQT

5150. Anyone have a 40m hexbeam?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 18:49:29 UTC
From: fch <na@hle.com>
Message-ID: <3E6B8CB8.96E79E80@hle.com>
Source record: 122941

Seems like it would be a good compromise over the
ridiculously large 2 ele 40 m beam.

5151. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 18:59:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6n3pbcoe0of22@corp.supernews.com>
Source record: 122938

Every once in a while (not often enough!) something just clicks, and Tom's comment triggered one of those too-rare events. I haven't been following this thread very closely, but had been in general agreement with Cecil's distinction of a "virtual short" as an effect as opposed to a "real short" as a cause. Tom's comment reoriented my thinking.

Let's suppose we have a transmission line with a quarter wavelength open stub, say, sticking off to one side -- or a shorted half wavelength of line continuing past some point. Either one causes a "virtual short circuit". Just put the open circuited quarter wavelength line, or short circuited half wavelength line into a box with a couple of terminals, and label it "short circuit". If we connect this box to our line, we won't be able to tell (being careful to restrict ourselves to steady state at a single frequency) whether the box contains a physical piece of wire between the terminals, a quarter wave open stub, a half wave open stub, Tom's series resonant circuit, or any of an infinite number of other possible circuits. Our analysis of the transmission line conditions will proceed exactly the same, and give exactly the same results, regardless of what's inside the box, as long as it causes -- by whatever means -- a short circuit to appear across its terminals. In fact, if we're restricted to the steady state at the single frequency where the box presents a short circuit, there's no test we could devise that would tell us what's inside the box (assuming everything's lossless, of course).

Obviously, we've lost information about what's happening along any line that might be inside the box. But as far as the world outside the box is concerned, there's absolutely no difference between a box containing a stub or "virtual short circuit" and one containing a physical piece of wire or "real short circuit". For all intents, analyses, and results, they're identically the same -- again cautioning that this is true only for a single frequency steady state analysis. I'm now perfectly comfortable with regarding a "virtual short circuit" as something that causes reflections.

Thanks, Tom, for the insight. And my apology to Walt for being so slow to pick up on this.

I'm already well established as one of Reg's Old Wives. Guess I can now add myself to Cecil's list.

Roy Lewallen, W7EL

Tdonaly wrote:
> Cecil wrote,
>

>>
>>>What is the point of making your point?
>>
>>To lay to rest one more Old Wives' Tale. We have far too many Old Wives'
>>Tales in ham radio.
>>--
>>cheers, CAM http://www.qsl.net/w5dxp
>>
>
>
> Does a capacitor and an inductor in series constitute a short at a
> resonant frequency? If I put such across the end of a transmission line
> do I have to analyze the field between the plate of the capacitor and the
> field surrounding the inductor in order to talk about it? Or can I just call
> it a short at the relevant frequency and hope I don't get nitpicked to death
> on the newsgroup?
> 73,
> Tom Donaly, KA6RUH
>
>

5152. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 19:02:35 UTC
From: "Dee D. Flint" <deehays@qix.net>
Message-ID: <fdMaa.5696$se1.3055780@newssvr28.news.prodigy.com>
Source record: 122932

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030309105918.18798.00000085@mb-ci.aol.com...
> >You claim to have a ham radio
> >license, correct? And you dont even know the rules and regulations
> >concerning a licensed service and interference to part 15 devices
>
> Who needs to learn rules and regulations? All you have to do is memorize a
> bunch of questions and answers.

Whether or not you actually learned them, the FCC holds you responsible for knowing the requirements. If a person chooses shortcuts, that doesn't get them off the hook when problems occur. Ignorance is not accepted as a defense.

Dee Flint, N8UZE

5153. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 19:09:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6B917D.9090601@ieee.org>
Source record: 122943

Roy Lewallen wrote:
> Obviously, we've lost information about what's happening along any line
> that might be inside the box.

By all means, Roy, when one is trying to understand exactly what is happening, hide part of the answer in a box so nobody can grok it. :-)

> I'm already well established as one of Reg's Old Wives. Guess I can now
> add myself to Cecil's list.

I told you most of the RF engineers I know have been seduced by one steady-state solution or another. :-)

If hiding stuff in a box is what ham radio is all about, we can also hide each of our antennas in a shielded box with the same "feedpoint" impedance as the antenna. And of course, the shielded impedance acts exactly like an antenna during transmit, doesn't it? Heck, you've just invented a black box capable of competing with the EH antenna.

Come on back to reality, Roy. You may not be able to tell the difference between a dummy load and an antenna during transmit, but are you really going to replace your antennas with dummy loads? Or replace all your radiation resistances with virtual resistances?

I can't believe you allowed Tom to change your mind from reality into believing in an Old Wives' Tale. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5154. Re: Discone & IC-R1?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 19:10:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6n4dhf8nn678@corp.supernews.com>
Source record: 122942

You'll almost certainly get garbage all over the place if you connect the R1 to any kind of a decent antenna, unless you live way out in the boonies. You'll need to put an attenuator (probably around 20 dB or so) between the antenna and the R1 to keep the spurs down to a reasonable level, unless you're only interested in a few frequencies and are lucky enough to not have intermod products falling on those frequencies, or are far from an urban area.

I take my R1 to air shows (fitted with an external bandpass filter), and use it as a detector for my impedance bridge. But it's otherwise pretty useless anywhere near an urban area due to its terrible intermodulation performance, even with its little ducky antenna.

Roy Lewallen, W7EL

Harry wrote:
> Has anyone ever used the Discone sold by Radio Shack with an Icom
> IC-R1? I was informed that it might saturate the front end circuitery
> of the IC-R1, is this true. I know the IC-R1 is old, but it is still
> serving its purpose!!
>
> Thanks
>
> Harry

5155. Re: MR. CAM Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 19:14:52 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6B92AC.90603@ieee.org>
Source record: 122944

fch wrote:
> What do you mean the hexbeam doesn't have much to
> offer?

As a single-band antenna, it doesn't have much to offer over
an X-beam or a two-element Yagi. The cost and performance of
all three antennas is approximately the same and all three
antennas require a rotor. It has all the advantages and
disadvantages of most other two-element beams. That's what
I meant. Sorry if that wasn't clear. I'm a man of few words.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5156. Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 19:45:49 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0303090820.361a15b@posting.google.com>
Source record: 122945
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Why does the LM324 op amp need only one voltage supply when the LM741 needs two? Can anyone help enlighten me on the difference between the single-supply and dual-supply op amps?

I recently realized that the LM741 needs both supplies, even for amplifying positive DC voltages. With only the positive supply present, an input of 0V produces an output supply of AT LEAST .3V (even more with enough gain) regardless of configuration.

According to the literature and some circuit designs I have seen, the LM324 only needs one power supply. But in PSPICE, the LM324 needs two power supplies. Does the LM324 have an internal DC-DC converter or some other method to provide the negative power supply? If the LM324 only needs one power supply in real life, then why does it still need the second in PSPICE? Have I stumbled upon a limitation of PSPICE?

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com

5157. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 20:19:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6BA1C8.1050009@ieee.org>
Source record: 122947
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:
> Why does the LM324 op amp need only one voltage supply when the LM741
> needs two? Can anyone help enlighten me on the difference between the
> single-supply and dual-supply op amps?

The LM324 is designed for +5v TTL compatibility. The LM741 is not.
The specs on the LM741 are better than the LM324 unless you require
a single voltage supply.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5158. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 20:19:29 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <218n6vch1apjnuronoq6r2p71j2fufvmpt@4ax.com>
Source record: 122946

On Sun, 09 Mar 2003 10:59:58 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

...snip
>... If we connect this box to our line, we
>won't be able to tell (being careful to restrict ourselves to steady
>state at a single frequency) whether the box contains a physical piece
>of wire between the terminals, a quarter wave open stub, a half wave
>open stub, Tom's series resonant circuit, or any of an infinite number
>of other possible circuits.

Dear Roy,

However, is there not a "middle ground" here?

If we further the discussion to include a possibility of something
that I will call "transference of causality through substitution",
could we not say that both parties are correct? The only thing that I
would insist on is that once we have substituted the "virtual short"
in place of the stub section in our model, then the virtual short is
"there" and the stub section is "not there". So, subsequent to the
substitution in the model, the "virtual short" could reasonably
considered as the "cause" of the reflection, even though it is a
"proxy" for the original cause.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

5159. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 20:22:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6BA280.6040008@ieee.org>
Source record: 122948

Robert Lay (W9DMK) wrote:
> If we further the discussion to include a possibility of something
> that I will call "transference of causality through substitution",
> could we not say that both parties are correct? The only thing that I
> would insist on is that once we have substituted the "virtual short"
> in place of the stub section in our model, then the virtual short is
> "there" and the stub section is "not there". So, subsequent to the
> substitution in the model, the "virtual short" could reasonably
> considered as the "cause" of the reflection, even though it is a
> "proxy" for the original cause.

Bob, you forgot to say that substitution happens *only* in the human
mind, not in reality. Do reflections happen only in the human mind? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5160. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 20:30:25 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <TeScnUOIsof5OfajXTWcog@crocker.com>
Source record: 122949

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6B917D.9090601@ieee.org...
> Roy Lewallen wrote:
> > Obviously, we've lost information about what's happening along any line
> > that might be inside the box.
>
> By all means, Roy, when one is trying to understand exactly what is
> happening, hide part of the answer in a box so nobody can grok it. :-)
>
> > I'm already well established as one of Reg's Old Wives. Guess I can now
> > add myself to Cecil's list.
>
> I told you most of the RF engineers I know have been seduced by one
> steady-state solution or another. :-)
>
> If hiding stuff in a box is what ham radio is all about, we can also
> hide each of our antennas in a shielded box with the same "feedpoint"
> impedance as the antenna. And of course, the shielded impedance
> acts exactly like an antenna during transmit, doesn't it? Heck,
> you've just invented a black box capable of competing with the EH
> antenna.
>
> Come on back to reality, Roy. You may not be able to tell the difference
> between a dummy load and an antenna during transmit, but are you really
> going to replace your antennas with dummy loads? Or replace all your
> radiation resistances with virtual resistances?

now this is another perfect example of the misuse of a simplification to a circuit. here you are mixing by implication two different problems and handwaving some worthless generalities.

First, it would be perfectly proper to replace an antenna with an equivalent lumped impedance IF what you you are studying is the circuit leading up to the antenna, but not the antenna itself. (assuming the sinusoidal steady state as he properly restricted his example to)

However, by implying that this will change the operation of the antenna itself shows a lack of understanding about the conditions necessary to allow replacement by equivalent impedances. you can not of course replace an obviously distributed component (the antenna) with any kind of a lumped component and expect it to perform as before.

>
> I can't believe you allowed Tom to change your mind from reality into
> believing in an Old Wives' Tale. :-)

> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5161. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 20:47:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0a9n6v4c8nia2j5sg5d736pseb09b7to3n@4ax.com>
Source record: 122950

On Sun, 09 Mar 2003 13:09:49 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Roy Lewallen wrote:
>> Obviously, we've lost information about what's happening along any line
>> that might be inside the box.
>
>By all means, Roy, when one is trying to understand exactly what is
>happening, hide part of the answer in a box so nobody can grok it. :-)
>
>> I'm already well established as one of Reg's Old Wives. Guess I can now
>> add myself to Cecil's list.
>
>I told you most of the RF engineers I know have been seduced by one
>steady-state solution or another. :-)

Hi All,

That opprobrium (despite the tacky funny face) is simply a hysteria
reaction. It offers nothing but to propagate new myths (much like
this thread) offered only to allow the author to fight them with the
ersatz nobility of a cause.

>
>If hiding stuff in a box is what ham radio is all about,

This is a continuation of that purple argument whereby Cecil injects
yet another inflammatory comment couched as some one else's attitude.
Hiding? A carefully crafted response of passive aggression used to
denigrate a logical approach offered by Roy, without directly
challenging it.

>we can also
>hide each of our antennas in a shielded box with the same "feedpoint"
>impedance as the antenna.

Hide again as though it were a covert act of some rascal.

>And of course, the shielded impedance
>acts exactly like an antenna during transmit, doesn't it? Heck,
>you've just invented a black box capable of competing with the EH
>antenna.

The attribution where once it was introduced as
>we can also
is then turned on as a solitary act attached to the antics of EH
>you've just invented

(where did "we" go?).

>
>Come on back to reality, Roy.

Now that Roy has been established as a rascal who is trying to hide
something that has all the legitimacy of inflated EH claims.
Salvation is his only redemption.

>You may not be able to tell the difference
>between a dummy load and an antenna during transmit, but are you really
>going to replace your antennas with dummy loads? Or replace all your
>radiation resistances with virtual resistances?

And thus having painted the critic as a knave, it is a short step to
paint him as ignorant.

>
>I can't believe you allowed Tom to change your mind from reality into
>believing in an Old Wives' Tale. :-)

The tacky funny face announces the arrival of the fresh morning dew
misting about.

73's
Richard Clark, KB7QHC

5162. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 20:49:01 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <pwednYtVx6EhNfajXTWcoA@comcast.com>
Source record: 122951
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

It largely boils down to common mode range. If you run a 741 between +5 and -5 volts, the input common mode range might be +/- 3 V (guessing here). Now if you run the thing between ground and +10V, you have to be sure the input voltage on NEITHER input pin falls below +2V. You can operate a 741 off a single supply if you are AC coupled, and the inputs are biased up at half the supply voltage. You don't need DC/DC converters to have the common mode range extend to ground. They might use PNP emitter follower or JFET inputs. Look at an LM324 data sheet, it should explain everything.

Tam/WB2TT
"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0303090820.361a15b@posting.google.com...
> Why does the LM324 op amp need only one voltage supply when the LM741
> needs two? Can anyone help enlighten me on the difference between the
> single-supply and dual-supply op amps?
>
> I recently realized that the LM741 needs both supplies, even for
> amplifying positive DC voltages. With only the positive supply
> present, an input of 0V produces an output supply of AT LEAST .3V
> (even more with enough gain) regardless of configuration.
>
> According to the literature and some circuit designs I have seen, the
> LM324 only needs one power supply. But in PSPICE, the LM324 needs two
> power supplies. Does the LM324 have an internal DC-DC converter or
> some other method to provide the negative power supply? If the LM324
> only needs one power supply in real life, then why does it still need
> the second in PSPICE? Have I stumbled upon a limitation of PSPICE?
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

5163. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 20:51:53 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6nab6fa8nd6b2@corp.supernews.com>
Source record: 122952

Robert Lay (W9DMK) wrote:
>
> Dear Roy,
>
> However, is there not a "middle ground" here?
>
> If we further the discussion to include a possibility of something
> that I will call "transference of causality through substitution",
> could we not say that both parties are correct? . . .

Sorry. When the discussion requires "transference of causality through substitution" to understand the salient points, I'll have to excuse myself. I'm an engineer and not much of a philosopher. But I'm sure you'll get a lively discussion going among the several participants in this newsgroup who do thrive on philosophical discussions and dissections. I'll leave this in their capable hands.

Roy Lewallen, W7EL

5164. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 20:53:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6nae2lm2n67e1@corp.supernews.com>
Source record: 122953

See, Bob, I knew you'd get some action from the philosophically minded.
Carry on!

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Robert Lay (W9DMK) wrote:
>
>> If we further the discussion to include a possibility of something
>> that I will call "transference of causality through substitution",
>> could we not say that both parties are correct? The only thing that I
>> would insist on is that once we have substituted the "virtual short"
>> in place of the stub section in our model, then the virtual short is
>> "there" and the stub section is "not there". So, subsequent to the
>> substitution in the model, the "virtual short" could reasonably
>> considered as the "cause" of the reflection, even though it is a
>> "proxy" for the original cause.
>
>
> Bob, you forgot to say that substitution happens *only* in the human
> mind, not in reality. Do reflections happen only in the human mind? :-)

5165. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 20:54:20 UTC
From: richardharrison@webtv.net
Message-ID: <9457-3E6BA9FC-725@storefull-2317.public.lawson.webtv.net>
Source record: 122956

Walter, W2DU wrote:
"One, when the wave flowing out of the stub encounters the conductor on the main line it has encountered a physical discontinuity,---"

Yes, as Yogi said: "When you get to a fork in the road, take it!" That`s what the wave flowing out of the stub must do. At the instant the newly reflected wave arrives at the main line, it likeky sees 1/2 the mainline impedance. This is likely 1/2 the Zo impedance the reflected wave traveled on while on the stub. This junction point is an impedance bump, at least initially. So, for sure it can reflect.

As Walter says, at the junction, one quarterwave back from the open circuit at the far end of the stub, the incident and reflected voltages on the stub, are 180-degrees apart. This is at the stub attachment point.

At the same point, the junction, one quarter wave back fron the open, the reflected current has risen from zero at the open-circuit to the value which satisfies Zo. Equality has been re-established between energies contained within the E&H fields. At this point where the stub meets the main line, in the stub, incident and reflected voltage vectors total zero while incident and reflected current vectors total their maximum.

A very low voltage and a very large current at a point signify a short.

Terman`s 1955 edition has a diagram of an open-circuit line and its voltage vectors on page 91. The vectors appear everywhere along the line. The current vectors are there too, but where the volts are maximum, the amps are minimum. This is shown on page 96.

A directional (Bird) wattmeter will show equal forward and reflected powers and their difference will be zero net power in a lossless line as used for the stub.

I haven`t read all the postings yet, but I read Walter saying: "The null in the standing wave would still be at point "x", and at every 1/2 wl point beyond, and 50 watts would still be dissipated in the load terminating the circulator.

I don`t know what Cecil has posed as a circuit feeding the 1/4 WL OC stub.

When you parallel a higher impedance with a short-circuit, as made by the OC stub, the stub will rob the higher-impedance of energy.

Best regards, Richard Harrison, KB5WZI

5166. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 21:07:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6nb8kfchrj4aa@corp.supernews.com>
Source record: 122954
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

The difference between single and dual supply op amps has to do with internal design. Single supply op amps don't have any internal negative supply -- the internal circuitry is designed to operate normally when run from a single supply. But then of course you can't swing its output beyond its supply terminal voltages. Some op amps can tolerate inputs a bit beyond the supply terminal voltages, though, because JFETs, for example, can be biased this way and still operate normally.

Of course, you can float a single supply op amp between positive and negative supplies or a dual supply op amp between ground and a single supply. But you have to make sure you keep the input and output within the specified ranges relative to the supply pins, and this is often inconvenient.

I don't know anything about the SPICE model you have, but I'd look for another one if the one you have doesn't seem to mimic the real device.

Roy Lewallen, W7EL

Jason Hsu wrote:
> Why does the LM324 op amp need only one voltage supply when the LM741
> needs two? Can anyone help enlighten me on the difference between the
> single-supply and dual-supply op amps?
>
> I recently realized that the LM741 needs both supplies, even for
> amplifying positive DC voltages. With only the positive supply
> present, an input of 0V produces an output supply of AT LEAST .3V
> (even more with enough gain) regardless of configuration.
>
> According to the literature and some circuit designs I have seen, the
> LM324 only needs one power supply. But in PSPICE, the LM324 needs two
> power supplies. Does the LM324 have an internal DC-DC converter or
> some other method to provide the negative power supply? If the LM324
> only needs one power supply in real life, then why does it still need
> the second in PSPICE? Have I stumbled upon a limitation of PSPICE?
>
> Jason Hsu, AG4DG
> usenet@@@@jasonhsu.com

5167. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 21:07:38 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <u2Oaa.11582$gF3.1065669@newsread1.prod.itd.earthlink.net>
Source record: 122955

Roy Lewallen <w7el@eznec.com> wrote in message
news:v6n3pbcoe0of22@corp.supernews.com...
> Every once in a while (not often enough!) something just clicks, and
> Tom's comment triggered one of those too-rare events. I haven't been
> following this thread very closely, but had been in general agreement
> with Cecil's distinction of a "virtual short" as an effect as opposed to
> a "real short" as a cause. Tom's comment reoriented my thinking.
>
> Let's suppose we have a transmission line with a quarter wavelength open
> stub, say, sticking off to one side -- or a shorted half wavelength of
> line continuing past some point. Either one causes a "virtual short
> circuit". Just put the open circuited quarter wavelength line, or short
> circuited half wavelength line into a box with a couple of terminals,
> and label it "short circuit". If we connect this box to our line, we
> won't be able to tell (being careful to restrict ourselves to steady
> state at a single frequency) whether the box contains a physical piece
> of wire between the terminals, a quarter wave open stub, a half wave
> open stub, Tom's series resonant circuit, or any of an infinite number
> of other possible circuits. Our analysis of the transmission line
> conditions will proceed exactly the same, and give exactly the same
> results, regardless of what's inside the box, as long as it causes -- by
> whatever means -- a short circuit to appear across its terminals. In
> fact, if we're restricted to the steady state at the single frequency
> where the box presents a short circuit, there's no test we could devise
> that would tell us what's inside the box (assuming everything's
> lossless, of course).
>
> Obviously, we've lost information about what's happening along any line
> that might be inside the box. But as far as the world outside the box is
> concerned, there's absolutely no difference between a box containing a
> stub or "virtual short circuit" and one containing a physical piece of
> wire or "real short circuit". For all intents, analyses, and results,
> they're identically the same -- again cautioning that this is true only
> for a single frequency steady state analysis. I'm now perfectly
> comfortable with regarding a "virtual short circuit" as something that
> causes reflections.
>
> Thanks, Tom, for the insight. And my apology to Walt for being so slow
> to pick up on this.
>
> I'm already well established as one of Reg's Old Wives. Guess I can now
> add myself to Cecil's list.
>
> Roy Lewallen, W7EL

HOORAY, HALLELUJAH, AND AMEN !!!

Thanks, Roy, I needed that,

Walt, W2DU

Walt

5168. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 21:30:50 UTC
From: dplatt@radagast.org
Message-ID: <v6nckamecoob00@corp.supernews.com>
Source record: 122957
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

In article <f7d9a152.0303090820.361a15b@posting.google.com>,
Jason Hsu <jason_hsu@my-deja.com> wrote:

>Why does the LM324 op amp need only one voltage supply when the LM741
>needs two? Can anyone help enlighten me on the difference between the
>single-supply and dual-supply op amps?

You can run any standard op amp on a single-voltage supply. The op amp itself can't tell the difference between a single supply and a dual/split supply! The op amp has no "ground" pin and it really has no idea what the system-ground voltage is.

The real factor which distinguishes between "single-supply" and "dual-supply" op amps, is more properly the question of the input and output voltage ranges. Many op amps will not behave properly if their IN+ or IN- pins are pulled to within a volt or three of either voltage-supply pin - they may fail to deliver their specified behavior, or may exhibit some fairly gross problems such as latch-up.

Similarly, many op amps cannot drive their output all the way "to the rail" - there may be a range of 2-3 volts between the op amp's most positive output voltage, and the positive voltage supply.

In both cases, you can probably figure out why this is the case by looking at the schematic (detailed or simplified) in the manufacturer's data sheet. Figure out what will happen if you pull an input pin all the way to one of the supply rails. You'll often see that you'll force part of the input circuitry into a weird state... forward-biasing the junction on a JFET or something like that. Look at the output circuitry, and see why it's not actually capable of pulling the output all the way up to the rail.

Older op amps like the 741 tend to have fairly large "no go" voltage ranges... circuits using them shouldn't try to drive inputs to within a couple of volts of the supply rails, and should't expect output voltages outside of this range.

You _can_ use an op amp like this with a single voltage supply, as long as your input and output voltages will be within acceptable ranges. For example, driving a 741 from +15 volts, and using it to buffer the output of a trimmer-potentiometer arrangement where the pot's output would always fall between +5 and +10 volts, would probably work just fine.

Newer op amps can be designed with 'rail-to-rail' inputs and outputs... the inputs can safely be driven all the way up to the

positive supply voltage, all the way down to the negative supply voltage, and the outputs can often go the whole way as well (although perhaps not with a lot of current-drive capability). The rail-to-rail inputs are often safe (predicable) even if you drive the inputs past the rails by a few tenths of a volt.

An op amp of this sort can be used with a single voltage supply with one side grounded (e.g. +5 and ground) and be able to handle signals in this entire voltage range, or at least all the way down to ground.

This is what you'll usually see, in the spec sheets for a "single supply" op amp.

>According to the literature and some circuit designs I have seen, the
>LM324 only needs one power supply. But in PSPICE, the LM324 needs two
>power supplies. Does the LM324 have an internal DC-DC converter or
>some other method to provide the negative power supply?

Nope. It just has internal circuitry which won't misbehave if the inputs are driven all the way down to the negative rail (which would be at 0 volts in most single-supply situations) and which can pull the output all the way down to ground.

> If the LM324
>only needs one power supply in real life, then why does it still need
>the second in PSPICE? Have I stumbled upon a limitation of PSPICE?

I believe that the "single supply in real life" reflects the actual usability of the LM324. The PSPICE model reflects the internal circuitry, which _does_ have two supply inputs which source or sink current into the internals.

To model the use of an LM324 in a single-supply application, just connect the negative supply input to 0 volts DC.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

5169. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 21:37:17 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <nacn6vof6029992skmda4dkfoikkh0m2lu@4ax.com>
Source record: 122958

On Sun, 09 Mar 2003 14:22:24 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Robert Lay (W9DMK) wrote:
>> If we further the discussion to include a possibility of something
>> that I will call "transference of causality through substitution",
>> could we not say that both parties are correct? The only thing that I
>> would insist on is that once we have substituted the "virtual short"
>> in place of the stub section in our model, then the virtual short is
>> "there" and the stub section is "not there". So, subsequent to the
>> substitution in the model, the "virtual short" could reasonably
>> considered as the "cause" of the reflection, even though it is a
>> "proxy" for the original cause.
>
>Bob, you forgot to say that substitution happens *only* in the human
>mind, not in reality. Do reflections happen only in the human mind? :-)

Dear Cecil,

I don't know about the human mind, never having had one, myself - Hi!
However, the milieu in which I see all of this taking place is the
mathematical model. I often ask myself, "are these things we call
forward and incident waves "real", or just mathematical abstractins?"

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

5170. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 21:38:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <j3dn6v8tp17ftutfmlgj4hn4emiglqgf6r@4ax.com>
Source record: 122959
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 9 Mar 2003 11:45:49 -0800, jason_hsu@my-deja.com (Jason Hsu) wrote:

>Why does the LM324 op amp need only one voltage supply when the LM741
>needs two? Can anyone help enlighten me on the difference between the
>single-supply and dual-supply op amps?
>
>I recently realized that the LM741 needs both supplies, even for
>amplifying positive DC voltages. With only the positive supply
>present, an input of 0V produces an output supply of AT LEAST .3V
>(even more with enough gain) regardless of configuration.
>
>According to the literature and some circuit designs I have seen, the
>LM324 only needs one power supply. But in PSPICE, the LM324 needs two
>power supplies. Does the LM324 have an internal DC-DC converter or
>some other method to provide the negative power supply? If the LM324
>only needs one power supply in real life, then why does it still need
>the second in PSPICE? Have I stumbled upon a limitation of PSPICE?
>
>Jason Hsu, AG4DG
>usenet@@@@jasonhsu.com

Hi Jason,

You should dust off your undergrad lab books. Look at your 2nd or 3rd year work that you breezed past. The issues above are very elemental.

Get away from PSPICE or any derivative of SPICE and get back into the lab. You should really try learning one thing at a time, and that one thing should be the Op-Amp NOT a software package.

73's
Richard Clark, KB7QHC

5171. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 21:48:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <bmdn6v8ki1ipvkgq7g4mqdufavn1b40j35@4ax.com>
Source record: 122960

On Sun, 09 Mar 2003 16:37:17 -0500, "Robert Lay (W9DMK)"
<w9dmk@crosslink.net> wrote:
>I don't know about the human mind, never having had one, myself - Hi!
>However, the milieu in which I see all of this taking place is the
>mathematical model. I often ask myself, "are these things we call
>forward and incident waves "real", or just mathematical abstractins?"
>
Hi Bob,

Ask yourself:
If you take the wave out of the water, is it a wave?
If you take the water out of the wave, is it a wave?

What is "real" about a wave in the first place?

73's
Richard Clark, KB7QHC

5172. Re: k1bqt? Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 21:55:59 UTC
From: k1bqt@aol.com
Message-ID: <20030309165559.09132.00000128@mb-fr.aol.com>
Source record: 122961

>How much better did the yagi perform than the hexbeam? 1 s unit??<

Not what I reported. A couple dBm is the average I measured using the sample-and-hold signal strength funciton on a Ten-Tec commercial receiver. In my view, the primary advantage of a small yagi is the rejection of unwanted signals off the back.

Rick K1BQT

5173. Re: Expert opinion about Antenna Tuners...

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 22:19:43 UTC
From: jgboyles@aol.com
Message-ID: <20030309171943.10081.00000092@mb-mp.aol.com>
Source record: 122962

>This is a MFJ-969 tuner Dummy Load is in the
>tuner. Even I change antenna selector to any antenna position with out
>any antenna connected to this unit this is happening.

Lavent, I am sorry I got confused should have looked up the specs. on the MFJ-969. I thought we were talking about separate tuner, coax switch and dummy load.
You might try disconnecting the ground wire and see what effect if any that has. This might tell you what part the ground is contributing as an antenna.
Also you might try moving the ground from the rig to the tuner and see if that does anything.
An experiment you might try is take a piece of 50 ohm coax about the same length as the coax from rig to tuner. position it in about the same position as rig to tuner. With the far end of this coax open, check the signal strength levels and compare them to levels when the tuner is in place. If the signals are stronger with the tuner in the circuit, than with an open piece of coax, then there is something with the 969 tuner that could stand some improvement in terms of rf leakage. Whether other tuners are better in this respect, I don't know, so I won't say rush out and buy a new tuner.
Sorry about the confusion with your exact setup. Us guys here in Alabama don't have much access to modern ham radio gear, so we may not know all the features:-).
73 Gary N4AST

5174. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 22:35:24 UTC
From: tdonaly@aol.com
Message-ID: <20030309173524.21604.00000063@mb-da.aol.com>
Source record: 122963

>
>Tdonaly wrote:
>> Cecil wrote,
>>>Lack of evidence to the contrary.
>>
>> That's what I thought.
>
>That's the way engineers are supposed to think, Tom. When
>there is evidence on one side and no evidence on the other
>side, it is logical to go with the side with some evidence
>rather than the side with no evidence.
>
>Or can you submit an example of a virtual impedance that
>causes anything in the absence of a physical impedance
>discontinuity pre-existing at the same point?
>

I don't think I have to prove that there is no Santa, Cecil.
I think it's up to you to show the world the difference in effect
between the lumped equivalent of a quarter wave stub and the
real thing if you want anyone to care whether you're right or not.

>If there is no physical impedance discontinuity existing
>at the point of the virtual impedance, the virtual impedance
>causes absolutely nothing.
>
>If there is a physical impedance discontinuity existing
>at the point of the virtual impedance, it is the physical
>impedance discontinuity along with wave interference that
>causes the virtual impedance to exist as an *effect* and
>the virtual impedance still causes absolutely nothing.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>

Those last two statements are fine, declaratory statements, Cecil. If
you want to believe them, o.k. Provide some real proof and maybe
you can get someone else to believe you. Further, you have to provide
a reason beyond debunking old wive's tales to make it worthwhile for
anyone to feel your theorizing will have any meaning. After all, a
lumped constant quarter wave imitation stub and a real stub will
both do exactly the same thing. It's hard for me to get excited over
an assertion that one of them is an effect and the other a cause. Even
if I believed you, it would be an "oh, that's interesting, ho hum" kind of

belief.
73,
Tom Donaly, KA6RUH

5175. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 22:42:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i3hn6v8kmggtidtgv114rl8s207tkul14i@4ax.com>
Source record: 122964

On Sat, 08 Mar 2003 18:02:32 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

> (Copper gets to be a really, really good conductor at
>cryogenic temperatures.)
>
>Roy Lewallen, W7EL

Hi Roy,

You meant insulator, didn't you?

73's
Richard Clark, KB7QHC

5176. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 22:44:37 UTC
From: jgboyles@aol.com
Message-ID: <20030309174437.09964.00000077@mb-mp.aol.com>
Source record: 122965

>Consider going just one step farther: a Pi-Network. In reality, you have the
>versatility of a Pi AND a bidirectional L-Network without switches to turn
>the
>L-Network around.

Another alternative is a reconfigurable L network using a small patch panel instead of switches. I built one with bananna jacks and plugs, with short jumpers that I can reconfigure quickly. Use the MFJ 259b plus a Smith Chart program to determine the proper configuration. It matches a 100' dipole fed with 45' of 450 ohm line 80-10m.
73 Gary N4AST

5177. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 22:47:32 UTC
From: arrow146@aol.com
Message-ID: <20030309174732.03331.00000065@mb-fi.aol.com>
Source record: 122966

<< Subject: Single-supply vs. dual-supply op amps
From: jason_hsu@my-deja.com (Jason Hsu)
Date: Sun, Mar 9, 2003 11:45 AM
Message-id: <f7d9a152.0303090820.361a15b@posting.google.com>

> Why does the LM324 op amp need only one voltage supply when the LM741
> needs two? Can anyone help enlighten me on the difference between the
> single-supply and dual-supply op amps?
>
> I recently realized that the LM741 needs both supplies, even for
> amplifying positive DC voltages. With only the positive supply
> present, an input of 0V produces an output supply of AT LEAST .3V
> (even more with enough gain) regardless of configuration.
>
> According to the literature and some circuit designs I have seen, the
> LM324 only needs one power supply. But in PSPICE, the LM324 needs two
> power supplies. Does the LM324 have an internal DC-DC converter or
> some other method to provide the negative power supply? If the LM324
> only needs one power supply in real life, then why does it still need
> the second in PSPICE? Have I stumbled upon a limitation of PSPICE? >>

I don't know if I can explain this right.
An op amp needs a dual supply only if you
want a sine wave output, in other words a
signal that is both above & below ground.

A 741 op amp can use a single supply if all
you want is a signal above ground.

It all depends on what you are trying to do.

I once use a 741 with a photo cell in a black
tube that could detect the light from a single
star.

73 Al Lowe N0IMW

5178. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 23:36:14 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6BCFEE.9050209@ieee.org>
Source record: 122967

David Robbins wrote:
> You can not of course replace an
> obviously distributed component (the antenna) with any kind of a lumped
> component and expect it to perform as before.

So it appears that you agree with me that if one is studying the radiation pattern of an antenna, one wouldn't choose to replace the antenna with an equivalent dummy load.

In like manner, if one is studying in detail exactly what happens at a virtual short, one wouldn't choose to replace the virtual short with an equivalent actual short.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5179. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 23:45:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6BD20B.7040508@ieee.org>
Source record: 122968

Richard Harrison wrote:
> Walter, W2DU wrote:
> "One, when the wave flowing out of the stub encounters the conductor on
> the main line it has encountered a physical discontinuity,---"
>
> Yes, as Yogi said: "When you get to a fork in the road, take it!" That`s
> what the wave flowing out of the stub must do. At the instant the newly
> reflected wave arrives at the main line, it likeky sees 1/2 the mainline
> impedance. This is likely 1/2 the Zo impedance the reflected wave
> traveled on while on the stub. This junction point is an impedance bump,
> at least initially. So, for sure it can reflect.

Nope, it can't reflect, Richard, because the voltage is zero. The possible
current exiting that junction is zero divided by something. It is exactly
like the plumber's delight connection point in a Yagi which is a maximum
current point and a minimum voltage point.

You agreed that no current would flow in a dipole paralleled with a
1/4WL stub. What happened to make you change your mind?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5180. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 23:46:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6BD26A.5040803@ieee.org>
Source record: 122869

Walter Maxwell wrote:
> HOORAY, HALLELUJAH, AND AMEN !!!
> Thanks, Roy, I needed that,

Heck, hide the entire universe in a black box and nobody will be
able to figure out anything. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5181. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-09 23:50:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6BD32B.40504@ieee.org>
Source record: 122870

Robert Lay (W9DMK) wrote:
> I don't know about the human mind, never having had one, myself - Hi!
> However, the milieu in which I see all of this taking place is the
> mathematical model. I often ask myself, "are these things we call
> forward and incident waves "real", or just mathematical abstractins?"

That's a reasonable question. However, if one writes a QEX article that heavily depends upon the wave reflection model, one cannot then argue that the wave reflection model is invalid as a defense of the contents of the article.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5182. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:00:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6BD583.7000501@ieee.org>
Source record: 122871

Tdonaly wrote:
> After all, a
> lumped constant quarter wave imitation stub and a real stub will
> both do exactly the same thing.

Absolutely false, Tom! Make the stub an odd number of quarter
wavelengths with a length of about 1000 feet. You will get
TV ghosting all over the place. Try causing TV ghosting
with your lumped constants.

If you are careful, you can even make it 1/4WL long and observe
the difference in the high frequency modulation products 180
degrees apart when the older reflected wave interferes with
the newer forward wave.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5183. What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:15:22 UTC
From: fch <na@hle.com>
Message-ID: <3E6BD91A.23D9BFF1@hle.com>
Source record: 122880

If a neighbor complains about me interfering with his TV.

5184. MR. CAM Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:17:34 UTC
From: fch <na@hle.com>
Message-ID: <3E6BD99E.4DAFB900@hle.com>
Source record: 122881

I think the hexbeam is much more expensive than the others.
I'm not sure what an X beam is.

How much performance difference is there between a 2 and 3 element yagi?

OC_CAM's Razor wrote:

> fch wrote:
> > What do you mean the hexbeam doesn't have much to
> > offer?
>
> As a single-band antenna, it doesn't have much to offer over
> an X-beam or a two-element Yagi. The cost and performance of
> all three antennas is approximately the same and all three
> antennas require a rotor. It has all the advantages and
> disadvantages of most other two-element beams. That's what
> I meant. Sorry if that wasn't clear. I'm a man of few words.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5185. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:20:18 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4gln6$ur9$1@slb6.atl.mindspring.net>
Source record: 122872

Wernt no teasin Chuck....he is just soooo easy.

Dan/W4NTI

"Chuck/KE4ETH" <chuck_hawks@hotmailNOSPAMORAMA.com> wrote in message
news:jtxaa.10707$ah3.4513@fe10.atl2.webusenet.com...
> Dan,
>
> Don't tease the boy. Remember he's a Government Rent-A-Cop.
>
> --
> 73,
> Chuck
> KE4ETH
> USA-NA
>
> "Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
> news:b4dupm$aa1$1@slb2.atl.mindspring.net...
> > Well Andy......is it everytime you open your mouth or just once in a
while
> > that you come off like some sort of a fool? You claim to have a ham
radio
> > license, correct? And you dont even know the rules and regulations
> > concerning a licensed service and interference to part 15 devices.
> >
> > Dan/W4NTI
> >
> > "VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
> > news:20030308082702.18913.00000104@mb-mh.aol.com...
> > > >The FCC has told an Oregon couple to stop using its Winegard
amplified
> > > >television antenna
> > >
> > > Sure, if a Ham is interefered with, the FCC jumps right in, but when a
> > non-ham
> > > is interefered with by a ham, too bad.
> > >
> > > My grandparents were getting QRM'ed to death from a neighbor ham with
a
> > bunch
> > > of yagi's, dipoles, verticals, etc.. He'd come over their radio, TV,
> > phone,
> > > etc... I emailed the FCC and they told me that unless I had proof that
> he
> > was

> > > operating illegally, they wouldn't even investigate it. What a double
> > standard,
> > > huh?!
> > > =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> > > 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> > > Beachwood, NJ USA! Grid FM29vw
> > > http://vhfradiobuff.tripod.com
> >
> >
>
>
>

5186. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:21:30 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4glpd$rt3$1@slb2.atl.mindspring.net>
Source record: 122873

And your excuse is?

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030309105542.18798.00000083@mb-ci.aol.com...
> >
> >No...its not a troll....He really is that ignorant. Ive dealt with this
> >goof for a while now....believe it.
> >
> >Dan/W4NTI
>
> That's only the radiation from the chemical school clouding your brain.
Don't
> worry. The half-life of that stuff over at McClellan is only like 500
years.
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5187. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:22:08 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4glqk$l0n$1@slb6.atl.mindspring.net>
Source record: 122874

You cant argue with a rock fella's.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030309105735.18798.00000084@mb-ci.aol.com...
> >Unless the ham operator is operating illegally, the reality is that his
> >equipment is functioning properly and he is operating as per his FCC
> >granted authority.
>
> And FCC authority also allows for station inspections. I mearly asked them
to
> inspect his station before trying to RF proof the house but they couldn't
be
> bothered, but yet some RV user bothers a ham up on UHF on a single obscure
> frequency, and the FCC is all over them.
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5188. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:23:32 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4glt8eus1@slb4.atl.mindspring.net>
Source record: 122875

Poor 'VHFRADIOBLUFF' Just showing your ignorance everytime you open your trap. Keep it up....were all getting a good chuckle goof.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message news:20030309105918.18798.00000085@mb-ci.aol.com...
> >You claim to have a ham radio
> >license, correct? And you dont even know the rules and regulations
> >concerning a licensed service and interference to part 15 devices
>
> Who needs to learn rules and regulations? All you have to do is memorize a
> bunch of questions and answers.
>
> Remember the days when you used to be able to memorize things, before all those
> lovely chemicals from McClellan got into your drinking water?
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5189. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:24:28 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4glv0$167$1@slb9.atl.mindspring.net>
Source record: 122876

Thank you Dee.....a new ham with a brain....how refreshing.

Dan/W4NTI

"Dee D. Flint" <deehays@qix.net> wrote in message
news:fdMaa.5696$se1.3055780@newssvr28.news.prodigy.com...
>
> "VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
> news:20030309105918.18798.00000085@mb-ci.aol.com...
> > >You claim to have a ham radio
> > >license, correct? And you dont even know the rules and regulations
> > >concerning a licensed service and interference to part 15 devices
> >
> > Who needs to learn rules and regulations? All you have to do is memorize
a
> > bunch of questions and answers.
>
> Whether or not you actually learned them, the FCC holds you responsible
for
> knowing the requirements. If a person chooses shortcuts, that doesn't get
> them off the hook when problems occur. Ignorance is not accepted as a
> defense.
>
> Dee Flint, N8UZE
>
>

5190. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:25:25 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4gm0p$s80$1@slb6.atl.mindspring.net>
Source record: 122877

Simple CAM....he memorized....didn't 'learn' a thing. Typical actually.

Dan/W4NTI

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6B8B72.1010604@ieee.org...
> Dee D. Flint wrote:
> > Whether or not you actually learned them, the FCC holds you responsible
for
> > knowing the requirements. If a person chooses shortcuts, that doesn't
get
> > them off the hook when problems occur. Ignorance is not accepted as a
> > defense.
>
> How can a person possibly be ignorant after passing a ham exam? :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5191. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:26:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6BDBB9.1050200@ieee.org>
Source record: 122878

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>If hiding stuff in a box is what ham radio is all about,
>
> This is a continuation of that purple argument whereby Cecil injects
> yet another inflammatory comment couched as some one else's attitude.
> Hiding? A carefully crafted response of passive aggression used to
> denigrate a logical approach offered by Roy, without directly
> challenging it.

Well, Richard, since you seem to admire the process of hiding things
in black boxes, I hid my cat in a black box about four days ago with
no food and water. Is the cat dead or alive?

And, oh yeah, Richard, you give me entirely too much credit.
I am neither careful nor a craftsman.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5192. Butternut HF6V 15m decoupling stub.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:35:20 UTC
From: Paul Buhse <buhse@earthlink.net>
Message-ID: <c5Raa.11447$wJ1.1079840@newsread2.prod.itd.earthlink.net>
Source record: 122879

I am installing an HF6V on the top of my roof (20 ft) with the following radial arrangement 1-80m, 2-40m, 2-30m, 2-20m, 2-15m, 3-10m. Initially, the low SWR point for 20m and 10m was around 15 Mhz and 31 Mhz. I added a 3 foot section of 1/4 in tubing to the antenna and was then able to tune all bands except 15m. The BEST I can get by adjusting the length of the decoupling stub on 15m is 2.5:1 SWR. My concern now is that the position of the decoupling stub may be incorrect because of the additional antenna height. So, here is my question --

Does anyone know how to select the feedpoint position of a decoupling stub? I looked in the ARRL handbook but couldn't find any references. I would experiment, but I at least want to be close when I start so I can limit the amount of times I have to pull down the antenna.

Thanks,
Paul -- KA0LKB

5193. Re: Single-supply vs. dual-supply op amps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:47:19 UTC
From: la8ak.xnd@online.no
Message-ID: <3e6bd786.7872367@news.online.no>
Source record: 122882
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Sun, 09 Mar 2003 21:30:50 -0000, dplatt@radagast.org (Dave Platt)
wrote:
>
>You can run any standard op amp on a single-voltage supply. The op
>amp itself can't tell the difference between a single supply and a
>dual/split supply! The op amp has no "ground" pin and it really has
>no idea what the system-ground voltage is.
>
>The real factor which distinguishes between "single-supply" and
>"dual-supply" op amps, is more properly the question of the input and
>output voltage ranges. Many op amps will not behave properly if their
>IN+ or IN- pins are pulled to within a volt or three of either
>voltage-supply pin - they may fail to deliver their specified
>behavior, or may exhibit some fairly gross problems such as latch-up.
>
Probably, the best answer in the thread.
Whether a device is mentioned as dual or single voltage device is
based on some understanding when it was written. A lot of designers
once believed that op-amps needed + and -15V to work properly.

uA741 won't operate properly below 10...12V supply, but in my Apple
2e+ computer it was run on +5V (cassette interface). It was rather
uncertain if it produced error or not, so you needed to play the
cassette several times, but an RCA 3140E improved very much on this.

Motorola and National made the Norton type op-amps which were supposed
to be for single supply, but I don't really believe they became much
popular. LM358 and LM324 will run properly on low voltage, but the
output swing is rather limited. The output may be pulled down to
ground (negative rail).

>Similarly, many op amps cannot drive their output all the way "to the
>rail" - there may be a range of 2-3 volts between the op amp's most
>positive output voltage, and the positive voltage supply.
>
Here, in fact uA741 is better for dc voltage below, but close to +Vcc,
and a good reason for keeping some in the junkbox. It may amplify
signals close as 0.6V to +Vcc

>In both cases, you can probably figure out why this is the case by
>looking at the schematic (detailed or simplified) in the
>manufacturer's data sheet. Figure out what will happen if you pull an
>input pin all the way to one of the supply rails. You'll often see
>that you'll force part of the input circuitry into a weird state...

>forward-biasing the junction on a JFET or something like that. Look
>at the output circuitry, and see why it's not actually capable of
>pulling the output all the way up to the rail.

Yes, it is always important to understand why and what happens inside,
it is bad that several modern devices aren't properly described, and I
am not particularly talking about OP-amps. It is many interesting
applications you can use a device for, but data isn't proper.
>
>Older op amps like the 741 tend to have fairly large "no go" voltage
>ranges... circuits using them shouldn't try to drive inputs to within
>a couple of volts of the supply rails, and should't expect output
>voltages outside of this range.
>
>You _can_ use an op amp like this with a single voltage supply, as
>long as your input and output voltages will be within acceptable
>ranges. For example, driving a 741 from +15 volts, and using it to
>buffer the output of a trimmer-potentiometer arrangement where the
>pot's output would always fall between +5 and +10 volts, would
>probably work just fine.
>
>Newer op amps can be designed with 'rail-to-rail' inputs and
>outputs... the inputs can safely be driven all the way up to the
>positive supply voltage, all the way down to the negative supply
>voltage, and the outputs can often go the whole way as well (although
>perhaps not with a lot of current-drive capability). The rail-to-rail
>inputs are often safe (predicable) even if you drive the inputs past
>the rails by a few tenths of a volt.
>
>An op amp of this sort can be used with a single voltage supply with
>one side grounded (e.g. +5 and ground) and be able to handle signals
>in this entire voltage range, or at least all the way down to ground.
>

73, Jan-Martin
LA8AK
http://home.online.no/~la8ak/

--
remove ,xnd to reply

5194. Re: How to i.d. a balun ratio

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 00:53:02 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <LdRaa.19300$Dp.6957@fe01.atl2.webusenet.com>
Source record: 122883

Or, find someone that has one of MFJ's SWR ANALYSERS. since these are by defination broadbanded (the baluns), pick convienent frequency around 15 MHz. terminate with 47 ohm resistor- if 1:1, 50 ohm load., if 4:1, then, try 210 ohm, if 1:1 , or close, then 4:1 balun. keep doing this , until 1:1, and, good top DOUBLE CHECK: change frequency to , say 5 MHz, or 30 MHz, and see if match sill 1:1. only other way can see would be to open, and check turns ratio inside it. (a noise bridge should also tell you similar results, hooked on far end of balun, with radio on near end of it. but that about the same test with the MFJ unit. Jim NN7K

"Roy sent: > Sorry, there's no way to do it with a VOM. You'll need some sort of RF
> source and detector. For example, you could do it with a transmitter,
> dummy load, and SWR meter. (Connect the balun between the transmitter
> and dummy load, and the SWR meter between the transmitter and balun. The
> indicated SWR is the balun impedance ratio.
>
> Roy Lewallen, W7EL
>
> don bryant wrote:
> > I have an old W2AU balun and I need to know the step up ratio. Is there a
> > measurement method using a simple VOM? Or how could I determine. There are
> > no external markings.
> > Don ZS6BTP
> >
> >
>

5195. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 01:07:17 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <n5pn6v069e4efru2cajiitpttoskunoe8d@4ax.com>
Source record: 122884

On Sun, 09 Mar 2003 16:15:22 -0800, fch <na@hle.com> wrote:

>If a neighbor complains about me interfering with his TV.

have you checked part 97 of the rules?

http://www.arrl.org/FandES/field/regulations/news/part97/

in general, you have an obligation to engineer and operate your
station according to part 97. in general, preventing interference is
the responsibility of the receiver but that assumes generality #1 is
being followed. others may have different opinions but if it was me
and i was on otherwise good terms with the neighbor, i'd try and work
it out.

73,
rich, n9dko

5196. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 01:21:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6nq5jesqmuef7@corp.supernews.com>
Source record: 122885

No, I meant conductor.

Roy Lewallen, W7EL

Richard Clark wrote:
> On Sat, 08 Mar 2003 18:02:32 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>(Copper gets to be a really, really good conductor at
>>cryogenic temperatures.)
>>
>>Roy Lewallen, W7EL
>
>
> Hi Roy,
>
> You meant insulator, didn't you?
>
> 73's
> Richard Clark, KB7QHC

5197. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 02:04:59 UTC
From: richardharrison@webtv.net
Message-ID: <25680-3E6BF2CB-291@storefull-2313.public.lawson.webtv.net>
Source record: 122886

Richard Clark wrote:
""You meant insulator, didn`t you?"

Roy Lewallen said that copper became a very good conductor at very low temperatures.

Roy was right. Most metals have positive temperature coefficients. Resistance rises with their temperature. Ever measure the temperature of a cold electric lamp filament? That resistance is just a few ohms. 120 V would put lots of amps through that resistance. But, a hot filiament in a 100W-bulb must draw less than an amp. The lamp would be in the kilowatt range if its resistance didn`t soar along with the temperature of its filiament.

The temperature coefficient is a fairly linear function for most metals. For copper its value is about 0.00393 ohms / degree Centigrade. That says resistance goes up about 0.393% per degree Centigrade temperature rise.

Carbon has a negative temperature coefficient.

Best regards, Richard Harrison, KB5WZI

5198. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 02:32:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4gtf8ivl1@knossos.btinternet.com>
Source record: 122888

Download program DIPOLE3 from website below.

Enter dipole length and height.
Balanced line length and impedance. (if any).
Balun impedance ratio.
Coax line length and impedance. (if any).

Efficiency of all parts of system, swr's and overall radiating efficiency is estimated.

Sweep spectrum for resonant frequencies from LF to VHF.

Hit one key for the immediate first full anaysis of the world-famous G5RV and draw your own conclusions.

Bonus - the program automatically decides L-network tuner configuration at any frequency complete with L & C component values.

Download DIPOLE3 now.

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20030309174437.09964.00000077@mb-mp.aol.com...
> >Consider going just one step farther: a Pi-Network. In reality, you have
the
> >versatility of a Pi AND a bidirectional L-Network without switches to
turn
> >the
> >L-Network around.
>
> Another alternative is a reconfigurable L network using a small patch
panel
> instead of switches. I built one with bananna jacks and plugs, with short
> jumpers that I can reconfigure quickly. Use the MFJ 259b plus a Smith
Chart
> program to determine the proper configuration. It matches a 100' dipole
fed
> with 45' of 450 ohm line 80-10m.
> 73 Gary N4AST

5199. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 02:49:39 UTC
From: richardharrison@webtv.net
Message-ID: <3983-3E6BFD43-905@storefull-2315.public.lawson.webtv.net>
Source record: 122890

CAM wrote:
"Nope, it can`t reflect---."
(The reflection from a 1/4-WL OC stub at its junction with the mainline.)

Terman`s open circuit transmission line example shows the unabated reflected wave creating repeated maxima and minima as it reacts with the incident wave, all the way back to the sender. At each of these extremes along the line, there`s no additional reflection.

Why are the waves transparent to each other? Why are there no additional reflections along the line`s route? It`s because there is no mismatch of the line anywhere along the route. Mismatch causes a reflection. The line ia uniform and enforces Zo. The wave at any point traveling in either direction is coming from Zo and traveling into Zo.

Our stub Teed into the mainline is different. Before a signal rebounds from the load or from the sender to the Teeing point, for example, the stub`s reflecttion may be coming out of Zo, but it hits Zo / 2 at the point where the stub joins the mainline.

If Zo / 2 is not a mismatch to Zo, we need a new definition for an impedance bump.

Best regards, Richard Harrison, KB5WZI

5200. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 03:09:27 UTC
From: jgrib@aol.com
Message-ID: <20030309220927.03756.00000157@mb-dh.aol.com>
Source record: 122889

Check part 97 as previously stated, but DO NOT MAKE ANY MODIFICATION S TO ANYTHING YOUR NEIGHBOR HAS OR IS HAVING TROUBLE WITH. You can make suggestions on what to do, but don't do it yourself. (for example, tell him to buy a telephone filter at Radio Shack, but have him get the information about it and install it himself) If you rewire, install, or modify anything of his, it opens you to liability if something goes wrong. The FCC used to put out an interference book aimed at consumers having problems and it showed pictures and diagrams of problems and suggested their potential cure. You may want to call the FCC and ask about that book and if it's still available. If I remember correctly it was free at one per household. Also, the ARRL has an interference book available (check with your dealer or the ARRL) and they may try and help you a bit via the telephone.

Good Luck,

Joe KI3B

5201. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 03:13:48 UTC
From: richardharrison@webtv.net
Message-ID: <11973-3E6C02EC-107@storefull-2312.public.lawson.webtv.net>
Source record: 122893

CAM wrote:
"Try causing TV ghosting with your lumped constants."

It`s all length of delay producing image displacement. Make a delay line of enough reactive components for comparable delay. Would a ghost know the difference?

A 1/8-WL of transmission line has a capacitive reactance equal to Zo`s magnitude. Your delay circuit won`t know if you had 50-ohms of capacitive reactance from a lumped capacitor or if it came from 1/8-WL of transmission line, assuming no stray coupling of the delay circuit itself.

Best regards, Richard Harrison, KB5WZI

5202. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 03:13:56 UTC
From: "Dee D. Flint" <deehays@qix.net>
Message-ID: <UpTaa.5853$se1.3162717@newssvr28.news.prodigy.com>
Source record: 122887

"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
news:b4glv0$167$1@slb9.atl.mindspring.net...
> Thank you Dee.....a new ham with a brain....how refreshing.
>
> Dan/W4NTI

Not really new. Originally licensed in '92. So while I'm not exactly an
oldtimer, I'm hardly a newbie.

Dee Flint, N8UZE

5203. Re: Rare earth mag-mount for HT when mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 03:20:11 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <LvTaa.47718$ki.1816589@twister.southeast.rr.com>
Source record: 122891

Ther is more than magnetic holding power involved. There is also leverage. The inch base is going to have about 3 times as much force working against it as the 3 inch one. We used some of these at work and they didnt perform very well

"Robert A. Book" <rbook1@mochamail.com> wrote in message news:3E64F967.274697EA@mochamail.com...
> This is sort of a newbie question.
>
> I'm about to get my first HT for 2M/220/440, and of course I want to be
> able to use it in the car. So, I've been looking at mag-mount antennas.
>
> I saw some "rare earth" magnetic-mount antennas at a hamfest recently.
> The selling point it that they have a much smaller footprint than
> "traditional" mag-mounts, they are much lighter, and they are almost
> (but not quite) as strong. I compared a rare-earth with about a
> half-inch diameter to a traditional with about a 3-inch diameter, and
> while the 3-inch did feel "stickier" it was not by as much as I'd
> expect.
>
> What do y'all think of these rare-earth mag-mounts? I'm concerned not
> only about antenna performance, but also about scratching the paint on
> the roof of my car. (Not just for car-vanity; I get rust whenever the
> paint scratches.)
>
> Thanks!
>
> --Robert
> KD6NRI/4

5204. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 03:28:10 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <6a1o6vopsss6p12mm9gu7mit2m5b6dgsd9@4ax.com>
Source record: 122892

On 08 Mar 2003 16:31:53 GMT, vhfradiobuff@aol.comspamme (VHFRadioBuff)
wrote:

>>What a stupid troll, HUH?
>>Dan, N9JBF
>
>Anyone without the same opinion as you is a troll, eh?
>=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA! Grid FM29vw
>http://vhfradiobuff.tripod.com

Not necessarily, but as a licensee, you should know the regs. As
someone pointed out earlier, if the transmitter is being operated
legally, it is up to the consumer to alleviate the interference. Some
small amount of cooperation with the ham involved would probably
result in satisfactorily filtering of the phones. Heck, I get into my
own phones and especially the computer speakers. Guess what? Some
ferrite and small caps and the problem goes away. Say, come to think
of it, why aren't YOU helping Grandma and Grandpa out?

Russ, kf4wxd

5205. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 03:43:01 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C09C5.3050203@ieee.org>
Source record: 122894

Richard Harrison wrote:
> Our stub Teed into the mainline is different. Before a signal rebounds
> from the load or from the sender to the Teeing point, for example, the
> stub`s reflecttion may be coming out of Zo, but it hits Zo / 2 at the
> point where the stub joins the mainline.

It hits Z0/2 at the point where the voltage is zero. Zero volts cannot
go anywhere. It is similar to the plumber's delight type of construction
used in a Yagi. You can attach any passive thing at a V=0 node and absolutely
nothing happens.

> If Zo / 2 is not a mismatch to Zo, we need a new definition for an
> impedance bump.

Z0/2 is a mismatch to Z0 but it doesn't matter because the voltage
at that point is zero. Split zero volts up into any number of paths.
It is still zero volts. No energy flows into the mismatch and there
are no reflections. Consider

```
source------------feedline----------x----1/4WL open stub---
|
+----------one ohm load
```

The existence of the one ohm load does not cause any additional
reflections because the voltage at 'x' is zero. There is no
current flowing in the one ohm load line. It doesn't matter
if the one ohm load line is attached or not.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5206. Re: MR. CAM Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 03:57:06 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C0D12.9010604@ieee.org>
Source record: 122895

fch wrote:
> I think the hexbeam is much more expensive than the others.
> I'm not sure what an X beam is.

Page 33-15, 1993 ARRL Handbook. X-beam Vs hexbeam below

> How much performance difference is there between a 2 and 3 element yagi?

Roughly 2.5 dB, roughly half an S-unit.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5207. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 04:08:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C0FAF.8040501@ieee.org>
Source record: 122896

Richard Harrison wrote:
> CAM wrote:
> "Try causing TV ghosting with your lumped constants."
>
> It`s all length of delay producing image displacement. Make a delay line
> of enough reactive components for comparable delay. Would a ghost know
> the difference?

Of course, you could do that but then you would have the equivalent
circuit of a transmission line. I was talking about only enough components
to duplicate the virtual impedance, not emulate the transmission line.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5208. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:02:00 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030310000200.11099.00000074@mb-cj.aol.com>
Source record: 122897

>Simple CAM....he memorized....didn't 'learn' a thing. Typical actually.
>
>Dan/W4NTI

What happened Dan? I thought you and your little bitch Bruce decided that I wasn't worth replying to. You're like a big fat sweaty bald man sitting at his kitchen table with a honkin' big slice of chocolate cake in front of you and you've just GOTTA take a bite.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5209. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:02:48 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030310000248.11099.00000075@mb-cj.aol.com>
Source record: 122898

>Not really new. Originally licensed in '92. So while I'm not exactly an
>oldtimer, I'm hardly a newbie.

If you haven't been licensed since the Vietnam Police Action, Dan considers you
a newbie.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5210. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:04:08 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030310000408.11099.00000076@mb-cj.aol.com>
Source record: 122899

>Poor 'VHFRADIOBLUFF' Just showing your ignorance everytime you open your
>trap. Keep it up....were all getting a good chuckle goof.

Do you get bored after you reply to my posts, so you decide to reply to them a second time? Or is it memory loss.. forgot you replied to it? I know! The youngins' came up with a whitty reply for you to send out.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5211. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:04:54 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030310000454.11099.00000077@mb-cj.aol.com>
Source record: 122900

>And your excuse is?
>
>Dan/W4NTI

For?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5212. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:05:41 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030310000541.11099.00000078@mb-cj.aol.com>
Source record: 122901

>
>You cant argue with a rock fella's.
>
>Dan/W4NTI

You just don't have a reply for a true statement. Now, shouldn't you and Brucie
be playing dress up like the queerbait's you guys are?
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5213. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:14:46 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030310001446.11099.00000079@mb-cj.aol.com>
Source record: 122902

Easy, email w4nti@mindspring.com. He's got all the answers.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5214. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:18:37 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6C202D.B0E007AA@cwis.net>
Source record: 122903

Reg,
About 30 cents per foot, mostly...
'Doc

5215. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:20:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i68o6vg7ckcbb3l08dm1b35j8r1e78qplt@4ax.com>
Source record: 122904

On Sun, 09 Mar 2003 18:26:33 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>If hiding stuff in a box is what ham radio is all about,
>>
>> This is a continuation of that purple argument whereby Cecil injects
>> yet another inflammatory comment couched as some one else's attitude.
>> Hiding? A carefully crafted response of passive aggression used to
>> denigrate a logical approach offered by Roy, without directly
>> challenging it.
>
>Well, Richard, since you seem to admire the process of hiding things
>in black boxes, I hid my cat in a black box about four days ago with
>no food and water. Is the cat dead or alive?
>
>And, oh yeah, Richard, you give me entirely too much credit.
>I am neither careful nor a craftsman.

Hi Cecil,

And that leaves a host of other tactless abilities confirmed through
omission of denial? I suppose credit is now balanced.

73's
Richard Clark, KB7QHC

5216. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:22:09 UTC
From: #8 <#8@smell.com>
Message-ID: <baecndPjlcWOvPGjXTWc3Q@comcast.com>
Source record: 122905

Dan you are correct he is a glorified CBer that uses rci 2950's etc and talks on 11 meters thats why his amatuer skills and comprehension of the laws are lacking.

"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message news:b4dv34$87p$1@slb5.atl.mindspring.net...
> No...its not a troll....He really is that ignorant. Ive dealt with this
> goof for a while now....believe it.
>
> Dan/W4NTI
>
> "VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
> news:20030308113153.21727.00000043@mb-ft.aol.com...
> > >What a stupid troll, HUH?
> > >Dan, N9JBF
> >
> > Anyone without the same opinion as you is a troll, eh?
> > =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> > 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> > Beachwood, NJ USA! Grid FM29vw
> > http://vhfradiobuff.tripod.com
>
>

5217. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:23:05 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6C2139.C8CD1D57@cwis.net>
Source record: 122906

```
fch,
Your responsibilities are outlined in Part-97. It
basically says that you should make sure your station
is in good operating order, meets standard requirements,
and you are operating the equipment correctly. Then,
if it "Ain't me, it's gotta be them.".
'Doc
```

5218. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:23:55 UTC
From: #8 <#8@smell.com>
Message-ID: <mN2dnRZ5B5bhvPGjXTWcrg@comcast.com>
Source record: 122907

Andy, queer baits? Take a look at your picture you look as queer as a 3 dollar bill.

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message news:20030310000541.11099.00000078@mb-cj.aol.com...
> >
> >You cant argue with a rock fella's.
> >
> >Dan/W4NTI
>
> You just don't have a reply for a true statement. Now, shouldn't you and Brucie
> be playing dress up like the queerbait's you guys are?
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5219. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:24:57 UTC
From: #8 <#8@smell.com>
Message-ID: <laSdnfwFk7cmvPGjXTWcpQ@comcast.com>
Source record: 122908

He is an 11 meter guru check the archives and the yahoo auctions.

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6B8B72.1010604@ieee.org...
> Dee D. Flint wrote:
> > Whether or not you actually learned them, the FCC holds you responsible
for
> > knowing the requirements. If a person chooses shortcuts, that doesn't
get
> > them off the hook when problems occur. Ignorance is not accepted as a
> > defense.
>
> How can a person possibly be ignorant after passing a ham exam? :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5220. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:33:52 UTC
From: richardharrison@webtv.net
Message-ID: <12120-3E6C23C0-873@storefull-2314.public.lawson.webtv.net>
Source record: 122910

CAM wrote:
"It hits Zo/2 at the point where the voltage is zero. Zero volts cannot go anywhere."

Current is maximum in this point where the sum of the incident and reflected voltages are zero. Neither a short nor an open, real or virtual, annihilates energy.

A reflection from a short allows current to loop around through the short while the voltage is temporarily brought down to zero. The resulting reflection inverts the voltage phase, but not the current phase.

A reflection from an open allows voltage to remain unrephased but forces current to invert its phase.

The actual physically caused short or open doesn`t stop a wave from going places, though voltage or current is interrupted there at a tiny spot.The occurence of zero volts or amps caused by a discontinuity at a point, just redirects (reflects) the energy there.

A 2:1 impedance mismatch, means a partial, or incomplete, reflection. It`s a reflection, just the same. Zero volts can make a wave go somewhere when it is not also at a point where the current is zero too.

Best regards, Richard Harrison, KB5WZI

5221. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:44:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6o9h1l6pi6353@corp.supernews.com>
Source record: 122909

OC_CAM's Razor wrote:
>
> You can't measure a virtual short with an ohm-meter.

It's essential to keep in mind that the concept and use of a virtual short are valid only at a single frequency (or at best a finite set of related frequencies) and in steady state. A virtual short, which I maintain is just as good as, and indistinguishable from, a real short at a single frequency and steady state, is not at all valid at DC where an ohm-meter measurement is made.

The fact that a virtual short isn't valid at all frequencies and under all conditions doesn't mean it's not useful for single frequency steady state analysis. It's useful for many of the same reasons that Thevenin and Norton equivalents, pi-tee equivalents, series-parallel equivalents, transformer-tee equivalents, and many other techniques and transformations, are useful when applied within their own sets of restrictions.

Anyone who claims that a virtual short is the equivalent of a physical short at other than one frequency (or a carefully considered finite set of frequencies) is in error. But I haven't seen anyone making this claim. You're the only one who seems to be requiring this of a virtual short.

Roy Lewallen, W7EL

5222. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:54:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6oa49ahud3fd@corp.supernews.com>
Source record: 122911

I hope no one has interpreted what I or any of the other "virtual short circuit" proponents has said to mean that we feel that a "virtual" short is identical to a physical short. It is most definitely not! But at a single frequency and in steady state, it is.

Egad, I'm glad you're not my boss. You'd demand that my model of a DC circuit include inductance, capacitance, transmission line effects, skin effects, radiation, and on and on -- and even then I'd be dinged for using models that aren't valid under all conditions. No matter that my result is by any measure identical to the one you get with all the added unnecessary requirements. Sheesh.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> David Robbins wrote:
>
>> ..., and you can't analyze transients once you do this.
>
>
> Which is an admission that they are not identical circuits.
> If the reflected wave from the end of the stub is not identical
> to the forward wave entering the stub, the substitution will
> not work correctly. The virtual short is caused by destructive
> interference of two waves that are offset in time. In a 1/4WL
> stub, the reflected wave is offset in time by 180 degrees
> compared to the forward wave with which it is interfering.

5223. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 05:57:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6oaa8ilitbe89@corp.supernews.com>
Source record: 122912

I couldn't find the original posting with the statement Richard quoted about ghosting. But if he quoted you accurately, you're seemingly once again complaining that a virtual short (or an equivalent made of lumped constants) isn't exactly the same as a physical short under all conditions (in this case, where transient reflections are present). Of course it's not. Who said it was?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Richard Harrison wrote:
>
>> CAM wrote:
>> "Try causing TV ghosting with your lumped constants."
>>
>> It`s all length of delay producing image displacement. Make a delay line
>> of enough reactive components for comparable delay. Would a ghost know
>> the difference?
>
>
> Of course, you could do that but then you would have the equivalent
> circuit of a transmission line. I was talking about only enough components
> to duplicate the virtual impedance, not emulate the transmission line.

5224. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 06:07:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8t8o6vgfjq7kmdmiuk2nch9lsk4flnb679@4ax.com>
Source record: 122913

On Sun, 09 Mar 2003 17:21:57 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>No, I meant conductor.
>
>Roy Lewallen, W7EL

Hi Roy,

I see nothing in the literature about superconductivity of metallic copper, but the literature is rich in the discussion of layers of copper-oxides: Mercury-Barium Copper Oxide, Sr-Nd-Cu-O, copper-yttrium, copper-barium-yttrium, bismuth, strontium, calcium, copper, and oxygen" ("BSCCO", pronounced "bosco" or "bisco"), La-Ba-Cu-O. The most widely used superconducting wires are made from niobium with titanium or tin in a copper matrix. Most of the stock metals we typically encounter in day to day activity were rejected as candidates a century ago - copper, along with silver and gold long ago vanished. About the only virtue of pure copper is as a non-magnetic substrate for the conductor (not as a conductor itself).

Generally speaking and early on, superconductors found an inversion of expectations in that at cryogenic temperatures some common metals appear to function as insulators, and common (or uncommon) insulators have been found to be super-conductive and many examples of superconductivity are frequently ceramics. The first superconductor was liquid helium and was followed by ORGANICs (perylene) and salts (bisethylenedithio-tetrathiofulvalene) not metals. The only road for the return of metals - is in the form of oxides in a ceramic form.

In fact, that is the supreme difficulty in practical applications of superconductivity is found in the need to construct the conductors in thin-film tape form that allows the fragile ceramics the ability to form a coil. Even then, there is great difficulty in manufacturing a long tape because the domains that encourage superconductivity are often non-contiguous and fail through the lack of a complete path of conduction.

73's
Richard Clark, KB7QHC

5225. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 06:32:04 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vcco6v4ac0557k2cdam51j7l18ml71s7nv@4ax.com>
Source record: 122914

On Fri, 07 Mar 2003 10:40:44 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Given the flood of queries that followed Bob's answer (speaking of
>> what was asked for, and what was not), it begs the question: who cares
>> anyway?
>
>People who like brainteasers. Your mileage may vary.

Well Cecil,

I let that one simmer for a while to observe how much interest
followed. You speculated you had a different answer than the one
offered - but it seems interest has not lead there, or anywhere.

I am sure you can convince us, belatedly, how interested you are - why
remains a mystery.

0 MPG (ï¿½3dB)

73's
Richard Clark, KB7QHC

5226. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 06:48:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6od9ni3vq5628@corp.supernews.com>
Source record: 122915

Copper's conductivity continues to increase down to essentially zero Kelvin, although the temperature coefficient decreases below about 30K.

The high temperature superconductors are ceramics, most or all with copper oxide layers. I followed the development of these materials closely for some time after they were first discovered. But I lost touch after it became apparent that they wouldn't be useful in the near future for very high speed time domain circuitry such as step generators, samplers, and low loss delay lines -- my primary interests --, and that the critical temperatures weren't likely to reach room temperature for some time if ever. But in the early days at least, a number of the materials weren't as good as copper at microwave frequencies and the same temperature, especially when used at temperatures not too far below their critical temperatures. A number of the shortcomings were due to processing defects and were mitigated as time went on. But copper can still be hard to beat at very high frequencies where superconductors also show finite resistance. I vaguely recall that gold is even better than copper at cryogenic temperatures, but my notes are buried and I don't remember for certain.

It is true that the "conventional" superconductors (those superconductive near liquid helium temperature of a few degrees Kelvin) are metals that are relatively poor conductors -- for metal -- at room temperature.

Roy Lewallen, W7EL

Richard Clark wrote:
> On Sun, 09 Mar 2003 17:21:57 -0800, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>No, I meant conductor.
>>
>>Roy Lewallen, W7EL
>
>
> Hi Roy,
>
> I see nothing in the literature about superconductivity of metallic
> copper, but the literature is rich in the discussion of layers of
> copper-oxides: Mercury-Barium Copper Oxide, Sr-Nd-Cu-O,
> copper-yttrium, copper-barium-yttrium, bismuth, strontium, calcium,
> copper, and oxygen" ("BSCCO", pronounced "bosco" or "bisco"),
> La-Ba-Cu-O. The most widely used superconducting wires are made from

> niobium with titanium or tin in a copper matrix. Most of the stock
> metals we typically encounter in day to day activity were rejected as
> candidates a century ago - copper, along with silver and gold long ago
> vanished. About the only virtue of pure copper is as a non-magnetic
> substrate for the conductor (not as a conductor itself).
>
> Generally speaking and early on, superconductors found an inversion of
> expectations in that at cryogenic temperatures some common metals
> appear to function as insulators, and common (or uncommon) insulators
> have been found to be super-conductive and many examples of
> superconductivity are frequently ceramics. The first superconductor
> was liquid helium and was followed by ORGANICs (perylene) and salts
> (bisethylenedithio-tetrathiofulvalene) not metals. The only road for
> the return of metals - is in the form of oxides in a ceramic form.
>
> In fact, that is the supreme difficulty in practical applications of
> superconductivity is found in the need to construct the conductors in
> thin-film tape form that allows the fragile ceramics the ability to
> form a coil. Even then, there is great difficulty in manufacturing a
> long tape because the domains that encourage superconductivity are
> often non-contiguous and fail through the lack of a complete path of
> conduction.
>
> 73's
> Richard Clark, KB7QHC

5227. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 07:03:05 UTC
From: tdonaly@aol.com
Message-ID: <20030310020305.19523.00000076@mb-mn.aol.com>
Source record: 122916

Cecil wrote,
>
>Richard Harrison wrote:
>> CAM wrote:
>> "Try causing TV ghosting with your lumped constants."
>>
>> It`s all length of delay producing image displacement. Make a delay line
>> of enough reactive components for comparable delay. Would a ghost know
>> the difference?
>
>Of course, you could do that but then you would have the equivalent
>circuit of a transmission line. I was talking about only enough components
>to duplicate the virtual impedance, not emulate the transmission line.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

Regardless of the above, your theory still isn't convincing. Moreover, you
still
haven't addressed the issue of why there is any pressing need for anyone to
prefer your explanation to that of Walt.
73,
Tom Donaly, KA6RUH

5228. Antenna for the office

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 09:08:08 UTC
From: A <reply.to@group>
Message-ID: <7J2dnRbAMY7gy_GjXTWc-g@speakeasy.net>
Source record: 122917
Cross-posted to: rec.radio.amateur.antenna,alt.radio.scanner,rec.radio.scanner

I want to purchase/build an antenna to use in my office scanner. I'm on the first floor of my building. I'd prefer something that Radio Shack carries or I can build myself, as my BC250D came without an antenna (it won't arrive for a while I'm betting). I mostly need 800 mhz trunking. (~860 mhz) Infact that alone would be enough for me. There is a real ham store, but I don't want to deal with the crummy Seattle traffic to get to HamMall or ABC Communications. If they have something that would be "perfect" for a reasonable price, then I'll go for it.

The only other things I am interested in (having these would be nice, but not a deal breaker):
150-158 mhz
~450 mhz (more important than 150)

Thompson

5229. Mod. CB coupler for Ham bands

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 10:25:42 UTC
From: Toni - ec3dds <ec3dds@hotmail.com>
Message-ID: <p8po6v02709g3gplflq0itt4ctce1rrj2e@4ax.com>
Source record: 122918
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi,

I have bought a second hand Zetagi M27 (http://www.zgitaly.it/)
antenna tuner this weekend with intention to modify it for ham band
use.

My intention is to substitute the internal coil with two terminals so
that I can have several coils and plug in whichever is more
appropriate for the band in use.

My questions are the following:

- Would it be worth removing the variable capacitors and mounting
them isolated from ground so that the circuit could be modified into a
T network instead of a PI network?

- Would it be dangerous as to RF exposure to mount the terminals so
that the new coil is _outside_ of the box and can be changed easily?
The TX power will be 100W.

Thanks,

ec3dds - Toni

5230. Re: Butternut HF6V 15m decoupling stub.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 11:22:48 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <s3to6v4frlnitih4g2cpthcfri0v7f8vpi@4ax.com>
Source record: 122819

On Mon, 10 Mar 2003 00:35:20 GMT, "Paul Buhse" <buhse@earthlink.net>
wrote:

>I am installing an HF6V on the top of my roof (20 ft) with the following
>radial arrangement 1-80m, 2-40m, 2-30m, 2-20m, 2-15m, 3-10m. Initially, the
>low SWR point for 20m and 10m was around 15 Mhz and 31 Mhz. I added a 3 foot
>section of 1/4 in tubing to the antenna and was then able to tune all bands
>except 15m. The BEST I can get by adjusting the length of the decoupling
>stub on 15m is 2.5:1 SWR. My concern now is that the position of the
>decoupling stub may be incorrect because of the additional antenna height.
>So, here is my question --
>
>Does anyone know how to select the feedpoint position of a decoupling stub?
>I looked in the ARRL handbook but couldn't find any references. I would
>experiment, but I at least want to be close when I start so I can limit the
>amount of times I have to pull down the antenna.
>
>Thanks,
>Paul -- KA0LKB

Paul,

All the tuning info should be in the manual for the Hf6v. You really
should not have had to add to the antenna. If you do not have the
Manual one can be downloaded in PDF format from bencher at

http://www.bencher.com/pdf_download.html#vert_ant

you will need Acrobat Reader or something to read PDF file formats.
73 Dave KC1DI

5231. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 11:48:56 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <X2udnW-IjMg05vGjXTWcpQ@crocker.com>
Source record: 122820

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6BCFEE.9050209@ieee.org...
> David Robbins wrote:
> > You can not of course replace an
> > obviously distributed component (the antenna) with any kind of a lumped
> > component and expect it to perform as before.
>
> So it appears that you agree with me that if one is studying the radiation
> pattern of an antenna, one wouldn't choose to replace the antenna with an
> equivalent dummy load.

correct.

>
> In like manner, if one is studying in detail exactly what happens at a
> virtual short, one wouldn't choose to replace the virtual short with
> an equivalent actual short.

not necessarily correct. if you are studying what happens on the generator side of the 'virtual' short you can replace it with a real short and nothing will change. (at sinusoidal steady state for a single frequency) if however you want to study transients or measure things in the stub or past the 'virtual' short in the cable then you can't replace it because you would be eliminating the components you wanted to measure. remember, in substituting a real short for a 'virtual' short you remove the circuit beyond the substitution so it is no longer there to make measurements in, if done properly the remaining part of the circuit is unaffected but the analysis can be greatly simplified.

5232. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 11:53:35 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <2LCdnah_hMMi4fGjXTWcoQ@crocker.com>
Source record: 122821

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6BD583.7000501@ieee.org...
> Tdonaly wrote:
> > After all, a
> > lumped constant quarter wave imitation stub and a real stub will
> > both do exactly the same thing.
>
> Absolutely false, Tom! Make the stub an odd number of quarter
> wavelengths with a length of about 1000 feet. You will get
> TV ghosting all over the place. Try causing TV ghosting
> with your lumped constants.
>
> If you are careful, you can even make it 1/4WL long and observe
> the difference in the high frequency modulation products 180
> degrees apart when the older reflected wave interferes with
> the newer forward wave.

another example of misuse of substitution. assuming tdonaly knew that you could only substitute the 'imitation stub' in place of the real stub at sinusoidal steady state for a single frequency he is making a valid replacement. cecil on the other hand has violated those conditions because a tv signal is not a steady state signal, it contains a wide range of constantly changing frequency components so obviously the replacement is no longer valid.

5233. Re: Mod. CB coupler for Ham bands

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 11:57:33 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e6c7ccb.12921297@news.freeserve.net>
Source record: 122822
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Mon, 10 Mar 2003 10:25:42 GMT, Toni - ec3dds <ec3dds@hotmail.com>
wrote:

>Hi,
>
>I have bought a second hand Zetagi M27 (http://www.zgitaly.it/)
>antenna tuner this weekend with intention to modify it for ham band
>use.
>
>My intention is to substitute the internal coil with two terminals so
>that I can have several coils and plug in whichever is more
>appropriate for the band in use.
>
>My questions are the following:
>
>- Would it be worth removing the variable capacitors and mounting
>them isolated from ground so that the circuit could be modified into a
>T network instead of a PI network?
>
>- Would it be dangerous as to RF exposure to mount the terminals so
>that the new coil is _outside_ of the box and can be changed easily?
>The TX power will be 100W.
>
Tony, take a look at this page...
http://www.qsl.net/m3msm/atu/atu.htm

I've used the capacitors from the M27 in its construction and it works
fine on powers up to about 50 watts. I don't think I'd like to try it
at higher powers though.
BEWARE the capacitor mounting screws, they are a strange thread and
very easily damaged. I had to re-tap with 4BA when I stripped mine ;-(

hth Mike W, G8NXD aka M3MSM qthr

5234. Re: WHY IS THIS SO HARD TO FIND?????

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 12:32:32 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b4i0l0anj1@sparta.btinternet.com>
Source record: 122823

Maplin make a 70cms/2m dual-band antenna which is telescopic (so easy to tune and goes down to 430mhz from memory) mounted on a BNC and universal joint which can swivel in all planes (�5). www.maplin.co.uk - not sure if you're in the UK or not.

Alternatively, can you not make something with straight wire soldered into a connector? I've actually made some quite professional looking antenna's like that.

D

"Sean Bartholomew" <sean@seanmusic.net> wrote in message news:53e4b2b4.0303062111.1d8426ed@posting.google.com...
> all i need is a cheap small antenna to replace my 7.5" piece of ugly
> wire sticking up crookedly from my Laipac RLP433A (433.92MHz)
> please help.

5235. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 12:33:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C860B.4000901@ieee.org>
Source record: 122824

Tdonaly wrote:
> I think it's up to you to show the world the difference in effect
> between the lumped equivalent of a quarter wave stub and the
> real thing if you want anyone to care whether you're right or not.

You seem to have gotten the wrong impression, Tom. I'm not saying
that a lumped equivalent of a quarter wave stub doesn't cause
reflections. I am saying that a virtual short doesn't cause
reflections. You want to replace a virtual short with a physical
lumped equivalent to prove reflections happen at a virtual short.
I already agree that reflections happen at a physical impedance
discontinuity and that's exactly why you have to replace a virtual
short with something physical to get any reflections to happen at
that point. Seems you have just helped proved my side of the argument.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5236. Ground Plane Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 12:36:33 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b4i0sh$186$1@helle.btinternet.com>
Source record: 122825

What is the difference in radiation pattern between a dipole and a quarter-wave ground plane when mounted on the roof (20m above ground and on 70cms)?

I'm trying to find out if a horizontal ground plane is better than the vertical one of a dipole when you are a long way up from the ground (relative to the 70cms frequency anyway).

Is this also the case with collinears? I have seen designs which use a straight vertical quarter wavelength of copper tube below the antenna to act as groundplane/lower the feedpoint impedance. Would an antenna of identical design, but with a horizontal groundplane perform better in terms of projecting more signal out sideways rather than projecting signal downwards?

Many thanks,

D

5237. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 12:53:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C8AC0.6070201@ieee.org>
Source record: 122827

Richard Harrison wrote:
> CAM wrote:
> "It hits Zo/2 at the point where the voltage is zero. Zero volts cannot
> go anywhere."
>
> Current is maximum in this point where the sum of the incident and
> reflected voltages are zero. Neither a short nor an open, real or
> virtual, annihilates energy.

Agreed. The current is also maximum at the point of connection
of a conductive Yagi element directly to the conductive boom but since
the voltage is zero, virtually no current flows into the boom at the
connection point. I have said this about ten times. Why is it not
soaking in? The two waves are not going to divert away from their
forward and reflected paths at a point where their voltages add up
to zero no matter what the impedance is at that point. E/R is zero
at that point no matter what the R.

> A reflection from a short allows current to loop around through the
> short while the voltage is temporarily brought down to zero. The
> resulting reflection inverts the voltage phase, but not the current
> phase.

Agreed. Another way of saying it is that the two equal magnitude voltages,
forward and reflected, have to add up to zero at the short.

> A reflection from an open allows voltage to remain unrephased but forces
> current to invert its phase.

Agreed. Another way of saying it is that the two equal magnitude currents,
forward and reflected, have to add up to zero at the open.

> The actual physically caused short or open doesn`t stop a wave from
> going places, though voltage or current is interrupted there at a tiny
> spot.The occurence of zero volts or amps caused by a discontinuity at a
> point, just redirects (reflects) the energy there.

Agreed. The actual physically caused short or open causes reflections. A
virtual short does not cause reflections. A virtual short is the *image*
of an actual physical short or open that is projected from a location
n(1/4WL) away from the virtual short.

I have never disagreed with anything you said.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5238. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 12:55:09 UTC
From: W1QE <w1qe@mindspring.com>
Message-ID: <b4i20rmni1@slb5.atl.mindspring.net>
Source record: 122826
Cross-posted to: rec.radio.amateur.antenna,alt.rv

"Rich" <rk911@ANTISPAM.yahoo.com> wrote in message
news:nhpj6vs1sjh483grn5o8kn89rielajbded@4ax.com...
> the following was pulled from the March 7, 2003 edition of "The ARRL
> Letter" (www.arrl.org/arrlletter)
>
> 73,
> rich, n9dko
> ____
> The FCC has told an Oregon couple to stop using its Winegard amplified
> television antenna (Model Sensar/Roadstar) on their recreational
> vehicle "until the condition causing harmful interference has been
> corrected."
>
[snipped.....]

Is there a way to easily determine which units have the problem?

Al
W1QE

5239. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 13:07:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C8E0A.3010708@ieee.org>
Source record: 122829

Roy Lewallen wrote:
> A virtual short, which I
> maintain is just as good as, and indistinguishable from, a real short at
> a single frequency and steady state, ...

The way you can distinguish between a virtual short and a physical short
is that there are no reflections occurring at a virtual short that is
unaccompanied by a physical impedance discontinuity.

> The fact that a virtual short isn't valid at all frequencies and under
> all conditions doesn't mean it's not useful for single frequency steady
> state analysis.

Nobody said it wasn't useful. The argument is whether a virtual short
can cause reflections at the virtual short point in the absence of any
physical impedance discontinuity at the virtual short point. That is the
ONLY argument.

> Anyone who claims that a virtual short is the equivalent of a physical
> short at other than one frequency (or a carefully considered finite set
> of frequencies) is in error. But I haven't seen anyone making this
> claim. You're the only one who seems to be requiring this of a virtual
> short.

The only argument is whether a virtual short causes reflections at the
virtual short point in the complete absence of a physical impedance
discontinuity at the virtual short point. All the discussions attempting
to divert the issue from that subject are extraneous. So we are back to
the original question:

Does a virtual short cause reflections at the virtual short point? I say
a virtual short cannot cause reflections at the virtual short point unless
there is also a physical impedance discontinuity at the virtual short point.
And if there is a physical impedance discontinuity at the virtual short
point, it is the physical impedance discontinuity that is causing the
reflections, not the virtual short. My ONLY argument is with people who
say a virtual short can cause reflections all by itself.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5240. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 13:12:05 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030310081205.18467.00000120@mb-fl.aol.com>
Source record: 122828

>Andy, queer baits? Take a look at your picture you look as queer as a 3
>dollar bill.

Getting a little schitzo, Dan? Just not enough balls to use your real account.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5241. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 13:12:51 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C8F53.9030100@ieee.org>
Source record: 122830

Roy Lewallen wrote:
> I hope no one has interpreted what I or any of the other "virtual short
> circuit" proponents has said to mean that we feel that a "virtual" short
> is identical to a physical short. It is most definitely not! But at a
> single frequency and in steady state, it is.

No, it is not identical, Roy. There are no reflections happening at a virtual short point. That's how you can tell the difference between a virtual short and a physical short. They are not identical. If they were really identical, there would be no need to distinguish between them using different words.

A physical short acts at the point of the physical short. A virtual short is a projected image of something that is happening elsewhere. Those conditions are certainly not identical.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5242. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 13:23:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C91E9.9050204@ieee.org>
Source record: 122831

Roy Lewallen wrote:
> I couldn't find the original posting with the statement Richard quoted
> about ghosting. But if he quoted you accurately, you're seemingly once
> again complaining that a virtual short (or an equivalent made of lumped
> constants) isn't exactly the same as a physical short under all
> conditions (in this case, where transient reflections are present). Of
> course it's not. Who said it was?

You did when you used the word "identical", Roy. To me, "identical" means
"exactly the same". But that's not the real issue. The real issue is:

In the absence of a physical impedance discontinuity at the point of a
virtual short, can the virtual short cause reflections? It's a simple
yes/no question.

I have asked for an example and no one has provided one. If one
exists, now would be a good time to present it.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5243. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 13:29:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C9330.6080700@ieee.org>
Source record: 122832

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>People who like brainteasers. Your mileage may vary.
>
> I let that one simmer for a while to observe how much interest
> followed. You speculated you had a different answer than the one
> offered - but it seems interest has not lead there, or anywhere.

Did you perform a poll of the readers of this newsgroup to ascertain
their level of interest? Lots of things happen in private email.
The level of interest was actually quite rewarding.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5244. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 13:38:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C955F.7080008@ieee.org>
Source record: 122833

Tdonaly wrote:
> Regardless of the above, your theory still isn't convincing.

It is not my theory, Tom. There is simply zero evidence that reflections occur at a virtual short in the absence of a physical impedance discontinuity existing at the point of the virtual short. I have asked you to provide us with an example that demonstrates reflections at a virtual short point in the absence of a physical impedance discontinuity at the virtual short point. You have, so far, provided none. I have provided many examples of virtual shorts where reflections do not occur. So are we to take your assertions on faith without even a single example or one iota of proof?

> Moreover, you still
> haven't addressed the issue of why there is any pressing need for anyone to
> prefer your explanation to that of Walt.

The truth is important to me, Tom. Your mileage may vary.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5245. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 13:43:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C9688.6090705@ieee.org>
Source record: 122834

David Robbins wrote:
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
>>In like manner, if one is studying in detail exactly what happens at a
>>virtual short, one wouldn't choose to replace the virtual short with
>>an equivalent actual short.
>
> not necessarily correct. if you are studying what happens on the generator
> side of the 'virtual' short you can replace it with a real short and nothing
> will change.

Please don't divert the issue. I didn't say I wanted to study the generator.
I said I wanted to "study in detail exactly what happens at a virtual short".
You simply cannot replace the virtual short with something else and expect
to "study in detail exactly what happens at a virtual short". That's exactly
why so many erroneous conclusions have been drawn about a virtual short.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5246. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 13:46:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6C9747.9090104@ieee.org>
Source record: 122835

David Robbins wrote:
> another example of misuse of substitution. assuming tdonaly knew that you
> could only substitute the 'imitation stub' in place of the real stub at
> sinusoidal steady state for a single frequency he is making a valid
> replacement. cecil on the other hand has violated those conditions because
> a tv signal is not a steady state signal, it contains a wide range of
> constantly changing frequency components so obviously the replacement is no
> longer valid.

I hope it is obvious to all that this is the old Catch-22 argument.
What we have is a law of physics that makes it a violation of the law
to question the law.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5247. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:03:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6p6pfd0qnc372@corp.supernews.com>
Source record: 122836

Let me get this straight.

You're saying that you can put a virtual short (say, a half wavelength shorted stub or a quarter wavelength open stub) in one closed box, and a real short -- a piece of wire -- in another, and be able to tell which is which with steady state single frequency measurements?

And how, exactly, do you tell the difference -- by observing what?

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> I hope no one has interpreted what I or any of the other "virtual
>> short circuit" proponents has said to mean that we feel that a
>> "virtual" short is identical to a physical short. It is most
>> definitely not! But at a single frequency and in steady state, it is.
>
>
> No, it is not identical, Roy. There are no reflections happening at a
> virtual
> short point. That's how you can tell the difference between a virtual short
> and a physical short. They are not identical. If they were really
> identical,
> there would be no need to distinguish between them using different words.
>
> A physical short acts at the point of the physical short. A virtual short
> is a projected image of something that is happening elsewhere. Those
> conditions are certainly not identical.

5248. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:03:26 UTC
From: Watcher <observer@thenet.net>
Message-ID: <ks5p6vkqu0glo7501affodgka6erdub0s8@4ax.com>
Source record: 122839

The FCC has that authority and very limited resources. Poor shielding
on consumer electronics is endemic there is no reason to squander
the FCC resources on complaints like this. It seems the Winguard
problem was quite widespread and affecting much more than
ham frequencies, thus their interest. Reading your posts I think
I have a flavor of how your interaction with the FCC went and I
can see why they might have had even less interest in your
complaint.

On 09 Mar 2003 15:57:35 GMT, vhfradiobuff@aol.comspamme (VHFRadioBuff)
wrote:

>>Unless the ham operator is operating illegally, the reality is that his
>>equipment is functioning properly and he is operating as per his FCC
>>granted authority.
>
>And FCC authority also allows for station inspections. I mearly asked them to
>inspect his station before trying to RF proof the house but they couldn't be
>bothered, but yet some RV user bothers a ham up on UHF on a single obscure
>frequency, and the FCC is all over them.
>=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
>73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
>Beachwood, NJ USA! Grid FM29vw
>http://vhfradiobuff.tripod.com

5249. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:09:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6p748ta2auj51@corp.supernews.com>
Source record: 122837

OC_CAM's Razor wrote:
>
> The only argument is whether a virtual short causes reflections at the
> virtual short point in the complete absence of a physical impedance
> discontinuity at the virtual short point. All the discussions attempting
> to divert the issue from that subject are extraneous. So we are back to
> the original question:
>
> Does a virtual short cause reflections at the virtual short point?

Sure. I stick my virtual short into a box and connect it across the line, and you betcha it causes reflections from that point. Ones that are identical, in fact, to those caused by a physical short. (Again making sure that the condition of single frequency steady state is observed.)

I say
> a virtual short cannot cause reflections at the virtual short point unless
> there is also a physical impedance discontinuity at the virtual short
> point.

I'm not sure what you mean my "physical impedance discontinuity." But if I connect a stub to the line that reflects a short circuit at the connection point, then the forward and reflected waves at the connection point will be exactly the same as they'd be if I had connected a wire instead. (Single frequency, steady state.)

> And if there is a physical impedance discontinuity at the virtual short
> point, it is the physical impedance discontinuity that is causing the
> reflections, not the virtual short. My ONLY argument is with people who
> say a virtual short can cause reflections all by itself.

But no such discontinuity is necessary.

Roy Lewallen, W7EL

5250. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:09:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6p75h1kvuoc6f@corp.supernews.com>
Source record: 122838

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> I couldn't find the original posting with the statement Richard quoted
>> about ghosting. But if he quoted you accurately, you're seemingly once
>> again complaining that a virtual short (or an equivalent made of
>> lumped constants) isn't exactly the same as a physical short under all
>> conditions (in this case, where transient reflections are present). Of
>> course it's not. Who said it was?
>
>
> You did when you used the word "identical", Roy. To me, "identical" means
> "exactly the same". But that's not the real issue. The real issue is:
>
> In the absence of a physical impedance discontinuity at the point of a
> virtual short, can the virtual short cause reflections? It's a simple
> yes/no question.

The answer is yes.

Roy Lewallen, W7EL

5251. Re: Ground Plane Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:23:04 UTC
From: richardharrison@webtv.net
Message-ID: <103-3E6C9FC8-320@storefull-2318.public.lawson.webtv.net>
Source record: 122844

Dean Elwood wrote:
"What is the difference in radiation pattern between a dipole and a quarter-wave ground-plane when mounted on the roof (20 m above ground and on 70 cms)?"

Mounting may affect antenna performance. The earth is far enough away to have small effect.

Polarization is of small importance if both sender and receiver are polarized the same way and the surroundings are not involved.

Arnold B. Bailey knows all and shows all in his excellent book: "TV and Other Receiving Antennas". The center-fed, 1/2-WL, thin dipole antenna in free-space is his universal reference.

The pattern of the reference dipole is clean and found in many publications. With Bailey`s construction, its bandwidth is 34% at 3 db down. Drivepoint is 60 ohms.

Bailey`s ground-plane antenna uses a 1/2-wave diameter disk as a counterpoise for the 1/4-wave vertical. The pattern is nearly identical to the dipole when both are polarized the same. Gain is the same. Bandwidth is 40% at 3 db down for the ground-plane. It has fatter elements. Drivepoint is 28 ohms.

Best regards, Richard Harrison, KB5WZI

5252. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:31:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CA1C9.30703@ieee.org>
Source record: 122842

Roy Lewallen wrote:
> Let me get this straight.
>
> You're saying that you can put a virtual short (say, a half wavelength
> shorted stub or a quarter wavelength open stub) in one closed box, and a
> real short -- a piece of wire -- in another, and be able to tell which
> is which with steady state single frequency measurements?

I didn't say that at all, Roy. In my world, the truth is not allowed
be be hidden in a closed box.

> And how, exactly, do you tell the difference -- by observing what?

By opening the boxes and installing a directional wattmeter at the
midpoint of the stub. Why on earth would you choose to hide the
truth inside a closed box?

There are no reflections occurring at the virtual short point in
the stub example. In both examples, all the reflections are
occurring at the actual physical short (or open). Why is that so
hard to understand and accept?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5253. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:32:06 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030310093206.26837.00000114@mb-fw.aol.com>
Source record: 122841

>Reading your posts I think
>I have a flavor of how your interaction with the FCC went and I
>can see why they might have had even less interest in your
>complaint.

I just act that way with Dan and his bitch, Brucie. Those southern Vietnam Vet-Wanna Be's can be a lot of fun to tease. Just remember, zoo policy - don't feed the rednecks.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5254. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:32:41 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6p8gcbcatig1c@corp.supernews.com>
Source record: 122840

OC_CAM's Razor wrote:
> Roy Lewallen wrote:
>
>> I couldn't find the original posting with the statement Richard quoted
>> about ghosting. But if he quoted you accurately, you're seemingly once
>> again complaining that a virtual short (or an equivalent made of
>> lumped constants) isn't exactly the same as a physical short under all
>> conditions (in this case, where transient reflections are present). Of
>> course it's not. Who said it was?
>
>
> You did when you used the word "identical", Roy. To me, "identical" means
> "exactly the same". But that's not the real issue. The real issue is:
>
> In the absence of a physical impedance discontinuity at the point of a
> virtual short, can the virtual short cause reflections? It's a simple
> yes/no question.
>
> I have asked for an example and no one has provided one. If one
> exists, now would be a good time to present it.

Ok.

Connect a source to a 50 ohm line of any length. At the end of the line, call it point x, connect a short circuit. Make any measurements you'd like. Now disconnect the short circuit and attach in its place an additional quarter wavelength of 50 ohm line with an open circuit at the end. This creates a "virtual short circuit" at x.

With the condition that you don't mess with the source (that is, you have to leave it at the same frequency and do measurements after steady state has been reached), you can make any measurements you'd like between the source and point x, and you won't be able to tell whether the physical or virtual short is at point x. All waves, reflections, voltages, currents, powers, and anything else you can measure will be the same between the source and point x. Now replace the virtual short stub with Tom's series resonant circuit. Again you can't tell the difference between it and the short.

There's no impedance discontinuity at point x.

Consider the simple question answered and the example provided. Now can we get back to something interesting or at least challenging?

Roy Lewallen, W7EL

-- certified Reg's Old Wife
-- certified Cecil's Old Wife

Isn't this some kind of bigamy?

5255. Re: Ground Plane Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:41:02 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933A43FE41453pookster@216.168.3.50>
Source record: 122843

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in
news:b4i0sh$186$1@helle.btinternet.com:

> What is the difference in radiation pattern between a dipole and a
> quarter-wave ground plane when mounted on the roof (20m above ground
> and on 70cms)?
>

Best answered by downloading EZNEC: www.eznec.com

--
Bill, W7TI

5256. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:45:04 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CA4F0.3060602@ieee.org>
Source record: 122845

Roy Lewallen wrote:
> OC_CAM's Razor wrote:
>> Does a virtual short cause reflections at the virtual short point?
>
> Sure. I stick my virtual short into a box and connect it across the
> line, and you betcha it causes reflections from that point.

If it is a 1/4WL open stub, you can prove your above statement to
be incorrect by placing a directional wattmeter in the middle of
the stub. That will prove that all the reflections are happening
at the open end of the stub and none are happening at the virtual
short. You can also prove the same thing without opening the box
by adding modulation to the incident wave and observing the "ghosting".

> But if
> I connect a stub to the line that reflects a short circuit at the
> connection point, then the forward and reflected waves at the connection
> point will be exactly the same as they'd be if I had connected a wire
> instead. (Single frequency, steady state.)

There's that old Catch-22 law of physics rearing its ugly head again.
The problem is that for a single frequency, steady state situation, I
cannot identify the waves that are 180 degrees different in age. Adding
anything to the waves to allow identification of the individual waves
runs into the Catch-22 requirement. However, I am not willing to base
my concepts of physics on some Catch-22 argument.

> But no such discontinuity is necessary.

So a physical discontinuity is not necessary to cause a reflection?
Is there some supernatural reflection angel causing them? I find it
hard to believe that you are not just pulling my leg.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5257. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:46:22 UTC
From: richardharrison@webtv.net
Message-ID: <11971-3E6CA53E-880@storefull-2312.public.lawson.webtv.net>
Source record: 122855

CAM wrote:
"---Yagi element directly to the conductive boom, but since the voltage is zero, virtually no current flows---."

The boom attaches at a balance point in the element for conduction and for induction.

When you connect a load of two 50-ohm resistors in parallel, the combined resistance is 25 ohms. Attach this load to a 50-ohm source. You have an instant mismatch which makes a reflection.

Best regards, Richard Harrison, KB5WZI

5258. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:47:10 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CA56E.9060000@ieee.org>
Source record: 122846

Roy Lewallen wrote:
> OC_CAM's Razor wrote:
>> In the absence of a physical impedance discontinuity at the point of a
>> virtual short, can the virtual short cause reflections? It's a simple
>> yes/no question.
>
> The answer is yes.

Then please provide an example, Roy. So far, no one has provided
even one example of a virtual short causing reflections in the
absence of a physical impedance discontinuity.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5259. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:51:43 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <2f-dnTe-g_0dO_GjXTWcpg@crocker.com>
Source record: 122847

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6C9747.9090104@ieee.org...
> David Robbins wrote:
> > another example of misuse of substitution. assuming tdonaly knew that
you
> > could only substitute the 'imitation stub' in place of the real stub at
> > sinusoidal steady state for a single frequency he is making a valid
> > replacement. cecil on the other hand has violated those conditions
because
> > a tv signal is not a steady state signal, it contains a wide range of
> > constantly changing frequency components so obviously the replacement is
no
> > longer valid.
>
> I hope it is obvious to all that this is the old Catch-22 argument.
> What we have is a law of physics that makes it a violation of the law
> to question the law.

ah, but this is the real rub... doing a substitution of a real short for an
open 1/4 wave line is an engineering shortcut that takes advantage of
certain characteristics of the components... the part that you don't seem to
want to accept is that using this type of shortcut places restrictions on
the system being analyzed. specifically in these cases it restricts it to
sinusoidal steady state at a single frequency. violating those conditions
invalidates the assumptions used when doing the replacement and forces you
back to using the complete system and more complex analysis methods to take
into account transients and other phenomena.

if you wish you may always use the full equations to analyze the whole
system rigorously... but in most cases it is useful to simplify complex
circuits to analyze several simple cases and get a general idea of what is
happening.

5260. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 14:58:21 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <hI-dnY0YBL6TNfGjXTWcrg@crocker.com>
Source record: 122848

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6C9688.6090705@ieee.org...
> David Robbins wrote:
> > "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
> >>In like manner, if one is studying in detail exactly what happens at a
> >>virtual short, one wouldn't choose to replace the virtual short with
> >>an equivalent actual short.
> >
> > not necessarily correct. if you are studying what happens on the
generator
> > side of the 'virtual' short you can replace it with a real short and
nothing
> > will change.
>
> Please don't divert the issue. I didn't say I wanted to study the
generator.
> I said I wanted to "study in detail exactly what happens at a virtual
short".
> You simply cannot replace the virtual short with something else and expect
> to "study in detail exactly what happens at a virtual short". That's
exactly
> why so many erroneous conclusions have been drawn about a virtual short.

I am not diverting it, i am clarifying when you may and when you may not use
the circuit simplifications and substitutions that have been presented. if
indeed you want to study what the voltage and current are doing on only the
generator side of a 'virtual' short in sinusoidal steady state at one
frequency you can do make the replacement of the open stub with a real short
and all of your measurements will remain the same. if however you want to
make measurements past that point you must include the rest of the circuit
and can not make the substitution.... or if you want to change frequencies,
analyze transients, etc then you must use the whole circuit. then the
'virtual' short location becomes nothing more than a point on the line where
the voltage just happens to go to zero at a particular frequency after
steady state is reached. during transients or at some other frequency this
particular point may or may not have any particular interesting
characteristics.

5261. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:02:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CA901.1050409@ieee.org>
Source record: 122849

Roy Lewallen wrote:
> With the condition that you don't mess with the source (that is, you
> have to leave it at the same frequency and do measurements after steady
> state has been reached), you can make any measurements you'd like
> between the source and point x, and you won't be able to tell whether
> the physical or virtual short is at point x.

Roy, what's with all the conditions designed to hide the truth?
Simply install a directional wattmeter in the middle of the stub
and you can see for yourself that no reflections are happening at
the virtual short. In fact, you are just repeating one of my examples.

> Again you can't tell the difference between it and the short.

Of course I can, Roy. I just told you how to prove that there are
no reflections happening at the virtual short. Thanks for one more
example that demonstrates no reflections at the virtual short point.

> There's no impedance discontinuity at point x.

And there are no reflections at point x.

> Consider the simple question answered and the example provided.

But you did NOT provide an example of reflections happening at a
virtual short. In fact, you provided an example of where no
reflections are happening at a virtual short. Are you pulling my
leg?

I am still waiting for a *valid* example from you or anyone else.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5262. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:09:28 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4i9q7$6j2$1@slb3.atl.mindspring.net>
Source record: 122850

Thanks for the confirmation. I always suspected that.

Dan/W4NTI

"#8" <#8@smell.com> wrote in message
news:baecndPjlcWOvPGjXTWc3Q@comcast.com...
> Dan you are correct he is a glorified CBer that uses rci 2950's etc and
> talks on 11 meters thats why his amatuer skills and comprehension of the
> laws are lacking.
>
>
> "Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
> news:b4dv34$87p$1@slb5.atl.mindspring.net...
> > No...its not a troll....He really is that ignorant. Ive dealt with this
> > goof for a while now....believe it.
> >
> > Dan/W4NTI
> >
> > "VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
> > news:20030308113153.21727.00000043@mb-ft.aol.com...
> > > >What a stupid troll, HUH?
> > > >Dan, N9JBF
> > > >
> > > Anyone without the same opinion as you is a troll, eh?
> > > =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> > > 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> > > Beachwood, NJ USA! Grid FM29vw
> > > http://vhfradiobuff.tripod.com
> >
> >
>
>

5263. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:11:04 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4i9t6$h6q$1@slb3.atl.mindspring.net>
Source record: 122851

See what I mean folks? This guys idea of a counter-arguement is to call someone names. IQ of a rock...I rest my case.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message news:20030310000541.11099.00000078@mb-cj.aol.com...
> >
> >You cant argue with a rock fella's.
> >
> >Dan/W4NTI
>
> You just don't have a reply for a true statement. Now, shouldn't you and Brucie
> be playing dress up like the queerbait's you guys are?
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5264. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:11:12 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CAB10.2020702@ieee.org>
Source record: 122854

David Robbins wrote:
> ... the part that you don't seem to
> want to accept is that using this type of shortcut places restrictions on
> the system being analyzed.

Actually, the part that you guys don't seem to want to accept is that if
you set up the conditions that makes it impossible to prove a point, the
counter-point is not automatically proven. The situation simply winds up
with neither point proven. And nobody has proven that reflections occur
at a virtual short in the absence of any physical impedance discontinuity
at that point.

I have no reason to believe that something supernatural happens at exactly
the point where single-frequency, sinusoidal, steady-state conditions occur.
Vary the frequency by a little bit, vary the sinusoidal by a little bit,
or vary the steady-state by a little bit and those supernatural happenings
disappear.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5265. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:12:58 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4ia1sutq1@slb5.atl.mindspring.net>
Source record: 122852

So now you accuse me of using a 'fake' account? Why should I do that ? I mean everything I say. I have nothing to hide. I am for real...Hard to believe eh? Especially in todays society and screwed up values. Someone who actually is for real.

Get over it Andy.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message news:20030310081205.18467.00000120@mb-fl.aol.com...
> >Andy, queer baits? Take a look at your picture you look as queer as a 3
> >dollar bill.
>
> Getting a little schitzo, Dan? Just not enough balls to use your real account.
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5266. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:14:34 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4ia3t$hi5$1@slb9.atl.mindspring.net>
Source record: 122853

Oh...so now Im a Vietnam Veteran wanabe? Dang...I guess I need to turn in
my government check for my combat injuries in that war.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030310093206.26837.00000114@mb-fw.aol.com...
> >Reading your posts I think
> >I have a flavor of how your interaction with the FCC went and I
> >can see why they might have had even less interest in your
> >complaint.
>
> I just act that way with Dan and his bitch, Brucie. Those southern Vietnam
> Vet-Wanna Be's can be a lot of fun to tease. Just remember, zoo policy -
don't
> feed the rednecks.
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5267. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:16:05 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4ia6kcri1@slb4.atl.mindspring.net>
Source record: 122856

Your not worth replying to...just so happens this is a slow week.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030310000200.11099.00000074@mb-cj.aol.com...
> >Simple CAM....he memorized....didn't 'learn' a thing. Typical actually.
> >
> >Dan/W4NTI
>
> What happened Dan? I thought you and your little bitch Bruce decided that
I
> wasn't worth replying to. You're like a big fat sweaty bald man sitting at
his
> kitchen table with a honkin' big slice of chocolate cake in front of you
and
> you've just GOTTA take a bite.
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5268. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:17:04 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4ia8evdo1@slb4.atl.mindspring.net>
Source record: 122857

Your right...not a newby. Sorry. However I still appreciate your ability
to see whats real and whats not.

Dan/W4NTI

"Dee D. Flint" <deehays@qix.net> wrote in message
news:UpTaa.5853$se1.3162717@newssvr28.news.prodigy.com...
>
> "Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
> news:b4glv0$167$1@slb9.atl.mindspring.net...
> > Thank you Dee.....a new ham with a brain....how refreshing.
> >
> > Dan/W4NTI
>
>
> Not really new. Originally licensed in '92. So while I'm not exactly an
> oldtimer, I'm hardly a newbie.
>
> Dee Flint, N8UZE
>
>

5269. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:18:25 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4iaav$hb8$1@slb9.atl.mindspring.net>
Source record: 122858

Now Vietnam is a 'police action'. Look folks a good example of our
educational system. VN was never called a 'police action'. Korea was,
incorrectly I might add.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030310000248.11099.00000075@mb-cj.aol.com...
> >Not really new. Originally licensed in '92. So while I'm not exactly an
> >oldtimer, I'm hardly a newbie.
>
> If you haven't been licensed since the Vietnam Police Action, Dan
considers you
> a newbie.
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5270. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:19:45 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4iadfbf1@slb2.atl.mindspring.net>
Source record: 122859

Just wanted to be sure you got it. From what I read from you your ability
to comprehend is in question.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message
news:20030310000408.11099.00000076@mb-cj.aol.com...
> >Poor 'VHFRADIOBLUFF' Just showing your ignorance everytime you open
your
> >trap. Keep it up....were all getting a good chuckle goof.
>
> Do you get bored after you reply to my posts, so you decide to reply to
them a
> second time? Or is it memory loss.. forgot you replied to it? I know! The
> youngins' came up with a whitty reply for you to send out.
> =-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5271. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:25:36 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4iaoj$6sp$1@slb0.atl.mindspring.net>
Source record: 122860

Not really all the answers cber....just enough to show you how stupid you are.

Dan/W4NTI

"VHFRadioBuff" <vhfradiobuff@aol.comspamme> wrote in message news:20030310001446.11099.00000079@mb-cj.aol.com...
> Easy, email w4nti@mindspring.com. He's got all the answers.
> =-
> 73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
> Beachwood, NJ USA! Grid FM29vw
> http://vhfradiobuff.tripod.com

5272. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:25:43 UTC
From: richardharrison@webtv.net
Message-ID: <11971-3E6CAE77-887@storefull-2312.public.lawson.webtv.net>
Source record: 122862

I wrote:
"You have an instant mismatch which causes a reflection."

The context is a Tee in a coax line with 50-ohms on both ends. The line tap sees 25 ohms as its load.

Best regards, Richard Harrison, KB5WZI

5273. FM trap in vhf/uhf antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 15:26:21 UTC
From: "J. Sun" <jsun@lucent.com>
Message-ID: <b4iaqv$31s@netnews.proxy.lucent.com>
Source record: 122861

Hi !

I posted several messages regarding double antennas (antennas stacking), ant-mount preamp and questions about installation of pre-amp, and tried to improve my over-the-air TV reception from stations broadcasted at NYC. Based on the responses, I bought a Winegard 8780 pre-amp. It works pretty well. The picture is beautiful and clear even on big screen TV. Now I would like to fine tuned the reception and hope to receive both vhf/uhf and FM well.

The Winegard comes with both fixed trap in/out and variable FM trap. Right now if the preamp is set as default, "fixed trap in" and variable FM trap turned
out of FM. The TV is reception is good but no stereo FM. If the preamp set to
fixed trap out, the reception degrades and FM is just o.k.. Can someone explain what the detailed electronicall functions of "fixed trap in", "fixed trap out"
and "variable FM trap" are ? especiallyy what the variable FM trap adjusted when
fixed trap is in or out position, respectively ?

Looks like I have very strong FM interference, right ?
because the channels around FM suffer more? What is the tip to get both TV and
FM signal ?

Thanks !

5274. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 16:37:49 UTC
From: tdonaly@aol.com
Message-ID: <20030310113749.10466.00000213@mb-fj.aol.com>
Source record: 122863

Part of what Cecil wrote,
>And nobody has proven that reflections occur
>at a virtual short in the absence of any physical impedance discontinuity
>at that point.

What's a "physical impedance discontinuity," Cecil? Why isn't such
mentioned in transmission line texts? Can a "non-physical impedance
discontinuity" become a "physical impedance discontinuity" if you
change its geometry? If I take two quarter-length wires, arrange them in
a collinear manner to form a dipole, is the impedance at the two proximal
ends a "physical impedance discontinuity," and if I slowly swivel them
in such a way as to eventually make them parallel does the "physical
impedance discontinuity morph into a "non-physical impedance discontinuity?"
At what point does this happen?
I think you've been reading too many popular philosophy books, Cecil.
You've got reificationitis.
73,
Tom Donaly, KA6RUH

5275. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 16:45:05 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <tW6dnXm5Y_GPXPGjXTWcpg@crocker.com>
Source record: 122864

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6CAB10.2020702@ieee.org...
> David Robbins wrote:
> > ... the part that you don't seem to
> > want to accept is that using this type of shortcut places restrictions
on
> > the system being analyzed.
>
> Actually, the part that you guys don't seem to want to accept is that if
> you set up the conditions that makes it impossible to prove a point, the
> counter-point is not automatically proven. The situation simply winds up
> with neither point proven. And nobody has proven that reflections occur
> at a virtual short in the absence of any physical impedance discontinuity
> at that point.
>
> I have no reason to believe that something supernatural happens at exactly
> the point where single-frequency, sinusoidal, steady-state conditions
occur.
> Vary the frequency by a little bit, vary the sinusoidal by a little bit,
> or vary the steady-state by a little bit and those supernatural happenings
> disappear.

yep, because you change the conditions the simplifications that have been
done are no longer valid so you must revert to analyzing the full circuit...
in which case the 'virtual' short is nothing more than a point where the
voltage is zero at one frequency, but moves or is gone at some other
frequency. there is nothing supernatural about the sinusoidal steady state
analysis methods, they just provide convenient ways to simplify analysis of
a circuit. but as i said, as soon as you want to analyze something with
transients, multiple frequencies, or you want to look inside a component
that has been replaced with a simpler piece (i.e. when you want to measure
the current inside the blackbox that might be a short or a stub) you must
analyze the whole circuit again.

what you must understand is that the simplifications that many of us almost
automatically make are engineering shortcuts... unfortunately many of us who
use these things regularly will often fail to state them clearly enough so
that someone not trained in using them can understand why they can be done
and under what conditions. these things are very powerful when used
properly, but the way you ignore the restrictions and try to apply them in
other cases just doesn't work... if you want to talk about transients, tv
video ghosts, measure currents in all parts of the circuit, etc you have to
keep the whole model and account for all the currents and voltages using
ohm's, kirchoff's, and maxwell's equations as appropriate.

5276. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 16:48:12 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E6CC1A2.8A56D2DB@attbi.com>
Source record: 122865

I'm amazed that any Amateur Licensee would have to ask this question! 47 CFR 97 covers all your responsibilities.

You will find the answer to your specific question in 47 CFR 97.121 and 307.

Deacon Dave, W1MCE
+ + +

fch wrote:
>
> If a neighbor complains about me interfering with his TV.

5277. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 16:53:13 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <3E6CC2F9.4080605@psu.edu>
Source record: 122867

Dick Carroll wrote:

> I should have added that there are quality variations in the brands
> of the compounds and some definitely are more durable than others. I
> avoid the mostly pine pitch compounds in favor of those with asphalt
> or latex/rubber ingredients

Once upon a time, Hams used to soak things like homebrew wood balanced line spreaders in Paraffin for a while to water/weatherproof them. Long items like bamboo might be a bit of a nuisance to totally soak, but would be do-able.

- Mike KB3EIA -

5278. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 16:53:28 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E6CC2DE.293FDA4B@attbi.com>
Source record: 122866

I hope you don't have to ask: "What is 47 CFR 97? Where do I find it?"

DD

Dave Shrader wrote:
>
> I'm amazed that any Amateur Licensee would have to ask this question! 47
> CFR 97 covers all your responsibilities.
>
> You will find the answer to your specific question in 47 CFR 97.121 and
> 307.
>
> Deacon Dave, W1MCE
> + + +
>
> fch wrote:
> >
> > If a neighbor complains about me interfering with his TV.

5279. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 17:08:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <pphp6vcjgijgk7utcsggcgsdsud2v7kl17@4ax.com>
Source record: 122868

On Mon, 10 Mar 2003 08:47:10 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Roy Lewallen wrote:
>> OC_CAM's Razor wrote:
>>> In the absence of a physical impedance discontinuity at the point of a
>>> virtual short, can the virtual short cause reflections? It's a simple
>>> yes/no question.
>>
>> The answer is yes.
>
>Then please provide an example, Roy. So far, no one has provided
>even one example of a virtual short causing reflections in the
>absence of a physical impedance discontinuity.

Ah!

Obviously it was NOT a yes/no question. Much like the so-called
brainteaser which also required a simple response, such responses are
obviously NOT the point of interest.

73's
Richard Clark, KB7QHC

5280. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 17:11:11 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <k0ip6v031ufdl2u8m5dbcfq1m92gfjtskr@4ax.com>
Source record: 122770

On Mon, 10 Mar 2003 09:02:25 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>I am still waiting for a *valid* example from you or anyone else.

Hi Cecil,

No doubt you will remain disappointed. Thankfully debate (not to be
confused with this churning response of yours) does not hinge on your
feelings.

73's
Richard Clark, KB7QHC

5281. EzNEC Yagi Model

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 17:12:13 UTC
From: Xanax <keepItInTheNewsGroups@news.com>
Message-ID: <fF3ba.1546$pK2.1934@news.indigo.ie>
Source record: 122769

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Do I have to include a ground for this kind of model.
I'm just using free space at the moment but the signal pattern gets really
distorted when I select a perfect or accurate ground.

Cheers,
Xanax
-----BEGIN PGP SIGNATURE-----
Version: PGP 8.0 (Build 294) Beta

iQA/AwUBPmzHayGakPXr24F/EQKVOACeJWe0yBPz3Sy8bwgFXSvo1LU/wyYAnRyF
M8xnuBgzgQ61ED8RGhZ4ae8I
=gsSu
-----END PGP SIGNATURE-----
```

5282. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 17:22:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qgip6v8rsgc3qgmsvv305t6qiung4shlh5@4ax.com>
Source record: 122771

On Mon, 10 Mar 2003 08:45:04 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>If it is a 1/4WL open stub

Duh!

IF indeed. And equally IF NOT.

You obviously have to lift the hood to make that determination, which proves you cannot make that determination at the plane of reflection for yourself. This qualifies your logic as being a secondary answer that is derivative and cannot be used to leverage against the more general form suggested by Roy.

73's
Richard Clark, KB7QHC

5283. Re: EzNEC Yagi Model

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 17:29:48 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <c_KdnQ0D2Y4TVvGjXTWcoA@crocker.com>
Source record: 122772

> Do I have to include a ground for this kind of model.
> I'm just using free space at the moment but the signal pattern gets really
> distorted when I select a perfect or accurate ground.
>
it depends on what you are trying to model, a yagi in free space, or a yagi
over real ground. in most cases it is easier and faster to optimize the
yagi in free space then move it over real ground and make final small
adjustments if needed.

5284. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 17:31:10 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rrip6v4n6gcmsdvdqcdurvko5aaa9u5gbg@4ax.com>
Source record: 122773

On Mon, 10 Mar 2003 07:29:20 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>People who like brainteasers. Your mileage may vary.
>>
>> I let that one simmer for a while to observe how much interest
>> followed. You speculated you had a different answer than the one
>> offered - but it seems interest has not lead there, or anywhere.
>
>Did you perform a poll of the readers of this newsgroup to ascertain
>their level of interest? Lots of things happen in private email.
>The level of interest was actually quite rewarding.

Do I smell singed martyr?

Your correspondents appear to have little interest in its discussion
here. We haven't had those kind of conclaves since the moderated
meetings of the mystic fractalytes. E-mail conversions must be
disappointingly short of getting that wild-eyed gaze of the newly
converted.

By-the-by, no interest in offering a competing answer to Bob's work?
You certainly don't have $1000 on the line for this challenge.

73's
Richard Clark, KB7QHC

5285. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 17:34:52 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6CCCBC.26612D29@uci.edu>
Source record: 122784

Richard Harrison wrote:
> Yes, as Yogi said: "When you get to a fork in the road, take it!" That`s
> what the wave flowing out of the stub must do. At the instant the newly
> reflected wave arrives at the main line, it likeky sees 1/2 the mainline
> impedance. This is likely 1/2 the Zo impedance the reflected wave
> traveled on while on the stub. This junction point is an impedance bump,
> at least initially. So, for sure it can reflect.
>
> As Walter says, at the junction, one quarterwave back from the open
> circuit at the far end of the stub, the incident and reflected voltages
> on the stub, are 180-degrees apart. This is at the stub attachment
> point.
>
> At the same point, the junction, one quarter wave back fron the open,
> the reflected current has risen from zero at the open-circuit to the
> value which satisfies Zo. Equality has been re-established between
> energies contained within the E&H fields. At this point where the stub
> meets the main line, in the stub, incident and reflected voltage vectors
> total zero while incident and reflected current vectors total their
> maximum.
>
> A very low voltage and a very large current at a point signify a short.

What would you predict the reflected pulse from a TDR would look like if
that were the source? Would the pulse be inverted, or not?

73 de ac6xg

5286. Re: EzNEC Yagi Model

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 17:41:34 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <l5jp6vsbi4ov707hka9n6a6se5der2gshq@4ax.com>
Source record: 122774

On Mon, 10 Mar 2003 17:12:13 -0000, "Xanax"
<keepItInTheNewsGroups@news.com> wrote:

|
|-----BEGIN PGP SIGNED MESSAGE-----
Why PGP?

|Do I have to include a ground for this kind of model.
|I'm just using free space at the moment but the signal pattern gets really
|distorted when I select a perfect or accurate ground.

Often during development of a design, free space modeling is fine.
Pattern changes are easier to see since things are a bit less
complicated.

However, because the antenna is ultimately going to be operated over
ground, final modeling should include an appropriate ground condition.
The "distortion" that you see is real and unavoidable.

5287. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:00:25 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <27kp6vsigu2duq1foql6momh9nvnnb46iv@4ax.com>
Source record: 122775

On Mon, 10 Mar 2003 06:32:41 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

|
| -- certified Reg's Old Wife
| -- certified Cecil's Old Wife
|
| Isn't this some kind of bigamy?

Not if you're Mormon or Muslim.

But if you're going to keep taking wives, why old ones instead of
young ones?

Stewart's law for the optimum age of a bride:

Ab = Ah / 2 + 7

where Ab = bride's age

and Ah = husband's age

5288. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:02:05 UTC
From: Harris <aharris@bookworm.suffolk.lib.ny.us>
Message-ID: <xq4ba.5228$io.219623@iad-read.news.verio.net>
Source record: 122776

fch <na@hle.com> wrote:
> If a neighbor complains about me interfering with his TV.

You're required to send him a QSL card verifying reception!

Art Harris N2AH

5289. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:08:12 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6CD48C.39C8D1A7@uci.edu>
Source record: 122793

Richard Harrison wrote:
>
> CAM wrote:
> "Nope, it can`t reflect---."
> (The reflection from a 1/4-WL OC stub at its junction with the
> mainline.)
>
> Terman`s open circuit transmission line example shows the unabated
> reflected wave creating repeated maxima and minima as it reacts with the
> incident wave, all the way back to the sender. At each of these extremes
> along the line, there`s no additional reflection.
>
> Why are the waves transparent to each other? Why are there no additional
> reflections along the line`s route? It`s because there is no mismatch of
> the line anywhere along the route. Mismatch causes a reflection. The
> line ia uniform and enforces Zo. The wave at any point traveling in
> either direction is coming from Zo and traveling into Zo.
>
> Our stub Teed into the mainline is different. Before a signal rebounds
> from the load or from the sender to the Teeing point, for example, the
> stub`s reflecttion may be coming out of Zo, but it hits Zo / 2 at the
> point where the stub joins the mainline.
>
> If Zo / 2 is not a mismatch to Zo, we need a new definition for an
> impedance bump.

Hi Richard,

Shouldn't the impedance be Zo || 0 ohms? ;-)

Jim, AC6XG

5290. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:27:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CD926.8080607@ieee.org>
Source record: 122777

Richard Harrison wrote:
> CAM wrote:
> "---Yagi element directly to the conductive boom, but since the voltage
> is zero, virtually no current flows---."
>
> The boom attaches at a balance point in the element for conduction and
> for induction.

Yep, conduction is what is being discussed. No conduction = no reflections.

> When you connect a load of two 50-ohm resistors in parallel, the
> combined resistance is 25 ohms. Attach this load to a 50-ohm source. You
> have an instant mismatch which makes a reflection.

> The context is a Tee in a coax line with 50-ohms on both ends. The line
> tap sees 25 ohms as its load.

Let's take a look at such a system using a signal generator equipped with
a circulator load resistor (SGCR). 50 watts into 50 ohm coax is convenient
because the voltage is then 50 volts. Here's your configuration:

```
+-----50 ohm line---50 ohm load
|
SGCR------50 ohm line----------x
|
+-----50 ohm line---50 ohm load
```

With a directional wattmeter, we measure 50W forward and 5.55W
reflected on the 50 ohm line out of the signal generator.
There are obviously reflections occurring at point 'x'. The
directional wattmeter reads 22.22W forward and zero watts
reflected in each leg going to the 50 ohm loads. Each 50 ohm
load dissipates 22.22W.

Now add a 1/4WL open stub at point 'x'.

```
+-----50 ohm line---50 ohm load
|
SGCR------50 ohm line----------x--50 ohm 1/4WL open stub-----
|
+-----50 ohm line---50 ohm load
```

The directional wattmeter reads 50W forward and 50W reflected
both on the 50 ohm line out of the signal generator and in the
middle of the newly added stub. The directional wattmeter reads
zero watts forward and zero watts reflected in each leg going
to the 50 ohm loads. There are no longer any reflections at

point 'x'. All reflections in the entire system are now occurring
at the end of the open stub. The 50 ohm loads are dissipating
zero watts. You can disconnect both load legs and nothing changes.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5291. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:30:59 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CD9E3.7080707@ieee.org>
Source record: 122778

David Robbins wrote:
> I am not diverting it, i am clarifying when you may and when you may not use
> the circuit simplifications and substitutions that have been presented.

If one wants to fully understand what happens at/in an impedance discontinuity
in a transmission line, one CANNOT "use the circuit simplifications and
substitutions that have been presented." Sounds like we agree on that.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5292. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:36:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CDB28.5060606@ieee.org>
Source record: 122779

Tdonaly wrote:
> I think you've been reading too many popular philosophy books, Cecil.
> You've got reificationitis.

I'm not the one depending upon some supernatural magic happening at
a virtual short to cause reflections but only at the point where
steady-state is reached. Before steady-state is reached, a virtual
short can be proven not to cause reflections. If steady-state is
upset in even an infinitesimal way, the virtual short can be
proven not to cause reflections. Why does it magically cause reflections
only during steady-state?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5293. 2 UHF RADIOS 1 ANTENNA -- NO INEXPENSIVE WAY?!?!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:41:10 UTC
From: ssybert@airvananet.com
Message-ID: <fa41afea.0303101041.3537b048@posting.google.com>
Source record: 122780

Hello everyone,

I've got a Kenwood D700A Mobile and a Motorola Spectra in my vehicle. I've got alot of other RF equipment and the antennas are starting to get rediculious. I've got a 1/4 wave on the roof for the spectra (460mhz) and a Diamond SG7500NMO on the trunk for the dualband D700A. I was planning on retuning my ham antenna from 420-250 to 440-470 That way it'll cover both my business band and amateur band (I dont use this antenna for Weak signal or ATV so there's no need for it to cover anything below 440). Now, both radios need to recieve at the same time but I want to protect the reciever of Radio B when I transmit on radio A, and vice-versa. I've drawn up everything I can think of from switch matrixs to diplexers to power splitters/combiners... If I go with a power combiner, I'll need 20+ DB of isolation... I was told that to get that kind of isolation it's going to be a 3db loss right off the top and the power is going to be supressed right into an resistor to achieve same band isolation inside the combiner. At 100W, 50 lost to isolation is no good. I going to with a brickwall passband filters, for hundreds of dollars... no good either. Lastly, I could not find a way to build an automatic switch setup with RF actuated relays that worked. My requirements are simple. both radios transmit on UHF (one on VHF) both radios need to work on the same antenna, both need their recievers protected from the others transmitter and both need to recieve while idle (unless other is transmitting). Anyone know of a way to achieve this thats not too redicuiously expensive or lossy?

Thanks,
Scott
KB1FXY

5294. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:45:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6pnaigfs4uj0d@corp.supernews.com>
Source record: 122781

Well, it looks like everyone understands it except Cecil. That's not a bad record, so it's time for me to get on with other things. Bye.

Roy Lewallen, W7EL

5295. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:46:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CDD77.4050303@ieee.org>
Source record: 122782

David Robbins wrote:
> what you must understand is that the simplifications that many of us almost
> automatically make are engineering shortcuts... unfortunately many of us who
> use these things regularly will often fail to state them clearly enough so
> that someone not trained in using them can understand why they can be done
> and under what conditions.

It's a lot worse than that. Unfortunately, many RF engineers have come
to believe that their models of reality are the cause of reality and
not the result of reality.

At a point in a transmission line, the phasor sum of the forward
and reflected voltages is zero and there are no reflections at that
point. An RF engineer walks up and says, "Hey, that's a virtual short!"
and immediately, as if by magic, reflections start occurring at that
point where there were none before. That's what I call magic.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5296. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:47:59 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CDDDF.9000407@ieee.org>
Source record: 122783

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>
>>Roy Lewallen wrote:
>>
>>>OC_CAM's Razor wrote:
>>>>In the absence of a physical impedance discontinuity at the point of a
>>>>virtual short, can the virtual short cause reflections? It's a simple
>>>>yes/no question.
>>>
>>>The answer is yes.
>>
>>Then please provide an example, Roy. So far, no one has provided
>>even one example of a virtual short causing reflections in the
>>absence of a physical impedance discontinuity.
>
> Obviously it was NOT a yes/no question. Much like the so-called
> brainteaser which also required a simple response, such responses are
> obviously NOT the point of interest.

Is one iota of proof too much to ask?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5297. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:50:20 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CDE6C.7050503@ieee.org>
Source record: 122785

Richard Clark wrote:
> On Mon, 10 Mar 2003 09:02:25 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>I am still waiting for a *valid* example from you or anyone else.

> No doubt you will remain disappointed. Thankfully debate (not to be
> confused with this churning response of yours) does not hinge on your
> feelings.

If it depended on my feelings, I would say virtual shorts cause
reflections. I once thought so and wish that it was true. It
causes me emotional grief to face the truth that virtual shorts
cannot cause reflections. Perhaps, that is your problem also.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5298. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 18:57:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CE02B.7090701@ieee.org>
Source record: 122786

Richard Clark wrote:
> You obviously have to lift the hood to make that determination, which
> proves you cannot make that determination at the plane of reflection
> for yourself.

And you cannot know how much money I have in my pocket without looking.
So exactly what does your ignorance prove? Does it prove anything? Does
it prove I don't have any money in my pocket? All your life, did you
choose not lift the hood and just remain ignorant?

What you guys seem to be missing is that if I am prohibited from looking
under the hood, I can't prove there are no reflections at a virtual short
but neither can you prove there are reflections at a virtual short so you
are without proof either way. OTOH, I have plenty of proof if I am allowed
to look under the hood. Why do you think ignorance is such a good thing?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5299. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:03:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CE193.1060504@ieee.org>
Source record: 122787

Richard Clark wrote:
> Your correspondents appear to have little interest in its discussion
> here.

That's because they are afraid of your (and others) ad hominem attacks. I often get an email that says, "I am afraid to say anything on r.r.a.a." Looks as if you have succeeded with some individuals in your personal war of intimidation. That's a pity.

> By-the-by, no interest in offering a competing answer to Bob's work?

Why should I offer a competing answer? Bob got the correct answer. Your ignorance is showing.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5300. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:11:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CE366.4040409@ieee.org>
Source record: 122788

Roy Lewallen wrote:
> Well, it looks like everyone understands it except Cecil. That's not a
> bad record, so it's time for me to get on with other things. Bye.

Roy, if you are trying to understand how a motor works, do you
hide the motor in a black box? But you're right, I don't understand
exactly why ignorance is such a wonderful thing that the truth
must be hidden in a black box.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5301. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:24:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <srpp6vsgba4m0bbj9blsi1hrv62ulqgqrj@4ax.com>
Source record: 122789

On Mon, 10 Mar 2003 12:47:59 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Is one iota of proof too much to ask?

Now we go for 200 postings on what constitutes an iota....

73's
Richard Clark, KB7QHC

5302. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:28:07 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <b0qp6vguvudncpp6f7lern2hhelufvutsj@4ax.com>
Source record: 122790

On Mon, 10 Mar 2003 12:57:47 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>What you guys seem to be missing is that if I am prohibited from looking
>under the hood, I can't prove there are no reflections at a virtual short
>but neither can you prove there are reflections at a virtual short so you
>are without proof either way.

Duh

5303. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:29:00 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <fR6cnd0CkdHjevGjXTWcpQ@crocker.com>
Source record: 122791

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6CDD77.4050303@ieee.org...
> David Robbins wrote:
> > what you must understand is that the simplifications that many of us
almost
> > automatically make are engineering shortcuts... unfortunately many of us
who
> > use these things regularly will often fail to state them clearly enough
so
> > that someone not trained in using them can understand why they can be
done
> > and under what conditions.
>
> It's a lot worse than that. Unfortunately, many RF engineers have come
> to believe that their models of reality are the cause of reality and
> not the result of reality.
>
> At a point in a transmission line, the phasor sum of the forward
> and reflected voltages is zero and there are no reflections at that
> point. An RF engineer walks up and says, "Hey, that's a virtual short!"
> and immediately, as if by magic, reflections start occurring at that
> point where there were none before. That's what I call magic.

i don't.... and i don't see the term 'virtual short' in the circuit theory
book or either of the two em books i keep on my desk for reference. and if
you notice i usually quote the 'virtual' part since i don't really know that
it is a widely accepted term for a point where the voltage is zero. who
first used that term on here anyway?

5304. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:30:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <94qp6vodsio4d2oqemekopkt9lcm22tc5a@4ax.com>
Source record: 122792

On Mon, 10 Mar 2003 13:03:47 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Bob got the correct answer.

of course he did.

>Your ignorance is showing.

uh-huh:

On Fri, 07 Mar 2003 16:15:38 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:
>The brainteaser has not been solved yet.

5305. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:32:13 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1bqp6v4na7qt07pp3p154gd0d5070uig42@4ax.com>
Source record: 122794

On Mon, 10 Mar 2003 13:11:34 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

> I don't understand exactly why ignorance is such a wonderful thing

;-)

5306. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:33:38 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <vLKcnVMWCskJdfGjXTWcoA@crocker.com>
Source record: 122795

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6CE366.4040409@ieee.org...
> Roy Lewallen wrote:
> > Well, it looks like everyone understands it except Cecil. That's not a
> > bad record, so it's time for me to get on with other things. Bye.
>
> Roy, if you are trying to understand how a motor works, do you
> hide the motor in a black box? But you're right, I don't understand
> exactly why ignorance is such a wonderful thing that the truth
> must be hidden in a black box.

of course not, but if you are trying to study the power supply or cable feeding the motor and it is all in a steady state condition it may be useful to replace the motor with a simple resistance or other impedance to simplify calculations... be it in a black box or not. yet again, you do not replace what you are trying to study, you replace other parts of the circuit to eliminate unnecessary complications in calculations.

5307. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:40:09 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6CEA19.94F2B66A@uci.edu>
Source record: 122805

David Robbins wrote:
> of course not, but if you are trying to study the power supply or cable
> feeding the motor and it is all in a steady state condition it may be useful
> to replace the motor with a simple resistance or other impedance to simplify
> calculations... be it in a black box or not. yet again, you do not replace
> what you are trying to study, you replace other parts of the circuit to
> eliminate unnecessary complications in calculations.

It's a good point. But there seem to be at least a few improper conclusions that can be drawn by placing an effective short across the line at that point. For example, a short there would prevent any reflections from the open end of the stub from returning back to the source. I think it's fairly clear that such reflections do indeed make it past the short. And obviously a short at that point would prevent waves from the source from propagating to the open end of the stub in the first place.

It's apparent that to infer anything more than a null in the standing wave pattern at that point can lead to some incorrect conclusions.

73 de ac6xg

5308. Re: Ground Plane Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 19:49:09 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303101149.2fe5062b@posting.google.com>
Source record: 122796

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:<b4i0sh$186$1@helle.btinternet.com>...
> What is the difference in radiation pattern between a dipole and a
> quarter-wave ground plane when mounted on the roof (20m above ground and on
> 70cms)?
>
> I'm trying to find out if a horizontal ground plane is better than the
> vertical one of a dipole when you are a long way up from the ground
> (relative to the 70cms frequency anyway).

Very little difference. But I prefer sloping radials over straight
horizontal on the 1/4 wave GP's. A better match to coax and a teeny
weeny bit more gain as the antenna starts to resemble a 1/2 wave
vertical. But the gain difference is very small and probably
unnoticable in the real world.
>
> Is this also the case with collinears? I have seen designs which use a
> straight vertical quarter wavelength of copper tube below the antenna to act
> as groundplane/lower the feedpoint impedance.

That is a decoupling section, not a ground plane or counterpoise. The
impedance stays the same. A collinear, as are the 1/2 wave antennas,
are "complete" and require no ground planes or counterpoises. But you
do need to decouple the feedline from the antenna. Otherwise the
common mode currents that flow on the shield of the coax usually skew
the pattern upwards off the horizon. You then lose any gain that you
are trying to achieve using the longer radiator.

> Would an antenna of identical
> design, but with a horizontal groundplane perform better in terms of
> projecting more signal out sideways rather than projecting signal downwards?

No. I'd rather have the straight 1/2 wave. But!!!, that assumes good
decoupling.
Many times on the VHF/UHF bands I actually prefer the 1/4 wave GP's
because they seem to decouple better without going through extra
steps. IE: a 1/4 GP with 8 radials usually seems to decouple better
than a 1/2 wave ringo or J pole. But, if you added the extra
decoupling sections to each antenna, in theory the 1/2 wave should win
by a small amount. ".3 db or so I think".
Note in the thread about J-poles where Al mentions that an open stub
is better than a closed stub when feeding with coax. This is due to
much better decoupling of the line with the open stub version. On
VHF/UHF this is ultra critical for top results. On HF, not so
critical. A simple 1/4 GP is quite a good antenna for VHF/UHF if it

has enough radials. I found 4 is not enough for best results in mnay cases. My GP in the attic has 6 radials. I've used 8 many times. There is a noticable difference between 4 and 8 on VHF. Not because of lower ground losses, but because of slightly better decoupling. The best 1/4 GP's or sleeve verticals use a 2nd 1/4 wave decoupling section below the feedpoint. IE: the tube you describe would qualify as such a device, and would work with a 1/4 GP. It's open at the bottom.
MK

5309. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:02:51 UTC
From: fch <na@hle.com>
Message-ID: <3E6CEF6B.F9790958@hle.com>
Source record: 122797

Shut the hell up Shrader.

Dave Shrader wrote:

> I'm amazed that any Amateur Licensee would have to ask this question! 47
> CFR 97 covers all your responsibilities.
>
> You will find the answer to your specific question in 47 CFR 97.121 and
> 307.
>
> Deacon Dave, W1MCE
> + + +
>
> fch wrote:
> >
> > If a neighbor complains about me interfering with his TV.

5310. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:03:59 UTC
From: fch <na@hle.com>
Message-ID: <3E6CEFAF.DB8D61FC@hle.com>
Source record: 122798

BTW Who said I was a liscensed Amateur Shrader?
I'm surprised you would jumped to that conclusion.

Dave Shrader wrote:

> I'm amazed that any Amateur Licensee would have to ask this question! 47
> CFR 97 covers all your responsibilities.
>
> You will find the answer to your specific question in 47 CFR 97.121 and
> 307.
>
> Deacon Dave, W1MCE
> + + +
>
> fch wrote:
> >
> > If a neighbor complains about me interfering with his TV.

5311. You're an asshole Shrader Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:05:03 UTC
From: fch <na@hle.com>
Message-ID: <3E6CEFEF.FAEE4295@hle.com>
Source record: 122799

"What is 47 CFR 97? And where do I find it?"

Dave Shrader wrote:

> I hope you don't have to ask: "What is 47 CFR 97? Where do I find it?"
>
> DD
>
> Dave Shrader wrote:
> >
> > I'm amazed that any Amateur Licensee would have to ask this question! 47
> > CFR 97 covers all your responsibilities.
> >
> > You will find the answer to your specific question in 47 CFR 97.121 and
> > 307.
> >
> > Deacon Dave, W1MCE
> > + + +
> >
> > fch wrote:
> > >
> > > If a neighbor complains about me interfering with his TV.

5312. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:40:57 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6CF859.5235B718@uci.edu>
Source record: 122720

OC_CAM's Razor wrote:
> In optics, the term [virtual] usually means something
> that appears to be there but really isn't there in reality.
> That sounds virtually correct to me. :-)

Yes. One could argue that the virtual short should really be located
1/4 WL beyond the reflection point - rather than 1/4 WL in front of
it.

ac6xg

5313. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:44:53 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6CF945.8F2CEE5B@uci.edu>
Source record: 122719

Walter Maxwell wrote:

I wrote:
> > Walt already agreed with you that a virtual short is not the cause of
> > anything.
>
> When did I ever make such a totally inaccurate statement? Somewhere a
> statement on that subject must have encountered a 180-degree phase shift.
>
> Walt, W2DU

Walt,

I apollogize if I misrepresented your views.

Jim, AC6XG

5314. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:47:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CF9DF.8090708@ieee.org>
Source record: 122800

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Is one iota of proof too much to ask?
>
> Now we go for 200 postings on what constitutes an iota....

200 postings that contain not one iota of proof that virtual
shorts cause reflections. Lots of feelings that virtual shorts
cause reflections but not one valid example. I might as well
have asked my question of the Catholic Church in 1640 AD.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5315. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:48:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CFA27.3010001@ieee.org>
Source record: 122801

Richard Clark wrote:
> On Mon, 10 Mar 2003 12:57:47 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>>What you guys seem to be missing is that if I am prohibited from looking
>>under the hood, I can't prove there are no reflections at a virtual short
>>but neither can you prove there are reflections at a virtual short so you
>>are without proof either way.
>
> Duh

Thanks for expressing what an ignorant brain has to say about
virtually everything.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5316. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:50:48 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6CFAA8.62191ED4@uci.edu>
Source record: 122721

Jim Kelley meant to type:

> Yes. One could argue that the virtual short should really be located
> 1/2 WL beyond the reflection point - rather than 1/4 WL in front of
> it.
>
> ac6xg

5317. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:51:46 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CFAE2.1090104@ieee.org>
Source record: 122802

David Robbins wrote:
> i don't.... and i don't see the term 'virtual short' in the circuit theory
> book or either of the two em books i keep on my desk for reference. and if
> you notice i usually quote the 'virtual' part since i don't really know that
> it is a widely accepted term for a point where the voltage is zero. who
> first used that term on here anyway?

I will let the person who coined (or adopted) the term be the
one to respond. In optics, the term usually means something
that appears to be there but really isn't there in reality.
That sounds virtually correct to me. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5318. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:55:04 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CFBA8.6010902@ieee.org>
Source record: 122803

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Bob got the correct answer.
>
> of course he did.

Yes, he did. But it wasn't the answer he posted to this newsgroup.
Too bad you don't realize that most of the world functions sans
r.r.a.a. If Bob is reading this, perhaps he will respond (and
perhaps he won't.)

>>Your ignorance is showing.
>
> uh-huh:

for sure!
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5319. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:57:07 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CFC23.9010706@ieee.org>
Source record: 122806

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>
>>I don't understand exactly why ignorance is such a wonderful thing.

;-)

Well, Richard, since you obviously understand why ignorance is such
a wonderful thing, would you let the rest of us in on the secret?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5320. Yagi 2 el or long mast for mobile HF ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 20:58:25 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e6cfc71$1_1@news.vo.lu>
Source record: 122804

Hi,

As I just get my ON1SKY licence, I will soon pass my CW exam.
Now I have a choice to made for mobile operations in HF (mainly 20-10m). By mobile I mean fixed in the field (at one place from which I do not move for about 1-2 hrs on the grass or the macadam).

I am very interested in a 2 elements yagi but I suspect it will be monoband. Right ? Or does it exist mobile yagi multibands ?

The second solution is to buy a very loo-ong mast (about 8m telescopic) ? Does it exists for mobile operation ?

Some URL to suggest ?

Thanks in advance

73
Thierry
ON1SKY, LX2SKY (ex SWL, ONL5183)
http://www.astrosurf.com/lombry

5321. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 21:01:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CFD45.6000009@ieee.org>
Source record: 122807

Roy Lewallen wrote:
> Well, it looks like everyone understands it except Cecil. That's not a
> bad record, so it's time for me to get on with other things. Bye.

You know, Roy, what you are saying just dawned on me when I underwent accidental shock therapy while installing an electric snake guard on my Purple Martin birdhouse pole. Let's see if I got it right this time.

If I want to completely understand my girlfriend, I put her in a black box and make love through a port in the black box. If I then cannot tell whether it's my girlfriend in that black box or some other female, it doesn't matter who is in the black box. Did I get it right?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5322. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 21:05:36 UTC
From: tdonaly@aol.com
Message-ID: <20030310160536.01434.00000100@mb-cv.aol.com>
Source record: 122808

Cecil wrote,
>
>Richard Clark wrote:
>> On Mon, 10 Mar 2003 12:57:47 -0600, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>>What you guys seem to be missing is that if I am prohibited from looking
>>>under the hood, I can't prove there are no reflections at a virtual short
>>>but neither can you prove there are reflections at a virtual short so you
>>>are without proof either way.
>>
>> Duh
>
>Thanks for expressing what an ignorant brain has to say about
>virtually everything.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

You sure make entertaining posts when you're trapped, Cecil.
73,
Tom Donaly, KA6RUH

5323. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 21:05:43 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6CFE27.2070103@ieee.org>
Source record: 122809

Jim Kelley wrote:
>
> David Robbins wrote:
>>... you do not replace what you are trying to study, ...
>
> It's apparent that to infer anything more than a null in the standing
> wave pattern at that point can lead to some incorrect conclusions.

Apparently Jim, David doesn't realize that what we are trying to
study is the impedance discontinuity itself so, by his own admission,
it cannot be replaced.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5324. Re: FM trap in vhf/uhf antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 21:21:33 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e6d032e_1@news1.prserv.net>
Source record: 122810

OK, here's the problem. TV transmitters tend to all be in one place, while FM transmitters are all over the map. There are likely one or more near you. You need a spectrum analyzer to identify the strong stations and tune the variable trap(s) to reduce their strength. The fixed trap reduces all of them, and the audio of channel 6 in the process, by the way. There used to be splitters which diverted the FM into a different connector as well as reducing its amplitude in the TV branch, but I have no idea whether they are still made or not. So your problem is solvable, but not easily nor without sophisticated test equipment. At least I don't know how to do it the easy way.

--
Crazy George
Remove NO and SPAM from return address
"J. Sun" <jsun@lucent.com> wrote in message
news:b4iaqv$31s@netnews.proxy.lucent.com...
> Hi !
>
> I posted several messages regarding double antennas (antennas stacking),
> ant-mount preamp and questions about installation of pre-amp, and tried to
> improve my over-the-air TV reception from stations broadcasted at NYC.
> Based on the responses, I bought a Winegard 8780 pre-amp. It works
> pretty well. The picture is beautiful and clear even on big screen TV. Now
> I would like to fine tuned the reception and hope to receive both vhf/uhf
> and FM well.
>
> The Winegard comes with both fixed trap in/out and variable FM trap. Right
> now if the preamp is set as default, "fixed trap in" and variable FM trap
> turned
> out of FM. The TV is reception is good but no stereo FM. If the preamp set
> to
> fixed trap out, the reception degrades and FM is just o.k.. Can someone
> explain what the detailed electronicall functions of "fixed trap in",
"fixed
> trap out"
> and "variable FM trap" are ? especiallyy what the variable FM trap
adjusted
> when
> fixed trap is in or out position, respectively ?
>
> Looks like I have very strong FM interference, right ?
> because the channels around FM suffer more? What is the tip to get both TV
> and
> FM signal ?

>
> Thanks !
>
>

5325. Re: 2 UHF RADIOS 1 ANTENNA -- NO INEXPENSIVE WAY?!?!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 21:27:12 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e6d04a7_1@news1.prserv.net>
Source record: 122811

Yes, there is an inexpensive way, but you have to hack into both radios to
do it. Email me if you want details. Used to be easy with tube equipment
which had coax jumpers between chassis.

--
Crazy George
Remove NO and SPAM from return address
"Scott" <ssybert@airvananet.com> wrote in message
news:fa41afea.0303101041.3537b048@posting.google.com...
> Hello everyone,
>
> I've got a Kenwood D700A Mobile and a Motorola Spectra in my
> vehicle. I've got alot of other RF equipment and the antennas are
> starting to get rediculious. I've got a 1/4 wave on the roof for the
> spectra (460mhz) and a Diamond SG7500NMO on the trunk for the dualband
> D700A. I was planning on retuning my ham antenna from 420-250 to
> 440-470 That way it'll cover both my business band and amateur band
> (I dont use this antenna for Weak signal or ATV so there's no need for
> it to cover anything below 440). Now, both radios need to recieve at
> the same time but I want to protect the reciever of Radio B when I
> transmit on radio A, and vice-versa. I've drawn up everything I can
> think of from switch matrixs to diplexers to power
> splitters/combiners... If I go with a power combiner, I'll need 20+ DB
> of isolation... I was told that to get that kind of isolation it's
> going to be a 3db loss right off the top and the power is going to be
> supressed right into an resistor to achieve same band isolation inside
> the combiner. At 100W, 50 lost to isolation is no good. I going to
> with a brickwall passband filters, for hundreds of dollars... no good
> either. Lastly, I could not find a way to build an automatic switch
> setup with RF actuated relays that worked. My requirements are
> simple. both radios transmit on UHF (one on VHF) both radios need to
> work on the same antenna, both need their recievers protected from the
> others transmitter and both need to recieve while idle (unless other
> is transmitting). Anyone know of a way to achieve this thats not too
> redicuiously expensive or lossy?
>
> Thanks,
> Scott
> KB1FXY

5326. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 21:38:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6D05F0.8010908@ieee.org>
Source record: 122812

Tdonaly wrote:
>>Thanks for expressing what an ignorant brain has to say about
>>virtually everything.
>
> You sure make entertaining posts when you're trapped, Cecil.

Rots of Ruck supporting that position, Tom. "Duh" certainly
sounds like the trapped position to me but what do I know?
You guys remind me of the Catholic Church in 1640 - put the
Earth in a black box and declare it the center of the universe.

Note that I didn't say that Richard had an ignorant brain -
just that his response was the same as an ignorant brain.
Or has the RF Church declared "Duh" to be an appropriate
technical response?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5327. Re: You're an asshole Shrader Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 21:46:04 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E6D0766.41717388@attbi.com>
Source record: 122813

If you don't want accurate answers from an 'AMATEUR RADIO' news group
then why waste bandwidth asking questions?

Regarding the vulgarity in the subject line you have just received a
FREE gift of forgiveness!

Rev. Dave Shrader, W1MCE

fch wrote:
>
> "What is 47 CFR 97? And where do I find it?"
>
> Dave Shrader wrote:
>
> > I hope you don't have to ask: "What is 47 CFR 97? Where do I find it?"
> >
> > DD
> >
> > Dave Shrader wrote:
> > >
> > > I'm amazed that any Amateur Licensee would have to ask this question! 47
> > > CFR 97 covers all your responsibilities.
> > >
> > > You will find the answer to your specific question in 47 CFR 97.121 and
> > > 307.
> > >
> > > Deacon Dave, W1MCE
> > > + + +
> > >
> > > fch wrote:
> > > >
> > > > If a neighbor complains about me interfering with his TV.

5328. Re: Yagi 2 el or long mast for mobile HF ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 21:54:01 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E6D0979.DA2F5696@osite.com.br>
Source record: 122814

Thierry - ON1SKY wrote:

> The second solution is to buy a very loo-ong mast (about 8m telescopic) ?
> Does it exists for mobile operation ?
>
> Some URL to suggest ?

Third: Hex-beam : http://groups.yahoo.com/group/hex-beam
--
Paulo E.P. Marcondes
wannabe hex-builder
pepm@osite.com.br

5329. Re: 2 UHF RADIOS 1 ANTENNA -- NO INEXPENSIVE WAY?!?!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 22:01:30 UTC
From: Ian <cls119@remove.spam.lycos.co.uk>
Message-ID: <1X7ba.2165$Gv.883@newsfep3-gui.server.ntli.net>
Source record: 122815

Hello,

It sounds like you need a cavity filter as used in PMR base station installations. You have two radio outputs and one antenna connection. They work on most bands, on UHF they would be smaller, but you tune them yourself by small screws on the outisde. I have used them in PMR installations were one antenna has been connected to both RX and TX, with a spacing of a few MHz on UHF or lower on VHF it is possible to TX and RX at the same time. You can RX/TX on two radios if you want to, RX at the same time and also TX. If you go outside the frequency limits you have set then the radio performance will just go off. It is possible to tune them by ear too, I had to do that when i forgot the test gear.

I hope that helps.

"Scott" <ssybert@airvananet.com> wrote in message news:fa41afea.0303101041.3537b048@posting.google.com...
> Hello everyone,
>
> I've got a Kenwood D700A Mobile and a Motorola Spectra in my
> vehicle. I've got alot of other RF equipment and the antennas are
> starting to get rediculious. I've got a 1/4 wave on the roof for the
> spectra (460mhz) and a Diamond SG7500NMO on the trunk for the dualband
> D700A. I was planning on retuning my ham antenna from 420-250 to
> 440-470 That way it'll cover both my business band and amateur band
> (I dont use this antenna for Weak signal or ATV so there's no need for
> it to cover anything below 440). Now, both radios need to recieve at
> the same time but I want to protect the reciever of Radio B when I
> transmit on radio A, and vice-versa. I've drawn up everything I can
> think of from switch matrixs to diplexers to power
> splitters/combiners... If I go with a power combiner, I'll need 20+ DB
> of isolation... I was told that to get that kind of isolation it's
> going to be a 3db loss right off the top and the power is going to be
> supressed right into an resistor to achieve same band isolation inside
> the combiner. At 100W, 50 lost to isolation is no good. I going to
> with a brickwall passband filters, for hundreds of dollars... no good
> either. Lastly, I could not find a way to build an automatic switch
> setup with RF actuated relays that worked. My requirements are
> simple. both radios transmit on UHF (one on VHF) both radios need to
> work on the same antenna, both need their recievers protected from the
> others transmitter and both need to recieve while idle (unless other
> is transmitting). Anyone know of a way to achieve this thats not too
> redicuiously expensive or lossy?
>
> Thanks,

> Scott
> KB1FXY

5330. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 22:02:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <b43q6v4rvqsvba1mt70c8dv00jo7hhabkn@4ax.com>
Source record: 122816

On Mon, 10 Mar 2003 14:57:07 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>>I don't understand exactly why ignorance is such a wonderful thing.
>
>;-)
>
>Well, Richard, since you obviously understand why ignorance is such
>a wonderful thing, would you let the rest of us in on the secret?

Following your logic (hope that explains it) ;-)

5331. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 22:04:20 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <473q6v09ctj7vnu29upvg9b7pndvvu7oce@4ax.com>
Source record: 122817

On Mon, 10 Mar 2003 15:01:57 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

> it
>doesn't matter who is in the black box. Did I get it right?

Hi Cecil,

Why don't you ask her directly instead of through us?

73's
Richard Clark, KB7QHC

5332. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 22:06:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2b3q6v0ero8gi5ofrpvoa9a8173sahn0ac@4ax.com>
Source record: 122818

On Mon, 10 Mar 2003 15:38:56 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Tdonaly wrote:
>>>Thanks for expressing what an ignorant brain has to say about
>>>virtually everything.
>>
>> You sure make entertaining posts when you're trapped, Cecil.
>
>Rots of Ruck supporting that position, Tom. "Duh" certainly
>sounds like the trapped position to me but what do I know?
>You guys remind me of the Catholic Church in 1640 - put the
>Earth in a black box and declare it the center of the universe.
>
>Note that I didn't say that Richard had an ignorant brain -
>just that his response was the same as an ignorant brain.
>Or has the RF Church declared "Duh" to be an appropriate
>technical response?

Hi Cecil,

Let's just say it is suitable to the "bleeding obviousness."

Anyway, I got what I came for ;-)

73's
Richard Clark, KB7QHC

5333. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 22:28:24 UTC
From: richardharrison@webtv.net
Message-ID: <9458-3E6D1188-358@storefull-2317.public.lawson.webtv.net>
Source record: 122725

Jim, AC6XG wrote:
"What would you predict the reflected pulse from a TDR would look like if that was the source? Would the pulse be inverted, or not?"

TDR reflectometry is not my field. Someone please correct me if my reasoning is astray.

A short pulse is a spectrum of frequencies. At the open-circuit, current is reversed because it has no other choice. Volts are doubled at the instant the incident current drops to zero. This preserves energy which resided in the incident H field when the current flow stops. Immediately, the surviving E field begins generating a new H field. This new field is traveling back towards the generator.

The length of the stub is only 1/4-wave at a single frequency, so impedance produced by combination of incident and reflected waves is a function of frequency. The only novelty is the presence of many frequencies as opposed to what we`ve been considering. This does not become unruley in the multifrequency case, as Zo compels compliance to: I = V/Zo at all frequencies. The velocity of propagation is about the same for all frequencies, too.

Reflection from an open-circuit does not change the voltage phase with respect to the incident voltage. The current, however, is shifted in phase by 180-degrees, and thus changes its direction.

My guess is, a voltage sample of the reflected pulse would not be inverted by reflection from an open-circuit. Likewise, a current sample of the same reflected pulse would be inverted.

This response was not provoked by any knowledge I was eager to share. It was simply answering questions of something I`d written, just because it seems I was asked.

Best regards, Richard Harrison, KB5WZI

5334. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 22:29:13 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6D11B9.5050800@ieee.org>
Source record: 122722

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Well, Richard, since you obviously understand why ignorance is such
>>a wonderful thing, would you let the rest of us in on the secret?
>
> Following your logic (hope that explains it) ;-)

Funny, that's exactly what the Catholic Church said to Galileo
circa 1640, plus or minus.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5335. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 22:31:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6D124B.4020602@ieee.org>
Source record: 122723

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>it doesn't matter who is in the black box. Did I get it right?
>
> Why don't you ask her directly instead of through us?

That would violate the present RF engineering procedure.
If I aspire to be an RF engineer, I shouldn't violate
that accepted procedure, right?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5336. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 22:34:16 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6D12E8.3060804@ieee.org>
Source record: 122724

Richard Clark wrote:
> Let's just say it is suitable to the "bleeding obviousness."

Amazingly, that is exactly what the physics establishment
said when Einstein introduced his Special Theory of Relativity.
Thanks for the establishment response, Richard. It means that
I am on the right track.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5337. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 23:07:08 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b4j5pn$58a$1@slb2.atl.mindspring.net>
Source record: 122726

Im not Dave. Most of them don't know how to cut a dipole in free space.

Dan/W4NTI

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E6CC1A2.8A56D2DB@attbi.com...
> I'm amazed that any Amateur Licensee would have to ask this question! 47
> CFR 97 covers all your responsibilities.
>
> You will find the answer to your specific question in 47 CFR 97.121 and
> 307.
>
> Deacon Dave, W1MCE
> + + +
>
>
> fch wrote:
> >
> > If a neighbor complains about me interfering with his TV.

5338. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 23:19:09 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E6D1D6C.8020102@mwci-news>
Source record: 122727

David Robbins wrote:
>
>
>
> i don't.... and i don't see the term 'virtual short' in the circuit theory
> book or either of the two em books i keep on my desk for reference. and if
> you notice i usually quote the 'virtual' part since i don't really know that
> it is a widely accepted term for a point where the voltage is zero. who
> first used that term on here anyway?
>
>
>

The term "virtual short" is an artifact of "Wave Mechanics". If a wave that is reflected from a short-circuited load or an open-circuited load creates a voltage null (zero voltage) on the transmission line, that location is referred to as a virtual short. This is despite the fact that a short-circuit current does not actually flow in the virtual short.

The term "virtual short" is basically nonsense and has created a vast amount of debate, confusion, technical errors and folklore in Amateur Radio circles.

I wish it would go away.

Bill W0IYH

5339. Re: Antenna for the office

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 23:23:49 UTC
From: Paul Logan <paul.logan4@btinternet.com>
Message-ID: <b4j6q4$7hg$1@sparta.btinternet.com>
Source record: 122728
Cross-posted to: rec.radio.amateur.antenna,alt.radio.scanner,rec.radio.scanner

A UK cellular phone antenna with a magnetic base should give good coverage
of 800-900 mhz traffic. try getting one on ebay

--
Paul Logan,
Lisnaskea, N. Ireland.

Low VHF and Scanner Skip Page:
www.geocities.com/yogi540

5340. Re: Spreader Treatment [was: Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)]

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 23:36:05 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v6q8b7osglqo80@corp.supernews.com>
Source record: 122729

Dear Paulo:
It is unexpected for the black VEDAPREN to need protection from
sunlight and for the white not to need protection. That is opposite to
what I expect.
It is possible that the "white" is the "black" with the addition of
something.
I wonder if an error was made in what was written. It seems wise to
contact the company and to talk to one of their experts - make sure the
person you talk to does not just read a data sheet.
Yuri has sent you in the right direction.
Hope to hear you on the air.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Paulo Marcondes" <pepm@osite.com.br> wrote in message
news:3E6B77BD.C4BFE561@osite.com.br...
> "J. McLaughlin" wrote:
> > However, the manufacturer seems to say that VEDAPREN should be
covered
> > with something to keep sun light from its surface. This is
unexpected.
> > Might have a language problem as the product is shown coating a
roof.
>
> This is only for the regular (black) VEDAPREN, there is
> another one, white, which does not require shielding from
> sunlight.
>
> I am not specialist in this field... It happened just to
> know that there was something similar to what Yuri
> described... Now, I have a pretty good answer.
>
> --
> Paulo E.P. Marcondes
> pepm@osite.com.br

5341. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 23:44:25 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <qr9ba.2018$VT.294375@news20.bellglobal.com>
Source record: 122731

I can see there would be a (small?) market for a software program that might be called Transmission Line Workshop. It should be based upon the most fundamental 'first principles' and would allow the user to 'explore' these sorts of issues in animated colour. If the files could be saved, annotated and emailed - then these debates would have less ASCII art.

Just an idea in case someone has too much time on their hands... ...any candidates ?

5342. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-10 23:46:32 UTC
From: jgboyles@aol.com
Message-ID: <20030310184632.11172.00000231@mb-cj.aol.com>
Source record: 122730

>Download program DIPOLE3 from website below.
>
>Enter dipole length and height.
>Balanced line length and impedance. (if any).
>Balun impedance ratio.
>Coax line length and impedance. (if any).

Hi Reg. I often use DIPOLE3, or is it DIPOLE2, and compare what I expect from your program to what I measure with the MFJ-259b. So far the computed values vs. the measured values are very close. I then use a freeware Smith Chart program from a University in Switzerland to explore all sorts of matching solutions using pi, t, pi-l, stubs, xmission line xformers, and just l networks.
A few years ago all this was real mystery to me, but thanks to your programs, and a little help from Switzerland, this is getting to be a lot of fun.

73 Gary N4AST

5343. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:01:49 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <KNacnccQxKntuvCjXTWcqQ@crocker.com>
Source record: 122732

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:3E6CEA19.94F2B66A@uci.edu...
>
>
> David Robbins wrote:
> > of course not, but if you are trying to study the power supply or cable
> > feeding the motor and it is all in a steady state condition it may be
useful
> > to replace the motor with a simple resistance or other impedance to
simplify
> > calculations... be it in a black box or not. yet again, you do not
replace
> > what you are trying to study, you replace other parts of the circuit to
> > eliminate unnecessary complications in calculations.
>
> It's a good point. But there seem to be at least a few improper
> conclusions that can be drawn by placing an effective short across the
> line at that point. For example, a short there would prevent any
> reflections from the open end of the stub from returning back to the
> source. I think it's fairly clear that such reflections do indeed make
> it past the short. And obviously a short at that point would prevent
> waves from the source from propagating to the open end of the stub in
> the first place.
>
> It's apparent that to infer anything more than a null in the standing
> wave pattern at that point can lead to some incorrect conclusions.
>
> 73 de ac6xg

you do not apparently understand the process of substitution to simplify a
circuit. when the short is placed on the main line to replace the stub, the
stub itself is removed... because it is removed you lose all knowledge of
it's length from the rest of the circuit, so therefore you are restricted to
that single frequency and steady state conditions.

5344. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:02:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6D2789.60307@ieee.org>
Source record: 122734

William E. Sabin wrote:
> The term "virtual short" is an artifact of "Wave Mechanics". If a wave
> that is reflected from a short-circuited load or an open-circuited load
> creates a voltage null (zero voltage) on the transmission line, that
> location is referred to as a virtual short. This is despite the fact
> that a short-circuit current does not actually flow in the virtual short.

Well, it would if the virtual short was a perfect short in a perfect transmission
line. Failing that, I guess we will have to settle for a virtual virtual short. :-)

> The term "virtual short" is basically nonsense and has created a vast
> amount of debate, confusion, technical errors and folklore in Amateur
> Radio circles.
>
> I wish it would go away.

IMO, the sooner, the better. *Everything* in a transmission line can be
explained without the concept of a "virtual impedance" ever being introduced.
Absolutely everything can be explained using whatever physical impedance
discontinuities exist in *reality*, as opposed to some virtual wet dream.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5345. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:03:16 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <-IOcnUAzicJauvCjXTWcqw@crocker.com>
Source record: 122733

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6D12E8.3060804@ieee.org...
> Richard Clark wrote:
> > Let's just say it is suitable to the "bleeding obviousness."
>
> Amazingly, that is exactly what the physics establishment
> said when Einstein introduced his Special Theory of Relativity.
> Thanks for the establishment response, Richard. It means that
> I am on the right track.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
ah, we have reduced the thread to personal attacks and namecalling, i guess
all the good technical information and arguments have finally been
exhausted. gn all.

5346. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:06:24 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6D2880.7080503@ieee.org>
Source record: 122736

David Robbins wrote:
> you do not apparently understand the process of substitution to simplify a
> circuit.

David, we don't want to simplify a circuit. Our goal is to fully understand
a circuit.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5347. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:08:10 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <nM-dnSb75vJxtfCjXTWcqg@crocker.com>
Source record: 122735

"J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote in message
news:qr9ba.2018$VT.294375@news20.bellglobal.com...
> I can see there would be a (small?) market for a software program that
might
> be called Transmission Line Workshop. It should be based upon the most
> fundamental 'first principles' and would allow the user to 'explore' these
> sorts of issues in animated colour. If the files could be saved,
annotated
> and emailed - then these debates would have less ASCII art.
>
> Just an idea in case someone has too much time on their hands... ...any
> candidates ?
>
>
>

the company i work for already has a product by that name... unfortunately
it has to do with high voltage power transmission lines rather than rf
lines. the product i work on is closer, but again it is modeling lightning
surges on power lines rather than rf so that wouldn't be much good either.

5348. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:10:54 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6D298E.6823EC83@uci.edu>
Source record: 122751

David Robbins wrote:
> you do not apparently understand the process of substitution to simplify a
> circuit.

Sure I do. It's just that in the circuits we've seen used here, the real reflection point has sometimes been misidentified. The circuits were not drawn with the stub removed. It would be accurate to say there is effectively an in-phase reflection taking place at the terminals of the equivalent circuit. But with the stub drawn in circuit it's technically correct to say an out-of-phase reflection takes place at the open end of the stub.

We should probably try to make sure that we keep our conventions straight.

So I see your point, but I also see Cecil's point.

73 de ac6xg

5349. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:14:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6D2A63.10207@ieee.org>
Source record: 122737

David Robbins wrote:
> ah, we have reduced the thread to personal attacks and namecalling, i guess
> all the good technical information and arguments have finally been
> exhausted. gn all.

That's exactly what happens when the establishment is afraid of the
truth and resorts instead to personal attacks. There is plenty more
technical information available. The establishment simply refuses to
hear of it. The r.r.a.a gurus are no better than the 1860's Catholic
Church. "All RF knowledge that will ever be known is already known!"
It's called PRC, "Political RF Correctness."
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5350. Re: FCC cites RV owners in RFI complaint

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:25:07 UTC
From: Rich <rk911@ANTISPAM.yahoo.com>
Message-ID: <v8bq6v4ejdpsdfjmagb437itduo0rkp96g@4ax.com>
Source record: 122740
Cross-posted to: rec.radio.amateur.antenna,alt.rv

On Mon, 10 Mar 2003 07:55:09 -0500, "W1QE" <w1qe@mindspring.com>
wrote:

>"Rich" <rk911@ANTISPAM.yahoo.com> wrote in message
>news:nhpj6vs1sjh483grn5o8kn89rielajbded@4ax.com...
>> the following was pulled from the March 7, 2003 edition of "The ARRL
>> Letter" (www.arrl.org/arrlletter)
>>
>> 73,
>> rich, n9dko
>> ____
>> The FCC has told an Oregon couple to stop using its Winegard amplified
>> television antenna (Model Sensar/Roadstar) on their recreational
>> vehicle "until the condition causing harmful interference has been
>> corrected."
>>
>[snipped.....]
>
>Is there a way to easily determine which units have the problem?
>
>Al
>W1QE
>

not sure, al. here's a link to winegard. maybe you can find
something useful here.

http://www.winegard.com/products/mobile/products_mobile_vhf_uhf_tv_ant-sensar2.html

73,
rich, n9dko

5351. Re: Spreader Treatment [was: Re: Spreader materials for Hex-Beam (FWD'ing Dave Platt's email)]

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:25:08 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E6D2CE4.E6F1ECD6@osite.com.br>
Source record: 122739

"J. McLaughlin" wrote:

> Dear Paulo:
> It is unexpected for the black VEDAPREN to need protection from
> sunlight and for the white not to need protection. That is opposite to
> what I expect.

The same happened to me. I was a bit surprised when I read
that it has to be convered from sunlight.

> It is possible that the "white" is the "black" with the addition of
> something.

Yes, probably. But there is also a difference in
application. The black is for areas that will have traffic,
the white if for areas whitout traffic.

> I wonder if an error was made in what was written. It seems wise to
> contact the company and to talk to one of their experts - make sure the
> person you talk to does not just read a data sheet.

Yes, I'll surely do that.
> Yuri has sent you in the right direction.
> Hope to hear you on the air.

Yes, I thank Yuri for that. Easy, cheap solution but not
cheap results... :)
Hope to be on air soon. I first have to arrange a power
supply. I read an article an hour ago, think it was in
r.r.a.homebrew... about hacking some PC supplies to power
radios.

here it it:
http://www.antennex.com/preview/archive3/powers.htm
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

5352. Re: W5QJR Loop Book ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:25:42 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E6D2D0C.81B96E36@silverstar.com>
Source record: 122738

For loop DFing? Happy Flyers null locater is more accurate with ONE DEGREE repeatability. Costs about 35.00 to build complete setup. Works on AM, CW, FM & SSB.

5353. Re: W5QJR Loop Book ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:28:47 UTC
From: jgboyles@aol.com
Message-ID: <20030310192847.11137.00000130@mb-cj.aol.com>
Source record: 122741

>Anyone have an aold copy of the loop book by W5QJR (think that is the call).
>I had one and have apparently lost it.

The Antennex website had these for sale a few weeks ago. You may or may not know that W5QJR was the ghost writer for the CFA articles, and the "inventor" of the EH antenna. May not interest you at all, but the NG gets upset at the mention of these antennas. The loop antenna book is more mainstream, although I have not read the whole thing. Try the Antennex site.
73 Gary N4AST

5354. Lightning TRANSIENT (Was the revoltingly reminiscent and almost entertaining Re: Transcient Vs Steady-State)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:35:42 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v6qcdk4aon7u64@corp.supernews.com>
Source record: 122744

Must

not pass this up. People died.
1970's
Lake Travis, Texas.....High water due to rains.....
Sailboat hits BIG power line with mast ......People die.
It's a spark gap: RF all over the place....

All the energetically available modes of the mast, stays, etc are excited.

The lawsuit came up in an undergrad Physics lab.

Build it; Watch...
Theory is only a way of thinking.
Experiment is physical.

73
H.
NQ5H

PS
Fourier already beat this to death long, long before MIT invented the
bazooka.
As far as lightning: Check the Texas Tech vs Rice game in '73.
Hit the wall by the track, not the light poles; game called.
BIG hole in the retaining wall.....

"David Robbins" <k1ttt@arrl.net> wrote in message
news:nM-dnSb75vJxtfCjXTWcqg@crocker.com...
>
> "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote in message
> news:qr9ba.2018$VT.294375@news20.bellglobal.com...
deleted
>
> the company i work for already has a product by that name... unfortunately
> it has to do with high voltage power transmission lines rather than rf
> lines. the product i work on is closer, but again it is modeling
lightning
> surges on power lines rather than rf so that wouldn't be much good either.
>
>
>

--
Give a man a match, and he'll be warm for a minute, but set him on

fire, and he'll be warm for the rest of his life.

5355. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:40:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <lbcq6vsmeocsjsbiogap97h9kic5tr79nu@4ax.com>
Source record: 122742

On Mon, 10 Mar 2003 16:31:39 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>it doesn't matter who is in the black box. Did I get it right?
>>
>> Why don't you ask her directly instead of through us?
>
>That would violate the present RF engineering procedure.
>If I aspire to be an RF engineer, I shouldn't violate
>that accepted procedure, right?

Hi Cecil,

Clearly your priorities are as off track as this thread.

73's
Richard Clark, KB7QHC

5356. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 00:43:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <uecq6v0lherbi6326a8vu613o47lkgbffl@4ax.com>
Source record: 122743

On Mon, 10 Mar 2003 18:14:27 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>David Robbins wrote:
>> ah, we have reduced the thread to personal attacks and namecalling, i guess
>> all the good technical information and arguments have finally been
>> exhausted. gn all.
>
>That's exactly what happens when the establishment is afraid of the
>truth and resorts instead to personal attacks. There is plenty more
>technical information available. The establishment simply refuses to
>hear of it. The r.r.a.a gurus are no better than the 1860's Catholic
>Church. "All RF knowledge that will ever be known is already known!"
>It's called PRC, "Political RF Correctness."

Gee, the cooking has been boosted to roast martyr, a la viking
funeral.

When do we get to Joan D'Arc visions of glory?

:-) keep up the good work

73's
Richard Clark, KB7QHC

5357. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 01:00:37 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <b4jcfivhn1@slb3.atl.mindspring.net>
Source record: 122745

Jeff:

[snip]
"J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote in message
news:qr9ba.2018$VT.294375@news20.bellglobal.com...
> I can see there would be a (small?) market for a software program that
might
> be called Transmission Line Workshop. It should be based upon the most
> fundamental 'first principles' and would allow the user to 'explore' these
> sorts of issues in animated colour. If the files could be saved,
annotated
> and emailed - then these debates would have less ASCII art.
>
> Just an idea in case someone has too much time on their hands... ...any
> candidates ?
[snip]

What!

And put this whole NG out of business?

Are you crazy?

--
Peter K1PO
Indialantic By-the-Sea, FL.

5358. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 01:03:28 UTC
From: K4Gap <k4gap@bellsouth.net>
Message-ID: <msaba.5107$1z1.4729@fe03.atl2.webusenet.com>
Source record: 122746

I am new ham...what is an "L Network" and what does it do?

K4Gap

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:%0Gaa.8750$Oz1.602357@bgtnsc05-news.ops.worldnet.att.net...
> Can a center fed 80 mtr dipole with ladder line be used
> with with an L network on 80-10 mtrs?
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.459 / Virus Database: 258 - Release Date: 2/25/03
>
>

5359. Re: MR. CAM Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 01:13:06 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303101713.7170bb5a@posting.google.com>
Source record: 122747

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:<3E6C0D12.9010604@ieee.org>...
> fch wrote:
> > I think the hexbeam is much more expensive than the others.
> > I'm not sure what an X beam is.
>
> Page 33-15, 1993 ARRL Handbook. X-beam Vs hexbeam below
>
> |\ /| /\ /\
> | \ / | / \ / \
> | \/ | / \/ \
>
> | /\ | \ /\ /
> | / \ | \ / \ /
> |/ \| \/ \/
>
> > How much performance difference is there between a 2 and 3 element yagi?
>
> Roughly 2.5 dB, roughly half an S-unit.

As you well know Cecil gain (or a lack therof)is not the the only
consideration when it comes to rotatable beams. Like the old saw goes
"ya can't work 'em if ya can't hear 'em" and the decent front-to-back
ratios (2-3 s-units or more) two elemet beams exhibit often make the
difference between being able to copy the guy or not. I'll take a
unity gain steerable beam with a 25 dB F/B ratio any day over a dipole
or a vertical. One can always get more gain with the Variac.

w3rv

5360. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 01:19:15 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303101719.5c5bd574@posting.google.com>
Source record: 122748

fch <na@hle.com> wrote in message news:<3E6BD91A.23D9BFF1@hle.com>...
> If a neighbor complains about me interfering with his TV.

In that case you plop into dot equipment or dot policy or whatever,
this group is about ham antennas, it is not about TVI/RFI.

w3rv

5361. Re: W5QJR Loop Book ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 01:22:39 UTC
From: k3bu@aol.com
Message-ID: <20030310202239.15360.00000167@mb-fc.aol.com>
Source record: 122749

> You may or may not
>know that W5QJR was the ghost writer for the CFA articles, and the "inventor"
>of the EH antenna. May not interest you at all, but the NG gets upset at the
>mention of these antennas.

More like this NG has some fine people with knowledge and experience in antenna field. When they see some outrageous claims, guerilla marketing of crap being presented as wunderantennas, they don't sit quietly and watch snake oil salesmen push their "wares" with impunity.
Who gets upset are those "promoters" because their outrageous claims and con jobs on unsuspected and fresh hams get exposed and shown in the proper light. It used to be that hams were honest people, inventing, developing and sharing their ideas with fellow hams. Now we see snake oil salesmen with ham radio licenses taking advantage of hams who got their tickets by memorizing few questions and reluctant to engage their brains for the purpose of educating themselves to greater heights of this wonderful hobby/sport. Antenna is the most important part of radio station and deserves some attention, study, fun experimenting with and still room for new designs.

Yuri, K3BU, VE3BMV, VE1BY

5362. FA: Cushcraft R8 Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 01:30:02 UTC
From: mike ferraro <k6zsr@cox.net>
Message-ID: <u_aba.82$IH2.53@news2.west.cox.net>
Source record: 122750

See it at:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4672&item=3012243510&rd=1

5363. Re: Butternut HF6V 15m decoupling stub.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 02:26:08 UTC
From: Paul Buhse <buhse@earthlink.net>
Message-ID: <4Pbba.13785$gF3.1267539@newsread1.prod.itd.earthlink.net>
Source record: 122752

Thanks -- I had the instructions and had followed them for assembly/tuning. The problem was, the antenna was 3 feet too short! This was a used antenna purchased on e-bay and I am now wondering if maybe the antenna had some damage (maybe bent) and a section(s) was "trimmed" out. Two of the sections that were supposed to be 48 in were 32 and 36 inches. The three feet I added simply restored the antenna to its 26 ft original length. I re-positioned the 15m tuning stub and that brought the low SWR to 1.6:1 and the entire band with less than 2.0:1 SWR.

I am still curious if you or anyone else knows where I can find information on antenna decoupler stubs -- especially the positioning. I am surprised I couldn't find anything about them in the ARRL handbook.

Thanks,
Paul - KA0LKB

"KC1DI" <elbc2@gwi.net> wrote in message
news:s3to6v4frlnitih4g2cpthcfri0v7f8vpi@4ax.com...
> On Mon, 10 Mar 2003 00:35:20 GMT, "Paul Buhse" <buhse@earthlink.net>
> wrote:
>
> >I am installing an HF6V on the top of my roof (20 ft) with the following
> >radial arrangement 1-80m, 2-40m, 2-30m, 2-20m, 2-15m, 3-10m. Initially,
the
> >low SWR point for 20m and 10m was around 15 Mhz and 31 Mhz. I added a 3
foot
> >section of 1/4 in tubing to the antenna and was then able to tune all
bands
> >except 15m. The BEST I can get by adjusting the length of the decoupling
> >stub on 15m is 2.5:1 SWR. My concern now is that the position of the
> >decoupling stub may be incorrect because of the additional antenna
height.
> >So, here is my question --
> >
> >Does anyone know how to select the feedpoint position of a decoupling
stub?
> >I looked in the ARRL handbook but couldn't find any references. I would
> >experiment, but I at least want to be close when I start so I can limit
the
> >amount of times I have to pull down the antenna.
> >
> >Thanks,
> >Paul -- KA0LKB
>
> Paul,

>
> All the tuning info should be in the manual for the Hf6v. You really
> should not have had to add to the antenna. If you do not have the
> Manual one can be downloaded in PDF format from bencher at
>
>
> http://www.bencher.com/pdf_download.html#vert_ant
>
> you will need Acrobat Reader or something to read PDF file formats.
> 73 Dave KC1DI
>
>

5364. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 02:43:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4jifs$c50$1@knossos.btinternet.com>
Source record: 122753

Gary, N4AST said -
> A few years ago all this was real mystery to me, but thanks to your
programs,
> and a little help from Switzerland, this is getting to be a lot of fun.
>
==========

Gary,

Program Dipole2 still exists but is no longer available from my website.
Dipole3 supercedes it. It's more comprehensive.

It may be thought curious but I have never used a Smith chart in my life. It
became outdated 20 years after Smith first published it around 1939, after
the transistor had been invented, and when computers were becoming more
commonplace. Smith had simplified for HF use some much more comprehensive
line transmission analysis charts which had been around since the 1890's for
design of telegraph, phone and power lines. I am told Smith has maintained
his popularity because of his chart's educational value.

I attended my one and only 3-day computer programming course at the British
Post Office's Research Station (The British Bell Labs) around 1960. The
solitary input and output device was a standard teleprinter! I forget the
number of holes in the ticker tape.

Around 5 years back, soon after making simple-to-use programs available to
all and sundry, I confess to feeling guilty about taking some of the fun out
of amateur radio experimenting, particularly with work-first-time lines and
simple antennas. I am also conscious of the fact, unknown to many amateurs,
that any bloody thing will work in a fashion sufficient to give a lot of
satisfaction.

I have since realised what is needed is a little encouragement to make a
start on what may appear initially to be an uncertain project. Which
encouragement it seems my programs provide. The start, of course, in this
computer age, begins in a rainy day in an armchair.

Gary, I receive occasional very welcome e-mails in the same vein as yours
from unexpected places in this rapidly contracting, over-populated Earth of
ours. Can we expect to hear CQ Contest calls from a mobile parked in the
ancient remains of the Hanging Gardens of Babylon?

There's still a lot of mileage in amateur radio.

Reg, G4FGQ

5365. Re: Is it OK to use a sheilded balanced feed line with non resonant antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 02:48:57 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4jiqp$f68$1@helle.btinternet.com>
Source record: 122754

> Reg,
> About 30 cents per foot, mostly...

==========

Doc,
And the cheapest is Radio Shack 18 awg twin speaker wire.

5366. Re: You're an asshole Shrader Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 03:10:19 UTC
From: fch <na@hle.com>
Message-ID: <3E6D539B.E24960BC@hle.com>
Source record: 122755

Oh... Reverend! ha! Very hard to believe. Don't worry about the bandwidth...
I'm paying for it. If you don't have a civil answer to questions on this NG
then just IGNORE them... snotty boy.
I'm not looking for your forgiveness hypocrite.

Dave Shrader wrote:

> If you don't want accurate answers from an 'AMATEUR RADIO' news group
> then why waste bandwidth asking questions?
>
> Regarding the vulgarity in the subject line you have just received a
> FREE gift of forgiveness!
>
> Rev. Dave Shrader, W1MCE
>
> fch wrote:
> >
> > "What is 47 CFR 97? And where do I find it?"
> >
> > Dave Shrader wrote:
> >
> > > I hope you don't have to ask: "What is 47 CFR 97? Where do I find it?"
> > >
> > > DD
> > >
> > > Dave Shrader wrote:
> > > >
> > > > I'm amazed that any Amateur Licensee would have to ask this question! 47
> > > > CFR 97 covers all your responsibilities.
> > > >
> > > > You will find the answer to your specific question in 47 CFR 97.121 and
> > > > 307.
> > > >
> > > > Deacon Dave, W1MCE
> > > > + + +
> > > >
> > > > fch wrote:
> > > > >
> > > > > If a neighbor complains about me interfering with his TV.

5367. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 03:44:24 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <sYcba.13144$wJ1.1260702@newsread2.prod.itd.earthlink.net>
Source record: 122756

Jim Kelley wrote .
> Walter Maxwell wrote:
>
> I wrote:
> > > Walt already agreed with you that a virtual short is not the cause of
> > > anything.
> >
> > When did I ever make such a totally inaccurate statement? Somewhere a
> > statement on that subject must have encountered a 180-degree phase
shift.
> >
> > Walt, W2DU
>
> Walt,
>
> I apollogize if I misrepresented your views.
>
> Jim, AC6XG

No problem, Jim, everyone makes mistakes, and there are plenty of them on
this NG.

Walt, W2DU

5368. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 04:03:51 UTC
From: richardharrison@webtv.net
Message-ID: <102-3E6D6027-1043@storefull-2318.public.lawson.webtv.net>
Source record: 122757

Jim, AC6XG wrote:
"It`s just that in the circuits we`ve seen used here, the real
reflection point has sometimes been misidentified."

Here is a simple circuit: Transmitter feeds a Tee. One Tee output feeds
1/2-WL of 50-ohm coax terminated in a 50-ohm load.

Other Tee output feeds 1/2-WL of 50-ohm coax into an open circuit.

All power should reach the matched 50-ohm load. Open-circuit at the end
of 2nd 1/2-wave coax should be repeated and not place any conductance
across the Tee.

You might say there is a real open circuit at the open-end of the 2nd
1/2-wave coax line, and a virtual open-circuit at the Tee.

When we short the real open-circuit, it`s repeated at the Tee.

In the middle of the coax with the shorts, we have a virtual open.

I see Cecil`s point that a real discontinuity is the real reflection
source, except in a situation as cited above. There is little current
needed to cause a high impedance. Where is the open-circuit established?

5369. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 07:26:14 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6D8F96.2020906@ieee.org>
Source record: 122758

Richard Harrison wrote:
> Jim, AC6XG wrote:
> "It`s just that in the circuits we`ve seen used here, the real
> reflection point has sometimes been misidentified."
>
> Here is a simple circuit: Transmitter feeds a Tee. One Tee output feeds
> 1/2-WL of 50-ohm coax terminated in a 50-ohm load.
>
> Other Tee output feeds 1/2-WL of 50-ohm coax into an open circuit.
>
> All power should reach the matched 50-ohm load. Open-circuit at the end
> of 2nd 1/2-wave coax should be repeated and not place any conductance
> across the Tee.
>
> You might say there is a real open circuit at the open-end of the 2nd
> 1/2-wave coax line, and a virtual open-circuit at the Tee.
>
> When we short the real open-circuit, it`s repeated at the Tee.
>
> In the middle of the coax with the shorts, we have a virtual open.
>
> I see Cecil`s point that a real discontinuity is the real reflection
> source, except in a situation as cited above. There is little current
> needed to cause a high impedance. Where is the open-circuit established?

```
+-----------1/2WL---------------50 ohm load
|
100W Source---x
|
+-----------1/2WL---------------Open
```

What will a directional wattmeter read during steady-state when placed
in the 1/2WL open line?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5370. Re: Yagi 2 el or long mast for mobile HF ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 07:45:58 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303102345.23db6ed7@posting.google.com>
Source record: 122759

"Thierry - ON1SKY" <lombryt@hotmail.com> wrote in message
news:<3e6cfc71$1_1@news.vo.lu>...
> Hi,
>
> As I just get my ON1SKY licence, I will soon pass my CW exam.
> Now I have a choice to made for mobile operations in HF (mainly 20-10m). By
> mobile I mean fixed in the field (at one place from which I do not move for
> about 1-2 hrs on the grass or the macadam).
>
> I am very interested in a 2 elements yagi but I suspect it will be monoband.
> Right ? Or does it exist mobile yagi multibands ?

Sure. It all boils down to how much work you want to do as to the size
of the antenna. The sky is the limit...That is unless the site size is
the limit...:/
>
> The second solution is to buy a very loo-ong mast (about 8m telescopic) ?
> Does it exists for mobile operation ?

Sure, common here in the states. For 20-10 use, almost anything will
do a decent job. Dipoles, or just a good antenna on a car is plenty. I
can do just fine on any band just using my antenna on my truck. For
80/40 I use throw wire dipoles through trees.
I do have a setup to use a beam portable, and I've taken it to the
last two field days. The tower is two sections, and shrinks down to 7
ft to fit in the back of my truck. I have a 16 ft heavy mast which I
strap to the side of the truck. Of course the beam "cushcraft A4S",
breaks down and fits in the back. The base is super heavy and made of
heavy ship steel. The tower is pretty wide, maybe rohn "45" or "55"
sized as far as width. It's an old tri-ex tiltover/crankup. It's 31 ft
including the mast cranked up. Just right for portable use...Unless
you have a hernia...
It will stand up by itself once cranked up even with the antenna on
it, but I guy it just to be safe. Two people could have it set up
fairly quickly. The hardest part is tilting it upright with the beam
on it. But it's not that big a deal.
This setup is about to the limit of the amount of work I want to
expend for a portable antenna...:/ MK

Field day 2001
http://web.wt.net/~nm5k/fd01.jpg
I'm the ugly looking guy walking towards the tower...

Field day 2002
http://web.wt.net/~nm5k/fd34.jpg

This was a test mounting it on my truck...Just kidding...Pix came out just right...That redneck looking truck hauls all that stuff...yep, it's old...A '68 F-250.
I just put a new engine it it a year ago. Still only has about 2400 miles on it...Has a camper on the back now I just put on about 4 months ago...Ready for the next safari...

http://web.wt.net/~nm5k/fd23.jpg
An "Iwo Jima" shot...

5371. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 07:47:12 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v6r53r12jqr76e@corp.supernews.com>
Source record: 122760

An L network is an impedance matching device made from two components. These can be an inductor and a capacitor, two capacitors, or two inductors. One component is put in series with the transmission line and the other is put across it (in shunt), forming a circuit that resembles the letter L. The components are usually adjustable. In theory, component values can be found to match any impedance to any other impedance, although the shunt component might have to be on one side or the other of the series component, and the components might be different combinations of L and C for particular impedances.

Roy Lewallen, W7EL

K4Gap wrote:
> I am new ham...what is an "L Network" and what does it do?
>
> K4Gap
>
> "marvin rosen" <raghead@worldnet.att.net> wrote in message
> news:%0Gaa.8750$Oz1.602357@bgtnsc05-news.ops.worldnet.att.net...
>
>>Can a center fed 80 mtr dipole with ladder line be used
>>with with an L network on 80-10 mtrs?
>>
>>
>>---
>>Outgoing mail is certified Virus Free.
>>Checked by AVG anti-virus system (http://www.grisoft.com).
>>Version: 6.0.459 / Virus Database: 258 - Release Date: 2/25/03
>>
>>
>
>
>
>

5372. Re: W5QJR Loop Book ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 09:39:36 UTC
From: jgboyles@aol.com
Message-ID: <20030311043936.12934.00000119@mb-fu.aol.com>
Source record: 122761

>More like this NG has some fine people with knowledge and experience in
>antenna
>field.
They sure do, and they get upset when the CFA or EH is mentioned. I have attempted a working model of both. I get a little upset when they are mentioned.

>Who gets upset are those "promoters" because their outrageous claims and con
>jobs on unsuspected and fresh hams get exposed and shown in the proper light.

Could you go through the mathematical analysis presented for the CFA and say no, here is where you are wrong? I could not, although common sense said it would not work. About 99% of Hams, not just fresh ones, could not say one way or another. Poynting (sp) vector syethesis is not a hot topic of conversation as I tune across the bands.
>It used to be that hams were honest people, inventing, developing and sharing
>their ideas with fellow hams.
I've been one for 39 years, and I have observed a very small number of hams inventing and sharing, not sure how honest they were. Judging by comments overheard at various Hamfests, we are a bunch of thieves.

>Now we see snake oil salesmen with ham radio
>licenses taking advantage of hams who got their tickets by memorizing few
>questions and reluctant to engage their brains for the purpose of educating

Yuri, you should see just the lab part of my idea for an extra class ticket, it would carry a lot more weight than the written. Of course it includes only stuff that I know. The snake oil salesmen may or may not know what they are pitching is no good.
Antennas are a complex subject, and if they knowingly deceive, shame on them.
>Antenna is the
>most important part of radio station and deserves some attention, study, fun
That's for sure, although on low bands, depending on what you wish to accomplish, adding a little power to your lousy antenna helps, I did observe this.

73 Gary N4AST

5373. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 10:13:04 UTC
From: jgboyles@aol.com
Message-ID: <20030311051304.12934.00000120@mb-fu.aol.com>
Source record: 122762

>It may be thought curious but I have never used a Smith chart in my life. It
>became outdated 20 years after Smith first published it around 1939, after
>the transistor had been invented,

Hi Reg and thanks for the nice reply,
I had never used a Smith Chart either, except in a University classroom as an educational tool. Never used an on paper chart, except for the educational requirements. The Smith Chart program I refer to combines the best of computers and the visualsation of the Smith Chart. It has both constant resistance and conductance circles, and can match anything to anything, in a matter of seconds (minutes).
Combined with your excellent programs and this Smith Chart program, Eznec, what is left in antenna design?

73 Gary N4AST

5374. Re: Ground Plane Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 13:14:17 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b4knf9$1pp$1@helle.btinternet.com>
Source record: 122763

Thanks to all for the responses.

Mark: thanks. That makes perfect sense, and would also indicate that I can use a collinear without horizontal ground radials (a straight vertical without them would suit my location) as long as it's suitably de-coupled?

I've seen designs for a cox collinear that uses a copper tube at the base as a kind of vertical groundplane decoupler, but presumably that would give a slightly higher impedance at the feedpoint? Is there a way of lowering that without going horizontal? I would like a think straight vertical antenna. What about torroids?

Many thanks,

D

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0303101149.2fe5062b@posting.google.com...
> "Dean Elwood" <dean@legallyspeaking.co.uk> wrote in message
news:<b4i0sh$186$1@helle.btinternet.com>...
> > What is the difference in radiation pattern between a dipole and a
> > quarter-wave ground plane when mounted on the roof (20m above ground and
on
> > 70cms)?
> >
> > I'm trying to find out if a horizontal ground plane is better than the
> > vertical one of a dipole when you are a long way up from the ground
> > (relative to the 70cms frequency anyway).
>
> Very little difference. But I prefer sloping radials over straight
> horizontal on the 1/4 wave GP's. A better match to coax and a teeny
> weeny bit more gain as the antenna starts to resemble a 1/2 wave
> vertical. But the gain difference is very small and probably
> unnoticable in the real world.
> >
> > Is this also the case with collinears? I have seen designs which use a
> > straight vertical quarter wavelength of copper tube below the antenna to
act
> > as groundplane/lower the feedpoint impedance.
>
> That is a decoupling section, not a ground plane or counterpoise. The
> impedance stays the same. A collinear, as are the 1/2 wave antennas,
> are "complete" and require no ground planes or counterpoises. But you
> do need to decouple the feedline from the antenna. Otherwise the
> common mode currents that flow on the shield of the coax usually skew
> the pattern upwards off the horizon. You then lose any gain that you

> are trying to achieve using the longer radiator.
>
> > Would an antenna of identical
> > design, but with a horizontal groundplane perform better in terms of
> > projecting more signal out sideways rather than projecting signal
downwards?
>
> No. I'd rather have the straight 1/2 wave. But!!!, that assumes good
> decoupling.
> Many times on the VHF/UHF bands I actually prefer the 1/4 wave GP's
> because they seem to decouple better without going through extra
> steps. IE: a 1/4 GP with 8 radials usually seems to decouple better
> than a 1/2 wave ringo or J pole. But, if you added the extra
> decoupling sections to each antenna, in theory the 1/2 wave should win
> by a small amount. ".3 db or so I think".
> Note in the thread about J-poles where Al mentions that an open stub
> is better than a closed stub when feeding with coax. This is due to
> much better decoupling of the line with the open stub version. On
> VHF/UHF this is ultra critical for top results. On HF, not so
> critical. A simple 1/4 GP is quite a good antenna for VHF/UHF if it
> has enough radials. I found 4 is not enough for best results in mnay
> cases. My GP in the attic has 6 radials. I've used 8 many times. There
> is a noticable difference between 4 and 8 on VHF. Not because of lower
> ground losses, but because of slightly better decoupling. The best 1/4
> GP's or sleeve verticals use a 2nd 1/4 wave decoupling section below
> the feedpoint. IE: the tube you describe would qualify as such a
> device, and would work with a 1/4 GP. It's open at the bottom.
> MK

5375. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 14:00:14 UTC
From: richardharrison@webtv.net
Message-ID: <20214-3E6DF9FE-1209@storefull-2316.public.lawson.webtv.net>
Source record: 122766

CAM wrote:
"What will a directional wattmeter read during steady-state when placed in the 1/2-WL open line?"

The open line is in parallel with another similar line which is terminated in its Zo.

Initially, power divides evenly into the two coax lines. Power into each line is E squared over Zo.

When the reflection from the open-circuit returns to the cable junction, it opposes power entrance to this cable. Voltage rises due to load reduction on the source.

During the transient period, power to the open-circuit cable is turned off. Power into the matched cable rises to the new E squared over Zo.

At the end of the transient period, there is no power flow into the open-circuit cable due to the high-impedance it presents at the cable junction.

What a wattmeter reads in the cable taking no power should be zero. It really depends on how good the wattmeter is.

Best regards, Richard Harrison, KB5WZI

5376. Re: Antenna & L Network ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 14:51:29 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4kt5h$e64$1@sparta.btinternet.com>
Source record: 122764

> I am new ham...what is an "L Network" and what does it do?
>
==========

Welcome to 'Argument Radio'.

An L-network is a single-coil & single-capacitor tuned circuit. Or sometimes two components of the same type.

Its usual purpose is to transform (or match) one complex impedance to another. It is commonly used between a radio transmitter and its antenna feedline to transform the input impedance of the line to the standard 50 0hms resistance required by the transmitter.

It is sometimes known as an antenna tuner and contained in a box with two control knobs and a few switches. It is sometimes contained within the transmitter itself. It can also be found at the antenna end of the feedline if the station operator is prepared to accept the inconvenience of walking through drenching rain and mud every time it is necessary to change bands during the course of a 24-hour contest.

To calculate L & C component values for given terminating impedances, and other matters, download program L_TUNER from website below.

There are also 3-element matching networks referred to as T and Pi.

So also download program T_TUNER during your visit to the following website.

Download L_TUNER and T_TUNER, each in a few seconds. No unzipping inconveniences. Run immediately. "What-if?" operating procedures. Moneyback accuracy guarantee to USA citizens.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

5377. Re: Yagi 2 el or long mast for mobile HF ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 15:03:26 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <5hsr6v0oi15hnfj3mhupussvsg6u9r56dr@4ax.com>
Source record: 122765

On Mon, 10 Mar 2003 21:58:25 +0100, "Thierry - ON1SKY"
<lombryt@hotmail.com> wrote:

|Hi,
|
|As I just get my ON1SKY licence, I will soon pass my CW exam.

Congratulations!

|Now I have a choice to made for mobile operations in HF (mainly 20-10m). By
|mobile I mean fixed in the field (at one place from which I do not move for
|about 1-2 hrs on the grass or the macadam).
|
|I am very interested in a 2 elements yagi but I suspect it will be monoband.
|Right ? Or does it exist mobile yagi multibands ?
|
|The second solution is to buy a very loo-ong mast (about 8m telescopic) ?
|Does it exists for mobile operation ?
|
|Some URL to suggest ?

As usual, I don't have a link on my minimal web page, but as an avid
QSL collector you might see what one ham did with his "mobile" rig.

http://users.triconet.org/wesandlinda/w7uvr.jpg

Lee, W7UVR, (SK) was my neighbor and my Elmer. Why he lived in my
neighborhood is a question since he had money and my parents didn't.

Nevertheless, he did and to add insult to injury, he had a bunch of
power lines near his place that made it difficult for him to hear
anything. So he became an ARRL Official Bulletin Station and
retransmitted W1AW messages, using single-band amps with P-P 304TLs,
high level modulated. When he went to SSB, these beauties were
replaced with five Collins 32S-1s, driving five Gonset GSB linears
(one for each frequency).

And... he built the mobile rig. The QSLs are circa 1957-8, (when I was
first licensed) so the equipment is representative of the era.
Sharped-eyed readers will note that the equipment is different in
different photos, as the equipment constantly changed to the latest
and greatest. What never seemed to change was the 4-1000A amplifier.
For AM it was plate-modulated. When he went SSB it was made into a
linear. (There was an extra leaf in the right rear spring to handle
the weight of the HV transformer. No Hypersil in those days)

What addresses this thread is the two-element Yagi on the roof. I don't remember the model, but it was a highly-loaded antenna. It could be elevated to 10 meters above the vehicle on the pneumatic mast that can be seen in one of the interior photos. The handles on the mast allowed "arm strong" rotation.

This beam was later replaced with a small three-element tribander that had been cut into sections with tubular hinges (machined out of solid aluminum bar stock by another ham friend) allowing it to fold up for driving.

For in-motion operation, there were two verticals on the back of the vehicle with edge-wound roller inductors and vacuum variable capacitors for matching. These were all motor-tuned from the driver's seat and encased in plexiglass boxes for weather-proofing.

When the generator was changed from 10 KW to 15KW, a larger trailer was required and he mounted a third vertical on it.

So there you go Thierry, this is the way we do it in the USA.

73,

Wes

5378. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 15:53:36 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <4Enba.184$nJ5.33368@newsread2.prod.itd.earthlink.net>
Source record: 122767

Hello All,

Report of Measurements to Determine Effectiveness of OC Shunt Stub

I invite you all to observe the data below, obtained from measurements.
Then register your opinion as to the significance of the data. The stub
was placed at any random location on the mail line. Both main line
(short bench-length pieces) and stub are RG-214 (L apx 42 feet)

Initial measurements to determine input impedance of stub, both open-
and short-circuit terminations:

3.833 MHz OC ----------Z = 0.8 + j0.52 SWR = 62.5:1
3.823 0.9 + j0
SWR = 55.5:1

3.823 SC ----------Z = 2503 + j487 SWR = 52:1
3.833 2660 + j0
SWR = 53.2:1

Equipment used during measurements:

HP-4815A RF Vector Impedance Meter
HP-8405A RF Vector Voltmeter
HP-606A Signal Generator
HP-5302A Frequency Counter
GR-1606A RF Impedance Bridge
(Note: Low-R resolution of GR bridge, graduations on resistance
dial every 0.1 ohm from 0 to 2 ohms.)

Measurements below made at 3.823 MHz

Zo = 50 ohms SWR = 1.04:1
Generator----------|----------L
52-ohm load
rho = 0.0196
1.0 volt

0.02 watts

0.0 dB
SWR = 55.6:1 Rshunt=0.9 ohms SWR = 1.04:1
Generator----------x----------L
52-ohm load
rho = 0.965 |
0.035 volts
| Stub
0.0000245 watts

```
| -29.1 dB
| 1/4 wl
| 90 deg, (measured
at 3.823 MHz)
|
OC
Notes:
Stub input resistance R = 0.90 ohms
Parallel circuit resistance, stub and line Zo = 0.8841 ohms
SWR on stub 55.5:1
SWR on line between Gen and stub 55.6:1
SWR on line between stub and load 1.04:1

Attenuation due to 0.9-ohm shunting resistance established by
the open-circuit 1/4 wl stub is 29.1 dB relative to no shunting
stub.

SWR between Gen and stub 55.6:1 due to reflection generated at
stub, rho = 0.965.

Walt, W2DU

PS--I hope the columnization comes out ok.
```

5379. WTB: Singer / Eaton / Stoddart antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 16:05:40 UTC
From: maxshiloh@yahoo.com
Message-ID: <8c7550c8.0303110805.5d62fbaf@posting.google.com>
Source record: 122768
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

Hi,

I am looking to buy the following Eaton/Ailtech/Singer/Stoddart antennas. They must be operational, and be in good shape. Here is list:

1) 94623-1 1-18GHz horn antenna KIT. It is used with the NM-67 and consists of 5 different antennas with reflectors and mounting adapters. It would be nice if it had the transit case, but I will take it without. But it must have all antennas, reflectors, and mounting brackets.

2) 94592-1 Rod antenna coupler 10Khz to 32 Mhz

3) 94607-1 Rod antenna preamplifier

If anyone has any of these lying around the shop, and would like to part with them, or if you know anyone that has them please e-mail me at:
maxshiloh@yahoo.com
Thanks

5380. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 16:19:32 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <o0oba.238$nJ5.35577@newsread2.prod.itd.earthlink.net>
Source record: 122569

Sorry, All, the columns didn't work. Trying again.

Walt

Walter Maxwell wrote
Hello All,
>
> Report of Measurements to Determine Effectiveness of OC Shunt Stub
>
> I invite you all to observe the data below, obtained from measurements.
> Then register your opinion as to the significance of the data. The stub
> was placed at any random location on the mail line. Both main line
> (short bench-length pieces) and stub are RG-214 (L apx 42 feet)
>
> Initial measurements to determine input impedance of stub, both open-
> and short-circuit terminations:
>
> 3.833 MHz OC ---------------------Z = 0.8 + j0.52 SWR = 62.5:1
> 3.823 0.9 + j0
SWR = 55.5:1
>
> 3.823 SC --------------------Z = 2503 + j487 SWR = 52:1
> 3.833 2660 + j0
SWR = 53.2:1
>
> Equipment used during measurements:
>
> HP-4815A RF Vector Impedance Meter
> HP-8405A RF Vector Voltmeter
> HP-606A Signal Generator
> HP-5302A Frequency Counter
> GR-1606A RF Impedance Bridge
> (Note: Low-R resolution of GR bridge, graduations on resistance
> dial every 0.1 ohm from 0 to 2 ohms.)

Measurements below made at 3.823 MHz

Zo = 50 ohms SWR = 1.04:1
Generator----------------------------------|----------------------------L
52-ohm load
rho = 0.0196
1.0 volt

0.02 watts

0.0 dB

SWR = 55.6:1 Rshunt=0.9 ohms SWR = 1.04:1
Generator--------------------------------x--------------------------------L
52-ohm load
rho = 0.965 |
0.035 volts
| Stub
0.0000245 watts

| -29.1 dB
| 1/4 wl
| 90 deg,
(measured at 3.823 MHz)
|
OC
Notes:
Stub input resistance R = 0.90 ohms
Parallel circuit resistance, stub and line Zo = 0.8841 ohms
SWR on stub 55.5:1
SWR on line between Gen and stub 55.6:1
SWR on line between stub and load 1.04:1

Attenuation due to 0.9-ohm shunting resistance established by
the open-circuit 1/4 wl stub is 29.1 dB relative to no shunting
stub.

SWR between Gen and stub 55.6:1 due to reflection generated at
stub, rho = 0.965.

Walt, W2DU

PS--I hope the columnization comes out ok this time.

5381. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 16:19:38 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <u0oba.239$nJ5.35577@newsread2.prod.itd.earthlink.net>
Source record: 122570

Sorry, All, the columns didn't work. Trying again.

Walt

Walter Maxwell wrote
Hello All,
>
> Report of Measurements to Determine Effectiveness of OC Shunt Stub
>
> I invite you all to observe the data below, obtained from measurements.
> Then register your opinion as to the significance of the data. The stub
> was placed at any random location on the mail line. Both main line
> (short bench-length pieces) and stub are RG-214 (L apx 42 feet)
>
> Initial measurements to determine input impedance of stub, both open-
> and short-circuit terminations:
>
> 3.833 MHz OC ---------------------Z = 0.8 + j0.52 SWR = 62.5:1
> 3.823 0.9 + j0
SWR = 55.5:1
>
> 3.823 SC --------------------Z = 2503 + j487 SWR = 52:1
> 3.833 2660 + j0
SWR = 53.2:1
>
> Equipment used during measurements:
>
> HP-4815A RF Vector Impedance Meter
> HP-8405A RF Vector Voltmeter
> HP-606A Signal Generator
> HP-5302A Frequency Counter
> GR-1606A RF Impedance Bridge
> (Note: Low-R resolution of GR bridge, graduations on resistance
> dial every 0.1 ohm from 0 to 2 ohms.)

Measurements below made at 3.823 MHz

Zo = 50 ohms SWR = 1.04:1
Generator----------------------------------|----------------------------L
52-ohm load
rho = 0.0196
1.0 volt

0.02 watts

0.0 dB

SWR = 55.6:1 Rshunt=0.9 ohms SWR = 1.04:1
Generator--------------------------------x--------------------------------L
52-ohm load
rho = 0.965 |
0.035 volts
| Stub
0.0000245 watts

| -29.1 dB
| 1/4 wl
| 90 deg,
(measured at 3.823 MHz)
|
OC
Notes:
Stub input resistance R = 0.90 ohms
Parallel circuit resistance, stub and line Zo = 0.8841 ohms
SWR on stub 55.5:1
SWR on line between Gen and stub 55.6:1
SWR on line between stub and load 1.04:1

Attenuation due to 0.9-ohm shunting resistance established by
the open-circuit 1/4 wl stub is 29.1 dB relative to no shunting
stub.

SWR between Gen and stub 55.6:1 due to reflection generated at
stub, rho = 0.965.

Walt, W2DU

PS--I hope the columnization comes out ok this time.

5382. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 16:21:40 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <o2oba.247$nJ5.35948@newsread2.prod.itd.earthlink.net>
Source record: 122571

Sorry, folks, my columnization still didn't work. I'll try again.

Walt, W2DU

5383. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 16:35:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E1043.1000305@ieee.org>
Source record: 122572

Richard Harrison wrote:
> At the end of the transient period, there is no power flow into the
> open-circuit cable due to the high-impedance it presents at the cable
> junction.

At the end of the transient period, there is no *NET* power flow into the "open-circuit" cable. There is plenty of forward power and reflected power still flowing in that stub. In fact, a lot of the power dissipated in the load during steady-state first makes a round trip through the stub.

> What a wattmeter reads in the cable taking no power should be zero. It
> really depends on how good the wattmeter is.

Remember, it is not a NET wattmeter. It is a directional wattmeter. It will read forward and reflected power in that stub. So the question remains: What will a directional wattmeter read during steady-state when installed in the middle of that 1/2WL stub?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5384. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 16:39:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E1159.1080806@ieee.org>
Source record: 122573

Walter Maxwell wrote:
> Sorry, folks, my columnization still didn't work. I'll try again.

Walt, if you use fixed font spacing (Courier) and use spaces instead
of tabs, it should line up for people displaying in Courier. And the
line wrap option needs to be turned off. Ain't ASCII a female dog?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5385. Re: Yagi 2 el or long mast for mobile HF ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 16:51:09 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e6e13fe_2@news.vo.lu>
Source record: 122574

Hi,

W7UVR QSL are great, as his "mobile shack"
But persoanlly a trailer to load a 15 kW generator is maybe oversized... Hi.
But I think that all depend first on your budget and your interests...

Thanks for comments
73
Thierry
ON1SKY
http://www.astrosurf.com/lombry

"Wes Stewart" <n7ws@#arrl.net> wrote in message
news:5hsr6v0oi15hnfj3mhupussvsg6u9r56dr@4ax.com...
> On Mon, 10 Mar 2003 21:58:25 +0100, "Thierry - ON1SKY"
> <lombryt@hotmail.com> wrote:
>
> |Hi,
> |
> |As I just get my ON1SKY licence, I will soon pass my CW exam.
>
> Congratulations!
>
> |Now I have a choice to made for mobile operations in HF (mainly 20-10m).
By
> |mobile I mean fixed in the field (at one place from which I do not move
for
> |about 1-2 hrs on the grass or the macadam).
> |
> |I am very interested in a 2 elements yagi but I suspect it will be
monoband.
> |Right ? Or does it exist mobile yagi multibands ?
> |
> |The second solution is to buy a very loo-ong mast (about 8m telescopic) ?
> |Does it exists for mobile operation ?
> |
> |Some URL to suggest ?
>
> As usual, I don't have a link on my minimal web page, but as an avid
> QSL collector you might see what one ham did with his "mobile" rig.
>
> http://users.triconet.org/wesandlinda/w7uvr.jpg
>
> Lee, W7UVR, (SK) was my neighbor and my Elmer. Why he lived in my
> neighborhood is a question since he had money and my parents didn't.

>
> Nevertheless, he did and to add insult to injury, he had a bunch of
> power lines near his place that made it difficult for him to hear
> anything. So he became an ARRL Official Bulletin Station and
> retransmitted W1AW messages, using single-band amps with P-P 304TLs,
> high level modulated. When he went to SSB, these beauties were
> replaced with five Collins 32S-1s, driving five Gonset GSB linears
> (one for each frequency).
>
> And... he built the mobile rig. The QSLs are circa 1957-8, (when I was
> first licensed) so the equipment is representative of the era.
> Sharped-eyed readers will note that the equipment is different in
> different photos, as the equipment constantly changed to the latest
> and greatest. What never seemed to change was the 4-1000A amplifier.
> For AM it was plate-modulated. When he went SSB it was made into a
> linear. (There was an extra leaf in the right rear spring to handle
> the weight of the HV transformer. No Hypersil in those days)
>
> What addresses this thread is the two-element Yagi on the roof. I
> don't remember the model, but it was a highly-loaded antenna. It
> could be elevated to 10 meters above the vehicle on the pneumatic mast
> that can be seen in one of the interior photos. The handles on the
> mast allowed "arm strong" rotation.
>
> This beam was later replaced with a small three-element tribander that
> had been cut into sections with tubular hinges (machined out of solid
> aluminum bar stock by another ham friend) allowing it to fold up for
> driving.
>
> For in-motion operation, there were two verticals on the back of the
> vehicle with edge-wound roller inductors and vacuum variable
> capacitors for matching. These were all motor-tuned from the driver's
> seat and encased in plexiglass boxes for weather-proofing.
>
> When the generator was changed from 10 KW to 15KW, a larger trailer
> was required and he mounted a third vertical on it.
>
> So there you go Thierry, this is the way we do it in the USA.
>
> 73,
>
> Wes

5386. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 17:00:31 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6E162F.E7696894@uci.edu>
Source record: 122585

Richard Harrison wrote:
>
> Jim, AC6XG wrote:
> "It`s just that in the circuits we`ve seen used here, the real
> reflection point has sometimes been misidentified."
>
> Here is a simple circuit: Transmitter feeds a Tee. One Tee output feeds
> 1/2-WL of 50-ohm coax terminated in a 50-ohm load.
>
> Other Tee output feeds 1/2-WL of 50-ohm coax into an open circuit.
>
> All power should reach the matched 50-ohm load. Open-circuit at the end
> of 2nd 1/2-wave coax should be repeated and not place any conductance
> across the Tee.
>
> You might say there is a real open circuit at the open-end of the 2nd
> 1/2-wave coax line, and a virtual open-circuit at the Tee.
>
> When we short the real open-circuit, it`s repeated at the Tee.
>
> In the middle of the coax with the shorts, we have a virtual open.
>
> I see Cecil`s point that a real discontinuity is the real reflection
> source, except in a situation as cited above. There is little current
> needed to cause a high impedance. Where is the open-circuit established?

Another fine post, Richard. But I don't see an exception in the
example. The circuit conditions in this case are still determined
ultimately by the nature of the stub termination rather than by any
physical discontinuity at the tee. Certainly to some this is a small
point. I think the light Walter Maxwell sheds on the subject of
analysis of transmission lines is invaluable, but not to the exclusion
of the underlying fundamental phenomena which we've been exploring
here. I'm sure you'll agree that while recognizing the value and
utility of the equivalent circuit, one must still remember the nature of
what goes on inside of it.

73 de AC6XG

5387. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 17:29:06 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <C1pba.369$nJ5.43339@newsread2.prod.itd.earthlink.net>
Source record: 122575

OC_CAM's Razor wrote in message
> Walter Maxwell wrote:
> > Sorry, folks, my columnization still didn't work. I'll try again.
>
> Walt, if you use fixed font spacing (Courier) and use spaces instead
> of tabs, it should line up for people displaying in Courier. And the
> line wrap option needs to be turned off. Ain't ASCII a female dog?
> --
> cheers, CAM http://www.qsl.net/w5dxp

Hi Cecil,

I first used Courier with Word using spaces. I did not use tabs. I looked everywhere, including the Word documentation, but I couldn't find a way to turn the word wrap off. I'm using Word 97. Can you tell me how?

Since I couldn't make Word work I went to Notepad, which is what is in the post. Everything lines up fine before sending, but becomes garbled when sending. Any other ideas?

Walt, W2DU

5388. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 17:36:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2k6s6v49hceld3b4np49jrbeev392agvuv@4ax.com>
Source record: 122576

On Tue, 11 Mar 2003 08:00:14 -0600 (CST), richardharrison@webtv.net (Richard Harrison) wrote:

>
>What a wattmeter reads in the cable taking no power should be zero. It
>really depends on how good the wattmeter is.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

You come close to exposing the joke of all this. To add a SWR meter to a "perfect" stub must necessarily invalidate the presumption of being a "perfect" stub. Why? Because the SWR meter consumes power and represents a loss within that same, former, "perfect" stub and thus cannot be said to make a "perfect" measure of SWR (or prove its existence for that matter).

Also, the addition of the SWR meter would still present a discontinuity even if its guts were snipped out (SWR meter reflection coefficients at their connectors are higher than many measurements that claim to have measured a flat line). True, for day-to-day activities this represents a trivial detail, but in the face of an argument that must sustain the myth of the "perfect" stub, it is a joke.

The proposition requiring anyone to open the hood to add this contraption is frosting on a moldy cake.

No doubt this will be met with cries of anguish and demands for considering a "perfect" SWR meter - which of course reveals the basic poverty of argument that has been circling in an ever tightening death spiral (can't find another way to do it?). This is like that bazooka mentality where when shown the error in the data, the reporter simply repeated the mistakes at greater number to crow about a new level of accuracy. Some folks will always be tempted to change the lug nuts on a flat to fix a tire. What is more amusing is when they then move on (walking, not driving, mind you) to write an article on the virtue of gold plated lug nuts they have that make flats impossible.

73's
Richard Clark, KB7QHC

5389. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 17:37:44 UTC
From: richardharrison@webtv.net
Message-ID: <11974-3E6E1EE8-48@storefull-2312.public.lawson.webtv.net>
Source record: 122578

Cecil wrote:
"Remember, it is a NET wattmeter."

Sure, the operator of a Bird wattmeter takes the difference between forward ans reflected indications to get the "net" power delivered to the load.

Never have I tried the Bird on an open circuit. I`ll guess Volts are the same as in the terminated line, but current is negligible. Since volts and amps produce the same deflections in the Bird, deflection is halved when current is missing. Due to the square root scale, half deflection is 1/4 the power indication, or 1/4 the indication obtained in the terminated line.

Both forward and reflected power indications are equal in the open line, so their difference is zero.

Why don`t I participate in CAM`s puzzles? I always suspect a trap. As a fool, I may be suspect. I don`t need to confirm the fact in front of a crowd.

Best regards, Richard Harrison, KB5WZI

5390. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 17:53:14 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <lh8s6vc08usvv9gmn4fu9lup1ajn4fegrf@4ax.com>
Source record: 122577

On Mon, 10 Mar 2003 17:07:08 -0600, "Dan/W4NTI"
<w4nti@NOSPAMmindspring.com> wrote:

>Im not Dave. Most of them don't know how to cut a dipole in free space.

How the devil to you get a dipole into free space to cut it?
I always have to cut mine down here on the ground, but then I have to
allow for it not being in free space.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>Dan/W4NTI
>
>"Dave Shrader" <david.shrader@attbi.com> wrote in message
>news:3E6CC1A2.8A56D2DB@attbi.com...
>> I'm amazed that any Amateur Licensee would have to ask this question! 47
>> CFR 97 covers all your responsibilities.
>>
>> You will find the answer to your specific question in 47 CFR 97.121 and
>> 307.
>>
>> Deacon Dave, W1MCE
>> + + +
>>
>>
>> fch wrote:
>> >
>> > If a neighbor complains about me interfering with his TV.
>

5391. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 17:56:27 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <098s6vgm7injrvekha0tqg0n26bktd7rth@4ax.com>
Source record: 122579

On Tue, 11 Mar 2003 17:29:06 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>Since I couldn't make Word work I went to Notepad, which is what is in the
>post. Everything lines up fine before sending, but becomes garbled when
>sending. Any other ideas?
>
>Walt, W2DU
>

Hi Walt,

I notice that you use Outlook Express. Dumping that garbage might
help (far beyond this problem); but habits die hard.

Barring doing that (and living with the hell OE brings) you might want
to review your posting preferences that set up the number of
characters in a row, their font and size, and so on. (We have a
number of posters here who don't know how to do these things and they
post atrociously columnated material even when they don't try.) You
might also check into the option of space replaced tab settings (lots
of things to go wrong).

In Agent (available as FreeAgent) I simply right-click the message
area and set the "fixed-font" setting and wall-la! it all comes out
right (provided, of course, that I composed it in "fixed-font"). This
DOES NOT mean that your correspondents will see it columnated in this
fashion (as they no doubt employ a variable font for general reading)
UNTIL they switch to "fixed-font."

To put it into technical terms unsuitable for the layman, it is the
rule of font-reciprocity. Fixed font courier is selected because
variable fonts are many and not all may share the same typeface (and
thus their system has to guess and substitute - this is where
columnization begins to crumble across the spectrum of variety).

73's
Richard Clark, KB7QHC

5392. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 18:35:10 UTC
From: DHH <dhhnews0@hotmail.com>
Message-ID: <CZpba.291$S53.50251@news20.bellglobal.com>
Source record: 122580

Ken
(1) - the 88ft 'dipole' is fed with open line (eg 450 ohm) of any length and must be used with an antenna tuner. Suggest putting a 4to1
The 130 ft dipole will be close to 75-50 ohms and can be fed without an antenna tuner on 80m - but will need a tuner to operate other bands.
(2) the 130 ft antenna will perform better than the 88ft one on 80m - the 88ft will perform better on 20 and 10 meters - since it is a EDZ antenna for 20meters and a DEDZ on 10 meters.
73
Dan VA3MA
PS - I use a 88ft dipole on 80M using 5w QRP ssb on the Geratol net.

"Ken" <cprstn54zz@att.net> wrote in message
news:3e143678.36035265@news-server.optonline.net...
> Still looking for the ideal 40/80 camping QRP dipole (or doublet), I
> am trying to reconcile W5DXP's approach (130 ft dipole fed with
> variable-length ladder line) with W4RNL's suggestion (88 ft dipole,
> fed with ???).
>
> (1) How is the the 88 ft dipole fed? It is called a "doublet," so I
> would assume balanced feed line -- but how long?
>
> (2) How do these two antennas perform on 160, 20 and 10?
>
> See:
> http://www.qsl.net/w5dxp/notuner.htm
> http://www.cebik.com/aledz.html
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

5393. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 18:36:02 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E6E2D01.A240CD01@att.net>
Source record: 122581

Richard,

wall-la ???????

Since you appear to be the resident linguist on RRAA, I am shocked!

Perhaps you meant "voila"? (give or take an accent)

8-)

73,
Gene W4SZ

Richard Clark wrote:
>
> Hi Walt,
>
[snip]
>
> In Agent (available as FreeAgent) I simply right-click the message
> area and set the "fixed-font" setting and wall-la! it all comes out
> right (provided, of course, that I composed it in "fixed-font"). This
> DOES NOT mean that your correspondents will see it columnated in this
> fashion (as they no doubt employ a variable font for general reading)
> UNTIL they switch to "fixed-font."
[snip]
>
> 73's
> Richard Clark, KB7QHC

5394. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 18:37:57 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3E6E2D05.9D9D85BD@yahoo.com>
Source record: 122587

> How the devil to you get a dipole into free space to cut it?
> I always have to cut mine down here on the ground, but then I have to
> allow for it not being in free space.
>
> Roger Halstead (K8RI EN73 & ARRL Life Member)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)

Hmmm I wonder how much it would cost for the shuttle crew to take some copper wire dipole with coax, out on an EVA and cut it to length via testing?

Then you would still have to trim it once you got it up, thats why I cut mine long and fold them back over the insulator. Then tune and trim (I dont have a GDO right now to do it right).

Scotty N7HJ

5395. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 18:50:14 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <1aas6vkju6ocjvsvcsb11js44cf835erru@4ax.com>
Source record: 122582

On Tue, 11 Mar 2003 17:36:42 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

[snip]
|Also, the addition of the SWR meter would still present a
|discontinuity even if its guts were snipped out (SWR meter reflection
|coefficients at their connectors are higher than many measurements
|that claim to have measured a flat line).

Yep. Isn't is something to see reports of, "I measured the SWR as
1.05:1" (RL=33 dB) and the measurement was made with an instrument
with 20 dB directivity and 20 dB RL connectors.

But I guess it's always possible the error vectors cancelled and the
instrument was "perfect." <g>

5396. Re: 40/80 dipole: 88 ft or 130 ft?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 18:50:24 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <b4lb5g$pp3$1@news1.tribune.com>
Source record: 122584

To understand the 88 foot antenna I suggest

http://www.cebik.com/88.html

I use the three for field day and work all bands with it.

I use a random length doublet at home, which is based on the distance and hieght provided by two trees in my yard.

KA9CAR

"DHH" <dhhnews0@hotmail.com> wrote in message
news:CZpba.291$S53.50251@news20.bellglobal.com...
> Ken
> (1) - the 88ft 'dipole' is fed with open line (eg 450 ohm) of any length
and
> must be used with an antenna tuner. Suggest putting a 4to1
> The 130 ft dipole will be close to 75-50 ohms and can be fed without an
> antenna tuner on 80m - but will need a tuner to operate other bands.
> (2) the 130 ft antenna will perform better than the 88ft one on 80m - the
> 88ft will perform better on 20 and 10 meters - since it is a EDZ antenna
for
> 20meters and a DEDZ on 10 meters.
> 73
> Dan VA3MA
> PS - I use a 88ft dipole on 80M using 5w QRP ssb on the Geratol net.
>
> "Ken" <cprstn54zz@att.net> wrote in message
> news:3e143678.36035265@news-server.optonline.net...
> > Still looking for the ideal 40/80 camping QRP dipole (or doublet), I
> > am trying to reconcile W5DXP's approach (130 ft dipole fed with
> > variable-length ladder line) with W4RNL's suggestion (88 ft dipole,
> > fed with ???).
> >
> > (1) How is the the 88 ft dipole fed? It is called a "doublet," so I
> > would assume balanced feed line -- but how long?
> >
> > (2) How do these two antennas perform on 160, 20 and 10?
> >
> > See:
> > http://www.qsl.net/w5dxp/notuner.htm
> > http://www.cebik.com/aledz.html
> >
> > Ken KC2JDY
> >
> > Ken

> > (to reply via email
> > remove "zz" from address)
>
>

5397. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 18:59:53 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Jmqba.505$nJ5.52384@newsread2.prod.itd.earthlink.net>
Source record: 122583

Richard Clark wrote
>
> Hi Walt,
>
> I notice that you use Outlook Express. Dumping that garbage might
> help (far beyond this problem); but habits die hard.
>
> Barring doing that (and living with the hell OE brings) you might want
> to review your posting preferences that set up the number of
> characters in a row, their font and size, and so on. (We have a
> number of posters here who don't know how to do these things and they
> post atrociously columnated material even when they don't try.) You
> might also check into the option of space replaced tab settings (lots
> of things to go wrong).
>
> In Agent (available as FreeAgent) I simply right-click the message
> area and set the "fixed-font" setting and wall-la! it all comes out
> right (provided, of course, that I composed it in "fixed-font"). This
> DOES NOT mean that your correspondents will see it columnated in this
> fashion (as they no doubt employ a variable font for general reading)
> UNTIL they switch to "fixed-font."
>
> To put it into technical terms unsuitable for the layman, it is the
> rule of font-reciprocity. Fixed font courier is selected because
> variable fonts are many and not all may share the same typeface (and
> thus their system has to guess and substitute - this is where
> columnization begins to crumble across the spectrum of variety).
>
> 73's
> Richard Clark, KB7QHC

Richard, I've just now downloaded Agent v 1.93, but am having difficulty in connecting it with my server. Outlook Express, of course, connects as usual, but Agent is refused access. Workin' on it.

Walt, W2DU

5398. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:11:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E34DA.5070408@ieee.org>
Source record: 122586

Walter Maxwell wrote:
> I first used Courier with Word using spaces. I did not use tabs. I looked
> everywhere, including the Word documentation, but I couldn't find a way to
> turn the word wrap off. I'm using Word 97. Can you tell me how?
>
> Since I couldn't make Word work I went to Notepad, which is what is in the
> post. Everything lines up fine before sending, but becomes garbled when
> sending. Any other ideas?

I have been through all of the above, Walt, and settled on the Nestcape
editor with the option set to Courier. This can, of course, be done off-
line and then sent on-line when one is finished. Since I have unlimited
internet access from my ISP, I rarely bother going off-line. Good luck
on whatever you decide to do.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5399. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:18:00 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <s2ds6vghsier0fpifqum57eudnvm48mnfp@4ax.com>
Source record: 122588

On Tue, 11 Mar 2003 18:59:53 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>
>Richard, I've just now downloaded Agent v 1.93, but am having difficulty in
>connecting it with my server. Outlook Express, of course, connects as usual,
>but Agent is refused access. Workin' on it.
>
>Walt, W2DU

Hi Walt,

The configuration issues are found in the several "Options" menu
offerings. You need to name your news server that your ISP provides
you (often simply named "news") in the "User and System Profile."
(likewise in the same menu you need to name your mail server,
typically named mail). Some of this needs repeating (for mail) in the
"Inbound Mail" "Systems" tab. Generally these details are offered by
your ISP at their home page under services. If you call their System
Operator for help, they are often savvy about Agent (it is the
leading, independent news/mail reader around).

Aside from these MUST DO settings, the remainder of the Options and
preferences are quite well documented by selecting the help button of
any of the menu screens offered.

Please note that you can use Agent as a News reader, an Email reader,
or both (or neither).

73's
Richard Clark, KB7QHC

5400. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:18:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E367F.2070604@ieee.org>
Source record: 122590

Richard Clark wrote:
> You come close to exposing the joke of all this. To add a SWR meter
> to a "perfect" stub must necessarily invalidate the presumption of
> being a "perfect" stub. Why? Because the SWR meter consumes power
> and represents a loss within that same, former, "perfect" stub and
> thus cannot be said to make a "perfect" measure of SWR (or prove its
> existence for that matter).

The answer is obvious. Since we are not allowed to conceptualize
and think about something that is perfect, we should all return
to the stone-age cave-man days when man didn't have time for
such nonsense as conceptualizing about perfect models of
reality.

For those of us who enjoy conceptualizing, your sour grape cop-
out is pretty obvious. At one time, it was forbidden to think
about things like a spherical earth and the sun being the center
of the solar system.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5401. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:20:19 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <nids6vgjjvqfhs5j4jf1707ih4ofjnkiq0@4ax.com>
Source record: 122591

On Tue, 11 Mar 2003 18:59:53 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

|Richard, I've just now downloaded Agent v 1.93, but am having difficulty in
|connecting it with my server. Outlook Express, of course, connects as usual,
|but Agent is refused access. Workin' on it.

Walt,

For a start, try going to Control Panel--> Internet Options -->
Programs and setting Newsgroups to Forte Agent.

Wes

5402. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:21:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <10es6vcch0d1a6e56bduqjsksg6b1hopfe@4ax.com>
Source record: 122589

On Tue, 11 Mar 2003 18:36:02 GMT, Gene Fuller <W4SZzzzzz@att.net>
wrote:

>Richard,
>
>wall-la ???????
>
>Since you appear to be the resident linguist on RRAA, I am shocked!
>
>Perhaps you meant "voila"? (give or take an accent)
>
>8-)
>
>73,
>Gene W4SZ

Hi Gene,

Shocked are you? Perhaps not so shocked as Cecil's clutch of
scribblers that shiver in fear of my writing. ;-)

73's
Richard Clark, KB7QHC

5403. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:28:32 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4bes6v48oap63mqacr3imllvhcddg4o8u1@4ax.com>
Source record: 122592

On Tue, 11 Mar 2003 13:18:23 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>The answer is obvious.

Followed by two paragraphs to re-state the obvious. It DOES take a lot of effort to explain the joke (which is the obvi-ossity). Some would wonder if you have to explain it....

;-)

73's
Richard Clark, KB7QHC

5404. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:38:46 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E3B46.2020607@ieee.org>
Source record: 122593

Richard Harrison wrote:
> Cecil wrote:
> "Remember, it is a NET wattmeter."

No, I didn't, Richard. I wrote: "Remember, it is not a NET wattmeter."
(cut and pasted from my posting) The Bird wattmeter does not read net
power. It reads forward power and reflected power with the turn of the
slug.

> Sure, the operator of a Bird wattmeter takes the difference between
> forward ans reflected indications to get the "net" power delivered to
> the load.

The point is that the operator does that. The standard Bird wattmeter
doesn't do that all by itself.

> Never have I tried the Bird on an open circuit. I`ll guess Volts are the
> same as in the terminated line, but current is negligible.

Not true. In a 1/2WL stub, there are both voltage standing waves and
current standing waves. The ratio of V+/I+ is 50 ohms. The ratio of
of V-/I- is 50 ohms. A open stub is just an unterminated transmission
line and obeys all the rules of transmission lines.

> Since volts
> and amps produce the same deflections in the Bird, deflection is halved
> when current is missing.

The current is not missing at the middle of a 1/2WL stub. Current is at
its maximum and the voltage is missing at the virtual short in the
middle of the stub.

> Both forward and reflected power indications are equal in the open line,
> so their difference is zero.

Yes, but difference is not what the Bird wattmeter measures.

> Why don`t I participate in CAM`s puzzles? I always suspect a trap. As a
> fool, I may be suspect. I don`t need to confirm the fact in front of a
> crowd.

Actually, my puzzles are simply leading questions but some people don't
like where they lead so they cry "trap, trap, trap" (as in Big Lie).
Only a person who thinks they already know everything and therefore,
have nothing new to learn, can be trapped by the truth.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5405. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:42:18 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <u_qba.571$nJ5.56530@newsread2.prod.itd.earthlink.net>
Source record: 122594

Jim Kelley wrote:
> Another fine post, Richard. But I don't see an exception in the
> example. The circuit conditions in this case are still determined
> ultimately by the nature of the stub termination rather than by any
> physical discontinuity at the tee. Certainly to some this is a small
> point. I think the light Walter Maxwell sheds on the subject of
> analysis of transmission lines is invaluable, but not to the exclusion
> of the underlying fundamental phenomena which we've been exploring
> here. I'm sure you'll agree that while recognizing the value and
> utility of the equivalent circuit, one must still remember the nature of
> what goes on inside of it.
>
> 73 de AC6XG

Hello All,

An hour or so ago I posted a report of measurements made on a main line with a 1/4 wl open circuit stub connected. My diagram failed to print properly, but most of the data is still there. I suggest you take a look.

Since that data was posted I ran additional measurements to satisfy Cecil's desire to know what powers are flowing in the stub. So here's that data using two Bird 43 wattmeters simultaneously, using 50-w slug.

Power delivered into main line, no stub, terminated in 50 ohms, 15.5 watts
Forward power in main line, with stub and 50-ohm termination, 50 watts
Reflected power in main line, with stub and 50-ohm termination, 45 watts
Forward power in stub, 50 watts
Reflected power in stub, 45 watts.

The initial power delivered into the mail line is 15.5 watts, the power absorbed in the 50-ohm load with no stub connected. However, the severe loading mismatch with the stub connected altered the match to the generator (Kenwood TS-830S), reducing the power delivered from 15.5 to 5 watts. (50 - 45 watts, forward minus reflected.)

I'm still working the diagram in my previous post so that it can make more sense.

Walt, W2DU

5406. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:45:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E3CD3.9090009@ieee.org>
Source record: 122595

Richard Clark wrote:
> Shocked are you? Perhaps not so shocked as Cecil's clutch of
> scribblers that shiver in fear of my writing. ;-)

I hope soon to have a few Purple Martin clutches but why
would scribblers want to nest?

Speaking of Purple Martins, I installed an electric snake
guard yesterday. Did you know that 50,000 volts comes right
through insulation designed for 600 volts? I do now. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5407. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 19:56:33 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <n2gs6v4ohvp50tlb5sljrbfef5k2pq50qb@4ax.com>
Source record: 122596

On Tue, 11 Mar 2003 13:45:23 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Shocked are you? Perhaps not so shocked as Cecil's clutch of
>> scribblers that shiver in fear of my writing. ;-)
>
>I hope soon to have a few Purple Martin clutches but why
>would scribblers want to nest?
>
>Speaking of Purple Martins, I installed an electric snake
>guard yesterday. Did you know that 50,000 volts comes right
>through insulation designed for 600 volts? I do now. :-)

Hi Cecil,

One has to wonder why you went to the expense (and shock) to obtain
this system when you only needed to staple copies of my work to nearby
fence posts.

;-)

73's
Richard Clark, KB7QHC

p.s. I hope your scribblers are not as messy as some birds.

5408. Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 20:53:53 UTC
From: theplanters95@aol.comnospam
Message-ID: <20030311155353.12115.00000136@mb-fz.aol.com>
Source record: 122597

How far from cable tv lines, propane tanks, and propane lines should (1) antennas and (2) feedline (either coax or 450 ohm ladder line) be? Of course I know not to use the propane line for a ground!

Randy ka4nma

5409. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 20:56:56 UTC
From: richardharrison@webtv.net
Message-ID: <26714-3E6E4D98-1104@storefull-2311.public.lawson.webtv.net>
Source record: 122600

CAM wrote:
"The current is not missing at the middle of a 1/2 WL stub. Current is maximum and voltage is missing at the virtual short in the middle of the stub."

Yes, every 1/4-wave is an impedance inverter and every voltage maximum is a current minimum, and vice versa.

Also, you apply volts to a transmission line, current results, and its rate is:
I = E/Zo.

Power in each direction doesn`t oscillate in magnitude, in either direction of travel. Voltage and current do as a result of reflected energy from a mismatch.

This pm I came across "NAVPERS 93400A-6", "Microwave Circuit Applications". It includes radar TR and ATR circuits. It says:
"During the transmitting pulse, an arc appears across both spark gaps and causes the TR and ATR circuits to act as a shorted transmission line.
None of the transmitted energy can pass through the reflected opens into the ATR stub or into the receiver."

It isn`t a "virtual open" in the NAVPERS book. It is a "reflected open". Just the same, implication is that the reflected open does the deed.

Best regards, Richard Harrison, KB5WZI

5410. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:21:10 UTC
From: richardharrison@webtv.net
Message-ID: <26716-3E6E5346-148@storefull-2311.public.lawson.webtv.net>
Source record: 122609

CAM wrote:
"Did you know that 50,000 volts comes right through insulation designed
for 600 volts?"

I know that Purple Martins and other fowl evaporate into a puff of smoke
and steam when landing upon an open-wire transmission line carrying 22
KV peak modulated r-f.

Best regards, Richard Harrison, KB5WZI

5411. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:22:03 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <C7icnZ8S9ozhzvOjXTWcog@crocker.com>
Source record: 122598

"Walter Maxwell" <w2du@iag.net> wrote in message
news:C1pba.369$nJ5.43339@newsread2.prod.itd.earthlink.net...
>
> OC_CAM's Razor wrote in message
> > Walter Maxwell wrote:
> > > Sorry, folks, my columnization still didn't work. I'll try again.
> > >
> > Walt, if you use fixed font spacing (Courier) and use spaces instead
> > of tabs, it should line up for people displaying in Courier. And the
> > line wrap option needs to be turned off. Ain't ASCII a female dog?
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
>
> Hi Cecil,
>
> I first used Courier with Word using spaces. I did not use tabs. I looked
> everywhere, including the Word documentation, but I couldn't find a way
to
> turn the word wrap off. I'm using Word 97. Can you tell me how?
>
> Since I couldn't make Word work I went to Notepad, which is what is in the
> post. Everything lines up fine before sending, but becomes garbled when
> sending. Any other ideas?
>
> Walt, W2DU
>

each reader will have to set their font to a fixed width. by default in
outlook express it uses a proportional font so no matter what you do they
columns won't line up, i have to change the viewer to make it work.

5412. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:22:31 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <rssba.712$nJ5.66714@newsread2.prod.itd.earthlink.net>
Source record: 122599

Hello All, here's another try to get the diagrams and columns right.

Report of Measurements to Determine Effectiveness of OC Shunt Stub

I invite you all to observe the data below, obtained from measurements. Then register your opinion as to the significance of the data. The stub was placed at any random location on the mail line. Both main line (short bench-length pieces) and stub are RG-214 (L apx 42 feet)

Initial measurements to determine input impedance of stub, both open- and short-circuit terminations:

Stub
3.833 MHz OC --------------Z = 0.8 + j0.52 SWR = 62.5:1
3.823 0.9 + j0 SWR = 55.5:1

3.823 SC---------------Z = 2503 + j487 SWR = 52:1
3.833 2660 + j0 SWR = 53.2:1

Equipment used during measurements:

HP-4815A RF Vector Impedance Meter
HP-8405A RF Vector Voltmeter
HP-606A Signal Generator
HP-5302A Frequency Counter
GR-1606A RF Impedance Bridge
(Note: Low-R resolution of GR bridge, graduations on resistance dial every 0.1 ohm from 0 to 2 ohms.)

Measurements below made at 3.823 MHz

Zo = 50 ohms SWR = 1.04:1
Gen------------------------|---------------------L 50-ohm load
rho = 0.0196 1.0 volt
0.02 watts
0.0 dB

SWR = 55.6:1 Rshunt=0.9 ohms SWR = 1.04:1
Gen------------------------x---------------------L 50-ohm load
rho = 0.965 | 0.035 volts
| stub 0.0000245 watts
|1/4 wl -29.1 dB
|90 deg, (measured at 3.823 MHz)
|
OC
Notes:
Stub input resistance R = 0.90 ohms

Parallel circuit resistance, stub and line Zo = 0.8841 ohms
SWR on stub 55.5:1
SWR on line between Gen and stub 55.6:1
SWR on line between stub and load 1.04:1
Attenuation due to 0.9-ohm shunting resistance established by
the open-circuit 1/4 wl stub is 29.1 dB relative to no shunting
stub.
SWR between Gen and stub 55.6:1 due to reflection generated at
stub, rho = 0.965.

Walt, W2DU

PS--I hope the diagrams come out ok this time.

5413. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:29:49 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <aajs6v47ahpoc125i0lgof26lhau4ev1gr@4ax.com>
Source record: 122601

On Mon, 10 Mar 2003 14:51:46 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>David Robbins wrote:
>> i don't.... and i don't see the term 'virtual short' in the circuit theory
>> book or either of the two em books i keep on my desk for reference. and if
>> you notice i usually quote the 'virtual' part since i don't really know that
>> it is a widely accepted term for a point where the voltage is zero. who
>> first used that term on here anyway?
>
>I will let the person who coined (or adopted) the term be the
>one to respond. In optics, the term usually means something
>that appears to be there but really isn't there in reality.
>That sounds virtually correct to me. :-)

I can't say who used it first, but it is interesting to note that a
"virtual open" was described as being created by a phase relationship
of 180 degrees between the voltage and current waves traveling on a
line. This was in the 1994 edition of the ARRL Antenna Book, page
25-2.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

5414. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:29:50 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <n2ls6v4p38f1fnkr0dbtoat64gl39b4tvg@4ax.com>
Source record: 122602

On Mon, 10 Mar 2003 19:30:49 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>On Mon, 10 Mar 2003 13:03:47 -0600, OC_CAM's Razor
><Cecil.A.Moore@ieee.org> wrote:
>
>>Bob got the correct answer.
>
>of course he did.
>
>>Your ignorance is showing.
>
>uh-huh:
>
>On Fri, 07 Mar 2003 16:15:38 -0600, OC_CAM's Razor
><Cecil.A.Moore@ieee.org> wrote:
>>The brainteaser has not been solved yet.

Dear Richard,

I did get an answer that agreed with Cecil's answer, but for some
reason, I forget what, it went by e-mail instead of to the group. I
was surprised to find out that we had come to the same answer by
completely different and independant means - so it was a win win
situation.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

5415. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:38:50 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <tgls6v0t4geujgmbdm813djf9kt85krlt7@4ax.com>
Source record: 122604

On Tue, 11 Mar 2003 21:22:31 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>
>Hello All, here's another try to get the diagrams and columns right.
>
> Report of Measurements to Determine Effectiveness of OC Shunt Stub
>
> I invite you all to observe the data below, obtained from measurements.
> Then register your opinion as to the significance of the data. The stub
> was placed at any random location on the mail line. Both main line
> (short bench-length pieces) and stub are RG-214 (L apx 42 feet)
>
> Initial measurements to determine input impedance of stub, both open-
> and short-circuit terminations:
>
> Stub
> 3.833 MHz OC --------------Z = 0.8 + j0.52 SWR = 62.5:1
> 3.823 0.9 + j0 SWR = 55.5:1
>
> 3.823 SC---------------Z = 2503 + j487 SWR = 52:1
> 3.833 2660 + j0 SWR = 53.2:1
>
> Equipment used during measurements:
>
> HP-4815A RF Vector Impedance Meter
> HP-8405A RF Vector Voltmeter
> HP-606A Signal Generator
> HP-5302A Frequency Counter
> GR-1606A RF Impedance Bridge
> (Note: Low-R resolution of GR bridge, graduations on resistance
> dial every 0.1 ohm from 0 to 2 ohms.)
>
> Measurements below made at 3.823 MHz
>
> Zo = 50 ohms SWR = 1.04:1
> Gen------------------------|----------------------L 50-ohm load
> rho = 0.0196 1.0 volt
> 0.02 watts
> 0.0 dB
>
> SWR = 55.6:1 Rshunt=0.9 ohms SWR = 1.04:1
> Gen------------------------x----------------------L 50-ohm load
> rho = 0.965 | 0.035 volts

> | stub 0.0000245 watts
> | 1/4 wl -29.1 dB
> | 90 deg,
> | (measured at 3.823 MHz)
> OC
> Notes:
> Stub input resistance R = 0.90 ohms
> Parallel circuit resistance, stub and line Zo = 0.8841 ohms
> SWR on stub 55.5:1
> SWR on line between Gen and stub 55.6:1
> SWR on line between stub and load 1.04:1
> Attenuation due to 0.9-ohm shunting resistance established by
> the open-circuit 1/4 wl stub is 29.1 dB relative to no shunting
> stub.
> SWR between Gen and stub 55.6:1 due to reflection generated at
> stub, rho = 0.965.
>
>Walt, W2DU
>
>PS--I hope the diagrams come out ok this time.
>

Hi Walt,

A lot clearer, but still with some misalignment that I attempted to square up above in fixed-font.

Aside from that, and certainly not secondarily, good work. Especially to have suppressed by nearly 30dB.

Here's a variation to offer insight into my observation of using a SWR meter in the stub. How much does this suppression of nearly 30dB suffer as a result of inserting a SWR meter into the stub? (at the near end? the far end? the middle end?)

73's
Richard Clark, KB7QHC

5416. Fonts and Columnization

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:44:07 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <9pls6vk18hbuqloe63luc1vn4qjrb8qsgn@4ax.com>
Source record: 122605

```
Dear RRAA

Please excuse this test of Fonts and Columnization

Settings in Free Agent by Forte':

Display Preferences:
Variable Pitch Body = Courier 15 pt (Western)
Fixed Pitch Body = Courier 15 pt (Western)

MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
------------------------------------------------------------
iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiixiiiiiiioiiiiiiiiiiiiiiiiiii
|
one tab
two tabs
8 char
16 char
|
| Using spaces
|
| using 5 tabs
|
|

Please ignore!

================================================
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
================================================
```

5417. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:44:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <hdms6v86fj1lbducr1bhks4apg76iphro0@4ax.com>
Source record: 122606

On Tue, 11 Mar 2003 16:29:50 -0500, "Robert Lay (W9DMK)"
<w9dmk@crosslink.net> wrote:

>On Mon, 10 Mar 2003 19:30:49 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>
>>On Mon, 10 Mar 2003 13:03:47 -0600, OC_CAM's Razor
>><Cecil.A.Moore@ieee.org> wrote:
>>
>>>Bob got the correct answer.
>>
>>of course he did.
>>
>>>Your ignorance is showing.
>>
>>uh-huh:
>>
>>On Fri, 07 Mar 2003 16:15:38 -0600, OC_CAM's Razor
>><Cecil.A.Moore@ieee.org> wrote:
>>>The brainteaser has not been solved yet.
>
>Dear Richard,
>
>I did get an answer that agreed with Cecil's answer, but for some
>reason, I forget what, it went by e-mail instead of to the group. I
>was surprised to find out that we had come to the same answer by
>completely different and independant means - so it was a win win
>situation.
>

Hi Bob,

Thank you for showing your interest.

73's
Richard Clark, KB7QHC

5418. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:46:09 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <BOsba.758$nJ5.69045@newsread2.prod.itd.earthlink.net>
Source record: 122607

Hello All, here's another try to get the diagrams and columns right.

Some additional data at the bottom.

Report of Measurements to Determine Effectiveness of OC Shunt Stub

I invite you all to observe the data below, obtained from measurements. Then register your opinion as to the significance of the data. The stub was placed at any random location on the mail line. Both main line (short bench-length pieces) and stub are RG-214 (L apx 42 feet)

Initial measurements to determine input impedance of stub, both open- and short-circuit terminations:

Stubs
3.833 MHz OC --------------Z = 0.8 + j0.52 SWR = 62.5:1
3.823 0.9 + j0 SWR = 55.5:1

3.823 SC---------------Z = 2503 + j487 SWR = 52:1
3.833 2660 + j0 SWR = 53.2:1

Equipment used during measurements:

HP-4815A RF Vector Impedance Meter
HP-8405A RF Vector Voltmeter
HP-606A Signal Generator
HP-5302A Frequency Counter
GR-1606A RF Impedance Bridge
(Note: Low-R resolution of GR bridge, graduations on resistance dial every 0.1 ohm from 0 to 2 ohms.)

Measurements below made at 3.823 MHz

Zo = 50 ohms SWR = 1.04:1
Gen------------------------|---------------------L 50-ohm load
rho = 0.0196 1.0 volt
0.02 watts
0.0 dB

SWR = 55.6:1 Rshunt=0.9 ohms SWR = 1.04:1
Gen------------------------x---------------------L 50-ohm load
rho = 0.965 | 0.035 volts
| stub 0.0000245 watts
|1/4 wl -29.1 dB
|90 deg, (measured at 3.823 MHz)
|
OC
Notes:

Stub input resistance R = 0.90 ohms
Parallel circuit resistance, stub and line Zo = 0.8841 ohms
SWR on stub 55.5:1
SWR on line between Gen and stub 55.6:1
SWR on line between stub and load 1.04:1
Attenuation due to 0.9-ohm shunting resistance established by
the open-circuit 1/4 wl stub is 29.1 dB relative to no shunting
stub.
SWR between Gen and stub 55.6:1 due to reflection generated at
stub, rho = 0.965.

Since the data above was posted I ran additional measurements to satisfy
Cecil's
desire to know what powers are flowing in the stub. So here's that data
using two Bird 43 wattmeters simultaneously, using 50-w slug.

Power initially delivered into main line, no stub, terminated in 50 ohms,
15.5 watts
Forward power in main line, with stub and 50-ohm termination, 50 watts
Reflected power in main line, with stub and 50-ohm termination, 45 watts
Forward power in stub, 50 watts
Reflected power in stub, 45 watts.

The initial power delivered into the mail line is 15.5 watts, the power
absorbed in the 50-ohm load with no stub connected. However, the severe
loading mismatch with the stub connected altered the match to the generator
(Kenwood TS-830S), reducing the power delivered from 15.5 to 5 watts. (50 -
45 watts, forward minus reflected.)

Walt, W2DU

PS--I hope the diagrams and columns come out ok this time.

5419. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:50:19 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <vSsba.767$nJ5.69513@newsread2.prod.itd.earthlink.net>
Source record: 122608

Dave Robbins wrote:
> each reader will have to set their font to a fixed width. by default in
> outlook express it uses a proportional font so no matter what you do they
> columns won't line up, i have to change the viewer to make it work.

Well, Dave, with my Word 97 I can select fixed width fonts, using the pull-down menu on the top tool bar. My first try was using Courier. But can anyone tell me how to turn word wrap off in Word? Or is it not possible?

Note that I've just posted a more complete report on measurements I made today on the s1/4 wl open-circuit stub connected to the main line.

Walt, W2DU

5420. Newsgroup for satellite users

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 21:52:55 UTC
From: Bill Ogden <ogden@us.ibm.com>
Message-ID: <3E6E5AB7.C7BC388E@us.ibm.com>
Source record: 122603

I am becoming interested in amateur radio satellite work. As usual, I have lots of questions. Is there a newsgroup or list server for this area?

Bill
W2WO

5421. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:01:55 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E5CD3.7020609@ieee.org>
Source record: 122610

Walter Maxwell wrote:
> Forward power in stub, 50 watts
> Reflected power in stub, 45 watts.

If the stub is such a high impedance, how on earth is 50 watts of
forward power getting into it? Let's say the virtual impedance is
10k ohms. It would take 707 volts to cause a forward power of 50W.
Makes me want to believe in a Guardian Angel for Stubs. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5422. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:03:42 UTC
From: richardharrison@webtv.net
Message-ID: <11971-3E6E5D3E-1127@storefull-2312.public.lawson.webtv.net>
Source record: 122617

Jim, AC6XG wrote:
"But I don`t see an exception in the example."

The 1/2-wave open circuit stub accepts current at a rate of I = E/Zo. It reflects from its OC end at the same rate. But, it does not transmit much energy in either direction because it presents an impedance of maybe 5000 ohms. It depends on the quality of shorts and opens how their inverted impedances turn out. The voltage presented the stub is determined by Zo and the power to the matched load. The open-circuit 1/2-wave stub doesn`t have a measurable effect on the voltage presented. This is 5000 ohms in parallel with 50 ohms. 1% to me is negligible.

The load current does not flow through the open-circuit stub. If a significant current, as compared with the load current flowed in the stub, it would make some sense to say the action took place at the open end of the stub. My point is that the energy rejection takes place at the stub`s junction with the line feeding the load.

Best regards, Richard Harrison, KB5WZI

5423. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:03:55 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E5D4B.2030305@ieee.org>
Source record: 122611

Richard Clark wrote:
> One has to wonder why you went to the expense (and shock) to obtain
> this system when you only needed to staple copies of my work to nearby
> fence posts.

You may be the meanest SOB in the valley, Richard, but six foot
long Texas Rat Snakes can't read.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5424. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:08:11 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E5E4B.2080207@ieee.org>
Source record: 122612

Richard Harrison wrote:
> It isn`t a "virtual open" in the NAVPERS book. It is a "reflected open".
> Just the same, implication is that the reflected open does the deed.

No argument that an ionized arc will result in a *physical* short circuit
which is quite different from a virtual short. Walt just found 50 watts
of forward power in a stub that should be blocking any energy from entering
the stub. It appears that a virtual short or open doesn't block one iota
of energy from entering the stub. Instead, the forward power and the
reflected power add up to nearly zero, i.e. the net power is near zero.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5425. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:12:06 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <jmns6vk9uo9q7le7b6bjiet8mhjprjnug8@4ax.com>
Source record: 122613

On Tue, 11 Mar 2003 16:01:55 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

|Walter Maxwell wrote:
|> Forward power in stub, 50 watts
|> Reflected power in stub, 45 watts.
|
|If the stub is such a high impedance, how on earth is 50 watts of
|forward power getting into it? Let's say the virtual impedance is
|10k ohms. It would take 707 volts to cause a forward power of 50W.
|Makes me want to believe in a Guardian Angel for Stubs. :-)

He didn't say it was a high impedance. It is an open-circuit 1/4
stub, measured as 0.9 ohm input Z.

5426. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:13:56 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E5FA4.802@ieee.org>
Source record: 122615

Robert Lay (W9DMK) wrote:
> I can't say who used it first, but it is interesting to note that a
> "virtual open" was described as being created by a phase relationship
> of 180 degrees between the voltage and current waves traveling on a
> line. This was in the 1994 edition of the ARRL Antenna Book, page
> 25-2.

What is interesting to note is the "created by" part. A virtual open
(or virtual short) is the *EFFECT* of wave interference. The waves
involved in the interference are often reflected waves. The waves
CAUSE the virtual impedance. The virtual impedance doesn't cause
the waves. It's very easy to confuse cause and effect.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5427. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:16:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E6020.5090307@ieee.org>
Source record: 122616

Robert Lay (W9DMK) wrote:
> I did get an answer that agreed with Cecil's answer, but for some
> reason, I forget what, it went by e-mail instead of to the group. I
> was surprised to find out that we had come to the same answer by
> completely different and independant means - so it was a win win
> situation.

Especially if it was the correct answer, eh? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5428. Re: Newsgroup for satellite users

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:16:47 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <jftba.1152$fA.912@news1.west.cox.net>
Source record: 122614

Yep it is rec.radio.amateur.space

Yahoo has 5 Amateur Satellite Groups
http://groups.yahoo.com/search?query=amateur+satellites

And Yahoo has 1275 Ham Groups From A to Z
http://groups.yahoo.com/search?query=amateur+radio&submit=Search

Lots more Ham NGs, computers, and general electronics at URL:
http://ac6v.com/newsgroups.htm

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Bill Ogden" <ogden@us.ibm.com> wrote in message
news:3E6E5AB7.C7BC388E@us.ibm.com...
> I am becoming interested in amateur radio satellite work. As usual, I
> have lots of questions. Is there a newsgroup or list server for this
> area?
>
> Bill
> W2WO
>

5429. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:20:22 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E6126.6050106@ieee.org>
Source record: 122618

Richard Clark wrote:
> Here's a variation to offer insight into my observation of using a SWR
> meter in the stub. How much does this suppression of nearly 30dB
> suffer as a result of inserting a SWR meter into the stub? (at the
> near end? the far end? the middle end?)

What does it matter if it's 1dB or 10dB, Richard? There's 50 watts of
forward power flowing in the stub. Aren't stubs supposed to suppress
virtually all of the forward power trying to enter them? How many dB
of suppression is 50 watts of forward power flowing in a stub? Can
you spell N-O-N-E?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5430. Re: T-line Brainteaser

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:23:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E61D3.7080609@ieee.org>
Source record: 122669

Richard Clark wrote:
> Thank you for showing your interest.

Those grapes were really, really sweet, Richard. You should have
tried them. :-) Bob has solved the brainteaser. How about you?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5431. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:27:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E62ED.8020006@ieee.org>
Source record: 122670

Richard Harrison wrote:
> CAM wrote:
> "Did you know that 50,000 volts comes right through insulation designed
> for 600 volts?"
>
> I know that Purple Martins and other fowl evaporate into a puff of smoke
> and steam when landing upon an open-wire transmission line carrying 22
> KV peak modulated r-f.

My Purple Martins were nervous this morning. I wondered how in the world
could they detect the electric fence voltage. I put my ear to the
Hurricane Fence that I had hung the transformer on and I could hear the
old familiar 60Hz hum and apparently, so could the Purple Martins.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5432. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:31:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E63BD.9020908@ieee.org>
Source record: 122671

Richard Harrison wrote:
> Jim, AC6XG wrote:
> "But I don`t see an exception in the example."
>
> The 1/2-wave open circuit stub accepts current at a rate of I = E/Zo. It
> reflects from its OC end at the same rate. But, it does not transmit
> much energy in either direction because it presents an impedance of
> maybe 5000 ohms.

Sorry Richard, but Walt's measurements just shot down that theory.
Forward power in Walt's stub was 50 watts. Virtual impedances have
zero effects on waves. Waves *cause* virtual impedances. That's why
they are called "virtual". They only exist in the human mind.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5433. Re: Newsgroup for satellite users

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:34:12 UTC
From: Ken Finney <kenneth.c.finney@boeing.com>
Message-ID: <HBLw0x.5C6@news.boeing.com>
Source record: 122674

"Bill Ogden" <ogden@us.ibm.com> wrote in message
news:3E6E5AB7.C7BC388E@us.ibm.com...
> I am becoming interested in amateur radio satellite work. As usual, I
> have lots of questions. Is there a newsgroup or list server for this
> area?
>
> Bill
> W2WO
>

Have you gone to www.amsat.org yet?

5434. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:49:25 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E67F5.7010409@ieee.org>
Source record: 122672

Wes Stewart wrote:
> On Tue, 11 Mar 2003 16:01:55 -0600, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
> |Walter Maxwell wrote:
> |> Forward power in stub, 50 watts
> |> Reflected power in stub, 45 watts.
> |
> |If the stub is such a high impedance, how on earth is 50 watts of
> |forward power getting into it? Let's say the virtual impedance is
> |10k ohms. It would take 707 volts to cause a forward power of 50W.
> |Makes me want to believe in a Guardian Angel for Stubs. :-)
>
> He didn't say it was a high impedance. It is an open-circuit 1/4
> stub, measured as 0.9 ohm input Z.

Sorry, I thought we were still talking about the 1/2WL stub so let
me rephrase. To get 50W into 0.9 ohms requires 7.45 amps. The reflection
coefficient for 0.9 ohms in a 50 ohm environment is 0.96. The driving
current necessary to get 7.45 amps through a reflection coefficient
of 0.96 is 7.45/.04 = 186 amps. Where the heck does that 186 amps
come from?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5435. Re: Fonts and Columnization

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 22:54:04 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933B97959C90Epookster@216.168.3.50>
Source record: 122673

"Robert Lay (W9DMK)" <w9dmk@crosslink.net> wrote in
news:9pls6vk18hbuqloe63luc1vn4qjrb8qsgn@4ax.com:

> Please excuse this test of Fonts and Columnization
>

Please send this kind of stuff to alt.test. That's what it's for.

--
Bill, W7TI

5436. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 23:07:34 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <nkydnXOG7qqp8fOjXTWcqg@crocker.com>
Source record: 122675

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6E67F5.7010409@ieee.org...
> Wes Stewart wrote:
> > On Tue, 11 Mar 2003 16:01:55 -0600, OC_CAM's Razor
> > <Cecil.A.Moore@ieee.org> wrote:
> >
> > |Walter Maxwell wrote:
> > |> Forward power in stub, 50 watts
> > |> Reflected power in stub, 45 watts.
> > |
> > |If the stub is such a high impedance, how on earth is 50 watts of
> > |forward power getting into it? Let's say the virtual impedance is
> > |10k ohms. It would take 707 volts to cause a forward power of 50W.
> > |Makes me want to believe in a Guardian Angel for Stubs. :-)
> >
> > He didn't say it was a high impedance. It is an open-circuit 1/4
> > stub, measured as 0.9 ohm input Z.
>
> Sorry, I thought we were still talking about the 1/2WL stub so let
> me rephrase. To get 50W into 0.9 ohms requires 7.45 amps. The reflection
> coefficient for 0.9 ohms in a 50 ohm environment is 0.96. The driving
> current necessary to get 7.45 amps through a reflection coefficient
> of 0.96 is 7.45/.04 = 186 amps. Where the heck does that 186 amps
> come from?

hmmm... very low voltage, very high current.... maybe it comes from a
'virtual' short!

5437. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 23:12:25 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <WLmdnTAA_dvK8POjXTWc3Q@crocker.com>
Source record: 122676

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6E5E4B.2080207@ieee.org...
> Richard Harrison wrote:
> > It isn`t a "virtual open" in the NAVPERS book. It is a "reflected open".
> > Just the same, implication is that the reflected open does the deed.
>
> No argument that an ionized arc will result in a *physical* short circuit
> which is quite different from a virtual short. Walt just found 50 watts
> of forward power in a stub that should be blocking any energy from
entering
> the stub. It appears that a virtual short or open doesn't block one iota
> of energy from entering the stub. Instead, the forward power and the
> reflected power add up to nearly zero, i.e. the net power is near zero.

very good grasshopper, some day you may yet understand why a 1/4 wave
shorted stub melted down with 1500w going 'by' it on the main line. in
order for the 'virtual' short to exist you must have current on the stub,
otherwise there is no way for the reflected wave to cancel out the incident
one (or add too it, depending on if you like tracking current or voltage) at
the junction.

5438. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 23:16:48 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E6E6ECF.BB3CFBB5@att.net>
Source record: 122677

Walt,

I don't know any way to turn off word wrap in MS Word 97, but there are
a couple of useful tricks that can accomplish a "virtual" turn off.
(Ouch!!)

First, set the page width to the maximum, which I believe is 20 inches.
Next set the (Courier) font size very small, say 4 or even 2. These
numbers do not appear on the drop-down menu, but you can type them in.
Finally, blow up the magnification to 500% so that you can see the text.

Now you can put literally hundreds of characters per line without word
wrapping.

Of course, MS Word complains when you try to save this document as a
text file, but it will do so just fine. It will not add any extraneous
line feeds or returns if the file is saved as pure text. All of the
formatting including page size and font size will be lost, which is just
what you want.

73,
Gene W4SZ

Walter Maxwell wrote:
>
> Dave Robbins wrote:
> > each reader will have to set their font to a fixed width. by default in
> > outlook express it uses a proportional font so no matter what you do they
> > columns won't line up, i have to change the viewer to make it work.
>
> Well, Dave, with my Word 97 I can select fixed width fonts, using the
> pull-down menu on the top tool bar. My first try was using Courier. But can
> anyone tell me how to turn word wrap off in Word? Or is it not possible?
>
> Note that I've just posted a more complete report on measurements I made
> today on the s1/4 wl open-circuit stub connected to the main line.
>
> Walt, W2DU

5439. Re: Newsgroup for satellite users

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 23:25:29 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <Jfuba.1399$fA.1204@news1.west.cox.net>
Source record: 122678

Yep it is rec.radio.amateur.space

Also see The Radio Amateur Satellite Corporation -- AMSAT at URL:
http://www.amsat.org/amsat/

Yahoo has 5 Amateur Satellite Groups
http://groups.yahoo.com/search?query=amateur+satellites

And Yahoo has 1275 Ham Groups From A to Z
http://groups.yahoo.com/search?query=amateur+radio&submit=Search

Lots more Ham NGs, computers, and general electronics at URL:
http://ac6v.com/newsgroups.htm

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Bill Ogden" <ogden@us.ibm.com> wrote in message
news:3E6E5AB7.C7BC388E@us.ibm.com...
> I am becoming interested in amateur radio satellite work. As usual, I
> have lots of questions. Is there a newsgroup or list server for this
> area?
>
> Bill
> W2WO
>

5440. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 23:46:55 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Pzuba.916$nJ5.81982@newsread2.prod.itd.earthlink.net>
Source record: 122679

Richard H. wrote;
> The 1/2-wave open circuit stub accepts current at a rate of I = E/Zo. It
> reflects from its OC end at the same rate. But, it does not transmit
> much energy in either direction because it presents an impedance of
> maybe 5000 ohms. It depends on the quality of shorts and opens how their
> inverted impedances turn out. The voltage presented the stub is
> determined by Zo and the power to the matched load. The open-circuit
> 1/2-wave stub doesn`t have a measurable effect on the voltage presented.
> This is 5000 ohms in parallel with 50 ohms. 1% to me is negligible.
>
> The load current does not flow through the open-circuit stub. If a
> significant current, as compared with the load current flowed in the
> stub, it would make some sense to say the action took place at the open
> end of the stub. My point is that the energy rejection takes place at
> the stub`s junction with the line feeding the load.
>
> Best regards, Richard Harrison, KB5WZI

Richard, the measurements were on a 1/4 wl open-circuited stub, not 1/2 wl.
Bigga'
difference.

Walt, W2DU

5441. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-11 23:49:52 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <orss6vcprppo6l8jsucledio1luhap42c3@4ax.com>
Source record: 122680

On 11 Mar 2003 20:53:53 GMT, theplanters95@aol.comnospam
(Theplanters95) wrote:

>How far from cable tv lines, propane tanks, and propane lines should (1)
>antennas and (2) feedline (either coax or 450 ohm ladder line) be? Of course I
>know not to use the propane line for a ground!
>
>Randy ka4nma

Far enough away to avoid contact.

When I lived in town, one end of my 80-meter inverted vee was tied to
the pole which carried the cable tv lines. Distance from the end of
the vee to the cable lines was about five feet. No TVI problems.

Don't know about the propane tank. I do know that the tank cannot
be located directly under power lines, so I guess you could extend
that (although it may not be covered by code) and say that as long
as your antenna is not directly over the tank, it's ok.

Coax feedline placement is not critical. You could wind it around
the tank a couple of times and (1) not have any antenna problems,
and (2) never blow anything up. Ladderline, of course, requires at
least a few inches of space between it and other metal "stuff".

Just use some common sense and go for it.

-wa5rrh-

5442. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:04:40 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <sQuba.943$nJ5.83128@newsread2.prod.itd.earthlink.net>
Source record: 122681

> What does it matter if it's 1dB or 10dB, Richard? There's 50 watts of
> forward power flowing in the stub. Aren't stubs supposed to suppress
> virtually all of the forward power trying to enter them? How many dB
> of suppression is 50 watts of forward power flowing in a stub? Can
> you spell N-O-N-E?
> --
> cheers, CAM >

Cecil, I didn't think to measure the power at the open end of the stub until Richard's suggestion above. I can't measure at the middle of the coax, because the coax I'm using is a single pristine section.

However, I just now measured the power at the open end using the Bird 43 open ended at the open end of the coax. The forward and reflected power are identical 40 watts. This is exactly what you'd expect from the theory for EM energy encountering an open circuit.

The 50 watts forward and 45 watts reflected were measured at the connection of the coax and the main line. Note that the difference is 5 watts. Note also that the difference between the 45 watts reflected at the junction and the forward/reflected at the open circuit is also 5 watts. This means that the 5 watts is power lost in the stub. If the stub were lossless both the forward and reflected power at both ends would be 50 watts.

Walt, W2DU

5443. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:06:49 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <tSuba.947$nJ5.76140@newsread2.prod.itd.earthlink.net>
Source record: 122683

Gene Fuller wrote i
> Walt,
>
> I don't know any way to turn off word wrap in MS Word 97, but there are
> a couple of useful tricks that can accomplish a "virtual" turn off.
> (Ouch!!)
>
> First, set the page width to the maximum, which I believe is 20 inches.
> Next set the (Courier) font size very small, say 4 or even 2. These
> numbers do not appear on the drop-down menu, but you can type them in.
> Finally, blow up the magnification to 500% so that you can see the text.
>
> Now you can put literally hundreds of characters per line without word
> wrapping.
>
> Of course, MS Word complains when you try to save this document as a
> text file, but it will do so just fine. It will not add any extraneous
> line feeds or returns if the file is saved as pure text. All of the
> formatting including page size and font size will be lost, which is just
> what you want.
>
> 73,
> Gene W4SZ

Thanks, Gene, a terrific idea!

Walt

5444. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:41:30 UTC
From: richardharrison@webtv.net
Message-ID: <105-3E6E823A-146@storefull-2318.public.lawson.webtv.net>
Source record: 122693

Walter, W2DU wrote:
"Richard, the measurements were on a 1/4 wl open-circuited stub, not 1/2 wl. Bigga difference."

Yes, I was responding to Jim, AC6XG and his question about (2) 1/2-wave sections of coax, one properly terminated, and the other OC. Both are fed from a common source.

It`s par for the thread to have multiple conversations.

Best regards, Richard Harrison, KB5WZI

5445. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:42:32 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E8278.1030708@ieee.org>
Source record: 122685

David Robbins wrote:

>W5DXP wrote:
>>Where the heck does that 186 amps come from?
>
> hmmm... very low voltage, very high current.... maybe it comes from a
> 'virtual' short!

OK David, you win. The current through a virtual short is double the
average current so where does the 93 amps come from? :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5446. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:45:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cj0t6vgsjmjfnp5vr4ovohap7n7kmnhaql@4ax.com>
Source record: 122684

On Wed, 12 Mar 2003 00:04:40 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>
>> What does it matter if it's 1dB or 10dB, Richard? There's 50 watts of
>> forward power flowing in the stub. Aren't stubs supposed to suppress
>> virtually all of the forward power trying to enter them? How many dB
>> of suppression is 50 watts of forward power flowing in a stub? Can
>> you spell N-O-N-E?
>> --
>> cheers, CAM >
>
>Cecil, I didn't think to measure the power at the open end of the stub until
>Richard's suggestion above. I can't measure at the middle of the coax,
>because the coax I'm using is a single pristine section.
>
>However, I just now measured the power at the open end using the Bird 43
>open ended at the open end of the coax. The forward and reflected power are
>identical 40 watts. This is exactly what you'd expect from the theory for EM
>energy encountering an open circuit.
>
>The 50 watts forward and 45 watts reflected were measured at the connection
>of the coax and the main line. Note that the difference is 5 watts. Note
>also that the difference between the 45 watts reflected at the junction and
>the forward/reflected at the open circuit is also 5 watts. This means that
>the 5 watts is power lost in the stub. If the stub were lossless both the
>forward and reflected power at both ends would be 50 watts.
>
>Walt, W2DU
>

Hi Walt,

Thanks for the follow-up, but I was still more interested in any
impact on the -29dB figure that came by way of putting the SWR meter
into the mix.

Your work, of course, shows that there is more than one way to find
the SAME answer (if in fact the SAME answer exists). A check for this
would be if the R terms you found for the stub account for this same 5
watts.

This is certainly a fresh breeze compared to a face full of -uh-
morning mist (or so its claimed).

73's
Richard Clark, KB7QHC

5447. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:46:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E837D.6080404@ieee.org>
Source record: 122686

David Robbins wrote:
> very good grasshopper, some day you may yet understand why a 1/4 wave
> shorted stub melted down with 1500w going 'by' it on the main line. in
> order for the 'virtual' short to exist you must have current on the stub,
> otherwise there is no way for the reflected wave to cancel out the incident
> one (or add too it, depending on if you like tracking current or voltage) at
> the junction.

David, you must not have been following the discussion very closely. That
is exactly my argument which most of the gurus reject. The gurus say
there is hardly any voltage and current in a stub at all since the
virtual impedance is either zero or infinity thus reflecting the
signals at the entrance to the stub.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5448. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:51:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <f71t6voa76cg2hrpu392fgg4nf0fnn3g3k@4ax.com>
Source record: 122687

On Tue, 11 Mar 2003 23:07:34 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:

>
>"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
>news:3E6E67F5.7010409@ieee.org...
>> Wes Stewart wrote:
>> > On Tue, 11 Mar 2003 16:01:55 -0600, OC_CAM's Razor
>> > <Cecil.A.Moore@ieee.org> wrote:
>> >
>> > |Walter Maxwell wrote:
>> > |> Forward power in stub, 50 watts
>> > |> Reflected power in stub, 45 watts.
>> > |
>> > |If the stub is such a high impedance, how on earth is 50 watts of
>> > |forward power getting into it? Let's say the virtual impedance is
>> > |10k ohms. It would take 707 volts to cause a forward power of 50W.
>> > |Makes me want to believe in a Guardian Angel for Stubs. :-)
>> >
>> > He didn't say it was a high impedance. It is an open-circuit 1/4
>> > stub, measured as 0.9 ohm input Z.
>>
>> Sorry, I thought we were still talking about the 1/2WL stub so let
>> me rephrase. To get 50W into 0.9 ohms requires 7.45 amps. The reflection
>> coefficient for 0.9 ohms in a 50 ohm environment is 0.96.

Walt reported rho = 0.965, but the echo needs repeating. Who is more
surprised to have arrived there is funnier.

>>The driving
>> current necessary to get 7.45 amps through a reflection coefficient
>> of 0.96 is 7.45/.04 = 186 amps. Where the heck does that 186 amps
>> come from?
>
>hmmm... very low voltage, very high current.... maybe it comes from a
>'virtual' short!
>

Uhm, are we bordering on the obvious again?

73's
Richard Clark, KB7QHC

5449. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:51:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E84AD.2030906@ieee.org>
Source record: 122688

Walter Maxwell wrote:
> Richard, the measurements were on a 1/4 wl open-circuited stub, not 1/2 wl.
> Bigga' difference.

The question still remains, Walt. How does 50 watts of forward power get
past the mouth of a 1/4WL open-circuited stub exhibiting an impedance of
0.9 ohms with a reflection coefficient of 0.96?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5450. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:58:10 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <8rudnamkW-68G_OjXTWcqw@comcast.com>
Source record: 122689

If the coax takes a direct lightning hit, it will go to ground by the
shortest path. I would make sure that is not through your propane tank.

Tam/WB2TT
"funkbastler" <funkbastler@eudoramail.com> wrote in message
news:orss6vcprppo6l8jsucledio1luhap42c3@4ax.com...
> On 11 Mar 2003 20:53:53 GMT, theplanters95@aol.comnospam
> (Theplanters95) wrote:
>
> >How far from cable tv lines, propane tanks, and propane lines should (1)
> >antennas and (2) feedline (either coax or 450 ohm ladder line) be? Of
course I
> >know not to use the propane line for a ground!
> >
> >Randy ka4nma
>
> Far enough away to avoid contact.
>
> When I lived in town, one end of my 80-meter inverted vee was tied to
> the pole which carried the cable tv lines. Distance from the end of
> the vee to the cable lines was about five feet. No TVI problems.
>
> Don't know about the propane tank. I do know that the tank cannot
> be located directly under power lines, so I guess you could extend
> that (although it may not be covered by code) and say that as long
> as your antenna is not directly over the tank, it's ok.
>
> Coax feedline placement is not critical. You could wind it around
> the tank a couple of times and (1) not have any antenna problems,
> and (2) never blow anything up. Ladderline, of course, requires at
> least a few inches of space between it and other metal "stuff".
>
> Just use some common sense and go for it.
>
> -wa5rrh-
>

5451. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 00:58:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E863D.6070308@ieee.org>
Source record: 122690

Walter Maxwell wrote:
> However, I just now measured the power at the open end using the Bird 43
> open ended at the open end of the coax. The forward and reflected power are
> identical 40 watts. This is exactly what you'd expect from the theory for EM
> energy encountering an open circuit.

Not if the input impedance to the stub is 0.9 ohms, Walt. What current is
required to force 40 watts into a 0.9 ohm impedance with a reflection
coefficient of 0.96? Only 4% of the current makes it through the 0.9 ohms.
40 watts in 50 ohms is 0.89 amps. 0.89/.04 = 22 amps.

It takes 22 amps of driving current to get 0.89 amps through a 0.9 ohm
load in a 50 ohm transmission line. Where the heck does that 22 amps
come from? 22^2*50 = 24,000 watts. What is the source of that power?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5452. Re: TS870 with RCP95

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 01:02:27 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <DGvba.6459$se1.3698114@newssvr28.news.prodigy.com>
Source record: 122682

I would be interested in looking at your program, Marus. Where can I
download it?

--
73,
Larry N8LP
www.telepostinc.com

"Marus Van Sand" <on7vs@antwerpen.be> wrote in message
news:b4lcp6$635$1@news.worldonline.be...
> Have a TS870 with Radio Control Program from Dynanet/Kenwood, version
1.0a.
> Managed to put up an easy to use version of the program, but I suppose
there
> are others in the world who did a similar thing. Anyone interested to have
a
> copy of my program? I am interested to get other realisations to combine
> the best items.
> Best 73 de ON7VS
> Marus
> on7vs@antwerpen.be
>
>

5453. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 01:08:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E8878.20001@ieee.org>
Source record: 122691

Richard Clark wrote:
> "David Robbins" <k1ttt@arrl.net> wrote:
>
>>"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote:
>>>The driving
>>>current necessary to get 7.45 amps through a reflection coefficient
>>>of 0.96 is 7.45/.04 = 186 amps. Where the heck does that 186 amps
>>>come from?
>>
>>hmmm... very low voltage, very high current.... maybe it comes from a
>>'virtual' short!
>
> Uhm, are we bordering on the obvious again?

Hardly. The current at a virtual short is double the sum of the forward
and reflected currents. To have a total current of 186 amps requires
a forward current of 93 amps and a reflected current of 93 amps. So
where the heck does that 93 amps of forward current come from? 93 amps
of forward current in a 50 ohm transmission line requires a half mega-
watt of driving power. Don't you think that is a little unreasonable
for a 100W transmitter?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5454. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 01:14:43 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5m2t6vcsfbe9ojntvm836kpcpcncju3p97@4ax.com>
Source record: 122692

On Tue, 11 Mar 2003 18:58:37 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Where the heck does that 22 amps
>come from? 22^2*50 = 24,000 watts.
average peak instantaneous RMS power?
>What is the source of that power?

Hi Cecil,

More problems with power in a transmission line? ;-)

73's
Richard Clark, KB7QHC

5455. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 01:22:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <su2t6v025rink2348jkfqec0rtsc7ib55e@4ax.com>
Source record: 122694

On Wed, 12 Mar 2003 00:45:28 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>> I can't measure at the middle of the coax,
>>because the coax I'm using is a single pristine section.
>>

Hi Walt,

I figured as much.

Perhaps if you used two such pieces at a lower frequency (if you want
to indulge my curiosity)then having a measurement in the middle of the
line can be instructive.

However, my 'd'ruthers are more to the impact of the SWR meter
insertion on the isolation value of -29dB.

73's
Richard Clark, KB7QHC

5456. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 01:23:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E8C18.2080507@ieee.org>
Source record: 122695

Richard Clark wrote:
> More problems with power in a transmission line? ;-)

I don't have problems with power in a transmission line, Richard.
I have problems with virtual impedances *allegedly* blocking the
entrance of power into a transmission line.

Walt measured 40W forward and reflected at the end of the stub.
The stub is supposed to present 0.9 ohms on the other end. That's
a reflection coefficient of 0.96, i.e. 96% of the current is reflected
at the 0.9 ohm point. That leaves 4% of the current to cause
a reading of 40W on the wattmeter. It takes 0.89 amps to cause
a 40W reading on the wattmeter so it takes 0.89/.04 = 22 amps
of RF incident upon the 0.9 ohms to get 40W into the stub.
22^2*50 = 24,200 watts, the necessary forward driving power.

Here it is in a form that maybe you can understand.

Source-----------50 ohm line--------------0.9 ohm load

What is the forward power necessary to deliver 40 watts
to the 0.9 ohm load? Do you have a directional wattmeter
with a full scale reading of 25,000 watts? Doesn't that
sound a tad unreasonable to you?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5457. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 01:33:18 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <eh3t6v4t02kk39msk5fa8v36qv8ptfrv0g@4ax.com>
Source record: 122696

On Tue, 11 Mar 2003 19:08:08 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

> Don't you think that is a little unreasonable
>for a 100W transmitter?

Hi Cecil,

Do you really expect this readership is going to buy your ignorance of this common observation of currents and voltages of similar amplitude found in small loop antennas (one of those lumped alternatives to this subject)?

Why do I have the urge to call you Basil? (Must be too many episodes of Fawlty Towers).

73's
Richard Clark, KB7QHC

5458. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 01:47:21 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <a34t6vsremvvln5pfel4i2f99cfeppnk20@4ax.com>
Source record: 122697

On Tue, 11 Mar 2003 19:23:36 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Walt measured 40W forward and reflected at the end of the stub.
>The stub is supposed to present 0.9 ohms on the other end. That's
>a reflection coefficient of 0.96, i.e. 96% of the current is reflected
>at the 0.9 ohm point. That leaves 4% of the current to cause
>a reading of 40W on the wattmeter.

Hi Cecil,

I never expected to hear such a squeal of outrage as when I suggested
we follow your advice to drop a SWR meter into the line. Thanks for
that memorable moment - my cup runneth over.

Doubly amusing is that you protest it proving your points. :-)

73's
Richard Clark, KB7QHC

5459. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 01:50:17 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <rnwba.1010$S53.104437@news20.bellglobal.com>
Source record: 122698

"OC_CAM's Razor"
> The gurus say there is hardly any voltage
> and current in a stub at all since the
> virtual impedance is either zero or infinity
> thus reflecting the signals at the entrance
> to the stub.

I thought that the boys were agreeing that the stub (generally agreed as being chock-a-block full of standing wave) was preventing the power from getting past it *along the main transmission line*. That's what I understood Walter was describing (once he explained it to me a second time).

(This would be about the Nth time that this type of 'World's Third Longest Newsgroup Thread' has been caused by simple orthogonal thinking and the key participants not really searching for the point of discrepancy.)

5460. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 01:58:58 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9b5t6v8lj9hb6kmmrp4c046qtp8fbmvfl8@4ax.com>
Source record: 122699

On Tue, 11 Mar 2003 20:50:17 -0500, "J. Harvey"
<JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote:

>
>(This would be about the Nth time that this type of 'World's Third Longest
>Newsgroup Thread' has been caused by simple orthogonal thinking and the key
>participants not really searching for the point of discrepancy.)
>

Second only to the UN in resolve.

73's
Richard Clark, KB7QHC

5461. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 02:01:01 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <vxwba.1018$S53.106312@news20.bellglobal.com>
Source record: 122700

"OC_CAM's Razor"
> How does 50 watts of forward power get
> past the mouth of a 1/4WL open-circuited stub
> exhibiting an impedance of 0.9 ohms with a
> reflection coefficient of 0.96?

Maybe the power goes in *before* it is reflected...

...actually no 'maybe' about it. :-)

Then it is reflected, thus creating a 'virtual thing-a-ma-bob' in the minds of the witnesses, and that (a.k.a. the standing wave, a.k.a. the physical reflection) prevents any more power from going in.

Fairly simple, eh ?

(In the real world, some power will leak in to make up for the losses in the stub.)

5462. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 02:17:59 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E6E9945.DABA4A74@att.net>
Source record: 122701

Hi Jeff,

Please don't be a stodgy traditionalist. It is always more entertaining
to grab a bunch of random factoids and then create a nonsensical problem
to debate.

(But even "entertainment" grows wearisome.)

8-)

73,
Gene W4SZ

"J. Harvey" wrote:
>
> "OC_CAM's Razor"
> > The gurus say there is hardly any voltage
> > and current in a stub at all since the
> > virtual impedance is either zero or infinity
> > thus reflecting the signals at the entrance
> > to the stub.
>
> I thought that the boys were agreeing that the stub (generally agreed as
> being chock-a-block full of standing wave) was preventing the power from
> getting past it *along the main transmission line*. That's what I
> understood Walter was describing (once he explained it to me a second time).
>
> (This would be about the Nth time that this type of 'World's Third Longest
> Newsgroup Thread' has been caused by simple orthogonal thinking and the key
> participants not really searching for the point of discrepancy.)

5463. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 02:23:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E9A31.6030208@ieee.org>
Source record: 122702

J. Harvey wrote:
> I thought that the boys were agreeing that the stub (generally agreed as
> being chock-a-block full of standing wave) was preventing the power from
> getting past it *along the main transmission line*.

If the virtual short or virtual open causes 100% reflection (as shorts
and opens do), then how does the standing wave energy get into the stub?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5464. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 02:29:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6E9B9D.8090102@ieee.org>
Source record: 122703

J. Harvey wrote:
> "OC_CAM's Razor"
>
>>How does 50 watts of forward power get
>>past the mouth of a 1/4WL open-circuited stub
>>exhibiting an impedance of 0.9 ohms with a
>>reflection coefficient of 0.96?
>
> Maybe the power goes in *before* it is reflected...
>
> ...actually no 'maybe' about it. :-)

It goes in, stops dead in its tracks and then does what?

> Then it is reflected, thus creating a 'virtual thing-a-ma-bob' in the minds
> of the witnesses, and that (a.k.a. the standing wave, a.k.a. the physical
> reflection) prevents any more power from going in.
>
> Fairly simple, eh ?
>
> (In the real world, some power will leak in to make up for the losses in the
> stub.)

You're talking *net* power of course. There is nothing at the mouth of a stub
to block entry of a new forward wave. There is nothing at the mouth of a stub
to block exit of an old reflected wave. There is a continuous entry and exit of
considerable energy at the mouth of a stub. The virtual impedance is simply the
interference pattern established by forward and reflected waves.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5465. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 02:34:11 UTC
From: tdonaly@aol.com
Message-ID: <20030311213411.01776.00000188@mb-ca.aol.com>
Source record: 122704

Cecil wrote,
>
>David Robbins wrote:
>> very good grasshopper, some day you may yet understand why a 1/4 wave
>> shorted stub melted down with 1500w going 'by' it on the main line. in
>> order for the 'virtual' short to exist you must have current on the stub,
>> otherwise there is no way for the reflected wave to cancel out the incident
>> one (or add too it, depending on if you like tracking current or voltage)
>at
>> the junction.
>
>David, you must not have been following the discussion very closely. That
>is exactly my argument which most of the gurus reject. The gurus say
>there is hardly any voltage and current in a stub at all since the
>virtual impedance is either zero or infinity thus reflecting the
>signals at the entrance to the stub.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
>

This is hick argument technique No. 23. Putting false arguments in other peoples mouths, that you hope will make them look ridiculous, and then repeating such over, and over again in the hopes you'll find someone gullible enough to believe you. You know, Cecil, the people I grew up with had necks colored the same crimson hue as the people you grew up with. I recognize all the debating tactics. Your theory is still bunk and will remain bunk until you iron out all the internal contradictions. If and when you ever do, you'll find you agree with the "gurus" more than you disagree and you won't have to resort to tactics such as the above to make your point.
73,
Tom Donaly, KA6RUH

5466. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 02:43:52 UTC
From: richardharrison@webtv.net
Message-ID: <25681-3E6E9EE8-118@storefull-2313.public.lawson.webtv.net>
Source record: 122707

I haven`t read all the postings in this thread but don`t see any surprises. Walter`s 1/4-WL open-circuit stub can be attached any place along his matched mainline circuit. That point, wherever it is, places an effective short on the line.

When a low-resistance shunts Zo, the Zo source becomes a current source. The volts available to the load depend on the resistance of the shunt. In Walter`s example, that measured 0.9 ohms.

The fraction of the open-circuit volts across 0.9 ohms is: 0.9 / 50.9 = 0.0177. or 1.77% of the open-circuit volts. It`s within 2% to say that all the current available from the generator goes into the short-circuit represented by the stub. A tiny leftover current goes into the matched load.

Cecil`s argument that the open-circuit is the stub`s reflection source looks valid in this case because nearly all of the current gets to the stub`s open-circuit point.

Best regards, Richard Harrison, KB5WZI

5467. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 02:49:39 UTC
From: tdonaly@aol.com
Message-ID: <20030311214939.01776.00000195@mb-ca.aol.com>
Source record: 122705

Cecil wrote,
>
>Walter Maxwell wrote:
>> Richard, the measurements were on a 1/4 wl open-circuited stub, not 1/2 wl.
>> Bigga' difference.
>
>The question still remains, Walt. How does 50 watts of forward power get
>past the mouth of a 1/4WL open-circuited stub exhibiting an impedance of
>0.9 ohms with a reflection coefficient of 0.96?
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

For those who might think that Cecil is actually asking a question, it should be made clear that Cecil knows full well what the answer to this fake query is. If someone actually takes the time to explain to him the answer to what he seemingly asks, he hopes to use their answer to show beyond all shadow of a doubt that it proves that his little theory is God's own truth.
73,
Tom Donaly

5468. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 03:03:49 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E6EA404.6470A122@att.net>
Source record: 122706

Tom,

As you know, physical problems appear differently when viewed from
accelerating reference frames.

Cecil is spinning so fast that the acceleration must be awesome.

8-)

73,
Gene W4SZ

Tdonaly wrote:
>
> Cecil wrote,
> >
> >Walter Maxwell wrote:
> >> Richard, the measurements were on a 1/4 wl open-circuited stub, not 1/2 wl.
> >> Bigga' difference.
> >
> >The question still remains, Walt. How does 50 watts of forward power get
> >past the mouth of a 1/4WL open-circuited stub exhibiting an impedance of
> >0.9 ohms with a reflection coefficient of 0.96?
> >--
> >cheers, CAM http://www.qsl.net/w5dxp
> >
>
> For those who might think that Cecil is actually asking a question, it should
> be made clear that Cecil knows full well what the answer to this fake
> query is. If someone actually takes the time to explain to him the
> answer to what he seemingly asks, he hopes to use their answer to
> show beyond all shadow of a doubt that it proves that his little theory is
> God's own truth.
> 73,
> Tom Donaly

5469. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 03:16:40 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <a09t6v4uk79n5morsednoqf72jjn3nd5t6@4ax.com>
Source record: 122708

On Tue, 11 Mar 2003 19:58:10 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:

>If the coax takes a direct lightning hit, it will go to ground by the
>shortest path. I would make sure that is not through your propane tank.
>
>Tam/WB2TT

Of course - like I said, use some common sense.

But, I wonder..... the tank would of course keep the charge from
a lightning strike on its exterior, protecting its contents. Might
have a problem with the copper (or whatever) line melting, possibly
resulting in a small but controlable fire at the tank. As quirky as
lightning is, there's always the possibility of a direct strike on
a tank anyway....might make for some fun field experiments.

-wa5rrh-

5470. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 03:17:31 UTC
From: richardharrison@webtv.net
Message-ID: <25680-3E6EA6CB-404@storefull-2313.public.lawson.webtv.net>
Source record: 122711

CAM wrote:
"There is nothing at the mouth of a stub to block the entry of a new forward wave."

True, if the wave is quite new, because a reflection has not made it back to the mouth of that stub yet to raise its impedance above Zo.

The phase of the reflection at that mouth is all important. It produces a high impedance when there is a short-circuit 1/4-wave back from the mouth of that stub. Two radar books I have say so and the reasoning seems impeccable to me.

The point is, an open-circuit is a high impedance, and a short-circuit is a low impedance. A high impedance tends to keep energy out. A low impedance tends to invite energy in.

Best regards, Richard Harrison, KB5WZI

5471. Home brew, single feed point VHF/UHF beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 03:19:36 UTC
From: fvracr@aol.com
Message-ID: <20030311221936.12353.00000273@mb-cu.aol.com>
Source record: 122709

I just received an Icom IC3210 dual band (VHF/UHF) radio.
I know that you can build a HF dipole, multi band, single feed point antenna
(ie., multiple dipoles). When operating, on a specific frequency, the rf will
"seek" out the resonant dipole and "ignore" the others.
I am looking for a home brew beam, single feed point antenna.
Any info out there?

Kirk Mohror
K7EKM

5472. Re: W5QJR Loop Book ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 03:49:39 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <lrbt6v0ii58svr2qljspe4nc3kqteas0u7@4ax.com>
Source record: 122712

On Tue, 11 Mar 2003 22:51:24 -0800, "Douglas Snowden"
<snowden@peoplepc.com> wrote:

>Wow! and all I wanted was a book!
>
>Doug N4IJ

Wait for the movie instead. ;-)

73's
Richard Clark, KB7QHC

5473. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:02:23 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <jjyba.1355$nJ5.98564@newsread2.prod.itd.earthlink.net>
Source record: 122713

> >> I can't measure at the middle of the coax,
> >>because the coax I'm using is a single pristine section.
> >>
>
> Hi Walt,
>
> I figured as much.
>
> Perhaps if you used two such pieces at a lower frequency (if you want
> to indulge my curiosity)then having a measurement in the middle of the
> line can be instructive.
>
> However, my 'd'ruthers are more to the impact of the SWR meter
> insertion on the isolation value of -29dB.
>
> 73's
> Richard Clark, KB7QHC

Sure, Richard, I can take some additional measurements with other lines. I'll do it tomorrow. You should know, however, that I'm using Bird 43 wattmeters, not SWR meters. As I know you know, the basic Bird is simply a short piece of transmission line of 50-ohm Zo. Thus the Bird shouldn't present any discontinuity in the circuit to upset the electrical condtions during the measurements.

You should also know that just a little while ago I measured the voltage at the open end of the stub at 80 volts while the other parameter values remain as shown in the diagram above. An interesting point here that seems to verify the measurement procedure and the analysis of the data, is that the quotient of the voltages appearing at the ends of the stub, 80 v / 0.035 v = 2286, the resonant voltage increase on the stub. Note that its sqrt equals 47.8. In addition, the product of the SC and OC input resistances of the stub is 2550 x 0.90 = 2295. Its sqrt equals 47.9. The values 47.8 and 47.9 appear as the measured characteristic impedance Zo of the stub. The close agreement of these values seems to verify that the procedure and measurements are valid.

I'll be back tomorrow with more measurements.

Walt, W2DU

5474. Re: Home brew, single feed point VHF/UHF beam?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:04:54 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030311230454.11723.00000125@mb-cn.aol.com>
Source record: 122714

Cushcraft sells one (5 elements on each band). They usually have their owner's manuals online in PDF format. Just find the model number of their dualband yagi and download the owner's manual. They always have detailed parts list, including lengths of elements. You should be able to homebrew one with that information.

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-

73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com

5475. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:09:49 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <hqyba.1365$nJ5.115450@newsread2.prod.itd.earthlink.net>
Source record: 122715

> <Cecil.A.Moore@ieee.org> wrote:
>
> >Walt measured 40W forward and reflected at the end of the stub.
> >The stub is supposed to present 0.9 ohms on the other end. That's
> >a reflection coefficient of 0.96, i.e. 96% of the current is reflected
> >at the 0.9 ohm point. That leaves 4% of the current to cause
> >a reading of 40W on the wattmeter.
>
> Hi Cecil,
>
> I never expected to hear such a squeal of outrage as when I suggested
> we follow your advice to drop a SWR meter into the line. Thanks for
> that memorable moment - my cup runneth over.
>
> Doubly amusing is that you protest it proving your points. :-)
>
> 73's
> Richard Clark, KB7QHC

Cecil, the 4% is the amount prohibited from entering the main line downstream of the stub. Therefore, the 4% refers to the power absorbed in the load. To verify this, Cecil, observe the voltage and power at the load in the diagram with the stub connected. Note that I stated above that the voltage at the open end of the stub is 80 v, and the voltage on the main line downstream of the stub (which is the same voltage at the junction of the stub and main line) is 0.035 v. It is the resonant voltage buildup of the stub that increases the voltage by a factor of 2286.

Walt, W2DU

5476. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:10:21 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6EB32D.9050405@ieee.org>
Source record: 122716

Tdonaly wrote:
>>David, you must not have been following the discussion very closely. That
>>is exactly my argument which most of the gurus reject. The gurus say
>>there is hardly any voltage and current in a stub at all since the
>>virtual impedance is either zero or infinity thus reflecting the
>>signals at the entrance to the stub.
>
> This is hick argument technique No. 23. Putting false arguments in other
> peoples mouths, that you hope will make them look ridiculous, and then
> repeating such over, and over again in the hopes you'll find someone
> gullible enough to believe you.

Tom, you must not have been following the discussion very closely either.
The argument is whether reflections occur at a virtual short (or open) or
farther down the stub. If 100% reflection occurs at a virtual short then
there is nothing left in the stub to reflect. If there is anything left
in the stub to reflect, then 100% reflection doesn't occur at the virtual
short.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5477. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:17:55 UTC
From: tdonaly@aol.com
Message-ID: <20030311231755.09356.00000255@mb-fk.aol.com>
Source record: 122717

Gene wrote,
>
>Tom,
>
>As you know, physical problems appear differently when viewed from
>accelerating reference frames.
>
>Cecil is spinning so fast that the acceleration must be awesome.
>
>8-)
>
>73,
>Gene W4SZ
>

That explains it. Cecil is in an accelerating reference frame. That
puts relativity theory in a new light.
73,
Tom Donaly

5478. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:18:33 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6EB519.4000008@ieee.org>
Source record: 122718

Richard Harrison wrote:
> Cecil`s argument that the open-circuit is the stub`s reflection source
> looks valid in this case because nearly all of the current gets to the
> stub`s open-circuit point.

If the virtual short was really a short, the reflection coefficient would be 49.1/50.9 = 0.965 and 93% of the incident power would be reflected at the 0.9 ohm point. We know from Walt's measurements that much more than 7% of the energy is flowing in the stub.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5479. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:22:19 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <%Byba.1376$nJ5.117805@newsread2.prod.itd.earthlink.net>
Source record: 122619

Richard Harrison wrote...
> I haven`t read all the postings in this thread but don`t see any
> surprises. Walter`s 1/4-WL open-circuit stub can be attached any place
> along his matched mainline circuit. That point, wherever it is, places
> an effective short on the line.
>
> When a low-resistance shunts Zo, the Zo source becomes a current source.
> The volts available to the load depend on the resistance of the shunt.
> In Walter`s example, that measured 0.9 ohms.
>
> The fraction of the open-circuit volts across 0.9 ohms is: 0.9 / 50.9 =
> 0.0177. or 1.77% of the open-circuit volts. It`s within 2% to say that
> all the current available from the generator goes into the short-circuit
> represented by the stub. A tiny leftover current goes into the matched
> load.
>
> Cecil`s argument that the open-circuit is the stub`s reflection source
> looks valid in this case because nearly all of the current gets to the
> stub`s open-circuit point.
>
> Best regards, Richard Harrison, KB5WZI

This becomes an interesting argument that I don't believe can be solved, or its solution proved. I may have to eat my words on this, but as I see it, the initial low resistance at the stub-main line junction results from the physical discontinuity of the open end of the stub. The low resistance at the junction has the same value of discontinuity with respect to Zo as at the open end of the stub. Therefore, if the discontinuity at the open end of the stub is the same (but of opposite polarity, so to speak) as at the junction, then the discontinuity at the junction can just as well be what causes the reflection rearward in the main line as the open-circuit discontinuity of the stub. Measurements on the main line cannot distinguish where the reflection occurred. This is exactly the point Roy made when he said if we were to put the circuit in a black box with only the terminals available, we cannot determine whether the reflection was caused by a physical short or a virtual short.

Walt, W2DU

5480. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:22:57 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <lpdt6v05fnanuj6bt161445ev72bl6lc9o@4ax.com>
Source record: 122620

On Wed, 12 Mar 2003 04:02:23 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>Note that its sqrt equals
>47.8. In addition, the product of the SC and OC input resistances of the
>stub is 2550 x 0.90 = 2295. Its sqrt equals 47.9. The values 47.8 and 47.9
>appear as the measured characteristic impedance Zo of the stub. The close
>agreement of these values seems to verify that the procedure and
>measurements are valid.

Hi Walt,

Yes I've noted those cross-correlations too.

73's
Richard Clark, KB7QHC

5481. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:25:16 UTC
From: tdonaly@aol.com
Message-ID: <20030311232516.09356.00000256@mb-fk.aol.com>
Source record: 122621

Cecil wrote,
>
>You're talking *net* power of course. There is nothing at the mouth of a stub
>to block entry of a new forward wave. There is nothing at the mouth of a stub
>to block exit of an old reflected wave. There is a continuous entry and exit
>of
>considerable energy at the mouth of a stub. The virtual impedance is simply
>the
>interference pattern established by forward and reflected waves.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>

Since you're (usually) talking about lossless components, Cecil, what do you
think would happen to the internal reflected waves in the stub if you suddenly
detached
it from the transmission line feeding it?

Tom Donaly, KA6RUH

5482. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:30:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6EB7EC.9090108@ieee.org>
Source record: 122622

Tdonaly wrote:
> For those who might think that Cecil is actually asking a question, it should
> be made clear that Cecil knows full well what the answer to this fake
> query is.

Here is what I have been told on this newsgroup. Using 50 ohm feedline -

A 0.9 ohm virtual impedance causes reflections. We can figure out the reflection coefficient as 0.965 which means that a 0.9 ohm virtual impedance reflects 93% of the power incident upon it. We know from Walt's measurements that 40W flows in the stub. That means 40W/.07 = 571 watts had to be incident upon the 0.9 ohm virtual impedance for 40W to make it into the stub. So why can't we measure that 571 watts anywhere? Could it be that the 0.9 ohm virtual impedance is not causing reflections after all?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5483. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:32:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6EB85A.4010507@ieee.org>
Source record: 122623

Gene Fuller wrote:
> Cecil is spinning so fast that the acceleration must be awesome.

Tsk, tsk, the closer we get to the truth, the more ad hominem
attacks we see from the gurus.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5484. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:37:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6EB999.3020705@ieee.org>
Source record: 122624

Richard Harrison wrote:
> CAM wrote:
> "There is nothing at the mouth of a stub to block the entry of a new
> forward wave."
>
> True, if the wave is quite new, because a reflection has not made it
> back to the mouth of that stub yet to raise its impedance above Zo.

I guess I should have said the "latest" forward wave.

> The point is, an open-circuit is a high impedance, and a short-circuit
> is a low impedance. A high impedance tends to keep energy out. A low
> impedance tends to invite energy in.

An open-circuit and a short-circuit have the same magnitude of reflection
coefficient = 1.0. A zero impedance reflects all the energy just like
an infinite impedance does. Using 50 ohm coax, a one ohm load rejects
just as much power as a 2500 ohm load.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5485. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 04:55:48 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6EBDD4.7060207@ieee.org>
Source record: 122625

Walter Maxwell wrote:
> Note that I stated above that the
> voltage at the open end of the stub is 80 v, and the voltage on the main
> line downstream of the stub (which is the same voltage at the junction of
> the stub and main line) is 0.035 v. It is the resonant voltage buildup of
> the stub that increases the voltage by a factor of 2286.

It is the phasor addition of the forward and reflected voltages that cause
both of those values. The voltage interference is constructive at the open
end of the stub and the forward and reflected voltages are both approximately
40v and in phase at the current null point. At the voltage null point those
two voltages are simply 180 degrees out of phase and phasor add to 0.035v.

Here's what we have: V+ = +40.0175v
V- = -39.9825v V+=40v
Source--------------------------x--------1/4WL open stub--- V-=40v
|
+--------------load
0.035v

The forward voltage is blowing right through point 'x' unmolested by
the virtual short and winds up being reflected at the open end of the
stub. The reflected voltage also blows right through point 'x' on its
way back toward the source. Nothing is happening at point 'x' except
destructive interference between the forward and reflected voltages
and constructive interference between the forward and reflected currents.
No reflections are occurring at point 'x'.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5486. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 05:01:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6EBF3E.8010303@ieee.org>
Source record: 122626

Walter Maxwell wrote:
> This becomes an interesting argument that I don't believe can be solved, or
> its solution proved. I may have to eat my words on this, but as I see it,
> the initial low resistance at the stub-main line junction results from the
> physical discontinuity of the open end of the stub. The low resistance at
> the junction has the same value of discontinuity with respect to Zo as at
> the open end of the stub. Therefore, if the discontinuity at the open end of
> the stub is the same (but of opposite polarity, so to speak) as at the
> junction, then the discontinuity at the junction can just as well be what
> causes the reflection rearward in the main line as the open-circuit
> discontinuity of the stub. Measurements on the main line cannot distinguish
> where the reflection occurred.

Measurements on the stub can and does distinguish exactly where the reflection
occurs. What is the agenda in wanting to coverup the source of the reflections?
Is this Old Wives' Tale a sacred cow?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5487. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 05:09:57 UTC
From: richardharrison@webtv.net
Message-ID: <25681-3E6EC125-127@storefull-2313.public.lawson.webtv.net>
Source record: 122628

CAM wrote:
"We know from Walt`s measurements that much more than 7% of the energy is flowing in the stub."

In my Sunday, Mar. 9, 2:54 pm posting, I wrote:
"When you parallel a higher impedance with a short-circuit, as made by the OC stub, the stub will rob the higher-impedance of energy."

Best regards, Richard Harrison, KB5WZI

5488. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 05:11:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6EC17F.30205@ieee.org>
Source record: 122627

Tdonaly wrote:
> Since you're (usually) talking about lossless components, Cecil, what do you
> think would happen to the internal reflected waves in the stub if you suddenly
> detached it from the transmission line feeding it?

Then one would have a physical impedance discontinuity at both ends.
If no energy was lost, it appears one would have produced walking
standing waves unless the stub was resonant.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5489. Re: W5QJR Loop Book ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 06:51:24 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v6tbb8tdkfv5c8@corp.supernews.com>
Source record: 122710

Wow! and all I wanted was a book!

Doug N4IJ

JGBOYLES <jgboyles@aol.com> wrote in message
news:20030311043936.12934.00000119@mb-fu.aol.com...
> >More like this NG has some fine people with knowledge and experience in
> >antenna
> >field.
> They sure do, and they get upset when the CFA or EH is mentioned. I have
> attempted a working model of both. I get a little upset when they are
> mentioned.
>
> >Who gets upset are those "promoters" because their outrageous claims and
con
> >jobs on unsuspected and fresh hams get exposed and shown in the proper
light.
>
> Could you go through the mathematical analysis presented for the CFA and
say
> no, here is where you are wrong? I could not, although common sense said
it
> would not work. About 99% of Hams, not just fresh ones, could not say one
way
> or another. Poynting (sp) vector syethesis is not a hot topic of
conversation
> as I tune across the bands.
> >It used to be that hams were honest people, inventing, developing and
sharing
> >their ideas with fellow hams.
> I've been one for 39 years, and I have observed a very small number of
hams
> inventing and sharing, not sure how honest they were. Judging by comments
> overheard at various Hamfests, we are a bunch of thieves.
>
> >Now we see snake oil salesmen with ham radio
> >licenses taking advantage of hams who got their tickets by memorizing few
> >questions and reluctant to engage their brains for the purpose of
educating
>
> Yuri, you should see just the lab part of my idea for an extra class
ticket, it
> would carry a lot more weight than the written. Of course it includes only
> stuff that I know. The snake oil salesmen may or may not know what they
are

> pitching is no good.
> Antennas are a complex subject, and if they knowingly deceive, shame on
them.
> >Antenna is the
> >most important part of radio station and deserves some attention, study,
fun
> That's for sure, although on low bands, depending on what you wish to
> accomplish, adding a little power to your lousy antenna helps, I did
observe
> this.
>
>
> 73 Gary N4AST

5490. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 06:56:36 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <b4ne3b22o6s@enews4.newsguy.com>
Source record: 122640

Not to mention that space is not free..... ever look at NASA's budget??

Just kiddin'- I know better! :)

--
Ryan, KC8PMX
FF/MFR
REMOVE "NOSPAM" in email address to reply.
--. --- -.. ... .- -. --. . .-.. ... .- .-. . ..-. .. .-. . ..-.
.. --. .... - . .-. ...

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:lh8s6vc08usvv9gmn4fu9lup1ajn4fegrf@4ax.com...
> On Mon, 10 Mar 2003 17:07:08 -0600, "Dan/W4NTI"
> <w4nti@NOSPAMmindspring.com> wrote:
>
> >Im not Dave. Most of them don't know how to cut a dipole in free space.
>
> How the devil to you get a dipole into free space to cut it?
> I always have to cut mine down here on the ground, but then I have to
> allow for it not being in free space.
>
> Roger Halstead (K8RI EN73 & ARRL Life Member)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)
>
> >
> >Dan/W4NTI
> >
> >"Dave Shrader" <david.shrader@attbi.com> wrote in message
> >news:3E6CC1A2.8A56D2DB@attbi.com...
> >> I'm amazed that any Amateur Licensee would have to ask this question!
47
> >> CFR 97 covers all your responsibilities.
> >>
> >> You will find the answer to your specific question in 47 CFR 97.121 and
> >> 307.
> >>
> >> Deacon Dave, W1MCE
> >> + + +
> >>
> >>
> >> fch wrote:
> >> >
> >> > If a neighbor complains about me interfering with his TV.

> >
>

5491. antenna type?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 10:20:29 UTC
From: T&#65533;nis <tonisa@hot.ee>
Message-ID: <3e6f09e6$1@news.infonet.ee>
Source record: 122629

What is the antenna type for this 2,4 GHz omnidirectional solution http://www.frars.org.uk/cgi-bin/render.pl?pageid=1071 ? I'm asking because I would like to know more regarding theoretical side of that particular antenna type. In particular I'm looking a way to "extend" that antenna to have a higher gain, lets say 10-14 dBi.

regards,
T&#65533;nis

5492. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 10:37:31 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <H5Eba.4102$Mz.493724@news20.bellglobal.com>
Source record: 122630

"Richard Harrison"
> ...an open-circuit is a high impedance,
> and a short-circuit is a low impedance.
> A high impedance tends to keep energy out.
> A low impedance tends to invite energy in.

Of course, a short-circuit would not 'invite as much energy in' as would a matched load.

5493. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 10:45:11 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <TcEba.4104$Mz.493756@news20.bellglobal.com>
Source record: 122631

"Walter Maxwell"
> This is exactly the point Roy made when he
> said if we were to put the circuit in a black box
> with only the terminals available, we cannot
> determine whether the reflection was caused
> by a physical short or a virtual short.

Of course, as Roy stated, this is only true if we're invited to the party too late (after the steady state has been achieved). That is quite the limitation (!) and hardly makes the general equivalence true. If you hand me the black box in a lab (equipped with a TDR or equivalent), then the difference is trivially obvious.

5494. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 10:58:29 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <jpEba.4105$Mz.494267@news20.bellglobal.com>
Source record: 122632

"OC_CAM's Razor"
> A ... virtual impedance causes reflections.

The word '...causes...' should be something like "...can be thought (as a mental shortcut) to cause..." In other words, it's a useful approximation in some situations.

> We know from Walt's measurements that
> 40W flows in the stub.

If you make the above mental short-cut, then you *don't* go around and make measurements to prove the opposite.

(Does this exchange seem familiar ?)

"Is there 1.6 km in a mile ?"

'Yes.'

"No there isn't. It's 1.609344 km in a mile. Look, based on 2.54 cm per inch (exactly) and multiplying by..." <snip>

'Sigh...'

5495. Re: antenna type?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 11:15:36 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <nFEba.4107$Mz.494876@news20.bellglobal.com>
Source record: 122633

"T�nis"
> What is the antenna type for this 2,4 GHz omnidirectional solution
> http://www.frars.org.uk/cgi-bin/render.pl?pageid=1071 ?

A 'co-linear' or 'collinear' array.
(where did the 2nd spelling come from ?)

Some random refs.
http://www.virtualtechnologiesltd.com/FAQs/Antenna%20FAQ.htm
http://glossary.its.bldrdoc.gov/fs-1037/dir-008/_1067.htm

> I'm looking a way to "extend" that antenna to
> have a higher gain, lets say 10-14 dBi.

Probably not practical - it would be too wobbly and the losses would be
adding up about as fast as the gain by that point. 14dBi and
omnidirectional (in azimuth) is getting up there...

BTW - have you checked "Pringles Antenna" ?

5496. Re: antenna type?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 11:59:05 UTC
From: T&#65533;nis <tonisa@hot.ee>
Message-ID: <3e6f2101$1@news.infonet.ee>
Source record: 122634

Pringles is directional, I need omni.

What do you think, is http://wireless.gumph.org/articles/homemadeomni.html more promising (more dBi) co-linear dipole solution? Is co-linear dipole something different than co-linear array?

BTW how to calculate antenna's gain? I don't have any HF measurement tools, just laptop with Netstumbler and access point. Netstumbler shows dBm, antenna's gain is measured in dBi.. Knowing laptop internal antenna's gain can I compare antenna under testing against it? First mentioned omni antenna gave 15 dBm more signal than with internal antenna. Internal antenna should have approx 2 dBi.

T&#65533;nis

"J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote in message news:nFEba.4107$Mz.494876@news20.bellglobal.com...

> A 'co-linear' or 'collinear' array.
> (where did the 2nd spelling come from ?)
>
> Some random refs.
> http://www.virtualtechnologiesltd.com/FAQs/Antenna%20FAQ.htm
> http://glossary.its.bldrdoc.gov/fs-1037/dir-008/_1067.htm
>
> > I'm looking a way to "extend" that antenna to
> > have a higher gain, lets say 10-14 dBi.
>
> Probably not practical - it would be too wobbly and the losses would be
> adding up about as fast as the gain by that point. 14dBi and
> omnidirectional (in azimuth) is getting up there...

5497. Re: antenna type?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 12:22:16 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <VDFba.5282$VT.557054@news20.bellglobal.com>
Source record: 122635

"T&#65533;nis"
> Pringles is directional, I need omni.

If you get very high omnidirectional gain, then the pattern would look like a pancake. Ensure that your targets are all in the same plane (thank gawd for gravity and the Earth's local surface - it helps in these sorts of cases).

> What do you think, is
> http://wireless.gumph.org/articles/homemadeomni.html
> more promising (more dBi) co-linear dipole solution?

That is almost the same sort of concept (but with more sections and probably more gain). The gain won't go up forever with added sections since there is less and less power (in transmit mode for example) as you go up.

This one is probably easier to build - but that is up to you. Don't cut your finger...

> BTW how to calculate antenna's gain?
> Netstumbler shows dBm...

Using the internal antenna as being approximately 2dBi should be a reasonable guess (but probably isn't in this case). If your first antenna peaked at 15 more dBm than the internal antenna, then it has 15 dB more gain (assuming that the Netstumbler display is accurate - and it seems like it isn't).

17dBi gain is quite a bit for an omnidirectional antenna. The pattern would be 'waffer-thin' at 17dBi (omnidirection in azimuth). Something is wrong with the data.

Good luck. Hi ho, hi ho, it's off to work I go...

5498. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 12:39:45 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E6F2A62.D828C459@attbi.com>
Source record: 122636

Methinks it is the standing wave itself that causes the virtual short,
etc.

DD
+ + +

OC_CAM's Razor wrote:
>
> J. Harvey wrote:
> > I thought that the boys were agreeing that the stub (generally agreed as
> > being chock-a-block full of standing wave) was preventing the power from
> > getting past it *along the main transmission line*.
>
> If the virtual short or virtual open causes 100% reflection (as shorts
> and opens do), then how does the standing wave energy get into the stub?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5499. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 13:27:26 UTC
From: richardharrison@webtv.net
Message-ID: <29747-3E6F35BE-13@storefull-2313.public.lawson.webtv.net>
Source record: 122638

J. Harvey wrote:
"Of course, a short-circuit would not "invite as much energy in" as would a matched load."

Maximum power transfer is not my point. What happens at a line-matched load with a short across it, is.

The short that Walter measured was 0.9 ohms in parallel with a load of 50 ohms.

First, the low-resistance short causes the source to drop nearly all the voltage which otherwise would be available to the load.

Second, the short hogs all available current.

A 1/4-wave line section is an impedance inverter. Put an open-circuit on one end and you get a short on the other end.

A perfect short offers no opposition to current. A near-perfect short offers very little opposition. The 1/4-WL OC stub is the equivalent of a series-resonant circuit. It can have low-loss, or in other words, a high-Q.

It should be no surprise that a series-resonant circuit accepts high current.

Put a short on the end of a 1/4-WL stub, and you produce the equivalent of a parallel-resonant circuit, in other words, a very high impedance. It should be no surprise that it accepts very little current. due to its very high impedance. That`s how the "metal insulator" is made.

Best regards, Richard Harrison, KB5WZI

5500. Re: antenna type?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 13:30:29 UTC
From: T&#65533;nis <tonisa@hot.ee>
Message-ID: <3e6f366e$1@news.infonet.ee>
Source record: 122637

I guess what's wrong - testing environment. I tested it within log house. First I dragged AP as far away as Netstubler dropped almost to red (maybe -80 dBm). Then I attached antenna to AP and compared Netstubler showings. Difference were 15 dBm. Then I attached simple directional antenna (http://flakey.info/antenna/biquad/) to the AP and decibells went up + 10 dBm (+25 dBm compared to internal antenna). That directional antenna should have gain of 5-12 dB depending on source ;)

I should test it within more homogeneous environment.

"J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote in message news:VDFba.5282

> Using the internal antenna as being approximately 2dBi should be a
> reasonable guess (but probably isn't in this case). If your first antenna
> peaked at 15 more dBm than the internal antenna, then it has 15 dB more gain
> (assuming that the Netstumbler display is accurate - and it seems like it
> isn't).
>
> 17dBi gain is quite a bit for an omnidirectional antenna. The pattern would
> be 'waffer-thin' at 17dBi (omnidirection in azimuth). Something is wrong
> with the data.

5501. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 13:54:25 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <I_Gba.1440$ja4.116248@bgtnsc05-news.ops.worldnet.att.net>
Source record: 122639

"Walter Maxwell" <w2du@iag.net> wrote in message
news:u2Oaa.11582$gF3.1065669@newsread1.prod.itd.earthlink.net...
>
> Roy Lewallen <w7el@eznec.com> wrote in message
> news:v6n3pbcoe0of22@corp.supernews.com...
> > Every once in a while (not often enough!) something just clicks, and
> > Tom's comment triggered one of those too-rare events. I haven't been
> > following this thread very closely, but had been in general agreement
> > with Cecil's distinction of a "virtual short" as an effect as opposed to
> > a "real short" as a cause. Tom's comment reoriented my thinking.
> >
> > Let's suppose we have a transmission line with a quarter wavelength open
> > stub, say, sticking off to one side -- or a shorted half wavelength of
> > line continuing past some point. Either one causes a "virtual short
> > circuit". Just put the open circuited quarter wavelength line, or short
> > circuited half wavelength line into a box with a couple of terminals,
> > and label it "short circuit". If we connect this box to our line, we
> > won't be able to tell (being careful to restrict ourselves to steady
> > state at a single frequency) whether the box contains a physical piece
> > of wire between the terminals, a quarter wave open stub, a half wave
> > open stub, Tom's series resonant circuit, or any of an infinite number
> > of other possible circuits. Our analysis of the transmission line
> > conditions will proceed exactly the same, and give exactly the same
> > results, regardless of what's inside the box, as long as it causes -- by
> > whatever means -- a short circuit to appear across its terminals. In
> > fact, if we're restricted to the steady state at the single frequency
> > where the box presents a short circuit, there's no test we could devise
> > that would tell us what's inside the box (assuming everything's
> > lossless, of course).
> >
> > Obviously, we've lost information about what's happening along any line
> > that might be inside the box. But as far as the world outside the box is

> > concerned, there's absolutely no difference between a box containing a
> > stub or "virtual short circuit" and one containing a physical piece of
> > wire or "real short circuit". For all intents, analyses, and results,
> > they're identically the same -- again cautioning that this is true only
> > for a single frequency steady state analysis. I'm now perfectly
> > comfortable with regarding a "virtual short circuit" as something that
> > causes reflections.
> >
> > Thanks, Tom, for the insight. And my apology to Walt for being so slow
> > to pick up on this.
> >

> > I'm already well established as one of Reg's Old Wives. Guess I can now
> > add myself to Cecil's list.
> >
> > Roy Lewallen, W7EL
>
> HOORAY, HALLELUJAH, AND AMEN !!!
>
> Thanks, Roy, I needed that,
>
> Walt, W2DU
>

Walt,

Before you get too excited, I think its important that everyone understand that Roy's use and definition of the "virtual short circuit" term and concept is not even remotely similar to that which you use in describing the impedance matching process.

The widely accepted understanding of a "virtual short circuit", consistent with Roy's discussion is the following: A virtual short circuit exists at a point on a transmission line where the TOTAL steady state voltage at that point equals 0 Volts and therefore, the steady state impedance at that point equals 0 ohms. The total steady state impedance at that point equals 0 ohms and is therefore effectively equivalent to a short circuit. From a traveling wave perspective, it is very important to understand that the TOTAL steady state voltage at that point is given by the sum of the steady state forward traveling voltage plus the steady state rearward traveling voltage, neither of which are 0 volts. In fact, they are equal in amplitude and 180 degrees out of phase. The TOTAL steady state current at the point of the virtual short circuit is not necessarily 0 Amps.

The disagreement that I have with your use of the "virtual short circuit" term is how you use it in describing the impedance matching process. Your use of the "virtual short circuit" term is not consistent with the above, widely accepted definition, or with Roy's discussion.

In the impedance matching process, you claim that a "virtual short circuit" exists *ONLY* for the rearward traveling wave and that this "virtual short circuit" is not seen by the forward traveling wave. Your "definition" of a virtual short circuit is not in anyway related to a physical short circuit, where the TOTAL steady state voltage must equal 0 Volts and the total steady state impedance must equal 0 ohms.

In your definition of a "virtual short circuit", the TOTAL steady state voltage does not go to 0 Volts and the steady state impedance does not go to 0 ohms. Since an impedance match exists, we all know that the both the rearward voltage and current go to 0 Volts and 0 Amps, respectively. The rearward voltage and current, both going to 0 in the steady state does not describe a "virtual short circuit" consistent with the previous definition as understood by Roy and others on this newsgroup. A true "virtual short circuit" requires the TOTAL steady state voltage to be 0 Volts. This is not

the same as the rearward voltage and current going to 0. Additionally, in the true definition of a "virtual short circuit", the total steady state impedance is 0 ohms, not Zo.

In all fairness to our disagreement, you should make it clear to everyone that your use of the "virtual short circuit" term in impedance matching is not consistent with a "virtual short circuit" where the total voltage and impedance equal 0 Volts and 0 ohms, respectively.

Steve VE9SRB

5502. Re: W5QJR Loop Book ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 14:30:11 UTC
From: k3bu@aol.com
Message-ID: <20030312093011.15360.00000228@mb-fc.aol.com>
Source record: 122641

Gary, N4AST writes:
>
>Could you go through the mathematical analysis presented for the CFA and say
>no, here is where you are wrong? I could not, although common sense said it
>would not work. About 99% of Hams, not just fresh ones, could not say one
>way
>or another. Poynting (sp) vector syethesis is not a hot topic of conversation
>as I tune across the bands.

Not really, my quest at the present is to pursue high performance antennas for contesting from the ocean front. I am behind that task, life keeps throwing more important problems in my way. I could care less trying to justify mathematically something that is showing "promise" of having less gain than a dipole. I prefer to measure and adjust for optimum (after some calculations or modeling), rather than argue about infinite SWR or transients. Snake oil "designers" and salesmen use technobabble and unsupported big words to impress unknowing to clean their wallets.

>I've been one for 39 years, and I have observed a very small number of hams
>inventing and sharing, not sure how honest they were. Judging by comments
>overheard at various Hamfests, we are a bunch of thieves.

"Tings change" and we see our share. Fewer build the stuff, radios are quite good. Local antenna restrictions do not help to foster antenna experimentation, you gotta get out of "civilized" neighborhood if you want to have comepetitive station and play with antennas.
Bunch of thieves where, on eBay?

>That's for sure, although on low bands, depending on what you wish to
>accomplish, adding a little power to your lousy antenna helps, I did observe
>this.

But it won't make it hear better. It all boils down to dBs. Cheapest dBs are at the place near the ocean, "free" 10 - 15 dB on receive and transmit.
The name of the game is knowing propagation modes and angles and fitting the antennas to take advantage of it. For contesters pushing the envelope, that's where the extra points are. Rigs and gizmos are more less at their state of the art level. Clever antenna design and their placement can outdo commercial stuff and still plenty of room to invent.

Yuri, K3BU

5503. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 14:56:25 UTC
From: richardharrison@webtv.net
Message-ID: <16823-3E6F4A99-16@storefull-2317.public.lawson.webtv.net>
Source record: 122645

Steve Best wrote:
"Your use of the "virtual short circuit" term is not consistent with the above widely accepted definition, or with Roy`s discussion."

Don`t know what Walter`s use is. I`ve never laid eyes on "Reflections". Would appreciate seeing Walter`s shortest statement including the wrong? idea, and seeing what Steve thinks is wrong with it.

Steve also wrote:
"Since an impedance match exists, we all know that both the rearward voltage and current, both going to 0 (at the same time?) Volts and 0 Amps, respectively. The rearward voltage and current, both going to 0 in the steady state does not describe a "virtual short circuit---."

Maybe it describes a real hard short sircuit.

Best regards, Richard Harrison, KB5WZI

5504. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 14:58:22 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E6F4B81.B8F6969A@att.net>
Source record: 122642

Cecil,

This was not an "ad hominem" attack; rather it was a description of your analysis style.

The entire concept of virtual short, open, or most anything else is precisely to allow the use of equivalent simplified structures to replace the actual physical structure.

This case is not different in principle from the use of a Thevenin equivalent source. I believe this was hashed out here a few weeks ago, and it was generally agreed that one should not look under the hood of a Thevenin source.

The case of a stub trap is no different. You can either do the entire problem in excruciating detail, or you can simplify the problem by using the known properties of the stub as a black box. This is not rocket science, and this analysis has not really changed for nearly a century. Do you really think you are onto a new concept that generations of professionals, amateurs, and academics have missed? Have generations been seduced by "old wives' tales"?

The "spinning" I refer to is with respect to your rapid switching from equivalent circuits, i.e., the "virtual" concept, to a detailed look under the hood. We have even seen switches from looking at the effect on the main line, which is often what one cares most about, to looking at the details of the stub, which is often of no particular interest.

It is impossible to arrive at any sort of conclusion when the point of view keeps on spinning around. If you view this as "ad hominem", so be it.

(no smiley face)

73,
Gene W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Cecil is spinning so fast that the acceleration must be awesome.
>
> Tsk, tsk, the closer we get to the truth, the more ad hominem
> attacks we see from the gurus.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>

> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5505. Confused

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:05:46 UTC
From: jlcook@clemson.edu
Message-ID: <e3c79b3.0303120705.22e6eb1f@posting.google.com>
Source record: 122643

I am a new ham with a dualband mobile that transmits at either 50 watts or 5 watts. I live in South Carolina with relatively flat areas and few large buildings. I am trying to find an omnidirectional antenna for use at home. It would be nice if it was easily (relative) to move around for extended vacations and whatnot. I am VERY CONFUSED as to what antenna to get. I have foud many interesting antennas on the internet, but they describe how to build, not the advantages.
I am looking to buy a commercial antenna but am confused over the J-Pole variations, the ground plans, and even the differing lengths ie 5/8 versus 1/1 versus 1/4 length.

I want an antenna I don't have to fiddle with with as much reasonable gain (low angle radiation)as possible. The J-poles and ground planes at companies such as Arrow Antenna of ~$30-40 is in my price range. I do not want to build an antenna right now.

Thanks for all the help

James KG4YTL

5506. Re: Confused

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:14:16 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933C49A068A24pookster@216.168.3.50>
Source record: 122644

jlcook@clemson.edu (James) wrote in
news:e3c79b3.0303120705.22e6eb1f@posting.google.com:

> I am a new ham with a dualband mobile that transmits at either 50
> watts or 5 watts. I live in South Carolina with relatively flat areas
> and few large buildings. I am trying to find an omnidirectional
> antenna for use at home. It would be nice if it was easily (relative)
> to move around for extended vacations and whatnot.

I'd get a dual-band mag mount and find a piece of sheet metal to mount it
on. You could later use in on a car if you wanted. A 5/8 wave will give
a bit more gain, but rarely enough to matter.

--
Bill, W7TI

5507. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:26:54 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F51BE.8010205@ieee.org>
Source record: 122646

Richard Harrison wrote:
> CAM wrote:
> "We know from Walt`s measurements that much more than 7% of the energy
> is flowing in the stub."
>
> In my Sunday, Mar. 9, 2:54 pm posting, I wrote:
> "When you parallel a higher impedance with a short-circuit, as made by
> the OC stub, the stub will rob the higher-impedance of energy."

Yes, it does Richard, and that is the point. Why doesn't a stub that presents a one ohm virtual impedance to an EM wave arriving in a 50 ohm feedline, exhibit a reflection coefficient of 0.96 and reflect 92% of the incident power at the one ohm point? Why do the rules of the wave reflection model have to be suspended for virtual impedances?

Instead, most of the energy flows right past the one ohm point and is reflected at the open end of the 1/4WL stub. The reflected energy from the open end of the stub becomes incident upon the source. The one ohm virtual impedance doesn't cause reflections because it is merely a calculated number equal to (V+ + V-)/(I+ + I-). The one ohm virtual impedance is the *result* of whatever voltage/current ratio exists at that point and is not the *cause* of anything. The entire example can be explained without ever mentioning a "virtual one ohm impedance".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5508. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:31:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6F52EB.B3484F7@cwis.net>
Source record: 122647

Tam & Jim,
The smart thing to do is keep all feed lines
away from propane tanks and lines. All things
considered, finding out if a lightning strike
would cause a 'small controllable' fire is just
something I wouldn't want to find out about from
personal experience (LOL)!
'Doc

5509. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:33:08 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F5334.10509@ieee.org>
Source record: 122648

J. Harvey wrote:
> "Richard Harrison"
>
>>...an open-circuit is a high impedance,
>>and a short-circuit is a low impedance.
>>A high impedance tends to keep energy out.
>>A low impedance tends to invite energy in.
>
> Of course, a short-circuit would not 'invite as much energy in' as would a
> matched load.

Source----50 ohm feedline----x---1/4WL 50 ohm open stub
|
+----50 ohm feedline----------50 ohm load

The voltage is zero at point 'x' so no energy reaches the "matched load".
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5510. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:35:02 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F53A6.1000008@ieee.org>
Source record: 122650

J. Harvey wrote:
> "Walter Maxwell"
>
>>This is exactly the point Roy made when he
>>said if we were to put the circuit in a black box
>>with only the terminals available, we cannot
>>determine whether the reflection was caused
>>by a physical short or a virtual short.
>
> Of course, as Roy stated, this is only true if we're invited to the party
> too late (after the steady state has been achieved). That is quite the
> limitation (!) and hardly makes the general equivalence true. If you hand
> me the black box in a lab (equipped with a TDR or equivalent), then the
> difference is trivially obvious.

One more voice of reason apparently voting against Catch-22 boundary
conditions. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5511. W2AU balun idnetification

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:36:36 UTC
From: don bryant <dba@yebo.co.za>
Message-ID: <b4nk66rcj1@ctb-nnrp2.saix.net>
Source record: 122649

I have an old W2AU balun and I need to know the step up ratio. Is there a measurement method using a simple VOM? Or how could I determine. There are no external markings.
Don ZS6BTP

5512. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:41:47 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F553B.1010707@ieee.org>
Source record: 122651

J. Harvey wrote:
> "OC_CAM's Razor"
>>A ... virtual impedance causes reflections.

This was not my assertion. This was apparently me quoting someone else.

> The word '...causes...' should be something like "...can be thought (as a
> mental shortcut) to cause..." In other words, it's a useful approximation
> in some situations.

My point exactly, J. The useful shortcut exists only in human minds.

>>We know from Walt's measurements that
>>40W flows in the stub.
>
> If you make the above mental short-cut, then you *don't* go around and make
> measurements to prove the opposite.

I don't make the mental short-cut and then go around making the measurements. :-)

> "No there isn't. It's 1.609344 km in a mile. Look, based on 2.54 cm per
> inch (exactly) and multiplying by..." <snip>

That's a little bit different than the binary argument whether virtual
impedances cause reflections or not. They either do or they don't.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5513. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:58:59 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F5943.30503@ieee.org>
Source record: 122653

Richard Harrison wrote:
> J. Harvey wrote:
> "Of course, a short-circuit would not "invite as much energy in" as
> would a matched load."
>
> The short that Walter measured was 0.9 ohms in parallel with a load of
> 50 ohms.
>
> First, the low-resistance short causes the source to drop nearly all the
> voltage which otherwise would be available to the load.

Nope, that's a confusion of cause and effect. The drop in the voltage is because the forward voltage phasor and reflected voltage phasor at the mouth of the stub add to 0.035 volts. There is no need to mention the virtual 0.9 ohms at all. The total load driving voltage is (V+ + V-) = 0.035 volts. No need to muddy the water with a confusing mental short cut of a virtual 0.9 ohms. Which of the following is easiest?

(V+ + V-) = easily explained measured voltage driving the load

(V+ + V-)/(I+ + I-) = virtual impedance mental short cut resulting in the confusion of cause and effect
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5514. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 15:59:20 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <1amu6vcpfrcjhf553sbk49tou5moflgq0e@4ax.com>
Source record: 122652

On Wed, 12 Mar 2003 12:39:45 GMT, Dave Shrader <david.shrader@attbi.com> wrote:

>Methinks it is the standing wave itself that causes the virtual short,
>etc.

And what caused the Standing Wave?

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

5515. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:05:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F5ACE.4070004@ieee.org>
Source record: 122654

VE9SRB wrote:
> From a
> traveling wave perspective, it is very important to understand that the
> TOTAL steady state voltage at that point is given by the sum of the steady
> state forward traveling voltage plus the steady state rearward traveling
> voltage, neither of which are 0 volts. In fact, they are equal in amplitude
> and 180 degrees out of phase. The TOTAL steady state current at the point
> of the virtual short circuit is not necessarily 0 Amps.

Strangely enough, Steve, I have been arguing your side of this argument.
I agree with you that a virtual short is caused by the forward and reflected
voltages adding up to zero. Saying that a virtual short *causes* zero volts
seems to me to be confusing cause and effect.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5516. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:11:35 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b4nm7nloo1@venus.btinternet.com>
Source record: 122655

Forgive me if this sounds stupid, but can a spark actually occur *inside* a sealed metal tank?

I would have thought that the potential difference across the tank (assuming it is one contigous metal object) would actually be zero.

Not that I would encourage experimentation on this....!

D

5517. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:15:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F5D1F.2050102@ieee.org>
Source record: 122656

Gene Fuller wrote:
> This case is not different in principle from the use of a Thevenin
> equivalent source. I believe this was hashed out here a few weeks ago,
> and it was generally agreed that one should not look under the hood of a
> Thevenin source.

But that's because a Thevenin source doesn't exist in reality. A stub
certainly exists in reality. There is no logical reason not to look
inside a stub to ascertain exactly what is happening. Why would
ignorance ever be an asset?

> The case of a stub trap is no different.

Of course it is different. A stub trap exists in reality. Forbidding me
from learning as much about it by dissecting it and making measurements
reminds me of the Catholic Church of 1640 AD. Is there really a
"Most Holy Steady-State" religion existing within modern day ham radio?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5518. Re: Confused

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:23:27 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b4nmtv$194$1@helle.btinternet.com>
Source record: 122657

The J-pole is a variation on a dipole and therefore has no gain (relative to a dipole - or 0dbd).

I personally believe the j-pole does have it's advantages. I have been told, although do not fully understand why, that it has a lower angle of radiation over the standard dipole, so, although it technically has no gain, it can outperform one. That has been my experience. That, of course, could be down to the fact that my location and antenna positioning happens to suit the J-pole better......

1/4 wave groundplanes also have no gain (in a way another variation on the dipole).

5/8 wave groundplanes have a very slight gain over a dipole, but not a great deal (I forget the exact figure).

The dipole is obviously 0dbd, but it's characteristic is that it can be mounted horizontally or vertically without problems. And if you want a straight vertical antenna with no radials for whatever reaason, it fits the bill.

I also like that feature of slim-jims and J-poles - no radials required. I use a slim-jim for that very reason (physically couldn't fit in an antenna with radials).

True gain comes about when you start using collinears (multiple antenna's stuck on top of each other). That's also when antenna's start to get quite large.

I'll ignore beams as I guess you want omnidirectional.

Someone once told me, think it was someone on here actually, that, as a general rule of thumb, a 3dbd gain antenna will be double the size of a 0dbd antenna at least. A 6dbd antenna four times the size etc. A lot of manufacturers make a lot of false claims.

So if you want gain - go for a collinear and I'm sure there are some in your price range. Diamond seem to be well recommended. You'll get a 3dbd antenna that's a bit over twice the height of a standard quarter-wave if that's not too unwieldy for your application (you didn't mention frequency). It will have ground radials (most likely).

If you're happy with zero gain (or close to it), choose either a slim-jim, J-pole, dipole, quarter-wave or 5/8 wave depending on which is physically the best for your application. They will all perform similarly.

hth

D

5519. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:24:41 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6F5F49.49554827@cwis.net>
Source record: 122658

Dean,
I wouldn't think so, but a spark is only one of the
things that can set of a fire/explosion. A heat build
up would be what I would be worried about. It can
either cause a pressure increase that can cause the
safety valve to open, or if it's localized enough, can
be the 'spark' that sets things in motion.
I'd be perfectly happy to let someone else find out
exactly what process occurs!
'Doc

5520. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:41:12 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E6F639B.8CB981A7@att.net>
Source record: 122659

Cecil,

Go right ahead and analyze everything to the last atom and photon. Some people have found that progress is easier when certain combinations and simplifications are made.

Do you also reject standard network analysis that uses this sort of construction? We typically know exactly what is inside the "black box", but all we care about is how the ports behave. Do you insist on going inside to solve the detailed problem even if the answer is always the same?

By the way, a Thevenin source is quite real as seen from its port. We just don't know what is inside. A stub is no different.

Feel free to use any analysis method you choose. It is best, however, if you refrain from randomly mixing detailed "real" analysis with equivalent "virtual" analysis.

73,
Gene W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > This case is not different in principle from the use of a Thevenin
> > equivalent source. I believe this was hashed out here a few weeks ago,
> > and it was generally agreed that one should not look under the hood of a
> > Thevenin source.
>
> But that's because a Thevenin source doesn't exist in reality. A stub
> certainly exists in reality. There is no logical reason not to look
> inside a stub to ascertain exactly what is happening. Why would
> ignorance ever be an asset?
>
> > The case of a stub trap is no different.
>
> Of course it is different. A stub trap exists in reality. Forbidding me
> from learning as much about it by dissecting it and making measurements
> reminds me of the Catholic Church of 1640 AD. Is there really a
> "Most Holy Steady-State" religion existing within modern day ham radio?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!

> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5521. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:50:22 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E6F651E.D2D1314D@attbi.com>
Source record: 122660

A resonant wave in the basic transmission line of course!

In the redesign of a microwave RF Subsystem on a military program we added a 1/4 wavelength stub to suppress abnormal signals at the input to the rf electronics. The addition of the 1/4 wave stub increased the insertion loss along the desired path by approximately 0.2 dB. Lift the stub and recover the 0.2 dB. Ergo the stub 'REQUIRES' energy from the desired path!! That energy, in the form of stored stored energy in the E-H waves [1/2 L*I^2 and 1/2 C*V^2], comes from the basic signal in the non stubbed portion of the circuit.

BTW, every 2 meter repeater using a single antenna must use 'stubs' [cavities] to achieve isolation and avoid desense. Put your hands on a cavity that's been operating continuously for 1/2 hour or more and you will absolutely know that the cavity absorbs [requires] it's energy from the desired signal.

In the absence of any signal there is no virtual short or open circuit in any stubbed system. The virtual short/open exists only under the conditions of excitation at it's resonant frequency.

Now physics people can argue all over the place about it but engineers can feel the heat being dissipated. The heat source is the signal in the non stubbed portion of the system being excited.

Deacon Dave, W1MCE
+ + +

"Robert Lay (W9DMK)" wrote:
>
> On Wed, 12 Mar 2003 12:39:45 GMT, Dave Shrader <david.shrader@attbi.com> wrote:
>
> >Methinks it is the standing wave itself that causes the virtual short,
> >etc.
>
> And what caused the Standing Wave?
>
> ==
> 73 de W9DMK - Bob in Dahlgren, VA
> http://www.qsl.net/w9dmk
> http://www.fortunecity.com/meltingpot/albania/784
> http://www.geocities.com/w9dmk/W9DMK.html
> ==

5522. Re: Confused

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:51:53 UTC
From: Dean Elwood <dean@legallyspeaking.co.uk>
Message-ID: <b4noj9$3mh$1@helle.btinternet.com>
Source record: 122661

Sorry, just notice you mentioned "dual-band" so assume this is 70cms/2m.

In which case, there are plenty of dual-band collinears around ranging from unity on 2m and 3dbd + on 70cms up to high gain on both bands. This directly relates to antenna height, so you will still need to make a decision based on physical size.

D

5523. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:53:21 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87smtsy1a6.fld@barrow.com>
Source record: 122666

"Dean Elwood" <dean@legallyspeaking.co.uk> wrote:
>Forgive me if this sounds stupid, but can a spark actually occur *inside* a
>sealed metal tank?
>
>I would have thought that the potential difference across the tank (assuming
>it is one contigous metal object) would actually be zero.
>
>Not that I would encourage experimentation on this....!
>
>D

The whole discussion regarding lightening is absurd. First, a
"direct hit" is a bit more significant than is being envisioned.
Typicaly a real direct hit will produce current in excess of
50,000 Amps, and maybe as high as 300,000 Amps. Think about
that for a moment... :-)

Your coax, not to mention your antenna wire, will vaporize in a
ball of fire. Not if, just how fast.

The whole point in grounding the antenna (and the propane tank
too, for that matter) is to prevent a direct hit by discharging
any charge build up before it becomes excessive. Wrapping the
coax around a metal tank that is grounded might be a good idea
(wrapping it around an ungrounded tank might be a way to attract
that direct hit).

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5524. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 16:58:55 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E6F671F.C6554579@attbi.com>
Source record: 122662

The sealed metal tank is by definition a Faraday Cage. A Faraday Cage
has no E fields inside of itself.

Lightning currents flow on the external surface of a Faraday Cage.
The magnetic component of the lightning does penetrate the Faraday Cage
and will induce voltages in any loops or partial loops.

So, if I'm inside a 50 gallon metal drum that only has breathing holes
in it, and it is intentionally struck by lightning I'm 100% safe from
the lightning strike!!

Deacon Dave, W1MCE

Dean Elwood wrote:
>
> Forgive me if this sounds stupid, but can a spark actually occur *inside* a
> sealed metal tank?
>
> I would have thought that the potential difference across the tank (assuming
> it is one contigous metal object) would actually be zero.
>
> Not that I would encourage experimentation on this....!
>
> D

5525. Re: W2AU balun idnetification

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 17:07:51 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E6F6937.A4154E3F@attbi.com>
Source record: 122663

connect a 50 ohm carbon resistor across the output. Use an antenna
analyzer to measure the input. If the VSWR reads 1:1 it's a 1:1 balun.
If it reads VSWR of 4:1 it's a 4:1 balun, etc.

Deacon Dave, W1MCE
+ + +

don bryant wrote:
>
> I have an old W2AU balun and I need to know the step up ratio. Is there a
> measurement method using a simple VOM? Or how could I determine. There are
> no external markings.
> Don ZS6BTP

5526. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 17:11:39 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <b4npbi$20d$1@news.service.uci.edu>
Source record: 122664

"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E6F651E.D2D1314D@attbi.com...
> Now physics people can argue all over the place about it but engineers
> can feel the heat being dissipated.

Physicists wouldn't be arguing about it.

ac6xg

5527. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 17:12:27 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <%TJba.1632$ja4.130661@bgtnsc05-news.ops.worldnet.att.net>
Source record: 122665

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6F5ACE.4070004@ieee.org...
> VE9SRB wrote:
> > From a
> > traveling wave perspective, it is very important to understand that the
> > TOTAL steady state voltage at that point is given by the sum of the
steady
> > state forward traveling voltage plus the steady state rearward traveling
> > voltage, neither of which are 0 volts. In fact, they are equal in
amplitude
> > and 180 degrees out of phase. The TOTAL steady state current at the
point
> > of the virtual short circuit is not necessarily 0 Amps.
>
> Strangely enough, Steve, I have been arguing your side of this argument.
> I agree with you that a virtual short is caused by the forward and
reflected
> voltages adding up to zero. Saying that a virtual short *causes* zero
volts
> seems to me to be confusing cause and effect.
> --
> cheers, CAM http://www.qsl.net/w5dxp

Cecil,

I have not followed all of the thread as I just peaked in yesterday to see
if anything controversial was being discussed. What a surprise!
Unfortunately, I don't have the time to read the details of the 300+ posts.

I agree with you that there seems to be some confusion as to "cause and
effect". As for the true "virtual short" (total volts = 0, total Z = 0),
it is my opinion that it is the end or steady state result of the transient
process, not the cause of anything.

Take care,

Steve VE9SRB

5528. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 17:25:03 UTC
From: tdonaly@aol.com
Message-ID: <20030312122503.15295.00000150@mb-cm.aol.com>
Source record: 122667

Gene wrote,
>
>Cecil,
>
>Go right ahead and analyze everything to the last atom and photon. Some
>people have found that progress is easier when certain combinations and
>simplifications are made.
>
>Do you also reject standard network analysis that uses this sort of
>construction? We typically know exactly what is inside the "black box",
>but all we care about is how the ports behave. Do you insist on going
>inside to solve the detailed problem even if the answer is always the
>same?
>
>By the way, a Thevenin source is quite real as seen from its port. We
>just don't know what is inside. A stub is no different.
>
>Feel free to use any analysis method you choose. It is best, however, if
>you refrain from randomly mixing detailed "real" analysis with
>equivalent "virtual" analysis.
>
>73,
>Gene W4SZ
>

Hi, Gene,
Cecil is trying to win an argument. It's normal for him to mix

different methods of analysis. He also tries to do physics with analysis.
That's where he comes up with concepts like physical impedance discontinuity
that he can't define, but that he can use in his oft-repeated arguments (if you

repeat the same lie over and over again eventually someone will accept it
as received truth.) If Cecil were serious about learning the Truth he would
use the intellectual tools physicists use instead of the shortcuts engineers
have found so useful over the years. If he did that, he would come to the
conclusions the people who have already done it have, and he might -- but
more probably would not -- stop wasting his time inventing crackpot
interpretations of
the way things work.
73,
Tom Donaly, KA6RUH

5529. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 17:27:56 UTC
From: ovni90902@aol.com
Message-ID: <20030312122756.12465.00000330@mb-ba.aol.com>
Source record: 122668

I have been watching this thread for a while with interest. I don't feel qualified technically to get into the depths of the discussion.

However, the subject line spelling error grates on my nerves, so I have taken the liberty to correct it on my post.

Otherwise, keep up the good work!

5530. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 17:36:20 UTC
From: tdonaly@aol.com
Message-ID: <20030312123620.15295.00000151@mb-cm.aol.com>
Source record: 122519

Dave wrote,
>
>A resonant wave in the basic transmission line of course!
>
>In the redesign of a microwave RF Subsystem on a military program we
>added a 1/4 wavelength stub to suppress abnormal signals at the input to
>the rf electronics. The addition of the 1/4 wave stub increased the
>insertion loss along the desired path by approximately 0.2 dB. Lift the
>stub and recover the 0.2 dB. Ergo the stub 'REQUIRES' energy from the
>desired path!! That energy, in the form of stored stored energy in the
>E-H waves [1/2 L*I^2 and 1/2 C*V^2], comes from the basic signal in the
>non stubbed portion of the circuit.
>
>BTW, every 2 meter repeater using a single antenna must use 'stubs'
>[cavities] to achieve isolation and avoid desense. Put your hands on a
>cavity that's been operating continuously for 1/2 hour or more and you
>will absolutely know that the cavity absorbs [requires] it's energy from
>the desired signal.
>
>In the absence of any signal there is no virtual short or open circuit
>in any stubbed system. The virtual short/open exists only under the
>conditions of excitation at it's resonant frequency.
>
>Now physics people can argue all over the place about it but engineers
>can feel the heat being dissipated. The heat source is the signal in the
>non stubbed portion of the system being excited.
>
>Deacon Dave, W1MCE
>+ + +
>
Hi, Deacon,
Cecil's intellectual stubs don't get hot; they're lossless, and, once excited,
don't need the injection of additional energy to keep oscillating. Lossless
resonators just keep going forever unless something deliberately damps
them. Please keep this discussion restricted to pure fantasy.
73,
Tom Donaly, KA6RUH

5531. Re: NEW SOFTWARE & SAT FREQ.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 17:49:20 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <v6usp3a3phcm3b@corp.supernews.com>
Source record: 122520

Hi,

Perhaps a nice site. But lose the ActiveX control that insists on being loaded. :)

Regards,
Jim
--
email sent to: denews@taborsoft.com
is discarded without being seen.
Sorry for any inconvenience.

5532. FA: Diamond SRH519 Dual Band HT Flexible Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 17:50:53 UTC
From: STA <ken@not_a_real_site.com>
Message-ID: <120320031250530052%ken@not_a_real_site.com>
Source record: 122521
Cross-posted to: rec.radio.amateur.equipment,alt.ham-radio.marketplace,rec.radio.amateur.antenna

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3012757367

5533. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:00:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F75C2.5070500@ieee.org>
Source record: 122522

Gene Fuller wrote:
> Go right ahead and analyze everything to the last atom and photon. Some
> people have found that progress is easier when certain combinations and
> simplifications are made.

And some people are still trying to explain how two matched particles
manage to "communicate" at greater than the speed of light. Why are
you so opposed to detailed scientific studies?

> Do you also reject standard network analysis that uses this sort of
> construction? We typically know exactly what is inside the "black box",
> but all we care about is how the ports behave. Do you insist on going
> inside to solve the detailed problem even if the answer is always the
> same?

Why do you want to divert the real issue which is, at the moment:
"What exactly is happening inside a stub in reality (not what is
happening in the wet dreams of gurus)."

> By the way, a Thevenin source is quite real as seen from its port. We
> just don't know what is inside. A stub is no different.

We know exactly what is inside a stub. Why should we deliberately
choose to remain ignorant?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5534. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:11:55 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F786A.6020600@ieee.org>
Source record: 122523

Tdonaly wrote:
> That's where he comes up with concepts like physical impedance discontinuity
> that he can't define, ...

I've given you example after example of physical impedance discontinuities.
Here's my favorite at the moment:

Source----50 ohm feedline----x----150 ohm feedline----load

There is a physical impedance discontinuity at point 'x' and at
the load if the load is not 150 ohms.

> If Cecil were serious about learning the Truth he would
> use the intellectual tools physicists use instead of the shortcuts engineers
> have found so useful over the years.

I'm obviously not a physicist - sorry. I just do the best I can
with what I've got. However, I seem to be making progress. From
zero support a few weeks ago, there seems to be about half a dozen
readers who understand what I am saying and tend to agree with me.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5535. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:13:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F78CE.1050707@ieee.org>
Source record: 122525

OVNI90902 wrote:
> However, the subject line spelling error grates on my nerves, so I have taken
> the liberty to correct it on my post.

That's not a spelling error. That's my embedded 'c' initial. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5536. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:15:42 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F794E.4020905@ieee.org>
Source record: 122526

Tdonaly wrote:
> Cecil's intellectual stubs don't get hot; they're lossless ...

Well, Walt's aren't lossless and I'll bet they exhibit a
temperature rise. That 0.9 ohms doesn't keep anything out
of the stub.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5537. Re: CDE rotors question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:16:19 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <v6uubmh9argk15@corp.supernews.com>
Source record: 122524

Greetings,

Highly recommended "Norm's Rotor Service" - Norm is great to deal with. See:
http://www.rotorservice.com/

Note he has a web page titled "Identifying Your Rotor" that may answer your
question.

Regards,
Jim - KU5S
--
email sent to: denews@taborsoft.com
is discarded without being seen.
Sorry for any inconvenience.

5538. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:23:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vvuu6vkkfbonj31d7nnfdos1d6rrr41hck@4ax.com>
Source record: 122527

On Wed, 12 Mar 2003 14:58:22 GMT, Gene Fuller <W4SZzzzzz@att.net>
wrote:

>It is impossible to arrive at any sort of conclusion when the point of
>view keeps on spinning around.

Ah Yes!

This is the strength of numbers: you can be 100% right if you dismiss
the 50% error rate for having taken every position.

...the comedy continues. ;-)

73's
Richard Clark, KB7QHC

5539. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:25:04 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87isuoxx1b.fld@barrow.com>
Source record: 122532

Dave Shrader <david.shrader@attbi.com> wrote:
>The sealed metal tank is by definition a Faraday Cage. A Faraday Cage
>has no E fields inside of itself.
>
>Lightning currents flow on the external surface of a Faraday Cage.
>The magnetic component of the lightning does penetrate the Faraday Cage
>and will induce voltages in any loops or partial loops.
>
>So, if I'm inside a 50 gallon metal drum that only has breathing holes
>in it, and it is intentionally struck by lightning I'm 100% safe from
>the lightning strike!!
>
>Deacon Dave, W1MCE

You mean except for being fried, you'd be safe?

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5540. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:25:59 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <g5vu6vg1cujlu1qptaec47vg62anh6onav@4ax.com>
Source record: 122528

On Wed, 12 Mar 2003 12:00:34 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Why do you want to divert the real issue which is, at the moment:

"at the moment" translation "my diversions are pure, yours are for
shit."

73's
Richard Clark, KB7QHC

5541. Indoor active HF loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:36:59 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e6f7e4a$1_2@news.vo.lu>
Source record: 122529

Hi,

Having some problems of discretion and space available to erect a large antenna outdoor (beam or vertical) I would like to know if a loop could be the solution (as I am using an ALA-1530 indoor for reception purposes successfully, see my website) :
- Is there on the market active magnetic loops suited for the HF bands (1.8-30 MHz) and giving good performances (some brands ?) that I can use indoor ?
- if they are, what is the risk to install it indoor ? I mean that I know they are high currents in such antenna, strong magnetic field, etc. So what could be the minimal distance between the loop emitting e.g. 100 W and my shack where they are living being... Is e.g. a distance of about 7m enough to avoid healty problems ?
- Where can I found information about emission HF loops to use indoor (providers URL ?)

Thanks in advance.

Thierry
ON1SKY
http://www.astrosurf.com/lombry

5542. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:45:20 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <tkvu6v4klb831sat4olomp8f4f1n81ujje@4ax.com>
Source record: 122530

On Wed, 12 Mar 2003 09:33:08 -0600, OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote:

>Source----50 ohm feedline----x---1/4WL 50 ohm open stub
> |
> +----50 ohm feedline----------50 ohm load
>
>The voltage is zero at point 'x' so no energy reaches the "matched load".

Dear Cecil,

I attempted to perform, experimentally, the test that you depicted in your diagram above.

My setup consisted of a ham rig set up to deliver approximately 50 watts into a dummy load. An indeterminant length of 50 ohm line from rig to antenna coax or dummy load (Antenna properly
tuned to present 50 ohms).

A stub of 1/4 WL at 14.3 MHz (Set up to present 0 ohms at 14.3 MHz with open circuited end, using
the MFJ-259 analyzer).

Directional wattmeter in line just out of rig and another in the leg going to the antenna/dummy
load.

No wattmer connected in the stub.

Stub connected at a random point between the 2 wattmeters using a Tee.

XMTR ----WATTMETER1--------TEE------------WATTMETER2--------------DUMMYLOAD/ANTENNA
|
|
| 1/4 WL
|
|
|
OC

Results:

Without the stub being connected:
50 watts and SWR 1:1 in both wattmeters

With stub connected to the tee:
Wattmeter1: approx 6 to 7 watts in both directions.
Wattmeter2: (antenna/dummy load) 0 reading in both directions.

Additional observations:
With stub connected, reception on 20 meter band very poor. No signals moving the S-meter.
With stub disconnected, normal S-9 signals on the band.

Conclusions:
Everything behaving exactly according to theory, considering the lines are not ideal.
The quarter wave stub effectively shorts out everything trying to move past it.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

5543. Re: antenna type?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:46:53 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <2d0v6vgktdvm449blvi3em34b0lkkc5fk1@4ax.com>
Source record: 122531

On Wed, 12 Mar 2003 06:15:36 -0500, "J. Harvey"
<JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote:

>
>BTW - have you checked "Pringles Antenna" ?

Hi Jeff,

I have, and had one (not an uncommon commercial design, sans the can
of course). Not very remarkable, nor the best for like effort for
other designs.

73's
Richard Clark, KB7QHC

5544. Re: Confused

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:52:51 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5m0v6vgroos6iu1dbel1bt5jm3kldtq162@4ax.com>
Source record: 122534

On 12 Mar 2003 07:05:46 -0800, jlcook@clemson.edu (James) wrote:

> The J-poles and ground planes
>at companies such as Arrow Antenna of ~$30-40 is in my price range. I
>do not want to build an antenna right now.

Hi James,

Yours is one of the better questions that comes with its own answer.
It is a good one. To reduce the confusion as to why: there isn't a
whole lot of difference in the first place (among all the variations
you have described and considered).

73's
Richard Clark, KB7QHC

5545. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:56:23 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <3d0v6vgf78b5227o5k63lak33ujsrv00pd@4ax.com>
Source record: 122533

On Wed, 12 Mar 2003 16:50:22 GMT, Dave Shrader <david.shrader@attbi.com> wrote:

>A resonant wave in the basic transmission line of course!

Dear Dave,

Does that mean that without resonance, there is no standing wave?

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

5546. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:58:42 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E6F8331.AF8D357D@attbi.com>
Source record: 122535

I've been reading this discussion for weeks now. I have made minimum comments.

But sometimes common sense has to be inserted for a reality check.

I still keep to my basic statement: Regardless of losses, the only way a virtual short can exist under any condition is that the energy source contains: "A resonant wave in the basic transmission line of course!" The source of excitation comes from the initial conditions which must include a component of a traveling E-H wave in the transmission line that contains energy at the resonant frequency of the stub!

Walt Disney does enough FANTASY for me. Transmission lines are not fantasy!

Deacon Dave
+ + +

Tdonaly wrote:
>
> Dave wrote,
> >
> >A resonant wave in the basic transmission line of course!
> >
SNIP
> Hi, Deacon,
> Cecil's intellectual stubs don't get hot; they're lossless, and, once excited,
> don't need the injection of additional energy to keep oscillating. Lossless
> resonators just keep going forever unless something deliberately damps
> them. Please keep this discussion restricted to pure fantasy.
> 73,
> Tom Donaly, KA6RUH

5547. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 18:58:49 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6F8369.AC0F907@uci.edu>
Source record: 122536

"Robert Lay (W9DMK)" wrote:
> I attempted to perform, experimentally, the test that you depicted in your diagram above.
>
> My setup consisted of a ham rig set up to deliver approximately 50 watts into a dummy load.
> An indeterminant length of 50 ohm line from rig to antenna coax or dummy load (Antenna properly
> tuned to present 50 ohms).
>
> A stub of 1/4 WL at 14.3 MHz (Set up to present 0 ohms at 14.3 MHz with open circuited end, using
> the MFJ-259 analyzer).
>
> Directional wattmeter in line just out of rig and another in the leg going to the antenna/dummy
> load.
>
> No wattmer connected in the stub.
>
> Stub connected at a random point between the 2 wattmeters using a Tee.
>
> XMTR ----WATTMETER1--------TEE------------WATTMETER2--------------DUMMYLOAD/ANTENNA
> |
> |
> | 1/4 WL
> |
> |
> |
> OC
>
> Results:
>
> Without the stub being connected:
> 50 watts and SWR 1:1 in both wattmeters
>
> With stub connected to the tee:
> Wattmeter1: approx 6 to 7 watts in both directions.
> Wattmeter2: (antenna/dummy load) 0 reading in both directions.
>
> Additional observations:
> With stub connected, reception on 20 meter band very poor. No signals moving the S-meter.
> With stub disconnected, normal S-9 signals on the band.
>
> Conclusions:

> Everything behaving exactly according to theory, considering the lines are not ideal.
> The quarter wave stub effectively shorts out everything trying to move past it.

Sounds like a fun experiment. It's great when things work out according to theory. Best not to misinterpret the results though. Your signal wasn't able to propagate past the tee because of phase cancellation - not because of a short. A short would have prevented signal from propagating through the stub. And as we've seen repeatedly over the last couple days, signal does propagate through the stub.

73, Jim AC6XG

5548. Re: W2AU balun idnetification

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 19:03:36 UTC
From: don bryant <dba@yebo.co.za>
Message-ID: <b4o0ae$3ue$1@ctb-nnrp2.saix.net>
Source record: 122537

Er...Why didn't I think of that (and invent velcro).
Tnx Dave

Dave Shrader <david.shrader@attbi.com> wrote in message
news:3E6F6937.A4154E3F@attbi.com...
> connect a 50 ohm carbon resistor across the output. Use an antenna
> analyzer to measure the input. If the VSWR reads 1:1 it's a 1:1 balun.
> If it reads VSWR of 4:1 it's a 4:1 balun, etc.
>
> Deacon Dave, W1MCE
> + + +
>
> don bryant wrote:
> >
> > I have an old W2AU balun and I need to know the step up ratio. Is there
a
> > measurement method using a simple VOM? Or how could I determine. There
are
> > no external markings.
> > Don ZS6BTP

5549. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 19:05:40 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6F8504.7090205@ieee.org>
Source record: 122538

Robert Lay (W9DMK) wrote:
> Conclusions:
> Everything behaving exactly according to theory, considering the lines are not ideal.
> The quarter wave stub effectively shorts out everything trying to move past it.

Thanks Bob, but we already know that. The question is how does the stub accomplish that feat? I say there are no reflections at the mouth of the stub and all the reflections are taking place at the actual open circuit at the end of the stub. I say we have 6-7 watts of forward power and 6-7 watts of reflected power INSIDE THE STUB itself. Others are arguing that the short is actually at the mouth of the stub thus causing reflections and not allowing the stub to carry any appreciable voltage or current, i.e. the stub shorts itself out because the virtual short is a real short that is really there causing reflections.

I don't see any reflections at the mouth of the stub. All I see is the 6-7 watts of forward power blowing right past the virtual short and flowing into the stub. And 6-7 watts of reflected power blowing right past the virtual short on its way back toward the source. The only reason that no power makes it to the load is that the forward and reflected voltages phasor-sum to zero at the mouth of the stub. It's just like plumber's delight construction of a Yagi.

If you had measured the forward and reflected power in the stub, you would have measured 6-7 watts both directions.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5550. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 19:34:20 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <FI2cnd_JSvMlFvKjXTWcoQ@crocker.com>
Source record: 122539

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6E837D.6080404@ieee.org...
> David Robbins wrote:
> > very good grasshopper, some day you may yet understand why a 1/4 wave
> > shorted stub melted down with 1500w going 'by' it on the main line. in
> > order for the 'virtual' short to exist you must have current on the
stub,
> > otherwise there is no way for the reflected wave to cancel out the
incident
> > one (or add too it, depending on if you like tracking current or
voltage) at
> > the junction.
>
> David, you must not have been following the discussion very closely. That
> is exactly my argument which most of the gurus reject. The gurus say
> there is hardly any voltage and current in a stub at all since the
> virtual impedance is either zero or infinity thus reflecting the
> signals at the entrance to the stub.

i was following the parts of the discussion about replacing the 'virtual'
short with a real one and what that did. i didn't think there was ever any
question about there being real current in a stub, its just so obvious that
there has to be.

5551. Re: W2AU balun idnetification

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 19:45:23 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <0PCdnbneaajPE_KjXTWcqg@comcast.com>
Source record: 122540

Always think big. A guy I used to work with invented "Mr. Coffee".

Tam/WB2TT

5552. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 19:45:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <vp3v6vs67g2bqm5f9anvcaa3lc0adkhb9p@4ax.com>
Source record: 122541

On Wed, 12 Mar 2003 18:58:42 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

> the only way a
>virtual short can exist

Not quoted as Dave's idea, but the out-of-context passage says reams
about this thread.

73's
Richard Clark, KB7QHC

5553. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 20:05:04 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E6F9364.6FB0DB67@att.net>
Source record: 122542

Cecil,

What was it you said about ad hominem attacks?

I believe you just called me anti-science, ignorant, and a wet-dream guru. (Hey, that may not be so bad!)

8-)

73,
Gene W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Go right ahead and analyze everything to the last atom and photon. Some
> > people have found that progress is easier when certain combinations and
> > simplifications are made.
>
> And some people are still trying to explain how two matched particles
> manage to "communicate" at greater than the speed of light. Why are
> you so opposed to detailed scientific studies?
>
> > Do you also reject standard network analysis that uses this sort of
> > construction? We typically know exactly what is inside the "black box",
> > but all we care about is how the ports behave. Do you insist on going
> > inside to solve the detailed problem even if the answer is always the
> > same?
>
> Why do you want to divert the real issue which is, at the moment:
> "What exactly is happening inside a stub in reality (not what is
> happening in the wet dreams of gurus)."
>
> > By the way, a Thevenin source is quite real as seen from its port. We
> > just don't know what is inside. A stub is no different.
>
> We know exactly what is inside a stub. Why should we deliberately
> choose to remain ignorant?
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5554. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 20:11:07 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E6F94CE.48972971@att.net>
Source record: 122543

Cecil,

It is way beyond the limits of self-flattery if you really believe this discussion is in the same universe as communication at greater than the speed of light.

8-)

73,
Gene W4SZ

OC_CAM's Razor wrote:
>
> Gene Fuller wrote:
> > Go right ahead and analyze everything to the last atom and photon. Some
> > people have found that progress is easier when certain combinations and
> > simplifications are made.
>
> And some people are still trying to explain how two matched particles
> manage to "communicate" at greater than the speed of light. Why are
> you so opposed to detailed scientific studies?

5555. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 20:16:51 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <TAMba.17287$gF3.1535766@newsread1.prod.itd.earthlink.net>
Source record: 122544

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E6F8504.7090205@ieee.org...
> Robert Lay (W9DMK) wrote:
> > Conclusions:
> > Everything behaving exactly according to theory, considering the lines
are not ideal.
> > The quarter wave stub effectively shorts out everything trying to move
past it.
>
> Thanks Bob, but we already know that. The question is how does the stub
accomplish
> that feat? I say there are no reflections at the mouth of the stub and all
the
> reflections are taking place at the actual open circuit at the end of the
stub.
> I say we have 6-7 watts of forward power and 6-7 watts of reflected power
INSIDE
> THE STUB itself. Others are arguing that the short is actually at the
mouth of the
> stub thus causing reflections and not allowing the stub to carry any
appreciable
> voltage or current, i.e. the stub shorts itself out because the virtual
short is
> a real short that is really there causing reflections.
>
> I don't see any reflections at the mouth of the stub. All I see is the 6-7
watts
> of forward power blowing right past the virtual short and flowing into the
stub.
> And 6-7 watts of reflected power blowing right past the virtual short on
its way
> back toward the source. The only reason that no power makes it to the load
is
> that the forward and reflected voltages phasor-sum to zero at the mouth of
the
> stub. It's just like plumber's delight construction of a Yagi.
>
> If you had measured the forward and reflected power in the stub, you would
have
> measured 6-7 watts both directions.
--
> cheers, CAM http://www.qsl.net/w5dxp

Cecil, apparently you haven't read all of my posts, one in reply to Richard C. In that post, 3-11 at 2:2 pm, I reported measurements in the stub. At the junction end of the stub the forward and reverse powers were 50 and 45 watts, respectively. With the Bird 43 wattmeter at the open end of the stub, and with the downstream side of the 43 left open circuited, the forward and reflected powers were both 40 watts. This is what theory tells us would happen at an open circuit--all forward power totally reflected.

You've been wondering where the increased power came from. Well, it's the forward power increase due to re-reflection of the waves reflected either by the 1.9-ohm resistance at junction or the 2550-ohm resistance at the open circuit of the stub. At this point I won't argue which is causing the reflections. However, using the standard forward-power increase factor with a reflection coefficient rho = 0.965 and attenuation 'a' = 0.165, the forward power calculates to 52 watts when the source power is 7 watts. The difference in forward and reflected, 50 - 45 watts = 5 watts, but these readings were taken where the the difference between 5 and 7 watts is indiscernable, so we use 7 watts as the source and all the calculations fit with the theory.

Walt

5556. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 20:43:32 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <KkmdnRI1PPttBvKjXTWcoQ@crocker.com>
Source record: 122545

you want to have fun... go to sci.physics.electromag and get mathew orman to explain his new faster than light cables that go on sale in a few days.

"Gene Fuller" <W4SZzzzzz@att.net> wrote in message news:3E6F94CE.48972971@att.net...
> Cecil,
>
> It is way beyond the limits of self-flattery if you really believe this
> discussion is in the same universe as communication at greater than the
> speed of light.
>
> 8-)
>
> 73,
> Gene W4SZ
>
> OC_CAM's Razor wrote:
> >
> > Gene Fuller wrote:
> > > Go right ahead and analyze everything to the last atom and photon.
Some
> > > people have found that progress is easier when certain combinations
and
> > > simplifications are made.
> >
> > And some people are still trying to explain how two matched particles
> > manage to "communicate" at greater than the speed of light. Why are
> > you so opposed to detailed scientific studies?

5557. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 20:51:29 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <I5Nba.17306$gF3.1538350@newsread1.prod.itd.earthlink.net>
Source record: 122546

> > David Robbins wrote:
> > > very good grasshopper, some day you may yet understand why a 1/4 wave
> > > shorted stub melted down with 1500w going 'by' it on the main line.
in
> > > order for the 'virtual' short to exist you must have current on the
> stub,
> > > otherwise there is no way for the reflected wave to cancel out the
> incident
> > > one (or add too it, depending on if you like tracking current or
> voltage) at
> > > the junction.
> >
> > David, you must not have been following the discussion very closely.
That
> > is exactly my argument which most of the gurus reject. The gurus say
> > there is hardly any voltage and current in a stub at all since the
> > virtual impedance is either zero or infinity thus reflecting the
> > signals at the entrance to the stub.
>
> i was following the parts of the discussion about replacing the 'virtual'
> short with a real one and what that did. i didn't think there was ever
any
> question about there being real current in a stub, its just so obvious
that
> there has to be.

Hi Dave,

Considering the voltage and current in the stub, please refer to my post 3-11 at 2:42 and 3-12 at 3:16, where I show that measurements indicated that at the junction of the stub and main line, there is 50 w forward and 45 w reflected. With the Bird 43 at the open end of of the stub, and the 43 left open circuited, the forward and reflected powers are are both 40 w. 40 w both forward and reflected at the open circuit follows transmission-line theory perfectly. In addition, at the open end of the stub the voltage is 80 v, while at the junction of the stub and main line the voltage is 0.035 volts, for a differential of 2286, the sqrt of which is 47.8, close to the Zo of the line. Noe in my 3-12 3:16 post I show that applying the standard forward-power increase factor with reflection coefficient rho = 0.965 and attenuation 'a' = 0.195 dB, the forward power becomes 52 watts, close to the measured forward power. This is assuming 7 w delivered. However, although the difference between forward and reflected power both in the main line and the stub is 50 - 45w = 5 w, the measured powers were found on the meter scale where the difference of 2 watts was undistinguishable. Seems to me the measurements follow the theory quite well.

Walt, W2DU

5558. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 21:06:12 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <8jNba.17320$gF3.1538239@newsread1.prod.itd.earthlink.net>
Source record: 122547

> >
> > Roy Lewallen wrote:

> > > Every once in a while (not often enough!) something just clicks, and
> > > Tom's comment triggered one of those too-rare events. I haven't been
> > > following this thread very closely, but had been in general agreement
> > > with Cecil's distinction of a "virtual short" as an effect as opposed
to
> > > a "real short" as a cause. Tom's comment reoriented my thinking.
> > >
> > > Let's suppose we have a transmission line with a quarter wavelength
open
> > > stub, say, sticking off to one side -- or a shorted half wavelength of
> > > line continuing past some point. Either one causes a "virtual short
> > > circuit". Just put the open circuited quarter wavelength line, or
short
> > > circuited half wavelength line into a box with a couple of terminals,
> > > and label it "short circuit". If we connect this box to our line, we
> > > won't be able to tell (being careful to restrict ourselves to steady
> > > state at a single frequency) whether the box contains a physical piece
> > > of wire between the terminals, a quarter wave open stub, a half wave
> > > open stub, Tom's series resonant circuit, or any of an infinite number
> > > of other possible circuits. Our analysis of the transmission line
> > > conditions will proceed exactly the same, and give exactly the same
> > > results, regardless of what's inside the box, as long as it causes --
by
> > > whatever means -- a short circuit to appear across its terminals. In
> > > fact, if we're restricted to the steady state at the single frequency
> > > where the box presents a short circuit, there's no test we could
devise
> > > that would tell us what's inside the box (assuming everything's
> > > lossless, of course).
> > >
> > > Obviously, we've lost information about what's happening along any
line
> > > that might be inside the box. But as far as the world outside the box
is
>
> > > concerned, there's absolutely no difference between a box containing a
> > > stub or "virtual short circuit" and one containing a physical piece of
> > > wire or "real short circuit". For all intents, analyses, and results,
> > > they're identically the same -- again cautioning that this is true
only
> > > for a single frequency steady state analysis. I'm now perfectly

> > > comfortable with regarding a "virtual short circuit" as something that
> > > causes reflections.
> > >
> > > Thanks, Tom, for the insight. And my apology to Walt for being so slow
> > > to pick up on this.
> > >
> > > I'm already well established as one of Reg's Old Wives. Guess I can
now
> > > add myself to Cecil's list.
> > >
> > > Roy Lewallen, W7EL
> >

> Walt,
>
> Before you get too excited, I think its important that everyone understand
> that Roy's use and definition of the "virtual short circuit" term and
> concept is not even remotely similar to that which you use in describing
the
> impedance matching process.
>
> The widely accepted understanding of a "virtual short circuit", consistent
> with Roy's discussion is the following: A virtual short circuit exists at
a
> point on a transmission line where the TOTAL steady state voltage at that
> point equals 0 Volts and therefore, the steady state impedance at that
point
> equals 0 ohms. The total steady state impedance at that point equals 0
ohms
> and is therefore effectively equivalent to a short circuit. From a
> traveling wave perspective, it is very important to understand that the
> TOTAL steady state voltage at that point is given by the sum of the steady
> state forward traveling voltage plus the steady state rearward traveling
> voltage, neither of which are 0 volts. In fact, they are equal in
amplitude
> and 180 degrees out of phase. The TOTAL steady state current at the point
> of the virtual short circuit is not necessarily 0 Amps.
>
> The disagreement that I have with your use of the "virtual short circuit"
> term is how you use it in describing the impedance matching process. Your
> use of the "virtual short circuit" term is not consistent with the above,
> widely accepted definition, or with Roy's discussion.
>
> In the impedance matching process, you claim that a "virtual short
circuit"
> exists *ONLY* for the rearward traveling wave and that this "virtual short
> circuit" is not seen by the forward traveling wave. Your "definition" of
a
> virtual short circuit is not in anyway related to a physical short
circuit,

> where the TOTAL steady state voltage must equal 0 Volts and the total
steady
> state impedance must equal 0 ohms.
>
> In your definition of a "virtual short circuit", the TOTAL steady state
> voltage does not go to 0 Volts and the steady state impedance does not go
to
> 0 ohms. Since an impedance match exists, we all know that the both the
> rearward voltage and current go to 0 Volts and 0 Amps, respectively. The
> rearward voltage and current, both going to 0 in the steady state does not
> describe a "virtual short circuit" consistent with the previous definition
> as understood by Roy and others on this newsgroup. A true "virtual short
> circuit" requires the TOTAL steady state voltage to be 0 Volts. This is
not
> the same as the rearward voltage and current going to 0. Additionally, in
> the true definition of a "virtual short circuit", the total steady state
> impedance is 0 ohms, not Zo.
>
> In all fairness to our disagreement, you should make it clear to everyone
> that your use of the "virtual short circuit" term in impedance matching is
> not consistent with a "virtual short circuit" where the total voltage and
> impedance equal 0 Volts and 0 ohms, respectively.
>
> Steve VE9SRB

With all due respect to your expert knowledge of mathematics, Steve, my use of 'virtual short circuit' to reflected waves at the match-point junction, while the source waves see Zo is consistent, contrary to your assessment of the case.

I still remain totally opposed to your assessment of this case.

Walt, W2DU

5559. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 21:34:39 UTC
From: richardharrison@webtv.net
Message-ID: <14154-3E6FA7EF-77@storefull-2312.public.lawson.webtv.net>
Source record: 122549

CAM wrote:
"I don`t see any reflections at the mouth of the stub."

NAVPERS 93400A-6 says:
"---recall that a quarter wavelength of transmission line inverts the impedance at the receiving end, and a half wavelength repeats the impedance at the receiving end.---"

"During the transmitting pulse (of the radar), an arc appears across both spark gaps and causes the TR and ATR circuits to act as a shorted transmission line. However, an open circuit is reflected one quarter wavelength away----."

"None of the transmitted energy can pass through these reflected opens into the ATR stub or into the receiver. Therefore all the transmitted pulse is sent straight to the antenna."

Why do they say transmitted energy can`t pass through the reflected opens?

1. It`s meaningful and traditional to refer to the shorted 1/4-WL stub as an open circuit when it behaves as a parallel resonant circuit.

2. Although opens and shorts reflect energy, the open-circuit behavior of the shorted 1/4-WL stub requires a complete round-trip of energy to attain the phase relations needed to reject energy at the mouth of the stub. It does not all happen in the short.

3. It`s traditional.

4. Even if Cecil were correct, there`s an old Portoguese proverb that`s truer:
"You can`t straighten out the whole world!"

Best regards, Richard Harrison, KB5WZI

5560. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 21:43:48 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4o9mkjvt1@venus.btinternet.com>
Source record: 122548

Seems to me the owners and designers of plant containing inflammable gasses as liquids should be responsible by the Law of the Land for all matters affecting safely of the general public.

For example, they are, or should be, fully aware in this day and age of the large number of road vehicles carrying radio transmitters.

How many mobile radio amateurs continue to transmit on full power while filling-up at gas filling stations?

But by far the most likely cause of explosions at filling stations is stray bullet holes from guns carried as a means of defence against rattlers and fellow citizens. ;o)

Reg.

5561. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 22:04:39 UTC
From: tdonaly@aol.com
Message-ID: <20030312170439.25924.00000134@mb-bh.aol.com>
Source record: 122550

Richard Clark wrote,
>
>On Wed, 12 Mar 2003 18:58:42 GMT, Dave Shrader
><david.shrader@attbi.com> wrote:
>
>> the only way a
>>virtual short can exist
>
>Not quoted as Dave's idea, but the out-of-context passage says reams
>about this thread.
>
>73's
>Richard Clark, KB7QHC
>

Hi, Richard,
see, Cecil is right. An unsupported statement repeated
often
enough becomes gospel.
73,
Tom Donaly, KA6RUH

5562. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 22:23:39 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6FB36B.2E996D67@uci.edu>
Source record: 122551

Richard Harrison wrote:
> Why do they say transmitted energy can`t pass through the reflected
> opens?

Prolly because all of it gets reflected back.

> 1. It`s meaningful and traditional to refer to the shorted 1/4-WL stub
> as an open circuit when it behaves as a parallel resonant circuit.
>
> 2. Although opens and shorts reflect energy, the open-circuit behavior
> of the shorted 1/4-WL stub requires a complete round-trip of energy to
> attain the phase relations needed to reject energy at the mouth of the
> stub. It does not all happen in the short.

I'd even go one further and say the only thing really at the 'short' is
a null in a standing wave pattern.

> 3. It`s traditional.
>
> 4. Even if Cecil were correct, there`s an old Portoguese proverb that`s
> truer:
> "You can`t straighten out the whole world!"

Just so I know, exactly what is Cecil incorrect about?

Thanks and 73,

Jim ac6xg

5563. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 22:35:09 UTC
From: tdonaly@aol.com
Message-ID: <20030312173509.25924.00000137@mb-bh.aol.com>
Source record: 122552

Jim wrote,
>
>Sounds like a fun experiment. It's great when things work out according
>to theory. Best not to misinterpret the results though. Your signal
>wasn't able to propagate past the tee because of phase cancellation -
>not because of a short. A short would have prevented signal from
>propagating through the stub. And as we've seen repeatedly over the last
>couple days, signal does propagate through the stub.
>
>73, Jim AC6XG
>

Tell me something Jim. According to Cecil and Steve Best, and, I guess,
you, if you attach a quarter-wave stub to a transmission line -- let's say in
the middle -- and feed one end of it with a source of some kind, and put
a resistor with the characteristic impedance of the transmission line on
the other end, when you activate the source, a wave will travel down the
transmission line, turn right at the stub, be totally reflected by the stub,
return back to the junction of the stub and the transmission line 180 degrees
out of phase and of the same magnitude as any wave that might want to
continue down the transmission line toward the resistor. It will then turn back

up the transmission line making a standing wave on same all the way up toward
the
source. How does the wave know which direction to take when it comes to a
fork in the road? If it is effectively reflected away from the road going to
the
resistor, according to the gospel according to Saint Cecil, it has to be
reflected
by a physical impedance discontinuity. But Cecil says one doesn't exist at
that
junction. Moreover, reflections from the resistor can't be blamed for the total

lack of current toward the resistor, because there aren't any reflections
in the line toward the resistor. Maybe you can explain all this. In the
meantime,
if I want to think of how a transmission line works, I'll just use an impedance
model
and let it go at that.
73,
Tom Donaly, KA6RUH

5564. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 22:47:19 UTC
From: tdonaly@aol.com
Message-ID: <20030312174719.25924.00000138@mb-bh.aol.com>
Source record: 122553

Cecil wrote,
>
>
>I don't see any reflections at the mouth of the stub. All I see is the 6-7
>watts
>of forward power blowing right past the virtual short and flowing into the
>stub.
>And 6-7 watts of reflected power blowing right past the virtual short on its
>way
>back toward the source. The only reason that no power makes it to the load is
>that the forward and reflected voltages phasor-sum to zero at the mouth of
>the
>stub. It's just like plumber's delight construction of a Yagi.
>
>If you had measured the forward and reflected power in the stub, you would
>have
>measured 6-7 watts both directions.
>--
>cheers, CAM http://www.qsl.net/w5dxp
>
How is it that the wave can be reflected back toward the source from the load
by wave cancellation, but it can't be reflected back toward the source from the

stub by wave cancellaton? How can there be a reflecton from the load anyway,
if there's no "physical impedance discontinuity?" I think it's time you turned
in
your Occam's Razor card, Cecil.
73,
Tom Donaly, KA6RUH

5565. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 22:56:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FBB09.3030200@ieee.org>
Source record: 122554

David Robbins wrote:
> i was following the parts of the discussion about replacing the 'virtual'
> short with a real one and what that did. i didn't think there was ever any
> question about there being real current in a stub, its just so obvious that
> there has to be.

Yep, that's my position also. The corollary to that is that reflections
don't happen at the mouth of the stub. They happen at the physical
impedance discontinuity at the other end of the stub. 'Course that
statement assumes you believe in reflections at all. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5566. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:12:55 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <Q9Pba.5610$VT.624801@news20.bellglobal.com>
Source record: 122555

"OC_CAM's Razor"
> Source----50 ohm feedline----x---1/4WL 50 ohm open stub
> |
> +----50 ohm feedline----------50 ohm load
>
> The voltage is zero at point 'x' so no energy reaches the "matched load".

a) Isn't that what Walt said ?
b) The voltage at point 'x' depends on where 'x' is located along the 1/4WL stub. The stub must contain a standing wave (otherwise you might as well put it away) and the voltage would be high towards the open end and very low towards the junction.

5567. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:16:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6FBFC8.C42264CE@uci.edu>
Source record: 122556

Tdonaly wrote:
> Tell me something Jim. According to Cecil and Steve Best, and, I guess,
> you, if you attach a quarter-wave stub to a transmission line -- let's say in
> the middle -- and feed one end of it with a source of some kind, and put
> a resistor with the characteristic impedance of the transmission line on
> the other end, when you activate the source, a wave will travel down the
> transmission line, turn right at the stub, be totally reflected by the stub,
> return back to the junction of the stub and the transmission line 180 degrees
> out of phase and of the same magnitude as any wave that might want to
> continue down the transmission line toward the resistor.

Kind of a long sentence, but so far I think the answer would depend on
what's at the end of the stub.

> It will then turn back
>
> up the transmission line making a standing wave on same all the way up toward
> the
> source.

I think it's fair to say there would be standing waves on the
transmission line as well as the stub. But the exact conditions on the
transmission line would depend on the length of the transmission line.
In our discussions we've been using transmission lines of arbitrary
length, and just concetrating on the stub and its ends.

> How does the wave know which direction to take when it comes to a
> fork in the road? If it is effectively reflected away from the road going to
> the
> resistor, according to the gospel according to Saint Cecil, it has to be
> reflected
> by a physical impedance discontinuity.

It's a good question. There's a difference between transient and steady
state conditions. It was covered a couple days ago, and really isn't a
point of contention among most in the group. The quick answer is that
with a null on the transmission line at the tee, there are no fields to
enable propagation beyond that point in the transmission line. The
fields are not null in the reverse direction, back toward the source.
However there may be a special case exception for multiples of 1/4 wl
lengths of transmission line.

> But Cecil says one doesn't exist at
> that
> junction.

He also says there no reflection there.

> Moreover, reflections from the resistor can't be blamed for the total
>
> lack of current toward the resistor, because there aren't any reflections
> in the line toward the resistor.

I'm going to step way out on a limb and say we would all probably tend
to agree with that. ;-)

> Maybe you can explain all this. In the
> meantime,
> if I want to think of how a transmission line works, I'll just use an impedance
> model
> and let it go at that.
> 73,
> Tom Donaly, KA6RUH

Fair enough, Tom. I think that's what the model is intended for.

73, Jim AC6XG

5568. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:19:22 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <TfPba.5612$VT.625963@news20.bellglobal.com>
Source record: 122557

"Jim Kelley"
> Just so I know, exactly what is Cecil incorrect about?

Cecil incorrectly thinks that other people think that the stub is 'really' empty.

In fact, other people have repeatedly acknowledged that the stub contains a standing wave and then, as an approximation if you wish for certain analysis purposes within the obvious limits such as steady state and single frequency, you can use the imagined concept of a virtual short (if you wish - but nobody is twisting your arm - but you don't have to if you don't want to).

That's it in a nutshell (I think).

5569. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:27:22 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <nnPba.5616$VT.627471@news20.bellglobal.com>
Source record: 122558

"OC_CAM's Razor"
> The useful shortcut [virtual shorts] exists only in human minds.

Heck, it has never been proven conclusively that the entire universe exists anywhere other than the observer's mind. Of course, it is a reasonable simplifying assumption that it does exist...

...maybe.

Sorry - drifting again.

'virtual shorts' - virtual boxers or virtual briefs ?
:-)

5570. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:30:17 UTC
From: richardharrison@webtv.net
Message-ID: <14154-3E6FC309-99@storefull-2312.public.lawson.webtv.net>
Source record: 122562

Jim, AC6XG wrote:
"Just so I know exactly what is Cecil incorrect about?"

If you short an r-f transmission line, 1/4-WL back from the short, a voltage maximum occurs. A current minimum coincides with the voltage maximum. This is a maximum impedance point in the line with a reflection. This point is sometimes called a virtual open circuit.

Cecil says, I believe, that this point reflects nothing despite its high impedance. All complete reflections, he says, must occur from a physical short or open of the transmission line.

He may be right.

Best regards, Richard Harrison, KB5WZI.

5571. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:33:28 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FC3C8.10409@ieee.org>
Source record: 122559

Walter Maxwell wrote:
> Cecil, apparently you haven't read all of my posts, one in reply to Richard
> C. In that post, 3-11 at 2:2 pm, I reported measurements in the stub. At the
> junction end of the stub the forward and reverse powers were 50 and 45
> watts, respectively. With the Bird 43 wattmeter at the open end of the stub,
> and with the downstream side of the 43 left open circuited, the forward and
> reflected powers were both 40 watts. This is what theory tells us would
> happen at an open circuit--all forward power totally reflected.

The question is, Walt, how does the 40 watts get into the stub in the first
place if the 1.9 ohm impedance at the mouth of the stub is causing reflections.
For 40 watts to get through a 1.9 ohm impedance in a 50 ohm environment, the
driving power would have to be about 500 watts. 1.9 ohm reflects 92% of the
incident power in a 50 ohm environment. Where did the 460 watts of power
reflected at the 1.9 ohm virtual impedance go?

> You've been wondering where the increased power came from. Well, it's the
> forward power increase due to re-reflection of the waves reflected either by
> the 1.9-ohm resistance at junction or the 2550-ohm resistance at the open
> circuit of the stub. At this point I won't argue which is causing the
> reflections.

Well, that's what the entire argument is about. Where do the stub reflections
really occur? At the mouth of the stub or at the other end of the stub.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5572. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:37:09 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E6FC4A5.9578F48A@uci.edu>
Source record: 122560

"J. Harvey" wrote:
>
> "Jim Kelley"
> > Just so I know, exactly what is Cecil incorrect about?
>
> Cecil incorrectly thinks that other people think that the stub is 'really'
> empty.

I can understand how asserting that waves reflect off of a virtual short
might tend to give someone that impression.

> In fact, other people have repeatedly acknowledged that the stub contains a
> standing wave and then, as an approximation if you wish for certain analysis
> purposes within the obvious limits such as steady state and single
> frequency, you can use the imagined concept of a virtual short (if you
> wish - but nobody is twisting your arm - but you don't have to if you don't
> want to).
>
> That's it in a nutshell (I think).

I appreciate your clarification. Though I wonder if that's what Richard
was referring to.

73, Jim AC6XG

5573. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:41:26 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <zAPba.5626$VT.629205@news20.bellglobal.com>
Source record: 122563

"Dave Shrader"
> Now physics people can argue all over the place about it
> but engineers can feel the heat being dissipated.

Hey !!!!!!!!!!!!!!!!!!!!

"Jim Kelley"
> Physicists wouldn't be arguing about it.

Darn right Jim !! Thanks.

"J. Harvey", BSc Physics wrote in this thread
[on March 11, 2003 9:01 PM EST]
> ...
> (In the real world, some power will leak in to
> make up for the losses in the stub.)

See ?!?!?!

:-)

5574. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:41:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FC5A7.20606@ieee.org>
Source record: 122561

Richard Harrison wrote:
> Why do they say transmitted energy can`t pass through the reflected
> opens?

They are obviously talking about NET energy, Richard. Here we are
talking about forward and reflected energy in the stub. When they
say "transmitted energy can't pass", they are talking about NET
energy. There is nothing at the mouth of a stub to block the influx
of forward energy. If there was, the stub would stop functioning.
The stub requires a supply of forward energy to maintain the reflections
at the far end.

> 2. Although opens and shorts reflect energy, the open-circuit behavior
> of the shorted 1/4-WL stub requires a complete round-trip of energy to
> attain the phase relations needed to reject energy at the mouth of the
> stub. It does not all happen in the short.

How do they maintain the round trip energy and the reflections in the stub
if the stub is rejecting all the energy? Does it tell how they accomplish
that supernatural feat?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5575. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-12 23:52:09 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FC829.5090009@ieee.org>
Source record: 122564

Tdonaly wrote:
> Tell me something Jim. According to Cecil and Steve Best, and, I guess,
> you, if you attach a quarter-wave stub to a transmission line -- let's say in
> the middle -- and feed one end of it with a source of some kind, and put
> a resistor with the characteristic impedance of the transmission line on
> the other end, when you activate the source, a wave will travel down the
> transmission line, turn right at the stub, be totally reflected by the stub,
> return back to the junction of the stub and the transmission line 180 degrees
> out of phase and of the same magnitude as any wave that might want to
> continue down the transmission line toward the resistor. It will then turn back
> up the transmission line making a standing wave on same all the way up toward
> the source.

You're obviously confused. Configuring the system a little differently:

Source---------------x---1/4WL open stub---

At point 'x' the forward voltage and the voltage reflected from the open
end of the stub will be equal and 180 degrees out of phase. Thus the
voltage at point 'x' will be zero. There are no reflections at point 'x'.
All of the reflections are occurring at the open end of the stub.

Now add whatever load you choose at point 'x'. Since the voltage at point 'x'
is zero, whatever you add at that point is completely irrelevant and has
zero effect on the system. It might as well not exist during steady-state.
There are still no reflections at point 'x'.

It is easy to start out with what you did and wade through the transient
buildup to steady-state but I thought the above steps to steady-state
would be easier for you to understand.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5576. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 00:06:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FCB8B.10702@ieee.org>
Source record: 122565

Tdonaly wrote:
> How is it that the wave can be reflected back toward the source from the load
> by wave cancellation, but it can't be reflected back toward the source from the
> stub by wave cancellaton? How can there be a reflecton from the load anyway,
> if there's no "physical impedance discontinuity?"

There can exist wave cancellation at a point where reflections occur or at
a point where reflections do not occur. Knowing that wave cancellation exists
at a point does not tell you anything about the location of the physical
reflection point.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5577. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 00:10:23 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FCC6F.1050006@ieee.org>
Source record: 122566

J. Harvey wrote:
> "OC_CAM's Razor"
>
>>Source----50 ohm feedline----x---1/4WL 50 ohm open stub
>> |
>> +----50 ohm feedline----------50 ohm load
>>
>>The voltage is zero at point 'x' so no energy reaches the "matched load".
>
> a) Isn't that what Walt said ?
> b) The voltage at point 'x' depends on where 'x' is located along the 1/4WL
> stub. The stub must contain a standing wave (otherwise you might as well
> put it away) and the voltage would be high towards the open end and very low
> towards the junction.

Remember the question is: Do any reflections occur at point 'x'. I say no.
That's my whole argument. Everything else is just support material.

And what Walt says is correct 99.9% of the time. I would be stupid to
disagree with him when he is right. :-)
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5578. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 00:17:43 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FCE27.4090900@ieee.org>
Source record: 122568

J. Harvey wrote:
> "Jim Kelley"
>
>>Just so I know, exactly what is Cecil incorrect about?
>
> Cecil incorrectly thinks that other people think that the stub is 'really'
> empty.
>
> In fact, other people have repeatedly acknowledged that the stub contains a
> standing wave ...

But that leaves them with a contradiction. If a stub presents a virtual short to the energy trying to enter the stub, it must necessarily wind up empty. People cannot have it both ways. Either a virtual short reflects all of the energy trying to enter the stub or it doesn't cause reflections.

So all you people out there, which of the following is the true statement? They cannot both be true.

1. The virtual short at the mouth of a lossless stub causes 100% reflection thereby blocking all energy from entering the stub.

2. The virtual short at the mouth of a lossless stub allows energy into the stub and thus causes no reflections at the mouth of the stub.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5579. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 00:19:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6FCEAB.655FBF52@cwis.net>
Source record: 122567

Floyd,
"Wrapping the feed line around" a propane tank?
Grounded or ungrounded, you're kidding, right?
'Doc

5580. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 00:21:08 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <N9Qba.5648$VT.634423@news20.bellglobal.com>
Source record: 122469

"OC_CAM's Razor"
> Do any reflections occur at point 'x'. I say no.
> That's my whole argument.

Others say that they are allowed to pretend that the reflection do occur at point 'x' so long as they stay within the bounds of the assumptions that make it a reasonable mental shortcut.

They're right of course.

And so are you.

Okay, all done now ?

5581. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 00:51:38 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FD61A.6060909@ieee.org>
Source record: 122470

J. Harvey wrote:
> "OC_CAM's Razor"
>
>>Do any reflections occur at point 'x'. I say no.
>>That's my whole argument.
>
> Others say that they are allowed to pretend that the reflection do occur at
> point 'x' so long as they stay within the bounds of the assumptions that
> make it a reasonable mental shortcut.
>
> They're right of course.
>
> And so are you.
>
> Okay, all done now ?

We still have people who think that actual reflections occur at a
virtual short - and not the pretend type. Some people remain
unconvinced and I am in email contact with them.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5582. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 01:03:45 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <MNQba.4348$Mz.596567@news20.bellglobal.com>
Source record: 122471

"OC_CAM's Razor"
> So all you people out there, which of
> the following is the true statement?
> They cannot both be true.
>
> 1. The virtual short at the mouth of a lossless
> stub causes 100% reflection thereby blocking
> all energy from entering the stub.
>
> 2. The virtual short at the mouth of a lossless
> stub allows energy into the stub and thus causes
> no reflections at the mouth of the stub.

If only electrons (and holes) had serial numbers, then you would have to choose one. Given that they don't (have SNs), then either could be true. There's no way to tell with the previously-mentioned assumptions (single frequency and steady state).

BTW - If you want to give the wave some internal identity, then just make it complex (as opposed to single frequency and steady state). Then all becomes obvious. It all comes down to the Subject Line (with minor spelling correction) doesn't it ?

5583. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 01:21:19 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <878yvkxdrk.fld@barrow.com>
Source record: 122472

'Doc <w5lz@cwis.net> wrote:
>Floyd,
> "Wrapping the feed line around" a propane tank?
>Grounded or ungrounded, you're kidding, right?
> 'Doc

Think about it.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5584. Master Mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 01:23:21 UTC
From: VA3ATD <a.duffy@sympatico.ca>
Message-ID: <3E6FDD89.7010402@sympatico.ca>
Source record: 122473

Hello all,

Has anyone information on a Master Mobile remote operated roller inductor. Sorry, no model #. It appears to be 14 gauge wire on the roller it's self.

I'm assuming that terminals 1,2,3 are connected to the same on both the controller and inductor while terminals 4 and 5 are connected to the power supply. Terminal 5 ground? Should I also assume the inductor has to be grounded to the car body?

I find it strange that the antenna for a car AM radio is fed through the control unit as well as a having a meter on it. Field strength antenna for the meter circuit?

Thanks in advance for info on wiring and operation.

--
73, Tony
VA3ATD

5585. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 02:17:51 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E6FEA4F.F9EFE035@cwis.net>
Source record: 122474

Floyd,
Think about it? I've been to a rodeo, a goat-rope'n,
and a couple of fires involving propane tanks. I don't
wanna think about it. I'm not wrapping any feed lines
around any kind of tank containing flamable liquids, gasses,
or solids, thanks anyway...
'Doc

5586. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 02:56:10 UTC
From: dplatt@radagast.org
Message-ID: <v6vsqadfuo7115@corp.supernews.com>
Source record: 122475

>Floyd,
> Think about it? I've been to a rodeo, a goat-rope'n,
>and a couple of fires involving propane tanks. I don't
>wanna think about it. I'm not wrapping any feed lines
>around any kind of tank containing flamable liquids, gasses,
>or solids, thanks anyway...

Hmmm. Well, winding a coax a few times around a propane tank would create some sort of RF choke, I imagine.

If the propane were to be touched off by accident, that choke would turn into one _hell_ of a cough! Not the sort of Heimlich Manuever I'd want to be around.

More seriously, though... the possible electrical hazard involved in a coax wouldn't be the only issue. I'd be equally concerned about mechanical issues. It's not unknown for coaxes, ropes, etc. to be snagged somehow, and then pulled... tower comes down in a high wind, etc. If you've looped the coax around a propane tank, there just _might_ be enough mechanical force to pull a small tank off of its mountings, or break a pipe or hose or regulator, and then you'd have propane spraying around all over the place and mixing with the air and making a nice explosive mixture. Fuel-air-explosive bombs are best left to the military.

Running a coax or other feedline around a propane tank is probably one of those many things which you can get away with 99.99% of the time... and the other .01% somebody ends up dead.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

5587. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 03:08:18 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <874r68x8t9.fld@barrow.com>
Source record: 122476

'Doc <w5lz@cwis.net> wrote:
>Floyd,
> Think about it? I've been to a rodeo, a goat-rope'n,
>and a couple of fires involving propane tanks. I don't
>wanna think about it. I'm not wrapping any feed lines
>around any kind of tank containing flamable liquids, gasses,
>or solids, thanks anyway...
> 'Doc

Fine. But you should be aware than none of the above relates
at all to antenna feedlines. I was discussing feelines. You
aren't.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5588. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 03:09:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FF65B.4020902@ieee.org>
Source record: 122477

J. Harvey wrote:
> BTW - If you want to give the wave some internal identity, then just make it
> complex (as opposed to single frequency and steady state). Then all becomes
> obvious.

Yep, that's what I did when I experimented with TV ghosting. It became
obvious that the TV signal is making a round trip to the end of the
stub and back. It would take some supernatural happening for that
process to suddenly change into something entirely different at exactly
the time when steady-state is reached.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5589. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 03:14:03 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E6FF77B.50003@ieee.org>
Source record: 122478

Gene Fuller wrote:
> Cecil, What was it you said about ad hominem attacks?
> I believe you just called me anti-science, ignorant, and a wet-dream
> guru. (Hey, that may not be so bad!)

Nothing personal, Gene. The "you" in my posting is a collective "you".
It was a shotgun statement aimed at everyone. If the Foo shits, wear
it. :-) Remember that old joke?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5590. Re: ATU for marine use

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 03:56:23 UTC
From: wf3h@ptnospam.com
Message-ID: <3e700119.42574865@news.ptdprolog.net>
Source record: 122479
Cross-posted to: rec.radio.amateur.antenna,rec.boats.electronics

On Sat, 1 Mar 2003 15:52:19 +0000 (UTC), Richard C. Ferryman
<Richard.Ferryman@btinternet.com> wrote:

>Can anyone recommend an atu that is rugged elecrically but will also
>stand up well to the harsh marine environment? It is to tune the the
>backstay on a yacht. 100W pepmaximum but I like to overrate
>everything so 300W pep capability.
>Thanks
>Richard G4BBH G4BBH/MM

just got an email that SGC has dropped the price of their SGC 239 by
$100.

5591. Re: Master Mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 05:19:31 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e701675_4@news1.prserv.net>
Source record: 122480

It is called a Master Matcher model 2495 -6 (6V) or -12 (12V). Your guess about the car antenna being used for the FS is likely correct. The control is simply a reversible DC motor, so you could work out the circuit with a DC supply and an ohmmeter. Since both 6 and 12 volt versions were available, be careful how much voltage you apply to the motor. The whole motor circuit may be floating, as both + and - grounds were available in 6V cars. The box will be grounded through the coax, but the motor power is likely separate for noise reasons. The lamp above the meter indicates when the inductor is at minimum, so that will be a separate circuit. And that may be ground referenced. Check if it is a 6 or 12 volt bulb for which model you have.

--
Crazy George
Remove NO and SPAM from return address
"VA3ATD" <a.duffy@sympatico.ca> wrote in message
news:3E6FDD89.7010402@sympatico.ca...
> Hello all,
>
> Has anyone information on a Master Mobile remote operated roller
> inductor. Sorry, no model #. It appears to be 14 gauge wire on the
> roller it's self.
>
> I'm assuming that terminals 1,2,3 are connected to the same on both the
> controller and inductor while terminals 4 and 5 are connected to the
> power supply. Terminal 5 ground? Should I also assume the inductor has
> to be grounded to the car body?
>
> I find it strange that the antenna for a car AM radio is fed through the
> control unit as well as a having a meter on it. Field strength antenna
> for the meter circuit?
>
> Thanks in advance for info on wiring and operation.
>
> --
> 73, Tony
> VA3ATD
>

5592. Mounting an FT100D in a Toyota Tacoma Extra Cab P/U Truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 05:35:26 UTC
From: "Dan Hayman, KD0DAN" <DanHayman@Accomplishments.com>
Message-ID: <YQbca.151$nX5.86805@news.uswest.net>
Source record: 122445

Just got a "new to me" 1999 Tacoma Ext Cab. Trying to figure out how to best mount my FT100D as well as the ATAS antenna. The trick is placing the antenna in a place where its functional as well as out of the way (same goes for the radio for that matter).

Any ideas?

Thanks,

Dan, KD0DAN

--
Dan Hayman
www.RakNRoll.com
From Surf Boards To Canoes, From SUV's To RV's, "The No Holes Drilled Transport Solution"

5593. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 06:25:22 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E702452.2C847A90@cwis.net>
Source record: 122481

Floyd,
When you mix a fuel tank and feed lines you are
NOT just talking about feed lines anymore. And you
are right, I'm not talking about feed lines, I'm
talking about using a little common sense for safety's
sake, in the routing of feed lines.
'Doc

5594. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 06:35:39 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <pb907vc3r1at9lgip7p9c1u5bj8bbe67ri@4ax.com>
Source record: 122482

On Wed, 12 Mar 2003 17:41:27 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:
[snip]

| Does it tell how they accomplish
|that supernatural feat?

When I was much younger and still working as a tech on the Phoenix missile receiver-transmitter-unit I posed a question to a coworker.

"Doc" Stinson was a PhD and former tenured prof at the U of Az.

Me: "Doc, how does a magic tee work?"

Doc: "It's magic."

5595. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 07:09:43 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87vfynwxmw.fld@barrow.com>
Source record: 122483

'Doc <w5lz@cwis.net> wrote:
>Floyd,
> When you mix a fuel tank and feed lines you are
>NOT just talking about feed lines anymore. And you
>are right, I'm not talking about feed lines, I'm
>talking about using a little common sense for safety's
>sake, in the routing of feed lines.
> 'Doc

What I pointed out was that the thinking being expressed
about lightning and how it might affect a transmission line
and or a propane tank, was bogus.

That does not make propane tanks safe.

But routing a feedline close to or even in contact with a
propane tank is simply *not* going to make it more or less of a
danger in regard to lightning. If the tank is not grounded, it
is exceedingly dangerous (which is absolutely unrelated to the
feedline). If the tank is grounded, it will actually help
protect the feedline/antenna.

The idea that the antenna is going to take a direct hit and
cause the tank to explode is simply invalid. The idea that
power from the transmission line is going to cause an explosion
inside the tank is also invalid.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5596. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 07:28:39 UTC
From: N9ECR@webtv.net
Message-ID: <5336-3E703327-114@storefull-2353.public.lawson.webtv.net>
Source record: 122484

Floyd, think about it,why are you safe inside an automobile during a lightning storm?

5597. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 09:13:36 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87r89bwrwf.fld@barrow.com>
Source record: 122485

N9ECR@webtv.net (Scott Webb) wrote:
>Floyd, think about it,why are you safe inside an automobile during a
>lightning storm?

Are you?

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5598. Wt halo antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 10:53:53 UTC
From: kc5cqa@devtex.net
Message-ID: <3e7162cb.21723996@news.devtex.net>
Source record: 122426

I am looking for a halo type antenna for two meters, and 440mhz.
thanks cl.

5599. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 12:09:43 UTC
From: VE9SRB <srbest@att.net>
Message-ID: <by_ba.3191$ja4.222715@bgtnsc05-news.ops.worldnet.att.net>
Source record: 122486

"Walter Maxwell" <w2du@iag.net> wrote in message
news:8jNba.17320$gF3.1538239@newsread1.prod.itd.earthlink.net...
>
> >
> > In all fairness to our disagreement, you should make it clear to
everyone
> > that your use of the "virtual short circuit" term in impedance matching
is
> > not consistent with a "virtual short circuit" where the total voltage
and
> > impedance equal 0 Volts and 0 ohms, respectively.
> >
> > Steve VE9SRB
>
> With all due respect to your expert knowledge of mathematics, Steve, my
use
> of 'virtual short circuit' to reflected waves at the match-point junction,
> while the source waves see Zo is consistent, contrary to your assessment
of
> the case.
>
> I still remain totally opposed to your assessment of this case.
>
> Walt, W2DU
>

Walt,

I respect and appreciate the fact that we disagree on certain aspects of this subject matter. I do not intend to debate further in this forum as both of us have more than adequately stated our opionions. I hope things are fine with you otherwise.

Take care,

Steve VE9SRB

5600. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 12:17:22 UTC
From: richardharrison@webtv.net
Message-ID: <27293-3E7076D2-72@storefull-2311.public.lawson.webtv.net>
Source record: 122490

Wes, N7WS wrote:
"It`s magic."

Terman, in his 1955 opus, gives an explanation of the "Magic T" on page 156. The Magic T seems to me to be an adaptation of the transformer center-tapped secondary hybrid, with an added mode twist.

Terman compares the function of the Magic T to that of the hybrid ring that you might find in your VHF repeater.

Best regards, Richard Harrison, KB5WZI

5601. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 12:21:59 UTC
From: richardharrison@webtv.net
Message-ID: <27294-3E7077E7-19@storefull-2311.public.lawson.webtv.net>
Source record: 122487

Wes, N7WS wrote:
"It`s magic."

Terman, in his 1955 opus, gives an explanation of the "Magic T" on page 156. The Magic T seems to me to be an adaptation of the transformer center-tapped secondary hybrid, with an added mode twist.

Terman compares the function of the Magic T to that of the hybrid ring that you might find in your VHF repeater.

Best regards, Richard Harrison, KB5WZI

5602. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 12:24:05 UTC
From: richardharrison@webtv.net
Message-ID: <29747-3E707865-154@storefull-2313.public.lawson.webtv.net>
Source record: 122488

Wes, N7WS wrote:
"It`s magic."

Terman, in his 1955 opus, gives an explanation of the "Magic T" on page 156. The Magic T seems to me to be an adaptation of the transformer center-tapped secondary hybrid, with an added mode twist.

Terman compares the function of the Magic T to that of the hybrid ring that you might find in your VHF repeater.

Best regards, Richard Harrison, KB5WZI

5603. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 12:41:28 UTC
From: richardharrison@webtv.net
Message-ID: <3733-3E707C78-207@storefull-2318.public.lawson.webtv.net>
Source record: 122489

Wes, N7WS wrote:
"It`s magic."

Terman, in his 1955 opus, gives an explanation of the "Magic T" on page 156. The Magic T seems to me to be an adaptation of the transformer center-tapped secondary hybrid, with an added mode twist.

Terman compares the function of the Magic T to that of the hybrid ring that you might find in your VHF repeater.

Best regards, Richard Harrison, KB5WZI

5604. Re: What are my legal responsibilities as a Ham?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 14:30:42 UTC
From: richardharrison@webtv.net
Message-ID: <11915-3E709612-201@storefull-2314.public.lawson.webtv.net>
Source record: 122491

fch wrote:
"If a neighbor complains about me interfering with his TV?"

You are compelled to comply with what`s written in the law and rules. No more and no less. If it`s not specified in print, you don`t have to do it. You may wish you had.

The ARRL has publications to help cope with complaints. One suggests 6 areas to explore. Three are related to the sender, which may be any number of devices, and three are related to the receiver, which may be a radio, TV, phone, stereo, blasting caps, etc.

The abbreviated list is:
1. Receiver traits
2. Receiver & wiring siting
3. RFI`ed user practices
4. RFI generator traits
5. RFI generator siting
6. RFI generator operator practices

Best regards, Richard Harrison, KB5WZI

5605. Medfer AM antenna loading question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 15:39:17 UTC
From: wings@dakotacom.net
Message-ID: <3e70a30f.11284123@news.dakotacom.net>
Source record: 122492

I am setting up an AM part 15 radio station for my kids school science project. I am planning on mounting a 3 meter vertical with one inch diameter post using four 3 meter top hat radials with a base loading coil of about 260 uH located about 20 feet above the earth with four quarter wave radial ground plane #12 wires for operation at 1.7 MHz.

I am confused about the loading coil requirements for this station, as I am trying to maximize the legal operation radius using 100 mW final stage input power.

Several old DOS antenna programs that I have fiddled with give me values for various components. I know that the loading coil will need to be about 260 uH, but am unsure about the "Q factor" that I will need, so have a simple idea. I am considering making a very high Q loading coil (about 500) and adding a series resistor potentiometer of about 4 ohms. My idea is to adjust the antenna to resonance using variable tap locations on the coil and adjusting the ground capacitor, then adjusting the series loading pot to give the needed Q-reduction to allow the 10KHz bandwidth I will need for operation. I will not know in advance what my antenna Q is, only the approximate maximum Q of the loading coil.

So the question boils down to is a low resistance winding on a coil with a series resistance equivalent to a higher resistance coil winding? Is this method feasable? I wish to operate with the minimum bandwidth for the maximum possible output power.

Regards,

Gene A. Townsend

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5606. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 16:11:33 UTC
From: richardharrison@webtv.net
Message-ID: <21650-3E70ADB5-191@storefull-2316.public.lawson.webtv.net>
Source record: 122494

Scott, N9ECR wrote:
"Floyd, think about it, why are you safe inside an automobile during a lightning storm?"

The auto is an all-metal construction and short=circuits lightning bolts. All parts are very nearly at the same potential due to their interconnection, so there is no difference of potential to force current through contents.

One night, after pulling the big switch at the station after sign-off, I came across a couple of suddenly sober guys sitting dazed in a car in the middle of the road. A downed high-voltage power line swung low nearby across part of the road.

I asked what happened? One guy replied: "There was a big bang and a blinding flash. I told Frank, Don`t open the door or roll down a window. Just put this damn thing in reverse and lets get outta here."

They hadn`t gone but a few yards. They were still stunned. A violent storm had dropped a cable. There were holes burnt in the vehicle roof where the cable had contacted or flashed over to it. The driver had swerved into a ditch, but didn`t avoid the cable. Nobody suffered electric shock. Burnt steel and rubber were the only casualties. I don`t remember the lights even blinking in our station supplied by the line.

Best regards, Richard Harrison, KB5WZI

5607. Re: Medfer AM antenna loading question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 16:19:46 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4qb32$5a1$1@sparta.btinternet.com>
Source record: 122493

I'm afraid you are on the wrong track.

Forget about obtaining or making a Q = 500 tuning coil. At MF there's no such thing.

When designing a radio transmitter + antenna system you have to accept whatever Q you end up with. Usually you hope the Q is not too low.

To limit radiated power to 100 milliwats just make a transmitter with a carrier drive-level control somewhere inside it.

Measure antenna drive-point impedance, calculate what antenna current is needed for 100 milliwatts, and set the antenna current to that value.

Reg, G4FGQ

==========

"Gene A. Townsend" <wings@dakotacom.net> wrote in message news:3e70a30f.11284123@news.dakotacom.net...
> I am setting up an AM part 15 radio station for my kids school science
> project. I am planning on mounting a 3 meter vertical with one inch
> diameter post using four 3 meter top hat radials with a base loading
> coil of about 260 uH located about 20 feet above the earth with four
> quarter wave radial ground plane #12 wires for operation at 1.7 MHz.
>
> I am confused about the loading coil requirements for this station, as
> I am trying to maximize the legal operation radius using 100 mW final
> stage input power.
>
> Several old DOS antenna programs that I have fiddled with give me
> values for various components. I know that the loading coil will need
> to be about 260 uH, but am unsure about the "Q factor" that I will
> need, so have a simple idea. I am considering making a very high Q
> loading coil (about 500) and adding a series resistor potentiometer of
> about 4 ohms. My idea is to adjust the antenna to resonance using
> variable tap locations on the coil and adjusting the ground capacitor,
> then adjusting the series loading pot to give the needed Q-reduction
> to allow the 10KHz bandwidth I will need for operation. I will not
> know in advance what my antenna Q is, only the approximate maximum Q
> of the loading coil.
>
> So the question boils down to is a low resistance winding on a coil
> with a series resistance equivalent to a higher resistance coil
> winding? Is this method feasable? I wish to operate with the minimum
> bandwidth for the maximum possible output power.

>
> Regards,
>
> Gene A. Townsend
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5608. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 17:36:58 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E70C1BA.864044C1@cwis.net>
Source record: 122495

Floyd,
Would you also use gas lines for grounding?
'Doc

5609. Re: ATU for marine use

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 17:55:05 UTC
From: Ken Coit <parfait@nc.rr.com>
Message-ID: <ZB3ca.124335$Se4.10443842@twister.southeast.rr.com>
Source record: 122496
Cross-posted to: rec.radio.amateur.antenna,rec.boats.electronics

ICOM AH-4?

Ken / ND7N

<wf3h@ptnospam.com> wrote in message
news:3e700119.42574865@news.ptdprolog.net...
> On Sat, 1 Mar 2003 15:52:19 +0000 (UTC), Richard C. Ferryman
> <Richard.Ferryman@btinternet.com> wrote:
>
> >Can anyone recommend an atu that is rugged elecrically but will also
> >stand up well to the harsh marine environment? It is to tune the the
> >backstay on a yacht. 100W pepmaximum but I like to overrate
> >everything so 300W pep capability.
> >Thanks
> >Richard G4BBH G4BBH/MM
>
>
> just got an email that SGC has dropped the price of their SGC 239 by
> $100.

5610. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 18:13:24 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <0ni17v4kv0ljhlaaioag0695t4ksq41q91@4ax.com>
Source record: 122497

On Wed, 12 Mar 2003 17:33:28 -0600, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>the 1.9 ohm virtual impedance

Hi Cecil,

Inventing a virtual impedance from Walt's actual data?

So where does the fruit of this -uh- logic lead?

73's
Richard Clark, KB7QHC

5611. Re: Medfer AM antenna loading question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 18:38:19 UTC
From: richardharrison@webtv.net
Message-ID: <21650-3E70D01B-228@storefull-2316.public.lawson.webtv.net>
Source record: 122498

Gene A. Townsend wrote:
"I am planning on mounting a 3 meter vertical---."

At 176 meters, 3 meters is only 0.017 WL.
Radiation resistance is less than one ohm.
Regardless of loading coil Q, your ground and other losses will make
overall antenna Q very low. Bandwidth won`t be a problem.

Best regards, Richard Harrison, KB5WZI

5612. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 18:58:02 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <9rj17vgup02kki4htsjd7k4mg61arii9kh@4ax.com>
Source record: 122499

On Wed, 12 Mar 2003 17:30:17 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Jim, AC6XG wrote:
>"Just so I know exactly what is Cecil incorrect about?"
>
>If you short an r-f transmission line, 1/4-WL back from the short, a
>voltage maximum occurs. A current minimum coincides with the voltage
>maximum. This is a maximum impedance point in the line with a
>reflection. This point is sometimes called a virtual open circuit.
>
>Cecil says, I believe, that this point reflects nothing despite its high
>impedance. All complete reflections, he says, must occur from a physical
>short or open of the transmission line.
>
>He may be right.
>
>Best regards, Richard Harrison, KB5WZI.

Hi Richard,

For which of the threads du jour? At what efficiency?

Your description above describes a discontinuity - which has been
stated all around to be sufficient for reflection. It takes a very
special connection at that massive discontinuity to create the
ILLUSION of a smooth and unfettered transmission line.

Walt's "pristine" cable presented nearly an Ohm of very real loss.
This shows to go you that at HF "pristine" is pretty scruffy, and at
VHF and above little bodes better. Yet and all it present a reject
filter with a null almost 30dB down. The upside of that is that the
reject curve is broad enough to capture side-bands and adjacent
frequencies. This is to say a "perfect" stub would be nigh on useless
with its 0.1Hz (or smaller) BW.

I think Jeff found he had to explicitly state (what I would have
considered to be eminently obvious) that the only reason for energy
(in excess of the captured stub filled energy) to enter the stub was
to replace power LOST within the stub.

I have seen absolutely no dialog in regards to this captured energy,
the necessity of its replacement (one would consider that as obviously
unnecessary in thought experiments of agreed "perfection"), nor how
these issues of what is reflection when this same energy meets the
same T intersection to see a path to the Xmtr and a path to the Load.

Would it be repetitive to say obvious: it will see a massive discontinuity and want to reflect back? Obvious, yes, repetitive, no - I don't recall many if any commenting in this regard.

Does it strike anyone's interest to observe that only exceedingly rare and fortuitous circumstances allow a perfect stub to cache energy? Some arguments would suggest the stub is simply a conveyor belt: all power goes in, all power goes out before it wends its way to the eventual load. The T intersection has magically turned into a ring?

73's
Richard Clark, KB7QHC

5613. Re: Indoor active HF loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 19:14:28 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <v71m4o7s06iq7d@corp.supernews.com>
Source record: 122500

Greetings,

Here are some great links a friend shared with me last month:
Receive Loops.
http://www.frontiernet.net/~jadale/Loop.htm
http://www.carcanada.net/dx/RTL.html
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Transmitting Loops.
http://home.datacomm.ch/hb9abx/loop1-e.htm
http://www.qsl.net/mnqrp/Loop/Mag_Loops.htm
http://www.qsl.net/aa5tb/loop.html
http://www.alphalink.com.au/~parkerp/nodec97.htm

Sorry, I don't have a specific answer for your question. But is a subject
I'm also looking into.

Regards,
Jim - ku5s
--
email sent to: denews@taborsoft.com
is discarded without being seen.
Sorry for any inconvenience.

5614. Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 19:19:19 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <XQ4ca.3804$nJ5.349808@newsread2.prod.itd.earthlink.net>
Source record: 122501

Yes, fch, it does. I've been using a 5 band commercial Hexbeam for 3 years now, which I guess makes me an old-timer when it comes to the Hexbeam. Before purchasing the antenna, I evaluated all the other 5 band commercially made antennas as well as the various compact wire beam designs requiring homebrew construction. If my circumstances had not ruled out a 100' tower and the gleaming aluminum antenna structures that I was used to, I would likely not have chosen the Hexbeam. Here's a link to a site where I lay out the advantages as I saw them three years ago, and still do.
http://home.sprintmail.com/~sentek/hexpage1.htm

The front/back ratio, and perhaps the gain (?) varies from one end of the band(s) to the other, with maximum f/b occurring low in the CW band on the five bands. While I see good front/back low in the bands, there is precious little at the top of some of the SSB portion of the bands, most notably 20 meters. On the other hand, the design results in a fairly flat SWR across the entire band(s). I won't enter into a discussion of the exact numbers, since that always results in attacks from the engineers in the group. The numbers I see are not as good as those described by Lew McCoy in his CQ article a couple of years ago, but they are comparable to other 2 element beam designs.

Note that the turning radius of a 20 meter hexbeam is only around 9.5 feet, which makes it smaller in the longest direction than a dipole and substantially smaller than a 2 element 20 meter yagi.

At any rate, I doubt that anyone will argue the fact that any antenna with gain, and particularly a rotatable antenna, will always be better than a dipole. If you have sufficient funds and no restrictions on what you can erect in your area, then put up the biggest, highest yagi array you can find or build. You'll be amazed at what you'll hear compared to the dipole!

K8AC

"fch" <na@hle.com> wrote in message news:3E6A46D5.663501A6@hle.com...
> Is it even directional?
>

5615. Wt.two meter 'eggbeater'

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 19:24:06 UTC
From: kc5cqa@devtex.net
Message-ID: <3e73da74.52360979@news.devtex.net>
Source record: 122454

If someone has a two meter or 440 eggbeater antenna
they would like to sell, please email ,cl. 73

5616. OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 19:28:32 UTC
From: wa0goz@arrl.net
Message-ID: <3E70DBE0.6B6C@arrl.net>
Source record: 122502

Does anyone know how to test MOV's please. A google search didn't get me what I needed.

Thanks and 73

Henry WA0GOZ

5617. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 19:32:51 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E70DC64.89632C7D@attbi.com>
Source record: 122503

A metal automobile, not plastic, not fiberglass, not convertible, etc.,
is a Farraday Cage!!!

Deacon Dave, W1MCE

Scott Webb wrote:
>
> Floyd, think about it,why are you safe inside an automobile during a
> lightning storm?

5618. Wanted: R5 Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 19:36:38 UTC
From: Rick Burke <jrburke@nf.sympatico.ca>
Message-ID: <a55ca.22327$0W6.874828@ursa-nb00s0.nbnet.nb.ca>
Source record: 122504

I am looking for the base section for an R5.
Anyone having a damaged R5 or R7 with a
good base section - I am interested.

Rick vo1sa@hotmail.com

5619. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 19:39:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E70DE81.1040306@ieee.org>
Source record: 122505

Richard Clark wrote:
> Inventing a virtual impedance from Walt's actual data?

I may have missed something by scanning too fast. Was
the 1.9 ohms not a virtual impedance?
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

5620. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 19:45:15 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E70DFCB.40203@ieee.org>
Source record: 122506

Richard Clark wrote:
> The T intersection has magically turned into a ring?

It's not magic, Richard, just a combination of the wave
reflection model, the superposition principle, and the
conservation of energy principle. If a theory is consistent
with all three of those, it is considerably consistent.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

5621. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 20:01:09 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E70E385.6741428B@cwis.net>
Source record: 122507

Floyd Davidson wrote:
> What I pointed out was that the thinking being expressed
> about lightning and how it might affect a transmission line
> and or a propane tank, was bogus.
>
> That does not make propane tanks safe.
>
> But routing a feedline close to or even in contact with a
> propane tank is simply *not* going to make it more or less of a
> danger in regard to lightning. If the tank is not grounded, it
> is exceedingly dangerous (which is absolutely unrelated to the
> feedline). If the tank is grounded, it will actually help
> protect the feedline/antenna.
>
Sorry, I can't agree with that. Grounded or ungrounded, any
thing that puts a propane tank, or the lines leaving the tank,
in the discharge path of lightning is a foolish gamble. Running
the feedline across, under, or wrapped around a propane tank is
not only silly, it's potentially very dangerous.

> The idea that the antenna is going to take a direct hit and
> cause the tank to explode is simply invalid. The idea that
> power from the transmission line is going to cause an explosion
> inside the tank is also invalid.
>
I don't see how you can say it is invalid, that it can't
happen. I don't mean an explosion inside the tank, it probably
won't. But, you are still taking a chance on breaching the tank
or gas lines in a situation where a feedline is in contact with
them. I think that's a needless risk, and would certainly counter
any benefit of a few feet saved by not routing the feed line around
the tank, or any 'choking' affect wrapping a feed line around the
tank would provide. It just ain't too smart Floyd...
'Doc

> --
> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
> Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5622. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 20:03:21 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E70E409.9FE553E1@uci.edu>
Source record: 122508

Richard Clark wrote:
>
> On Wed, 12 Mar 2003 17:30:17 -0600 (CST), richardharrison@webtv.net
> (Richard Harrison) wrote:

> Walt's "pristine" cable presented nearly an Ohm of very real loss.

Yeah, and it wasn't virtual loss either. Please explain how you can
have real loss at a virtual impedance.

> This shows to go you that at HF "pristine" is pretty scruffy, and at
> VHF and above little bodes better. Yet and all it present a reject
> filter with a null almost 30dB down. The upside of that is that the
> reject curve is broad enough to capture side-bands and adjacent
> frequencies. This is to say a "perfect" stub would be nigh on useless
> with its 0.1Hz (or smaller) BW.

If you're arguing that there's really no such thing as a lossless
transmission line then you win. Of course, nobody was arguing against
it. Does that prove something to you about reflections in transmission
lines?

> I think Jeff found he had to explicitly state (what I would have
> considered to be eminently obvious) that the only reason for energy
> (in excess of the captured stub filled energy) to enter the stub was
> to replace power LOST within the stub.

Net energy. Energy in = Energy out + loss.

> I have seen absolutely no dialog in regards to this captured energy,
> the necessity of its replacement (one would consider that as obviously
> unnecessary in thought experiments of agreed "perfection"), nor how
> these issues of what is reflection when this same energy meets the
> same T intersection to see a path to the Xmtr and a path to the Load.

You've seen no discussion of losses within lossless transmission lines,
that's correct. As for the rest........what?????

> Would it be repetitive to say obvious: it will see a massive
> discontinuity and want to reflect back? Obvious, yes, repetitive, no
> - I don't recall many if any commenting in this regard.

It would be repetitive to say obvious twice in a row. Is that what you
want to know?

> Does it strike anyone's interest to observe that only exceedingly rare
> and fortuitous circumstances allow a perfect stub to cache energy?

Cache energy? It might 'cache' the transferred energy prior to reaching steady state, but after that it's 'what goes in must come out' - one way or the other.

> Some arguments would suggest the stub is simply a conveyor belt: all
> power goes in, all power goes out before it wends its way to the
> eventual load.

Evidently you missed it. The argument about that is pretty much over. To the load? Not necessarily.

> The T intersection has magically turned into a ring?

As far as you know apparently.

5623. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 20:19:46 UTC
From: jgboyles@aol.com
Message-ID: <20030313151946.20080.00000015@mb-mv.aol.com>
Source record: 122509

>Does anyone know how to test MOV's please.

MOV=Motor operated valve. Apply power to the motor and watch the valve open.

One way to test the electrical kind: Get a variable ac source and a suitable current limiting resistor, the output capability, and the value resistor depend on the value of the MOV under test. Series the MOV and resistor, hook the AC across the series string and watch the voltage waveform across the MOV with a scope. Increase the AC until you see symetrical clipping of the waveform on the scope. The voltage that clipping takes place is the pk-pk rating of the MOV. The number on the MOV is usually the rms rating. For example a 130 Vrms MOV breaks down at 1.414 X 130=184 volts pk, or about 370 Vpk-pk.
The failure mode of the MOV is shorted, but when the higher voltage ones short, they usually then blow up, unless they trip a breaker or get a fuse, and then they are open.
I once had a lengthy discussion with a maintenance electrician concerning MOV's at one of our plants. After several minutes of back and forth, found he was talking about valves, and I transient suppressors.
73 Gary N4AST

5624. Re: Indoor active HF loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 20:42:19 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e70ed2b_2@news.vo.lu>
Source record: 122510

<swl@c.dk> wrote in message
news:pcn17vcl8dh6gpkn265ftcpjp3s7r69ske@4ax.com...
> Hi
>
> For recieving loops..
>
>
> Dont forget the Wellbrook line www.wellbrook.uk.com
> Absolutely quality. Check out the reviews
>

Hi,

And maybe my review too ;-)
http://www.astrosurf.com/lombry/qsl-ala330.htm

Thierry
ON1SKY

>
>
>
> On Thu, 13 Mar 2003 13:14:28 -0600, "J Tabor" <denews@taborsoft.com>
> wrote:
>
> >Greetings,
> >
> >Here are some great links a friend shared with me last month:
> >Receive Loops.
> >http://www.frontiernet.net/~jadale/Loop.htm
> >http://www.carcanada.net/dx/RTL.html
> >http://www.geocities.com/SunsetStrip/Underground/8585/loop.html
> >
> >Transmitting Loops.
> >http://home.datacomm.ch/hb9abx/loop1-e.htm
> >http://www.qsl.net/mnqrp/Loop/Mag_Loops.htm
> >http://www.qsl.net/aa5tb/loop.html
> >http://www.alphalink.com.au/~parkerp/nodec97.htm
> >
> >Sorry, I don't have a specific answer for your question. But is a subject
> >I'm also looking into.
> >
> >Regards,
> >Jim - ku5s
>

>
>
>
>
> Best Regards / Med Venlig Hilsen
> Stephan W.-Larsen
> --
> Listening to the World from Denmark.
> Radio:NRD545G,HP3586A,ICR8500,WR-G303i/PD,UBC9000,AOR8200.
> Antenna: Wellbrook ALA1530 and LFL1010,Dressler ARA2000,Discone.
> and Longwire plus various "testers"
> Software: Radioraft 3.21,Spectrogram,SkySpy/Hammc. Argo & Spectran.

5625. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 20:44:45 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <ce2dnR7xOocIYe2jXTWcpQ@ctc.net>
Source record: 122419

> Is there a simple way to test one(s) in a circuit? Ohm meter etc. I
> just want to know if they are good or burned out.
>

If it is showing almost any resistance with a VOM then it is probably bad.

It should show open at a voltage less than what it is rated for. Most voms have a voltage of less than 9 volts and most movs you see will be rated higher. Its job is to short circuit at voltages higher than its rated breakdown voltage. It is difficult to tell if it is "good" with a meter. If it is "bad" but not shorted, it should not effect the circuit, you just will not have the protection from voltage surges.

5626. Re: Indoor active HF loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 20:45:16 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e70eddc$1_1@news.vo.lu>
Source record: 122511

"J Tabor" <denews@taborsoft.com> wrote in message
news:v71m4o7s06iq7d@corp.supernews.com...
> Greetings,
>
> Here are some great links a friend shared with me last month:
> Receive Loops.
> http://www.frontiernet.net/~jadale/Loop.htm
> http://www.carcanada.net/dx/RTL.html
> http://www.geocities.com/SunsetStrip/Underground/8585/loop.html
>
> Transmitting Loops.
> http://home.datacomm.ch/hb9abx/loop1-e.htm
> http://www.qsl.net/mnqrp/Loop/Mag_Loops.htm
> http://www.qsl.net/aa5tb/loop.html
> http://www.alphalink.com.au/~parkerp/nodec97.htm
>

Fine Jim
This is well the links I was looking for.
To complete the list there are also some reviews of eham.net (antenna, hf
wire, etc) including the ALA-330 and 1530 that I own.

Thierry
ON1SKY
http://www.astrosurf.com/lombry

> Sorry, I don't have a specific answer for your question. But is a subject
> I'm also looking into.
>
> Regards,
> Jim - ku5s
> --
> email sent to: denews@taborsoft.com
> is discarded without being seen.
> Sorry for any inconvenience.
>
>

5627. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 20:48:25 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <nJudnaXeTqcKc-2jXTWcpg@crocker.com>
Source record: 122512

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E6FBB09.3030200@ieee.org...
> David Robbins wrote:
> > i was following the parts of the discussion about replacing the
'virtual'
> > short with a real one and what that did. i didn't think there was ever
any
> > question about there being real current in a stub, its just so obvious
that
> > there has to be.
>
> Yep, that's my position also. The corollary to that is that reflections
> don't happen at the mouth of the stub. They happen at the physical
> impedance discontinuity at the other end of the stub. 'Course that
> statement assumes you believe in reflections at all. :-)

of course i believe in reflections, that is what my tdr relies on.

5628. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 20:50:34 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <ua6ca.3918$nJ5.359501@newsread2.prod.itd.earthlink.net>
Source record: 122513

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E70DE81.1040306@ieee.org...
> Richard Clark wrote:
> > Inventing a virtual impedance from Walt's actual data?
>
> I may have missed something by scanning too fast. Was
> the 1.9 ohms not a virtual impedance?
> --
> 73, Cecil, W5DXP

Cecil, as I understand impedance it's always the ratio Z = E/I, whether it's measured directly in physical components or at the input of a lossless network terminated in a dissipative load. Unless you can see that there is a dissipative resistor somewhere in the circuit the impedance is always just the ratio of the current to the applied voltage, and you'll not be able to tell whether it's a 'virtual' impedance or not. I differentiate between a physical short and 'virtual' short, but I never heard anyone but you use the term 'virtual impedance'.

In addition, I don't remember a 1.9-ohm impedance, the MEASURED resistance at the junction of the stub and main line is 0.9 ohms.

Walt

5629. MIDLAND RIGS WANTED

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 21:14:51 UTC
From: n2ion@aol.com
Message-ID: <20030313161451.24725.00000013@mb-md.aol.com>
Source record: 122262

I'M LOOKING TO BUY A FEW MIDLAND RADIOS
MODEL# 70-565B, OR 70-530A, OR 70-526A&B
THE RADIOS MUST BE CAPABLE OF GOING DOWN TO THE 430 MHz PORTION OF THE BAND.
MUST HAVE MICROPHONE AND MOUNTING BRACKETS.

IF YOU HAVE ANY OF THESE RIGS, EMAIL ME WITH THE CORRESPONDING DETAILS.

THANKS IN ADVANCE

5630. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 21:19:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E70F5F9.6090009@ieee.org>
Source record: 122514

Walter Maxwell wrote:
> Unless you can see that there is a
> dissipative resistor somewhere in the circuit the impedance is always just
> the ratio of the current to the applied voltage, and you'll not be able to
> tell whether it's a 'virtual' impedance or not.

Well, we know the SWR in a real world stub is nearly infinite so there
will be I^2*R losses, a real resistance loss. The more loss in a stub,
the less ideal its performance.

> I differentiate between a
> physical short and 'virtual' short, but I never heard anyone but you use the
> term 'virtual impedance'.

In the following circuit, there is not a physical 50 ohm resistance at point 'x'.

Source---50 ohm feedline---x---1/2WL 150 ohm feedline---50 ohm load

The 50 ohms resistive at 'x' is merely the ratio of the voltage to the current.
Since there is no power dissipation at 'x', that 50 ohms is virtual. The whole
process of what happens at the impedance discontinuity at 'x' need not even
mention the virtual 50 ohms. The virtual 50 ohms is the *result* of reflections
and wave interference and not the *cause* of anything.

> In addition, I don't remember a 1.9-ohm impedance, the MEASURED resistance
> at the junction of the stub and main line is 0.9 ohms.

I also don't know where the 1.9 ohms came from. Perhaps a typo?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

5631. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 21:29:12 UTC
From: wa0goz@arrl.net
Message-ID: <3E70F828.602@arrl.net>
Source record: 122515

Is there a simple way to test one(s) in a circuit? Ohm meter etc. I
just want to know if they are good or burned out.

Thanks

Henry

JGBOYLES wrote:
>
> >Does anyone know how to test MOV's please.
>
> MOV=Motor operated valve. Apply power to the motor and watch the valve open.
>
> One way to test the electrical kind: Get a variable ac source and a suitable
> current limiting resistor, the output capability, and the value resistor depend
> on the value of the MOV under test. Series the MOV and resistor, hook the AC
> across the series string and watch the voltage waveform across the MOV with a
> scope. Increase the AC until you see symetrical clipping of the waveform on
> the scope. The voltage that clipping takes place is the pk-pk rating of the
> MOV. The number on the MOV is usually the rms rating. For example a 130 Vrms
> MOV breaks down at 1.414 X 130=184 volts pk, or about 370 Vpk-pk.
> The failure mode of the MOV is shorted, but when the higher voltage ones short,
> they usually then blow up, unless they trip a breaker or get a fuse, and then
> they are open.
> I once had a lengthy discussion with a maintenance electrician concerning
> MOV's at one of our plants. After several minutes of back and forth, found he
> was talking about valves, and I transient suppressors.
> 73 Gary N4AST

5632. Re: Indoor active HF loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 21:38:13 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e70fa46$1_1@news.vo.lu>
Source record: 122516

"J Tabor" <denews@taborsoft.com> wrote in message
news:v71m4o7s06iq7d@corp.supernews.com...
> Greetings,
>
> Here are some great links a friend shared with me last month:
> Receive Loops.
> http://www.frontiernet.net/~jadale/Loop.htm
> http://www.carcanada.net/dx/RTL.html
> http://www.geocities.com/SunsetStrip/Underground/8585/loop.html
>
> Transmitting Loops.

Hi,

Some more dealers,
I found them browsing my own website !! at
http://www.astrosurf.com/lombry/antenna2.htm):
http://www.wsplc.com/
http://www.universal-radio.com/catalog/sw_ant/1806.html
They complete the list,
http://www.rys.nl/isloop.htm, and
http://www.qsl.net/dk5cz/e-products.htm
These are all brands that I know. Most cost over $300

Thierry

> http://home.datacomm.ch/hb9abx/loop1-e.htm
> http://www.qsl.net/mnqrp/Loop/Mag_Loops.htm
> http://www.qsl.net/aa5tb/loop.html
> http://www.alphalink.com.au/~parkerp/nodec97.htm
>
> Sorry, I don't have a specific answer for your question. But is a subject
> I'm also looking into.
>
> Regards,
> Jim - ku5s
> --
> email sent to: denews@taborsoft.com
> is discarded without being seen.
> Sorry for any inconvenience.
>
>

5633. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 21:40:41 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5hu17vcll35897bgetba0bjovnnbmht46c@4ax.com>
Source record: 122517

On 13 Mar 2003 20:19:46 GMT, jgboyles@aol.com (JGBOYLES) wrote:

>>Does anyone know how to test MOV's please.
>
>MOV=Motor operated valve. Apply power to the motor and watch the valve open.
>
>One way to test the electrical kind: Get a variable ac source and a suitable
>current limiting resistor, the output capability, and the value resistor depend
>on the value of the MOV under test. Series the MOV and resistor, hook the AC
>across the series string and watch the voltage waveform across the MOV with a
>scope. Increase the AC until you see symetrical clipping of the waveform on
>the scope. The voltage that clipping takes place is the pk-pk rating of the
>MOV. The number on the MOV is usually the rms rating. For example a 130 Vrms
>MOV breaks down at 1.414 X 130=184 volts pk, or about 370 Vpk-pk.
>The failure mode of the MOV is shorted, but when the higher voltage ones short,
>they usually then blow up, unless they trip a breaker or get a fuse, and then
>they are open.
> I once had a lengthy discussion with a maintenance electrician concerning
>MOV's at one of our plants. After several minutes of back and forth, found he
>was talking about valves, and I transient suppressors.
>73 Gary N4AST

Hi Gary,

If deep memory serves, MOVs degrade with successive hits above their
trip point. That level is far in excess of the typical service
voltage's peak more or less as you already describe. Through either
obscure specifications back then, or simply through my lack of
understanding, it seems MOVs accumulate the hits until failure.

As such, this is like a schematic I saw passed around HP back in the
60's. It showed a 1:1 AC Line transformer feeding a light bulb and
switch. The switch is a momentary style with the other end feeding a
fuse holder, the other end of which is connected to common.

Fuse Tester Instructions:
Plug in unit
Observe Light go on;
insert fuse;
press switch
observe light go out
observe light go on
release switch
remove fuse
mark "fuse was good"

73's
Richard Clark, KB7QHC

5634. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 21:44:55 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <35v17voi6c97a032i6haeeino63pq37ta4@4ax.com>
Source record: 122518

On Thu, 13 Mar 2003 13:19:53 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>> the MEASURED resistance
>> at the junction of the stub and main line is 0.9 ohms.
>
>I also don't know where the 1.9 ohms came from. Perhaps a typo?

Hi Cecil,

Well I guess that answers the question about the quality of logic that
follows from a typo.

73's
Richard Clark, KB7QHC

5635. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 22:02:31 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E70FFF7.4080304@ieee.org>
Source record: 122420

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>I also don't know where the 1.9 ohms came from. Perhaps a typo?
>
> Well I guess that answers the question about the quality of logic that
> follows from a typo.

For conceptualizing the results, it really doesn't matter whether
it is 0.9 ohms or 1.9 ohms. There's probably that much difference
between an RG-58 stub and an LM-400 stub.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

5636. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 22:05:38 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87wuj2sz0t.fld@barrow.com>
Source record: 122423

'Doc <w5lz@cwis.net> wrote:
>Floyd,
> Would you also use gas lines for grounding?
> 'Doc

Gas lines might make a very good ground.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5637. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 22:10:52 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87smtqsys3.fld@barrow.com>
Source record: 122424

Dave Shrader <david.shrader@attbi.com> wrote:
>A metal automobile, not plastic, not fiberglass, not convertible, etc.,
>is a Farraday Cage!!!
>
>Deacon Dave, W1MCE

You do *not* want to be the test object to see if it is true
for any given car you happen to be riding in! Any part of the
interior of the car which is not well bonded to the rest of the
car's metal, is going to be an interesting place to watch... as
the charge equalizes itself, one way or another.

>Scott Webb wrote:
>>
>> Floyd, think about it,why are you safe inside an automobile during a
>> lightning storm?

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5638. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 22:26:06 UTC
From: jgboyles@aol.com
Message-ID: <20030313172606.00329.00000011@mb-cf.aol.com>
Source record: 122421

>Is there a simple way to test one(s) in a circuit? Ohm meter etc.

An ohm meter will tell you if the MOV is shorted, but that's about it. If you are continually blowing fuses or tripping breakers on AC mains circuits with MOV's, then it's a good bet they are shorted. As I remember MOV's degrade after multiple high energy transients. An ohm meter will not tell you in this case whether it has any value as an MOV.
There is not an easier test than the one I described AFAIK, that will tell you whether they will act like MOV's
73 Gary N4AST

5639. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 22:26:09 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87of4esy2m.fld@barrow.com>
Source record: 122427

'Doc <w5lz@cwis.net> wrote:
>Floyd Davidson wrote:
>> What I pointed out was that the thinking being expressed
>> about lightning and how it might affect a transmission line
>> and or a propane tank, was bogus.
>>
>> That does not make propane tanks safe.
>>
>> But routing a feedline close to or even in contact with a
>> propane tank is simply *not* going to make it more or less of a
>> danger in regard to lightning. If the tank is not grounded, it
>> is exceedingly dangerous (which is absolutely unrelated to the
>> feedline). If the tank is grounded, it will actually help
>> protect the feedline/antenna.
>>
> Sorry, I can't agree with that. Grounded or ungrounded, any
> thing that puts a propane tank, or the lines leaving the tank,
> in the discharge path of lightning is a foolish gamble. Running
> the feedline across, under, or wrapped around a propane tank is
> not only silly, it's potentially very dangerous.

But it is exactly what you said, "any thing that puts a propane tank
... in the discharge path of lightning is a foolish gamble"!

If the tank is not grounded, it is already in the discharge path
of lightning, and if the antenna is not grounded too then the
tank increases the risk for the antenna to be destroyed. If the
antenna is grounded, it will help *protect* an ungrounded tank
by removing the charge that would otherwise build up and cause a
lightning strike.

If the tank is grounded, it helps protect the antenna.

(And of course the tank *will* be grounded.)

>> The idea that the antenna is going to take a direct hit and
>> cause the tank to explode is simply invalid. The idea that
>> power from the transmission line is going to cause an explosion
>> inside the tank is also invalid.
>>
> I don't see how you can say it is invalid, that it can't

How much current can the antenna and transmission line handle?
It will vaporize (act like a fuse) before there is enough
current to breach a propane tank or the lines leading to it.

> happen. I don't mean an explosion inside the tank, it probably
> won't. But, you are still taking a chance on breaching the tank
> or gas lines in a situation where a feedline is in contact with
> them. I think that's a needless risk, and would certainly counter
> any benefit of a few feet saved by not routing the feed line around
> the tank, or any 'choking' affect wrapping a feed line around the
> tank would provide. It just ain't too smart Floyd...
> 'Doc

What 'choking' affect?

If you wrap the line around it, chances are very good that any
significant build up of charge on the antenna will dissipate
to ground through the tank. That will prevent the charge build
up that attracts a lightning strike.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5640. Re: Fonts and Columnization

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 22:34:21 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <NH7ca.4117$nJ5.372849@newsread2.prod.itd.earthlink.net>
Source record: 122422

> "Robert Lay (W9DMK)" <w9dmk@crosslink.net> wrote in
> news:9pls6vk18hbuqloe63luc1vn4qjrb8qsgn@4ax.com:
>
> > Please excuse this test of Fonts and Columnization
> >
>
> ----------
>
> Please send this kind of stuff to alt.test. That's what it's for.
>
> --
> Bill, W7TI

Where does one find 'alt.test'?

Walt, W2DU

5641. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 22:37:42 UTC
From: jgboyles@aol.com
Message-ID: <20030313173742.00329.00000013@mb-cf.aol.com>
Source record: 122425

>It showed a 1:1 AC Line transformer feeding a light bulb and
>switch. The switch is a momentary style with the other end feeding a
>fuse holder, the other end of which is connected to common.

>fuse Tester Instructions:
> Plug in unit
> Observe Light go on;
> insert fuse;
> press switch
> observe light go out
> observe light go on
> release switch
> remove fuse
> mark "fuse was good"
Hi Richard,
This adds to my understanding of why on a test stand we applied enough
current through circuit breakers to "test trip the breaker", but we never "test
blowed fuses". Always wondered why :-).

73 Gary N4AST

5642. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 22:43:45 UTC
From: richardharrison@webtv.net
Message-ID: <21650-3E7109A1-275@storefull-2316.public.lawson.webtv.net>
Source record: 122430

CAM wrote:
"The 50 ohms resistive at "X" is merely the ratio of the voltage to the current." Walter meant conductance when he wrote ratio of current to voltage.

CAM`s statement is a perfect fit with the definition of a resistance. It`s simply E/I, provided the volts and amps are in-phase.

Zo in a perfect line is a real resistance (not a resistor) It is however, a dissipationless resistance.

Best regards, Richard Harrison, KB5WZI

5643. Re: Fonts and Columnization

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 23:09:12 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i0427vkn0p6pbmr8avhglpo0bnk75ip94m@4ax.com>
Source record: 122428

On Thu, 13 Mar 2003 22:34:21 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

>
>> "Robert Lay (W9DMK)" <w9dmk@crosslink.net> wrote in
>> news:9pls6vk18hbuqloe63luc1vn4qjrb8qsgn@4ax.com:
>>
>> > Please excuse this test of Fonts and Columnization
>> >
>>
>> ____
>>
>> Please send this kind of stuff to alt.test. That's what it's for.
>>
>> --
>> Bill, W7TI
>
>Where does one find 'alt.test'?
>
>Walt, W2DU
>

Hi Walt,

Replace rec.radio.amateur.antenna with alt.test as the newsgroup you
are subscribed to.

I see you are still using OE so I cannot describe further.

73's
Richard Clark, KB7QHC

5644. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 23:13:42 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1a427vs00hirkraj5imm817nt59q95a0do@4ax.com>
Source record: 122429

On Thu, 13 Mar 2003 14:02:31 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>I also don't know where the 1.9 ohms came from. Perhaps a typo?
>>
>> Well I guess that answers the question about the quality of logic that
>> follows from a typo.
>
>For conceptualizing the results, it really doesn't matter whether
>it is 0.9 ohms or 1.9 ohms. There's probably that much difference
>between an RG-58 stub and an LM-400 stub.

Hi Cecil,

But it does matter when you go from Walt's MEASURED Resistance to your
claiming it is a virtual impedance.

73's
Richard Clark, KB7QHC

5645. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 23:28:23 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <3r327vojtmuk3oc8dnr3h11ph1n9badm3n@4ax.com>
Source record: 122431

On Wed, 12 Mar 2003 04:02:23 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

[snip]
|
|You should also know that just a little while ago I measured the voltage at
|the open end of the stub at 80 volts while the other parameter values remain
|as shown in the diagram above. An interesting point here that seems to
|verify the measurement procedure and the analysis of the data, is that the
|quotient of the voltages appearing at the ends of the stub, 80 v / 0.035 v =
|2286, the resonant voltage increase on the stub. Note that its sqrt equals
|47.8. In addition, the product of the SC and OC input resistances of the
|stub is 2550 x 0.90 = 2295. Its sqrt equals 47.9. The values 47.8 and 47.9
|appear as the measured characteristic impedance Zo of the stub. The close
|agreement of these values seems to verify that the procedure and
|measurements are valid.

Walt,

Unless I'm mistaken (always a good possibility) something seems wrong
with your voltage measurements.

First some words about my measurement technique:

I characterized a random length of 20+ year old RG-8 using a method
described in HP Application Note 77-3, "Measurement of Complex
Impedance 1-1000 MHz."

I used an HP 8405A Vector Voltmeter (VVM), HP 11549A Power Splitter,
two HP 8491 Attenuators, two HP 11536 Sampling tees, and various
HP908A and Narda 379 precision terminations for reference standards.

My signal source was an HP 8601A. I measured frequency with a Yaesu
YC-500 counter.

The setup is basically a resistive bridge with one arm terminated with
a known load and the other arm terminated with the device under test
(DUT). The reference (A) channel of the VVM measures the incident
signal at the reference load and the B channel measures the sum of the
incident + reflected voltage of the DUT connected to the test port.

With a precision load for a DUT, the reference phase is set to zero
and the ratio A/B is recorded. This ratio becomes a correction factor
for future measurements. A short is them used as the DUT. A short
should have Gamma = 1 at 180 degrees. Because of the finite length of
the sampling tee the measured angle will be less than 180. I made a
couple of measurements at frequencies that bracket the expected

measurement frequency and noted the error angles. These then become phase correction factors, using linear interpolation for frequencies between the two points.

Whoops, at this point, "Super Stable" Windows XP crashed, presenting me with the blue screen of death... I'll try to regain my train of thought.

I measured the insertion loss and phase shift of the cable as 0.15 dB and -90 degrees at 6.002 MHz. The loss is slightly higher than predicted for this length cable, but it is old and equipped with PL-259 connectors, to which I had to add UHF to Type N adapters to fit the test equipment. So the number is reasonable, particularly considering the other uncertainties.

At the same frequency, I measured:

R = 0.86 X = 0 with load = open

R = 3075 X = 1074 with load = short

At half frequency (3.001 MHz), I measured:

R = 0.99 X = -52.5 with load = open

R = 1.13 X = 52.5 with load = short

Therefore, Zo ~ 52.5

Using TLDetails.exe (www.qsl.net/ac6la) I selected RG-8 and set the length to 90 degrees at 6 MHz and the load to 50 j0. Then I tweaked the loss coefficient (k1) to increase the insertion loss to 0.15 dB. Changing the load to 10^7 (~open) the computed R = 0.91, close enough to my measured 0.86 to make me happy.

So now I have a (pretty well) known 6.002 MHz 1/4 wavelength stub.

Returning the frequency to 6 MHz I moved the "A" (reference) probe to the output end of the cable. I'm now measuring the ratio of input to output voltage with the input driven with a well-matched source. Since the probe impedance is speced at > 1 M ohm and is slightly capacitive it isn't a pure "open" therefore, I had to tweak the frequency slightly to 5.907 MHz to minimize the input voltage.

Results:

Vs = 100 mV = the source voltage (previously measured)

Vin = 3.45 mV = the voltage at the input

Vo = 200 mV = the voltage at the open

This is far different from what you measured.

Trying to make sense of this...

Vo = the vector sum of the voltage incident upon the open plus the voltage reflected from the open:

Vo = 2 * k * Vs = 196.5 mV (200 measured)

where: k is the loss factor due to attenuation in the line

k = 10 ^ (-0.15 / 20) = 0.983

and

Vin = the vector sum of the source voltage and the reflected voltage:

Vin = Vs - k ^ 2 * Vs = 3.4 mV (3.45 measured)

So:

Vo / Vin = 57.97 <<< 2286

Given all of the uncertainties, the correlation between measured and calculated data seems remarkable.

So where did I make my mistake?

5646. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 23:31:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E7114ED.9060701@ieee.org>
Source record: 122432

Richard Clark wrote:
> But it does matter when you go from Walt's MEASURED Resistance to your
> claiming it is a virtual impedance.

No matter what is the measured value of (V+ + V-)/(I+ + I-),
it is still just a virtual impedance caused by wave interference.
--
73, Cecil, W5DXP

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

5647. Re: Wt halo antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 23:53:51 UTC
From: dplatt@radagast.org
Message-ID: <v726gfcg1v1h70@corp.supernews.com>
Source record: 122433

>I am looking for a halo type antenna for two meters, and 440mhz.
>thanks cl.

Assuming that you're interested in constructing one, a Google search for "2-meter halo antenna" will turn up numerous interesting links, including:

http://members.aol.com/n2kbk/2mhalo.html
http://hamgate1.sunyerie.edu/races/antenna/2m_halo.gif
http://home.attbi.com/~buck0/2m_halo.htm

I imagine that you could rescale these designs for 440. I have no idea how well a 2-meter version would work on 440.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

5648. Re: Medfer AM antenna loading question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-13 23:59:50 UTC
From: wings@dakotacom.net
Message-ID: <3e711a59.385560@news.dakotacom.net>
Source record: 122434

On Thu, 13 Mar 2003 12:38:19 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Gene A. Townsend wrote:
>"I am planning on mounting a 3 meter vertical---."
>
>At 176 meters, 3 meters is only 0.017 WL.
>Radiation resistance is less than one ohm.
>Regardless of loading coil Q, your ground and other losses will make
>overall antenna Q very low. Bandwidth won`t be a problem.

Thanks for the helpful information. I know there is no way to predict
the Q of the antenna system before hand. I can only control the
loading coil at this point in time. I think shooting for a coil Q
higher then a few hundred may be a waste of time. I can always add a
resistor later if needed to raise the system Q. :-)

I'm using an AM transmitter called the "Gizmo" for this station, but
would like to give the kids all the range that I can, to make the
project the most fun for them.

Regards,

Gene A. Townsend

>
>Best regards, Richard Harrison, KB5WZI
>

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

5649. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 00:19:28 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E712010.EB0C22A4@uci.edu>
Source record: 122435

Richard Clark wrote:
> Hi Cecil,
>
> But it does matter when you go from Walt's MEASURED Resistance to your
> claiming it is a virtual impedance.

The point is that the apparent impedance is totally dependent upon physical conditions that don't exist at that physical location. There exists nothing there to absorb the I^2*R power. The impedance at that point is virtual just as a apparent short there would be virtual.

Let's take the simplest of all possible examples. Say you've got your dummy load hooked to the far end of a length of really good coax. If you put your ohmmeter across the open end of the coax and measure 50 ohms, you wouldn't really believe your dummy load has moved to that end of your coax, would you? You know the current from the ohmmeter is flowing down one side of the coax to the load and flowing back again throught the other, right? Any power would be dissipated in the load resistor, not at the junction between the coax and the ohmmeter. This is true even though you have the ohmmeter measurement to prove that it's right there at your end of the coax.

As Walt indicated, the lost power in his measurements was dissipated along the length of his coax, not at some fixed point.

73, Jim AC6XG

5650. Re: Indoor active HF loop ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 00:21:20 UTC
From: J Tabor <denews@taborsoft.com>
Message-ID: <v72846svjen4f4@corp.supernews.com>
Source record: 122436

Hi,

Thank You. Very interesting.

73,
Jim
--
email sent to: denews@taborsoft.com
is discarded without being seen.
Sorry for any inconvenience.

5651. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 00:54:52 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E71285C.498F3E03@uci.edu>
Source record: 122437

Wes Stewart wrote:
> Vo / Vin = 57.97 <<< 2286
>
> Given all of the uncertainties, the correlation between measured and
> calculated data seems remarkable.
>
> So where did I make my mistake?

Walt's initial test circuit diagram showed 1 volt across a 50 ohm balanced load, and .035 volts across the load with the open circuit stub. When he later made his measurements across the open end of the stub he measured 80 volts. Ideally he should have measured around 2 volts. 2 / .035 = 57.

73, Jim AC6XG

5652. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 01:03:59 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7ra27v8ksdg5foajb0gupfft28bduspk1t@4ax.com>
Source record: 122438

On Thu, 13 Mar 2003 16:19:28 -0800, Jim Kelley <jwkelley@uci.edu>
wrote:

>The point is that the apparent impedance is totally dependent upon
>physical conditions that don't exist at that physical location.

Hi Jim,

And the resistance of a resistor does not exist at its leads.

Obvious.

73's
Richard Clark, KB7QHC

5653. Re: Medfer AM antenna loading question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 01:05:01 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <1V9ca.4139$ja4.286133@bgtnsc05-news.ops.worldnet.att.net>
Source record: 122439

> Gene A. Townsend wrote:

> I'm using an AM transmitter called the "Gizmo" for this station, but
> would like to give the kids all the range that I can, to make the
> project the most fun for them.

Couple the transmitter output back into the house power
wiring. This should saturate the neighborhood with
signal. This is called carrier-current operation. I
don't have a neat scheme for doing this at hand, but
I'll bet others on this NG do.

Jim, K7JEB

5654. Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 01:26:12 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303131726.531e07b7@posting.google.com>
Source record: 122440

fch <na@hle.com> wrote in message news:<3E6A46D5.663501A6@hle.com>...
> Is it even directional?

Here's the mother lode of tech info on the whole category of compact
end-coupled beams like the hex.

http://www.cebik.com/4.html

w3rv

5655. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 01:34:30 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E7131A6.704B49ED@cwis.net>
Source record: 122441

Enough said...

5656. Re: ATU for marine use

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 02:29:47 UTC
From: wf3h@ptnospam.com
Message-ID: <3e713e61.123799524@news.ptdprolog.net>
Source record: 122442
Cross-posted to: rec.radio.amateur.antenna,rec.boats.electronics

On Thu, 13 Mar 2003 17:55:05 GMT, "Ken Coit" <parfait@nc.rr.com>
wrote:

>ICOM AH-4?

no, unfortunately, it's the one SGC makes...the AH4 I think is an icom
model...

>
>Ken / ND7N
>
><wf3h@ptnospam.com> wrote in message
>news:3e700119.42574865@news.ptdprolog.net...
>> On Sat, 1 Mar 2003 15:52:19 +0000 (UTC), Richard C. Ferryman
>> <Richard.Ferryman@btinternet.com> wrote:
>>
>> >Can anyone recommend an atu that is rugged elecrically but will also
>> >stand up well to the harsh marine environment? It is to tune the the
>> >backstay on a yacht. 100W pepmaximum but I like to overrate
>> >everything so 300W pep capability.
>> >Thanks
>> >Richard G4BBH G4BBH/MM
>>
>>
>> just got an email that SGC has dropped the price of their SGC 239 by
>> $100.
>
>

5657. Re: Medfer AM antenna loading question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 03:10:34 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4rh7a$ma2$1@knossos.btinternet.com>
Source record: 122443

If you have power to throw away there's no need to consider efficiency or making much of an attempt to match antenna impedance to whatever the transmitter needs. The resistive load on the transmitter need be sufficient only to prevent distortion.

The loading coil need not be located at the bottom of the antenna. On the contrary, It can much more conveniently be located next to the transmitter and refered to as part of an antenna tuner. Whatever is between the tuner and the antenna proper is a part of the antenna. Whether or not that plastic insulated wire or length of coax radiates is of no consequence.

The coax will make job look better for the children. ;o)

However the length of the connection between tuner and antenna WILL affect the value of the tuning coil. It will need much less inductance.

The coil's inductance will resonate with the capacitance of the antenna itself plus the capacitance of the antenna connection, plus a small trimmer capacitor in shunt with the coil.

25pF maximum setting should do the job.

Wind the coil on a 1" diameter wood, cardboard or plastic former using thin 22 AWG enamelled magnet wire. This will have a Q similar to a receiver tuning coil and will have a satisfactory bandwidth.

If you should need to increase bandwidth then just connect a 1/2-watt or 1-watt resistor across the coil. But I doubt that this will be necessary because Q of the circuit AS A WHOLE will probably be between 50 and 100.

To provide a load to the transmitter in the right ball park, tap the transmitter into the bottom end of the coil by experiment. Or wind a primary winding over the bottom end of the coil.

Get the kids to calculate number of turns on the coil to provide a given inductance. There has to be some way of estimating the capacitance of the antenna plus its feed wire.

You can use program SOLNOID2 available from my website.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

"Gene A. Townsend" <wings@dakotacom.net> wrote in message
news:3e711a59.385560@news.dakotacom.net...

> On Thu, 13 Mar 2003 12:38:19 -0600 (CST), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >Gene A. Townsend wrote:
> >"I am planning on mounting a 3 meter vertical---."
> >
> >At 176 meters, 3 meters is only 0.017 WL.
> >Radiation resistance is less than one ohm.
> >Regardless of loading coil Q, your ground and other losses will make
> >overall antenna Q very low. Bandwidth won`t be a problem.
>
> Thanks for the helpful information. I know there is no way to predict
> the Q of the antenna system before hand. I can only control the
> loading coil at this point in time. I think shooting for a coil Q
> higher then a few hundred may be a waste of time. I can always add a
> resistor later if needed to raise the system Q. :-)
>
> I'm using an AM transmitter called the "Gizmo" for this station, but
> would like to give the kids all the range that I can, to make the
> project the most fun for them.
>
> Regards,
>
> Gene A. Townsend
>
> >
> >Best regards, Richard Harrison, KB5WZI
> >
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5658. Re: Fonts and Columnization

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 03:16:28 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <9Qbca.7800$VT.839974@news20.bellglobal.com>
Source record: 122446

Why don't we all just dump the hopeless ASCII art and simply post some nice, neat, clear graphics files (.jpg for example) to a newsgroup that accepts such image files. Then the poster could simply reference the Subject name and Newsgroup where the diagram was posted.

The transmission line circuits would certainly confuse the poor sods looking for porn. ;-)

5659. Tonna 21el 432MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 03:17:11 UTC
From: Adam 9A4QV <alicajic.adam@pu.hinet.hr>
Message-ID: <b4rhej$9fsc$1@as201.hinet.hr>
Source record: 122444

Hello,
I am looking for a dipole design, way how to connect the 50 ohm coax cable to the dipole of the 21el tonna for MHz. I found the 21el tonna but with some coax"balun" soldered to the dipole.
So, all tonna 21el 43MHz users are kindly requested to send me a "original" way of coax connecting to the dipole. If any coax balun is involved, please specify the lenght and way of connecting to the dipole terminals.
Thanks, Adam 9a4qv

5660. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 04:12:53 UTC
From: richardharrison@webtv.net
Message-ID: <27296-3E7156C5-4@storefull-2311.public.lawson.webtv.net>
Source record: 122449

Jim Kelley wrote:
"The point is that the apparent impedance is totally dependent upon physical conditions that edon`t exist at that physical location."

Test:
25:1 = turns ratio of output transformer

4 ohms = resistive load

625:1 = impedance ratio of output transformer

2500 ohms = (virtual ?) load on output tube

I don`t think there is any need to say "virtual" load. The load is simply a real load resistance.

Best regards, Richard Harrison, KB5WZI

5661. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 04:17:48 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <MJcca.4653$nJ5.424069@newsread2.prod.itd.earthlink.net>
Source record: 122447

> Wes Stewart wrote:
> > Vo / Vin = 57.97 <<< 2286
> >
> > Given all of the uncertainties, the correlation between measured and
> > calculated data seems remarkable.
> >
> > So where did I make my mistake?
>
> Walt's initial test circuit diagram showed 1 volt across a 50 ohm
> balanced load, and .035 volts across the load with the open circuit
> stub. When he later made his measurements across the open end of the
> stub he measured 80 volts. Ideally he should have measured around 2
> volts. 2 / .035 = 57.
>
> 73, Jim AC6XG

Wes and Jim,

I've got to hit the sack now, but tomorrow I'll refer you to a post where I changed the input from the SG to the Kenwood transceiver where the input was advanced to 50 watts initially with no stub. Then with the stub, the resulting impedance mismatch at the source reduced the power input to 15.5 w. When you review the posts you missed I believe you'll see the solution to the difference in voltage values.

However, I'll review Wes' data to see if there really is a problem.

Walt, W2DU

5662. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 04:34:11 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <qq-dnQKb1sRcxuyjXTWcpQ@comcast.com>
Source record: 122448

> How much current can the antenna and transmission line handle?
> It will vaporize (act like a fuse) before there is enough
> current to breach a propane tank or the lines leading to it.
floyd@barrow.com

Low loss coax starts to melt at about 500 amps. I suspect it will carry 2000 amps or more for the duration of a lightning strike. Should draw a good arc.

Tam/WB2TT

5663. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 04:45:11 UTC
From: richardharrison@webtv.net
Message-ID: <16824-3E715E57-37@storefull-2317.public.lawson.webtv.net>
Source record: 122451

Henry, WA0GOZ wrote:
"Does anyone know how to test MOV`s?"

I have a TII Industries Model T-101 gas tube tester. It displays the voltage at which a device under test clamps the internal high voltage generator. It works with any device.

Technicians working with many MOV`s told me that leakage rises with wear and tear on MOV`s. They said that they could tell a leaker from its temperature. Replacing the leaky MOV eliminates the heat production, they said.

Best regards, Richard Harrison, KB5WZI

5664. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 04:48:47 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87k7f2sgcw.fld@barrow.com>
Source record: 122450

"Tarmo Tammaru" <t-tammaru@home.com> wrote:
>> How much current can the antenna and transmission line handle?
>> It will vaporize (act like a fuse) before there is enough
>> current to breach a propane tank or the lines leading to it.
> floyd@barrow.com
>
>Low loss coax starts to melt at about 500 amps. I suspect it will carry 2000
>amps or more for the duration of a lightning strike. Should draw a good
>arc.
>
>Tam/WB2TT

A typical lightning strike would be _several_ times that.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5665. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 06:46:59 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E715EE3.3ADEC5A@att.net>
Source record: 122452

'Doc wrote:

> Enough said...

So you quickly tired of his quibbling, too.

5666. Re: Wt halo antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 07:12:05 UTC
From: theplanters95@aol.comnospam
Message-ID: <20030314021205.06581.00000020@mb-cl.aol.com>
Source record: 122453

I have a M2 square halo. Make an offer plus shipping from NV.

Randy ka4nma

5667. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 07:24:22 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303132324.5555a2f6@posting.google.com>
Source record: 122455

Floyd Davidson <floyd@ptialaska.net> wrote in message
> The whole discussion regarding lightening is absurd. First, a
> "direct hit" is a bit more significant than is being envisioned.
> Typicaly a real direct hit will produce current in excess of
> 50,000 Amps, and maybe as high as 300,000 Amps. Think about
> that for a moment... :-)

But, it is also for a very short time period. Thankfully...
>
> Your coax, not to mention your antenna wire, will vaporize in a
> ball of fire. Not if, just how fast.

Only if you have a lousy high resistance ground connection. If you
have a good low resistance connection to ground, a #10 wire can be
struck with little damage at all. The wire won't even hardly heat up.
Look at lightning rod installations. They don't burn up. I take direct
strikes on my mast and have to look hard to tell any damage at all.
All I've ever seen so far was a tiny "arc" spot on the tip of my mast.
The lightning blew out a cap of electrical tape which I had on top to
seal out water. But it hardly effected the metal at all. All the
antenna wires "dipoles" and coaxes running down the side of the mast
were untouched. The lightning strikes 10-15 ft from where I'm sitting.
It's hit my mast twice in 4 years. Or at least that I witnessed first
hand...The last big boomer a few months ago hit the big tree in the
front yard instead of my mast.

>
> The whole point in grounding the antenna (and the propane tank
> too, for that matter) is to prevent a direct hit by discharging
> any charge build up before it becomes excessive.

I disagree with this statement. Number one, trying to bleed off a
charge in a storm is nearly impossible. The charge is replenished too
fast. This was a selling point of the "brush discharger" things used
on buildings and towers.
They don't work. They still are struck.
The whole point of grounding a structure that is prone to lightning
strikes is to provide a good low resistance path to ground. You can't
bleed off charges fast enough to do any good. But you can offer a
better and easier streaming target. IE: lightning rod. You can't avoid
strikes in your immediate area. You can only offer a better and/or
well grounded target.
The reason for grounding objects that are on or near ground level is
to place all objects at the same potential so no current can flow
between them.

Wrapping the
> coax around a metal tank that is grounded might be a good idea
> (wrapping it around an ungrounded tank might be a way to attract
> that direct hit).

Wouldn't have any real effect on the likelyhood of being struck. How well the object streams and how close any down leaders are will determine that. Having a antenna/coax running to the tank will make it much more likely to be in the path of a strike.
Connecting any kind of conductive line that is a potential path for lightning to a propane gas tank is very foolish. Grounded or not. I would never do that even if it's unlikely to actually blow up. Just not a smart move and most likely against NEC code. Also, gas lines or pipes should never be used as lightning returns. They should be grounded to all other grounds though. IE: all grounds should be tied together at a common point. This is usually at the power service entrance. "breaker box area". All lightning ground systems should be built on their own. IE: Own rods, radials, etc at the base of towers, masts, etc. That system in turn should be tied to the rest of the system. Very few household grounds/wires have a low enough resistence to ground to avoid damage to the struck object. Thats why they use additional rods, radials, ufer grounds, etc at the base of towers.

MK

5668. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 10:12:57 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87bs0es1cm.fld@barrow.com>
Source record: 122456

nm5k@wt.net (Mark Keith) wrote:
>Floyd Davidson <floyd@ptialaska.net> wrote in message
>> The whole discussion regarding lightening is absurd. First, a
>> "direct hit" is a bit more significant than is being envisioned.
>> Typicaly a real direct hit will produce current in excess of
>> 50,000 Amps, and maybe as high as 300,000 Amps. Think about
>> that for a moment... :-)
>
>But, it is also for a very short time period. Thankfully...

Given the typical 18 gauge ladder line, a *very* short period of
time! :-)

>> Your coax, not to mention your antenna wire, will vaporize in a
>> ball of fire. Not if, just how fast.
>
>Only if you have a lousy high resistance ground connection. If you
>have a good low resistance connection to ground, a #10 wire can be
>struck with little damage at all. The wire won't even hardly heat up.

A #10 wire *cannot* provide a "good low resistance connection to
ground". If nothing else, just the inductance in a wire that small
is too high.

>Look at lightning rod installations. They don't burn up. I take direct

They rarely take direct lightning hits either. The whole
purpose in having them is to dissipate any charge build up to
avoid ever taking a direct hit. They also don't use #10 wire
for ground connections!

>strikes on my mast and have to look hard to tell any damage at all.

I question that your mast actually takes direct hits, but it is
possible. If it is actually grounded with only a #10 wire,
either you a) do not have a good ground connection, or b) you
are not really taking direct hits. If you were, the first
decent sized hit would melt that #10 wire.

Regardless, if you want to claim that a #10 wire can handle a
direct hit of lightning, you most certainly are not going to say
that a propane tank will be destroyed by that same direct hit...

>All I've ever seen so far was a tiny "arc" spot on the tip of my mast.
>The lightning blew out a cap of electrical tape which I had on top to
>seal out water. But it hardly effected the metal at all. All the
>antenna wires "dipoles" and coaxes running down the side of the mast

>were untouched. The lightning strikes 10-15 ft from where I'm sitting.

How are your ears???? :-)

>It's hit my mast twice in 4 years. Or at least that I witnessed first
>hand...The last big boomer a few months ago hit the big tree in the
>front yard instead of my mast.

I doubt you are taking direct hits, but secondary discharges are
another matter. Not that they are not serious though! But you
aren't seeing 100,000+ Amp discharges, or your descriptions
would be a little more, shall we say "annimated".

(I had the pleasure, many years ago, of working in a transmitter
building sitting on a mountain top that took dozens of hits per
day every summer afternoon. The three 300' towers took all the
direct hits, but anything and everything that wasn't bonded
would errupt with fireballs too.)

>> The whole point in grounding the antenna (and the propane tank
>> too, for that matter) is to prevent a direct hit by discharging
>> any charge build up before it becomes excessive.
>
>I disagree with this statement. Number one, trying to bleed off a
>charge in a storm is nearly impossible. The charge is replenished too
>fast. This was a selling point of the "brush discharger" things used
>on buildings and towers.

Well, disagree all you like, but that is the way it works and
that is the purpose. It is not a guarantee against taking a
direct hit, but it most certainly reduces the chances very
significantly. If you are at the top of a mountain or the
Empire State Building, it won't help, but in many places it
will almost guarantee no direct hits.

>They don't work. They still are struck.
>The whole point of grounding a structure that is prone to lightning
>strikes is to provide a good low resistance path to ground. You can't
>bleed off charges fast enough to do any good. But you can offer a
>better and easier streaming target. IE: lightning rod. You can't avoid
>strikes in your immediate area. You can only offer a better and/or
>well grounded target.

In some cases that is indeed true, but usually that is not what
a lightning rod does. If the lightning rod is small and
grounded via a #10 wire, it is intended to dissipate the charge,
not to take direct hits. If it is grounded with 2 inch wide
copper strap, it might handle direct hits.

>The reason for grounding objects that are on or near ground level is
>to place all objects at the same potential so no current can flow
>between them.

Exactly. Otherwise there will be "fire balls" rolling around...

> Wrapping the
>> coax around a metal tank that is grounded might be a good idea
>> (wrapping it around an ungrounded tank might be a way to attract
>> that direct hit).
>
>Wouldn't have any real effect on the likelyhood of being struck. How
>well the object streams and how close any down leaders are will
>determine that. Having a antenna/coax running to the tank will make it
>much more likely to be in the path of a strike.

Only if it isn't grounded.

>Connecting any kind of conductive line that is a potential path for
>lightning to a propane gas tank is very foolish. Grounded or not. I

Every pipe that goes to the tank qualifies. Does that make them
a "very foolish" thing to have? How about the ground connection
itself, that qualifies too?

>would never do that even if it's unlikely to actually blow up. Just
>not a smart move and most likely against NEC code. Also, gas lines
>or pipes should never be used as lightning returns. They should be
>grounded to all other grounds though. IE: all grounds should be tied
>together at a common point. This is usually at the power service

Which makes them all "lightning returns".

>entrance. "breaker box area". All lightning ground systems should be
>built on their own. IE: Own rods, radials, etc at the base of towers,
>masts, etc. That system in turn should be tied to the rest of the
>system. Very few household grounds/wires have a low enough resistence
>to ground to avoid damage to the struck object. Thats why they use
>additional rods, radials, ufer grounds, etc at the base of towers.
>
>MK

True enough, but what has that got to do with what makes a propane
tank dangerous or not?

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5669. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 11:42:13 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <fdtR+ICVAcc+EAT2@ifwtech.co.uk>
Source record: 122458

Richard Harrison wrote:
>Henry, WA0GOZ wrote:
>"Does anyone know how to test MOV`s?"
>
>I have a TII Industries Model T-101 gas tube tester. It displays the
>voltage at which a device under test clamps the internal high voltage
>generator. It works with any device.
>
>Technicians working with many MOV`s told me that leakage rises with wear
>and tear on MOV`s.

To clarify that, "wear and tear" means the number and size of any large transients absorbed. The simplest method to avoid unnecessary "wear and tear" on mains MOVs is to connect them *after* the mains switch, so they only see transients while the equipment is switched on.

Part of the folklore about the unreliability of MOVs is because many organizations have a policy of always replacing them if there's any suspicion of having received a 'hit'. It's cheaper to replace MOVs than to test them in the field... but it doesn't do their reputation much good.

>They said that they could tell a leaker from its
>temperature. Replacing the leaky MOV eliminates the heat production,
>they said.
>
Both are correct. The MOV should not be passing any current in normal operation, so (after switching off the equipment and making it safe) the MOV should always feel cool to the touch, no warmer than surrounding components.

On the other hand, a completely open-circuit MOV will also feel cool, but will give no protection at all!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5670. Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 13:29:29 UTC
From: k1bqt@aol.com
Message-ID: <20030314082929.00686.00000026@mb-bh.aol.com>
Source record: 122457

Dang...wish I'd thought of that! LB wrote a whole series of articles on these antnenas for Com Quarterly!

http://www.cebik.com/4.html

5671. Wilson Tetra Tower- Need Specs & Prints

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 13:33:24 UTC
From: "Peter M. Ackermann" <w4sfd@ispwest.com>
Message-ID: <kdk37vkb3rm813oe6qi3b1jnm4n4e3fkra@4ax.com>
Source record: 122459

I'm looking for prints & specs on Winson Tetra Towers. Please respond
direct E-mail

W4SFD@arrl.net

5672. Re: Mounting an FT100D in a Toyota Tacoma Extra Cab P/U Truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 13:56:27 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E71DF8B.BC34FE88@cwis.net>
Source record: 122460

Dan,
It's fairly simple. Decide where you would like the
radio to be, if it could be anywhere you'd like. Now,
make a mount that will hold it there.
Antennas, especially on a truck, are always going to
be in the way of something. Decide what inconvenience
you are willing to put up with. Using a 'stake hole'
mount seems to be a fairly 'convenient' place to mount
an antenna, at least to me. What do you thing?
'Doc

5673. Re: Fonts and Columnization

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 14:27:59 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns933E41C8043F2pookster@216.168.3.50>
Source record: 122461

"Walter Maxwell" <w2du@iag.net> wrote in news:NH7ca.4117$nJ5.372849
@newsread2.prod.itd.earthlink.net:

>> Please send this kind of stuff to alt.test. That's what it's for.
>>
>> --
>> Bill, W7TI
>
> Where does one find 'alt.test'?
>
> Walt, W2DU
>
>

It's a newsgroup, just like rec.radio.amateur.antenna or any other.

--
Bill, W7TI

5674. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 15:31:23 UTC
From: richardharrison@webtv.net
Message-ID: <392-3E71F5CB-12@storefull-2312.public.lawson.webtv.net>
Source record: 122463

Floyd in Barrow, Alaska wrote:
"If you are at the top of the Empire State Building it won`t help (to dissipate any charge build up to avoid ever taking a direct hit.)."

The Empire State Building should make an excellent charge bleeder. Fact is, it gets struck repeatedly in nearly every storm which passes by. That`s the way it is with the tallest structures. Tall structures make the shortest arc-gap.

Tall trees take hits. Due to the abrupt start of the stroke, there is much r-f included in lightning. This causes conduction on the exterior surface of conductors. On trees it`s a bark blaster.

I spent 26 years with a corporation that had hundreds of radio masts world-wide. They got countless direct hits. We used antennas with d-c grounds to the tower top. For frequencies other than the radio used, r-f impedance was low too. If we had to use an antenna which had no ground, we provides a grounded shunt to the tower top, using a resonant line section.

What was our lightning damage? Zero, except for small pits as described by others in this thread. We used stainless-steel antennas because they took the wear and tear better, at VHF.

The tower takes the surge. Coax was never fazed by direct hits. Transistor radio front-ends were never damaged, and and we never used gas tubes, Transzorbs, or other protection across the coax. It is superfluous when antennas are installed and used as we did.

Best regards, Richard Harrison, KB5WZI

5675. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 15:44:59 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <ES-dnTxVH49nZeyjXTWcqA@comcast.com>
Source record: 122462

It may, or may not. Still, before it melts you will have that amount of current flowing.

Tam/WB2TT
"Floyd Davidson" <floyd@ptialaska.net> wrote in message news:87k7f2sgcw.fld@barrow.com...
> "Tarmo Tammaru" <t-tammaru@home.com> wrote:
> >> How much current can the antenna and transmission line handle?
> >> It will vaporize (act like a fuse) before there is enough
> >> current to breach a propane tank or the lines leading to it.
> > floyd@barrow.com
> >
> >Low loss coax starts to melt at about 500 amps. I suspect it will carry 2000
> >amps or more for the duration of a lightning strike. Should draw a good
> >arc.
> >
> >Tam/WB2TT
>
> A typical lightning strike would be _several_ times that.
>
> --
> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
> Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5676. Pawsey Stub Verses W2DU Balun

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 15:57:41 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E71FBF5.B9EEEC48@netscape.net>
Source record: 122464

Does a Pawsey stub provider better "isolation" than a W2DU style balun ?
I understand the pawsey stub is more narrow banded so I was guessing it
might provider better performance over a single band than if the W2DU
was used. Is this true? Thanks, Scott.

5677. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 16:03:43 UTC
From: richardharrison@webtv.net
Message-ID: <27983-3E71FD5F-61@storefull-2315.public.lawson.webtv.net>
Source record: 122468

Ian, G3SEK wrote:
"On the other hand, a completely open circuit MOV will also feel cool,
but will give no protection at all!"

True! That`s where the clamp-voltage tester helps, but may require
disconnecting a MOV lead.

I designed a surge suppression system installed by my company at many of
its locations. It it, the MOV`s were protected by more robust
capacitors, inductors, and thyrites. These worked and protected
sensitive solid-state equipment. The MOV replacement rate was low too.
Commercial copies appeared. One manufacturer proudly showed me how
faithfully they had copied my design. That`s good. If they price it
right we would much rather buy it from them as electrical manufacturing
was not our business.

Best regards, Richard Harrison, KB5WZI

5678. Reference material for antenna element stubs ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 16:05:30 UTC
From: g4nla@g4nla.demon.co.uk
Message-ID: <13b13013.0303140805.68a7ab64@posting.google.com>
Source record: 122465

Hi All,

I have this feeling that I am being incredibly dim, and missing the obvious.. and need poynting (sic) in the right direction.

I am erecting a 6M Al pole on the gable end of our terrace house. One of it's purposes being to support the centre of a dipole array over our dwelling. The dipoles being parallel fed 80M/40M elements - ignore these for the moment....

Given that I am going to be using this Al pole as a support, then there is also an opportunity to use it as a vertical radiator. I have an extensive ground plane in the roof void from previous experiments - and will also deploy a radial system around the new vertical.

The irritating bit from my point of view is that I can't remember how 'stubs' are used, connected to the main radiator, to act as a trap - i.e isolating a section of the radiator in much the same way as an LC resonant trap would be deployed. The target bands are 30M,20M,17M - 30M I will probably be OK with. I vaguely remember that the main element, and the 'stub' element look like an open circuit transmission line - but I can't remember why.

So if someone could point me at a URL, offer an explanation, or a reference book to re-read to jog the old grey matter along a bit I would be gratefull

Feeling rather stupid (I knew this stuff once !!)

TIA

Gee
G4NLA

5679. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 16:21:39 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <871y19syuk.fld@barrow.com>
Source record: 122467

"Tarmo Tammaru" <t-tammaru@home.com> wrote:
>It may, or may not. Still, before it melts you will have that amount of
>current flowing.
>
>Tam/WB2TT

A small hit might be 10,000 Amps. Regardless, it isn't going to
do a thing to a propane tank.

>"Floyd Davidson" <floyd@ptialaska.net> wrote in message
>news:87k7f2sgcw.fld@barrow.com...
>> "Tarmo Tammaru" <t-tammaru@home.com> wrote:
>> >> How much current can the antenna and transmission line handle?
>> >> It will vaporize (act like a fuse) before there is enough
>> >> current to breach a propane tank or the lines leading to it.
>> > floyd@barrow.com
>> >
>> >Low loss coax starts to melt at about 500 amps. I suspect it will carry
>2000
>> >amps or more for the duration of a lightning strike. Should draw a good
>> >arc.
>> >
>> >Tam/WB2TT
>>
>> A typical lightning strike would be _several_ times that.
>>
>> --
>> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
>> Ukpeagvik (Barrow, Alaska) floyd@barrow.com
>
>

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5680. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 16:22:03 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <b4sv6fdti1@news.service.uci.edu>
Source record: 122466

It's a good example, Richard. But do you think it shows that no energy reaches the 4 ohm load? That would extend the analogy fully to the present debate. To measure power, typically one would measure the voltage and current at the 4 ohm junction rather than at the 2500 ohm point in such a circuit. I think you would agree that except for losses, power is not being utilized at the input to the transformer.

73, Jim AC6XG

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:27296-3E7156C5-4@storefull-2311.public.lawson.webtv.net...
> Jim Kelley wrote:
> "The point is that the apparent impedance is totally dependent upon
> physical conditions that edon`t exist at that physical location."
>
> Test:
> 25:1 = turns ratio of output transformer
>
> 4 ohms = resistive load
>
> 625:1 = impedance ratio of output transformer
>
> 2500 ohms = (virtual ?) load on output tube
>
> I don`t think there is any need to say "virtual" load. The load is
> simply a real load resistance.
>
> Best regards, Richard Harrison, KB5WZI
>

5681. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 16:25:03 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87wuj1rk4g.fld@barrow.com>
Source record: 122369

richardharrison@webtv.net (Richard Harrison) wrote:
>Floyd in Barrow, Alaska wrote:
>"If you are at the top of the Empire State Building it won`t help (to
>dissipate any charge build up to avoid ever taking a direct hit.)."
>
>The Empire State Building should make an excellent charge bleeder. Fact
>is, it gets struck repeatedly in nearly every storm which passes by.
>That`s the way it is with the tallest structures. Tall structures make
>the shortest arc-gap.
>
>Tall trees take hits. Due to the abrupt start of the stroke, there is
>much r-f included in lightning. This causes conduction on the exterior
>surface of conductors. On trees it`s a bark blaster.
>
>I spent 26 years with a corporation that had hundreds of radio masts
>world-wide. They got countless direct hits. We used antennas with d-c
>grounds to the tower top. For frequencies other than the radio used, r-f
>impedance was low too. If we had to use an antenna which had no ground,
>we provides a grounded shunt to the tower top, using a resonant line
>section.
>
>What was our lightning damage? Zero, except for small pits as described
>by others in this thread. We used stainless-steel antennas because they
>took the wear and tear better, at VHF.
>
>The tower takes the surge. Coax was never fazed by direct hits.
>Transistor radio front-ends were never damaged, and and we never used
>gas tubes, Transzorbs, or other protection across the coax. It is
>superfluous when antennas are installed and used as we did.
>
>Best regards, Richard Harrison, KB5WZI

So you are confirming that wrapping the coax around a propane tank
is not a threat to the propane tank.

That was my point.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5682. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 16:41:01 UTC
From: richardharrison@webtv.net
Message-ID: <13979-3E72061D-49@storefull-2313.public.lawson.webtv.net>
Source record: 122372

Floyd Davidson wrote:
"Low loss coax starts to melt at about 500 amps."

Materials melt when they reach a certain temperature. Ice melts when it reaches 0-degrees Centigrade. Heat required to melt an object depends on its thermal capacity and heat applied, a function of duration and temperature.

Copper has a low voltage drop and its use in coax may offer a high-inductance path as compared with other parallel paths.

A lightning pulse lasts just milliseconds. Copper doesn`t melt at 500 amps. It melts at 1083 degrees Centigrade.

Best regards, Richard Harrison, KB5WZI

5683. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 16:50:42 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <b4t0s7$f86$1@news.service.uci.edu>
Source record: 122370

"Walter Maxwell" <w2du@iag.net> wrote in message
news:MJcca.4653$nJ5.424069@newsread2.prod.itd.earthlink.net...
I
> changed the input from the SG to the Kenwood transceiver where the input
was
> advanced to 50 watts initially with no stub. Then with the stub, the
> resulting impedance mismatch at the source reduced the power input to 15.5
> w. When you review the posts you missed I believe you'll see the solution
to
> the difference in voltage values.
>
> However, I'll review Wes' data to see if there really is a problem.

The data using the SG was very good. Data for the Kenwood less so. Is it a coincidence that the voltage across the load with the open circuit stub measured 35 mV whether the input power was 20 milliwatts or 50 watts? You used the same number for both cases.

73, Jim AC6XG

5684. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 17:06:13 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <9_nca.471$pK4.47464@newsread1.prod.itd.earthlink.net>
Source record: 122371

>
> "Walter Maxwell" wrote
anged the input from the SG to the Kenwood transceiver where the input
> was
> > advanced to 50 watts initially with no stub. Then with the stub, the
> > resulting impedance mismatch at the source reduced the power input to
15.5
> > w. When you review the posts you missed I believe you'll see the
solution
> to
> > the difference in voltage values.
> >
> > However, I'll review Wes' data to see if there really is a problem.
>
> The data using the SG was very good. Data for the Kenwood less so. Is it
a
> coincidence that the voltage across the load with the open circuit stub
> measured 35 mV whether the input power was 20 milliwatts or 50 watts? You
> used the same number for both cases.
>
> 73, Jim AC6XG

Well, gentlemen, the problem is that I had another 'senior moment'. With the input power 20 mw the voltage across the 50-ohm termination is 35 mV, and the voltage at the open circuit end of the stub is 5.8 V. My senior moment came when I incorrectly reported the 80 V at the open end with the Kenwood source, but with the 35 mV across the load with the 20 mw source. Guess I'd better retire from reporting RF measurements, hi.

Wes, thanks for finding my error. l would not have discovered it, so without your finding it it probably would have gone on unnoticed.

Jim suggested that the open-circuit voltage should have been around 2 V, but my stub is different from Wes', and the frequency is lower, thus our open-circuit voltages should not necessarily be the same. I don't know the attenuation of Wes' stub, but mine is 0.165 dB at 3.823 MHz.

Incidentally, my precision 50-ohm terminating loads are HP-908A, and the 80 V at the open circuit was measured with an HP-410B RF voltmeter.

Walt, W2DU

5685. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 17:19:06 UTC
From: richardharrison@webtv.net
Message-ID: <11732-3E720F0A-81@storefull-2311.public.lawson.webtv.net>
Source record: 122373

Floyd Davidson wrote:
"So you are confirming that wrapping the coax around a propane tank is not a threat to the propane tank."

True, but propane is heavier than air and so it is persistant in low spots. A coax wrap of a propane tank would not pass UAL or Factory Mutual standards in any confined space.

Any conductor that is subject to carrying more than very few milliamps or volts, having electrical energy storage capability, etc. is considered capable of providing an ignition spark and requires explosion-proof containers and conduit.

Insurance companies don`t want fire claims, and gas leaks are always possible.

Best regards, Richard Harrison, KB5WZI

5686. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 17:51:31 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4t4r3$2md$1@sparta.btinternet.com>
Source record: 122374

Richard Harrison wrote -
> Copper has a low voltage drop and its use in coax may offer a
> high-inductance path as compared with other parallel paths.
>
==========

Why should a copper conductor have a higher inductance than other metals?
Am I missing something?

Reg, G4FGQ

5687. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 18:12:03 UTC
From: richardharrison@webtv.net
Message-ID: <11732-3E721B73-100@storefull-2311.public.lawson.webtv.net>
Source record: 122375

It`s persistent, not persistant. Dang Me!
Best Regards, Richard Harrison, KB5WZI

5688. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 19:26:31 UTC
From: richardharrison@webtv.net
Message-ID: <6590-3E722CE7-48@storefull-2316.public.lawson.webtv.net>
Source record: 122378

Reg, G4FGQ wrote:
"Why should a copper conductor have a higher inductance than other metals?"

I left out a complete explanation. I wasn`t comparing metals. Copper screened coax may have slightly more or less inductance than coax shielded by some other metal.

I meant that the coax might have more inductance than a supporting tower, wiring for the tower illumination, and other cables which might provide parallel paths. A single coax run up a dry wooden mast would not be so lucky.

Inductance decreases as conductor periphery tncreases. The smaller the wire, the larger its inductance. So, a small coax might impede surface current on its exterior and shift much of the surge to the metal tower and other cables.
Evidence of this has been my experience. I haven`t seen coax melted by lightning on a tower.

Best regards, Richard Harrison, KB5WZI

5689. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 19:38:54 UTC
From: dplatt@radagast.org
Message-ID: <v74bue34u8ikce@corp.supernews.com>
Source record: 122376

>>> How much current can the antenna and transmission line handle?
>>> It will vaporize (act like a fuse) before there is enough
>>> current to breach a propane tank or the lines leading to it.

>>Low loss coax starts to melt at about 500 amps. I suspect it will carry 2000
>>amps or more for the duration of a lightning strike. Should draw a good
>>arc.

>A typical lightning strike would be _several_ times that.

Consider what will happen in that case. Lightning hits cable. Large
current flows. Copper (or whatever) conductors heat up rapidly and
vaporize.

You now have a roughly-coax-shaped volume of incandescently-hot,
ionized metal vapor, with some vaporized-and-probably-ionized former
petrochemicals from the dielectric and insulation.

In other words, you've got plasma - just like the incandescently-hot,
ionized atmospheric gasses inside the main lightning bolt leading from
cloud to tower.

The plasma in the atmospherically-derived portion of the bolt is,
obviously, carrying the lightning current quite happily.

I rather doubt that the plasma derived from the vaporized coax is
going to be less so.

Yeah, the coax will melt (and probably vaporize in a horrific BANG!)
but I really don't think that this melting/vaporization is going to
interrupt the flow of lightning current enough to make a jot's worth
of difference in how much damage the discharge does to anything
connected to, or near, the erstwhile coax cable.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

5690. Re: OT: MOV's

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 19:55:27 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <29c47v4mr5bstnt6jutm5dudf2uid7m8nh@4ax.com>
Source record: 122377

On Fri, 14 Mar 2003 11:42:13 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Richard Harrison wrote:
>>Henry, WA0GOZ wrote:
>>"Does anyone know how to test MOV`s?"
>>
>>I have a TII Industries Model T-101 gas tube tester. It displays the
>>voltage at which a device under test clamps the internal high voltage
>>generator. It works with any device.
>>
>>Technicians working with many MOV`s told me that leakage rises with wear
>>and tear on MOV`s.
>
>To clarify that, "wear and tear" means the number and size of any large
>transients absorbed. The simplest method to avoid unnecessary "wear and
>tear" on mains MOVs is to connect them *after* the mains switch, so they
>only see transients while the equipment is switched on.
>
>Part of the folklore about the unreliability of MOVs is because many
>organizations have a policy of always replacing them if there's any
>suspicion of having received a 'hit'. It's cheaper to replace MOVs than
>to test them in the field... but it doesn't do their reputation much
>good.
>
>>They said that they could tell a leaker from its
>>temperature. Replacing the leaky MOV eliminates the heat production,
>>they said.
>>
>Both are correct. The MOV should not be passing any current in normal
>operation, so (after switching off the equipment and making it safe) the
>MOV should always feel cool to the touch, no warmer than surrounding
>components.
>
>On the other hand, a completely open-circuit MOV will also feel cool,
>but will give no protection at all!

The only open ones I've ever seen ... welll... I haven't actually seen
an open one as there was nothing left but the wires that had hooked to
them sticking straight our in the direction in which the parts
had...well...departed. (That's #8 or #10 wire)

Course this things were across a pair of 1200 Amp SCRs (about the size
of a hockey puck) fed with 500 MCM locomotive cables bundled in groups
of 3 or 4 to the buss bar. The silicon slices inside the SCRs were

bout an inch and a half in diameter. I think maybe later ones were 2400 Amps.

If you were any where near one of those suckers when it blew, your ears would ring for the rest of the day...They were almost deafening...I think the MOVs were rated at 50,000 jouls...maybe more. They were about 3 inches long, 2 inches wide and an inch thick, on an 1/8th inch think aluminum mounting plate.

An ohm meter (that uses 9 volts) should find shorted ones. They rarely fail open, but it's not impossible.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

5691. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 19:59:06 UTC
From: richardharrison@webtv.net
Message-ID: <27983-3E72348A-84@storefull-2315.public.lawson.webtv.net>
Source record: 122380

I wrote:
"Copper has a low voltage drop (meaning small heat production for a given current) and may offer a high-inductance path (when formed into small diameter coax) as compared with other parallel paths (such as the tower and larger tower cables)."

The idea is that only a small percentage of lightning current is carried by a small coax on most towers. Therefore, coax, low loss or not, is unlikely to melt from a lightning strike.

Best regards, Richard Harrison, KB5WZI

5692. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 20:05:57 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E723625.69D768EE@uci.edu>
Source record: 122379

> > I don`t think there is any need to say "virtual" load. The load is
> > simply a real load resistance.

P.S.
Of course I agree with you, Richard. However you must concede that in
this case the impedance is not as the result of wave reflection.

Best Regards,

Jim Kelley

*Interesting you should happen to choose a vacuum tube amp example.

5693. Re: Transcient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 20:33:57 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E723CB5.7070207@ieee.org>
Source record: 122381

Jim Kelley wrote:
>>>I don`t think there is any need to say "virtual" load. The load is
>>>simply a real load resistance.
>>
> Of course I agree with you, Richard. However you must concede that in
> this case the impedance is not as the result of wave reflection.

If the test for a physical impedance discontinuity is that it can
cause reflections, that impedance passes the test.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

5694. Lightning Conductors and Transmission Lines

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 23:17:11 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b4tntn$2fs$1@helle.btinternet.com>
Source record: 122382

> Inductance decreases as conductor periphery tncreases. The smaller the
> wire, the larger its inductance. So, a small coax might impede surface
> current on its exterior and shift much of the surge to the metal tower
> and other cables.
> Evidence of this has been my experience. I haven`t seen coax melted by
> lightning on a tower.
>
> Best regards, Richard Harrison, KB5WZI
=======================

Thanks Richard, all is now clear. Yes, a thin wire (the coax) does have a greater inductance than a thick wire. (the tower).

It also has a smaller capacitance. And so a lightning conductors not surprisingly behave like transmission lines. Fat conductors have lower Zo and and, given the opportunity, are the routes preferred by lightning strikes rather than antenna feedlines.

Furthermore, fat conductors have higher propagation velocity which further encourages current once it gets started.

And as with all transmission lines, if the ground connection at the bottom end does not match line Zo there's a gigantic reflection with ringing and re-radiation.

Reg.

5695. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-14 23:41:42 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ivo47vgf256mgfoksgnhe62h4elfbitbbn@4ax.com>
Source record: 122383

On Fri, 14 Mar 2003 17:06:13 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:

[snip]

|Well, gentlemen, the problem is that I had another 'senior moment'. With the
|input power 20 mw the voltage across the 50-ohm termination is 35 mV, and
|the voltage at the open circuit end of the stub is 5.8 V. My senior moment
|came when I incorrectly reported the 80 V at the open end with the Kenwood
|source, but with the 35 mV across the load with the 20 mw source. Guess I'd
|better retire from reporting RF measurements, hi.

Well, I'm glad that I've never made a "misteak."
|
|Wes, thanks for finding my error. l would not have discovered it, so without
|your finding it it probably would have gone on unnoticed.
|
|Jim suggested that the open-circuit voltage should have been around 2 V, but
|my stub is different from Wes', and the frequency is lower, thus our
|open-circuit voltages should not necessarily be the same. I don't know the
|attenuation of Wes' stub, but mine is 0.165 dB at 3.823 MHz.

I measured 0.15 dB. That said, it isn't necessary to make a second
measurement of the loss or even of the source voltage, as I did.

The loss can be directly determined from only the ratio of input and
output voltage.

Let x = Vin / Vout

k = attenuation factor

Vs = source voltage (any value)

x = (2 * k * Vs) / (Vs - k ^ 2 * Vs)

Solving for k = (-2 + 2 * sqrt(1 + x ^ 2)) / (2 * x)

My measured x = 57.97 therefore, k = 0.983

and

20 * log(0.983) = -0.15 dB

which checks.

Unfortunately, Walt your ratio is 165.7, thus k = 0.994

and

20 * log(0.994) = -0.05 dB,

which is much less than you measured.

One of us is still in error.

Wes

5696. Re: Does a Hexbeam work better than a dipole?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 00:40:29 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303141640.613beb96@posting.google.com>
Source record: 122384

k1bqt@aol.com (Rick Littlefield) wrote in message
news:<20030314082929.00686.00000026@mb-bh.aol.com>...
> Dang...wish I'd thought of that! LB wrote a whole series of articles on these
> antnenas for Com Quarterly!
>
> http://www.cebik.com/4.html

I live in his website. I've downloaded a lot of it.

Do you know if he published those articles before 1999? The League
offers a CD which covers all issues of QEX from 1981 thru 1998. I'd
grab that if it includes those articles.

I gotta build one of 'em, either a triband hex or a Moxon. Perchance
have you ever run into a triband Moxon (10 nested inside 15 nested
inside 20 on the same four spreaders)??

Tnx,

Brian w3rv

5697. Re: Wt halo antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 01:50:15 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303141750.516eca4c@posting.google.com>
Source record: 122385

kc5cqa@devtex.net (kc5cqa) wrote in message news:<3e7162cb.21723996@news.devtex.net>...
> I am looking for a halo type antenna for two meters, and 440mhz.
> thanks cl.

Ya can't get a Halo which works on both 2 and 440.

Check http://www.kb6kq.com/products.html

w3rv

5698. Comet UHV-6 Connector

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 02:38:28 UTC
From: Drink <drink@coqui.net>
Message-ID: <b4u3m7anj2@newsreader.mailgate.org>
Source record: 122386

Hi Folks,
Does anybody know what connector type the Comet UHV-6 mobile uses? I've looked but it isn't obvious and I don't want to assume since it's quite a bit larger than most other Comet mobiles.
I got an IC 706MkIIG and want to start using it.
I'd also appreciate any recommendations for a duplexer between the MkIIG and the UHV-6 as well.
Thanks in advance.
Best Regards,
Jim, WP3JQ

5699. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 05:26:37 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87d6ktqjxu.fld@barrow.com>
Source record: 122387

richardharrison@webtv.net (Richard Harrison) wrote:
>Floyd Davidson wrote:
>"So you are confirming that wrapping the coax around a propane tank is
>not a threat to the propane tank."
>
>True, but propane is heavier than air and so it is persistant in low
>spots. A coax wrap of a propane tank would not pass UAL or Factory
>Mutual standards in any confined space.

Thank you. That was my point. I did *not* say the tank was safe.
Merely that worrying about lightning coming down the antenna/feedline
is nonsense.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5700. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 05:29:27 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <878yvhqjt4.fld@barrow.com>
Source record: 122388

richardharrison@webtv.net (Richard Harrison) wrote:
>Floyd Davidson wrote:
>"Low loss coax starts to melt at about 500 amps."

I did not say that. You are quoting someone else and attributing it
to me.

Please be more careful in the future.

>Materials melt when they reach a certain temperature. Ice melts when it
>reaches 0-degrees Centigrade. Heat required to melt an object depends
>on its thermal capacity and heat applied, a function of duration and
>temperature.
>
>Copper has a low voltage drop and its use in coax may offer a
>high-inductance path as compared with other parallel paths.
>
>A lightning pulse lasts just milliseconds. Copper doesn`t melt at 500
>amps. It melts at 1083 degrees Centigrade.

The fact that a lightning pulse lasts just milliseconds is totally
unrelated to the melting temperature of copper, and does *not*
restrict copper from being vaporized by a lightning strike.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5701. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 05:34:11 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <874r65qjl8.fld@barrow.com>
Source record: 122389

richardharrison@webtv.net (Richard Harrison) wrote:
>Reg, G4FGQ wrote:
>"Why should a copper conductor have a higher inductance than other
>metals?"
>
>I left out a complete explanation. I wasn`t comparing metals. Copper
>screened coax may have slightly more or less inductance than coax
>shielded by some other metal.
>
>I meant that the coax might have more inductance than a supporting
>tower, wiring for the tower illumination, and other cables which might
>provide parallel paths. A single coax run up a dry wooden mast would not
>be so lucky.
>
>Inductance decreases as conductor periphery tncreases. The smaller the
>wire, the larger its inductance. So, a small coax might impede surface
>current on its exterior and shift much of the surge to the metal tower
>and other cables.
>Evidence of this has been my experience. I haven`t seen coax melted by
>lightning on a tower.

In addition, coax is intended to be wrapped into turns, and that
will increase the inductance. As opposed to that, the tower
legs and perhaps other nearby conductors (including the ground
itself) might not exhibit that much inductance. Current from
lightning is very likely to jump to some other conductor rather
than traverse a 90 degree bend with a radius of 6 inches, for
example.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5702. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 12:57:47 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <frFca.137156$Se4.11490894@twister.southeast.rr.com>
Source record: 122390

Many years ago while needing supports for a quad I soaked rope in fiberglass resin and hung it from a tree to harden. Finished it off by wrapping in fiberglass, more resin and painting with automotive paint.

"Mike Coslo" <mjc5@psu.edu> wrote in message news:3E6CC2F9.4080605@psu.edu...
> Dick Carroll wrote:
>
> > > I should have added that there are quality variations in the brands
> > > of the compounds and some definitely are more durable than others. I
> > > avoid the mostly pine pitch compounds in favor of those with asphalt
> > > or latex/rubber ingredients
>
> Once upon a time, Hams used to soak things like homebrew wood balanced
> line spreaders in Paraffin for a while to water/weatherproof them. Long
> items like bamboo might be a bit of a nuisance to totally soak, but
> would be do-able.
>
> - Mike KB3EIA -
>

5703. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 17:50:03 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <fJJca.2294$jA2.213770@newsread2.prod.itd.earthlink.net>
Source record: 122391

"Walter Maxwell" <w2du@iag.net>
> wrote:
>
> [snip]
>
> |Well, gentlemen, the problem is that I had another 'senior moment'. With
the
> |input power 20 mw the voltage across the 50-ohm termination is 35 mV, and
> |the voltage at the open circuit end of the stub is 5.8 V. My senior
moment
> |came when I incorrectly reported the 80 V at the open end with the
Kenwood
> |source, but with the 35 mV across the load with the 20 mw source. Guess
I'd
> |better retire from reporting RF measurements, hi.
>
> Well, I'm glad that I've never made a "misteak."

Yeah, well, I thought I made a misteak once too, but I was wrong.

> |Wes, thanks for finding my error. l would not have discovered it, so
without
> |your finding it it probably would have gone on unnoticed.
> |
>
> The loss can be directly determined from only the ratio of input and
> output voltage.
>
> Let x = Vin / Vout
>
> k = attenuation factor
>
> Vs = source voltage (any value)
>
> x = (2 * k * Vs) / (Vs - k ^ 2 * Vs)
>
> Solving for k = (-2 + 2 * sqrt(1 + x ^ 2)) / (2 * x)
>
> My measured x = 57.97 therefore, k = 0.983
>
> and
>
> 20 * log(0.983) = -0.15 dB
>
> which checks.

>
> Unfortunately, Walt your ratio is 165.7, thus k = 0.994
>
> and
>
> 20 * log(0.994) = -0.05 dB,
>
> which is much less than you measured.
>
> One of us is still in error.
>
> Wes

Yeah, Wes, it's I. I've already had one senior moment, but here I go into another one. I'm no trapeze expert, but it's good that you are my safety net and caught me this time. This time I can't read the meters correctly--read the wrong scale on the VVM. I changed attenuation position switch 10 dB and forgot to change the scale to read from. Consequently, my earlier reading of 5.8 v for the voltage at the open end of the stub, I should have read 1.84 v. Check it out on your VVM and you'll see what I mean.

So now reading the correct voltages, my meaured 'x' = 52.57, making 'k' = 0.981--pretty darned close to yours, wouldn't you say?

That's two senior moments--I do get one more before I strike out, eh?

Walt, W2DU

5704. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 18:07:41 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E736BED.7020208@ieee.org>
Source record: 122392

Walter Maxwell wrote:
> That's two senior moments--I do get one more before I strike out, eh?

Don't feel bad, Walt. I've been having senior moments ever since
grammer school.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5705. Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 19:33:57 UTC
From: Doug Niessen <dniessen@pacbell.net>
Message-ID: <3E738025.40204@pacbell.net>
Source record: 122398

I am considering the purchase of a 20-15-10 3 or 4 element yagi.
Does anyone have recommendations.

Thank you,
Doug K6STS

5706. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 20:01:45 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <JELca.2492$jA2.232029@newsread2.prod.itd.earthlink.net>
Source record: 122393

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:3E736BED.7020208@ieee.org...
> Walter Maxwell wrote:
> > That's two senior moments--I do get one more before I strike out, eh?
>
> Don't feel bad, Walt. I've been having senior moments ever since
> grammer school.
> --
> cheers, CAM http://www.qsl.net/w5dxp

That's a real refreshing thought, Cecil, maybe I'll make it into the next
day after all.

Walt

5707. Re: Confused

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 20:29:08 UTC
From: KC7ZRU - Tate <73kc7zru73@arrl.net>
Message-ID: <o2Mca.116032$S_4.69343@rwcrnsc53>
Source record: 122394

James wrote:
> I am a new ham with a dualband mobile that transmits at either 50
> watts or 5 watts. I live in South Carolina with relatively flat areas
> and few large buildings. I am trying to find an omnidirectional
> antenna for use at home.

James,

You'd be hard pressed to find a better deal than an Arrow dual band
J-pole. Good price, sturdier than most and as effective as all get out.
Best yet, I believe it'll meet all the criteria you mentioned and even a
couple you haven't <g>.

http://www.arrowantennas.com/j-pole.html

Using one here the the 'hilly' country of central Wyoming and it's been
nothing but great for several years now.

73

--
"The Dungeon" online at http://go.to/kc7zru
Casper, WY | CARC Repeater
DN62tt | 146.940-
http://www.trib.com/~carc

5708. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 22:21:47 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <l3977vkk0k2j9e3es6p05872438m4c6q7r@4ax.com>
Source record: 122395

On Sat, 15 Mar 2003 17:50:03 GMT, "Walter Maxwell" <w2du@iag.net>
wrote:
[snip]
|
|Yeah, Wes, it's I. I've already had one senior moment, but here I go into
|another one. I'm no trapeze expert, but it's good that you are my safety
|net and caught me this time.

Reading your stuff has saved my bacon more times than I could ever
save yours. The fact is that I read you more carefully than I do a
lot of other authors, because I usually learn something.

|This time I can't read the meters
|correctly--read the wrong scale on the VVM. I changed attenuation position
|switch 10 dB and forgot to change the scale to read from. Consequently, my
|earlier reading of 5.8 v for the voltage at the open end of the stub, I
|should have read 1.84 v. Check it out on your VVM and you'll see what I
|mean.

Well... I would *never* do something like that. heh heh.
|
|So now reading the correct voltages, my meaured 'x' = 52.57, making 'k' =
|0.981--pretty darned close to yours, wouldn't you say?

Remarkably so. Especially considering all of the unaccounted for
uncertainties (at least on this end)
|
|That's two senior moments--I do get one more before I strike out, eh?

Sure. Take another swing and try to settle the
argument---sorry---"discussion" about what comes first, the
discontinuity or the effects of the discontinuity. Or is that still
the subject anymore? hi.

Regards,

Wes N7WS

5709. Re: Confused

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 22:29:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E73A95E.7080907@ieee.org>
Source record: 122396

KC7ZRU - Tate wrote:
> You'd be hard pressed to find a better deal than an Arrow dual band
> J-pole. Good price, sturdier than most and as effective as all get out.
> Best yet, I believe it'll meet all the criteria you mentioned and even a
> couple you haven't <g>.
>
> http://www.arrowantennas.com/j-pole.html
>
> Using one here the the 'hilly' country of central Wyoming and it's been
> nothing but great for several years now.

I ran field strength measurements on it a number of years ago.
It works as advertised, better than I expected.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5710. Re: Antenna/Feedline Question [Lightning Parameters]

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-15 22:33:59 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E73AA24.C9BB8771@attbi.com>
Source record: 122397

Lightning pulse characteristics defined by the USAF: the 90th percentile
of all USA lightning strikes is as follows.

0 to 100,000 amperes in 1 microsecond max.
100,000 amperes to 10,000 amperes in 10 microseconds max.
10,000 amperes to 600 amperes in 0.001 seconds max.
continuing current of 600 amperes for 0.300 seconds max.

Restrike is defined as follows: at 0.01 to 0.05 seconds from leading
edge of first strike:

0 to 50,000 amperes in 1 microsecond max.
50,000 to 5,000 amperes in 10 microseconds max
5,000 to 600 amperes in 0.001 seconds max
600 amperes continuous for 0.200 seconds max.

Source: Systems Requirements Analysis for Weapon System S-118 dated
1978. It may have been updated since I first designed to it.

It is a double strike with a very high amplitude peak with fast rise
times that decays to a continuing current for 100s of milliseconds.

In any event it has a high peak current and a long sustaining current.

Deacon Dave, W1MCE
+ + +

Floyd Davidson wrote:
>
SNIP

> A small hit might be 10,000 Amps. Regardless, it isn't going to
> do a thing to a propane tank.
>
SNIP

> >> "Tarmo Tammaru" <t-tammaru@home.com> wrote:
> >> >> How much current can the antenna and transmission line handle?
> >> >> It will vaporize (act like a fuse) before there is enough
> >> >> current to breach a propane tank or the lines leading to it.
> >> > floyd@barrow.com
> >> >
> >> >Low loss coax starts to melt at about 500 amps. I suspect it will carry
> >2000
> >> >amps or more for the duration of a lightning strike. Should draw a good
> >> >arc.
> >> >

SNIPPED

5711. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 04:02:28 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <eR%ca.33010$Yz5.26144@fe07.atl2.webusenet.com>
Source record: 122415

Woudn't it be better to wrap the coax around a VW Beetle? <GRIN>

--
73,
Chuck
KE4ETH
USA-NA

"Dave Platt" <dplatt@radagast.org> wrote in message
news:v6vsqadfuo7115@corp.supernews.com...
> >Floyd,
> > > Think about it? I've been to a rodeo, a goat-rope'n,
> > >and a couple of fires involving propane tanks. I don't
> > >wanna think about it. I'm not wrapping any feed lines
> > >around any kind of tank containing flamable liquids, gasses,
> > >or solids, thanks anyway...
> >
> > Hmmm. Well, winding a coax a few times around a propane tank would
> > create some sort of RF choke, I imagine.
> >
> > If the propane were to be touched off by accident, that choke would
> > turn into one _hell_ of a cough! Not the sort of Heimlich Manuever
> > I'd want to be around.
> >
> > More seriously, though... the possible electrical hazard involved in a
> > coax wouldn't be the only issue. I'd be equally concerned about
> > mechanical issues. It's not unknown for coaxes, ropes, etc. to be
> > snagged somehow, and then pulled... tower comes down in a high wind,
> > etc. If you've looped the coax around a propane tank, there just
> > _might_ be enough mechanical force to pull a small tank off of its
> > mountings, or break a pipe or hose or regulator, and then you'd have
> > propane spraying around all over the place and mixing with the air and
> > making a nice explosive mixture. Fuel-air-explosive bombs are best
> > left to the military.
> >
> > Running a coax or other feedline around a propane tank is probably one
> > of those many things which you can get away with 99.99% of the time...
> > and the other .01% somebody ends up dead.
> >
> > --
> > Dave Platt <dplatt@radagast.org> AE6EO
> > Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> > I do _not_ wish to receive unsolicited commercial email, and I will
> > boycott any company which has the gall to send me such ads!

5712. Re: Antenna/Feedline Question [Lightning Parameters]

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 04:05:02 UTC
From: richardharrison@webtv.net
Message-ID: <6010-3E73F7EE-332@storefull-2317.public.lawson.webtv.net>
Source record: 122400

Dave Shrader wrote:
"0 to 100,000 amperes in 1 microsecond max.+

About 40 years ago I was asked to stop repeated semiconductor failures in new equipment being used in fixed stations as a result of lightning strikes. The equipment manufacturer said said they were trying to fix the problems, but weren`t ready to issue field modification bulletins. They weren`t confident they had "the fix", but pretended they did, just being careful not to be causing added problems so that a series of bulletins followed, etc. As users, we couldn`t wait.

A request was identical to a direct order in my corporation, so I went to work. I found a standard test pulse existed. IIRC, for design purposes, by the time lightning gets to your equipment, it is OK to guess that the rise time is 20 milliseconds and the fall time is 200 milliseconds. I don`t recall that the duration was specified, if any, between rise and fall. These are arbitrary rules of thumb. Whatever they were, at the time I took them into account. My device worked, and we lived hapily ever after.

My take on why others failed to stop the damage was their obnsession on trying to lower ground impedance. I remembered the survivors it the car which hit the high voltage cable. They were saved by enclosure in a conducting shell. Their ground was the arc across the tires.

I had also years of broadcast experience where lightning on a tower is kept of the electrical circuits powering the tower lights by the same tower-lighting choke that keeps r-f off those same electrical circuits.

I made brute force filters of tower lighting chokes with capacitors bypassing both ends of the choke. The capacitor next to the electronic gear was shunted with MOV`s usually, or sometimes gas tubes or Transzorbs. The capacitor next to the power line usually got a thyrite arrestor. Every power wire, including the neutral, got the same treatment. Other wires into and out of protected equipment got similar treatment, but a wire carrying milliamps could use ordinary chokes in place of tower-lighting chokes good for many amps.

We did not put arresters or bypass capacitors across r-f cables. They already are chokes for the common-mode due to tight coupling between the two conductors. Ground the coax at the tower and at the entrance to the station, and there usually is no lightning problem from the coax.

It worked. I gave a paper. It was copied commercially. It is still being used.

Best regards, Richard Harrison, KB5WZI

5713. Miitary Freq

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 04:16:06 UTC
From: "Mr. & Mrs. James D. Green" <jdgreen@netdoor.com>
Message-ID: <a5Scnew-_s0WZ-6jXTWcrg@netdoor.com>
Source record: 122399

Bob,
I remember you wanting any info on military frequencies , ctc. I ran
accross this on the Antenna Usergroup. Ihave not check it out but here it
is for what its worth,hi.
JG

--
"A great new book 'Monitoring the Iraq War' has just been published giving
the
frequencies to monitor, background information and Internet links."

Visit http://www.carapress.ip3.com/ for full details.

5714. Wanted 5b-tv by Hustler

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 04:25:24 UTC
From: theplanters95@aol.comnospam
Message-ID: <20030315232524.10583.00000079@mb-fv.aol.com>
Source record: 122401

I am looking to trade or buy a used 5b-tv. Willing to trade a FT-50 for the antenna.

Randy ka4nma

Email me directly at theplanters95 at aol.com.

5715. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 04:26:10 UTC
From: richardharrison@webtv.net
Message-ID: <6011-3E73FCE2-102@storefull-2317.public.lawson.webtv.net>
Source record: 122404

I am sorry I misquoted Floyd Davidson when I attributed to him:
"Low-loss coax starts to melt at 500 amps."

I read that in a posting to this thread, that I thought he authored.
Maybe he quoted another author, maybe I read the wrong posting, or maybe
it was something else.

I apologize for the misattribution.

Best regards, Richard Harrison, KB5WZI

5716. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 04:48:19 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v780gih8km69c@corp.supernews.com>
Source record: 122402

Well.... it depends on what you wish to do.
As a diversion from the crush that always arrives in March and
April, I just modeled the path to VU4 - a DX entity I have not worked.
It became clear that if I work VU4 when it is next on the air, it is
likely to be on the 18 MHz band. Only occasionally will a band above or
below be likely to have reasonable propagation.
I am suggesting that a tri-bander is quite restrictive. The
in-between bands can be very important. Perhaps you might wish to
consider one of the five band antennas or a log-periodic antenna.
... just a thought. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Doug Niessen" <dniessen@pacbell.net> wrote in message
news:3E738025.40204@pacbell.net...
> I am considering the purchase of a 20-15-10 3 or 4 element yagi.
> Does anyone have recommendations.
>
> Thank you,
> Doug K6STS
>

5717. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 04:49:56 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <UnTca.3133$jA2.295399@newsread2.prod.itd.earthlink.net>
Source record: 122403

Thanks for the nice response, Wes. l've got a lot more to say, but it's already past my beddy-bye time, so I'll continue tomorrow morning. Your msg was timed at 5:21 pm, but it didn't arrive here until just a few minutes ago--can't account for the delay, otherwise I would have answered completely before it got this late.

Walt

5718. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 05:49:12 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E741056.F6765788@att.net>
Source record: 122405

Floyd Davidson wrote:
\

>
> So you are confirming that wrapping the coax around a propane tank
> is not a threat to the propane tank.

Maybe not in Alaska. Where I live no one in their right mind would do it.

5719. Re: Comet UHV-6 Connector

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 07:16:22 UTC
From: David Mohr <ka9nyn@ameritech.net>
Message-ID: <axVca.749$we1.475705@newssrv26.news.prodigy.com>
Source record: 122406

As I remember, it is a pl-259/ so-239 antenna to mount setup.

"Drink" <drink@coqui.net> wrote in message
news:b4u3m7anj2@newsreader.mailgate.org...
> Hi Folks,
> Does anybody know what connector type the Comet UHV-6 mobile uses? I've
> looked but it isn't obvious and I don't want to assume since it's quite a
> bit larger than most other Comet mobiles.
> I got an IC 706MkIIG and want to start using it.
> I'd also appreciate any recommendations for a duplexer between the MkIIG
> and the UHV-6 as well.
> Thanks in advance.
> Best Regards,
> Jim, WP3JQ
>
>

5720. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 08:24:11 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303160024.1c1af9d1@posting.google.com>
Source record: 122407

Floyd Davidson <floyd@ptialaska.net> wrote in message news:<87bs0es1cm.fld@barrow.com>...
> nm5k@wt.net (Mark Keith) wrote:
> >Floyd Davidson <floyd@ptialaska.net> wrote in message
> >
>
> >> Your coax, not to mention your antenna wire, will vaporize in a
> >> ball of fire. Not if, just how fast.
> >
> >Only if you have a lousy high resistance ground connection. If you
> >have a good low resistance connection to ground, a #10 wire can be
> >struck with little damage at all. The wire won't even hardly heat up.
>
> A #10 wire *cannot* provide a "good low resistance connection to
> ground". If nothing else, just the inductance in a wire that small
> is too high.

The #10 wire is the antenna in my example. Not the connection to
ground. If the base is grounded to a good ground system it will have a
fairly low resistance to ground.
The inductance may be borderline, but I don't think the wire would
burn up if the resistance was low.

>
> >Look at lightning rod installations. They don't burn up. I take direct
>
> They rarely take direct lightning hits either. The whole
> purpose in having them is to dissipate any charge build up to
> avoid ever taking a direct hit. They also don't use #10 wire
> for ground connections!

Huh? They take direct hits all the time. Thats what they are designed
to do.
The dissapation of the charge theory is balony as far as I'm
concerned. I know damn well in the real world it's useless as tit's on
a boar hog to the average ham. I've seen both grounded and ungrounded
objects struck many times. It really does not make a heck of a lot of
difference. My mast is well grounded and it's been struck more than
once. Relying on that theory of charge dissapation is a disaster
waiting to happen unless you have good enough ground connections to go
along with it in order to handle a strike. In order to protect a
nearby object from strikes , you must lure the strike to an easier
streaming object nearby. How will merely dissapating the charge at the
lightning rod protect the nearby antenna to be protected? It won't. It
will still be charged. Not to mention the charge is replenished very
fast anyway. If lightning is going to strike in your area, it's going

to strike regardless of a grounded mast, or wistfully hoping the
charge is dissapated. Where it goes will be determined more on the
location of the leader, and the locations of the streamers underneath.
The only surefire way to protect the object is to draw the strike to
the rod via a better streamer. Thats why they have sharp easy
streaming points on top. Of course they don't use wire. They use flat
copper strap for conductors.
>
> >strikes on my mast and have to look hard to tell any damage at all.
>
> I question that your mast actually takes direct hits, but it is
> possible. If it is actually grounded with only a #10 wire,
> either you a) do not have a good ground connection, or b) you
> are not really taking direct hits. If you were, the first
> decent sized hit would melt that #10 wire.

Who ever said anything about grounding with #10 wire. I used that
example as the antenna itself.
>
> Regardless, if you want to claim that a #10 wire can handle a
> direct hit of lightning, you most certainly are not going to say
> that a propane tank will be destroyed by that same direct hit...

Probably not, but drawing a strike to ground at that point would be a
bad idea. Probably fail code also.
>
> >All I've ever seen so far was a tiny "arc" spot on the tip of my mast.
> >The lightning blew out a cap of electrical tape which I had on top to
> >seal out water. But it hardly effected the metal at all. All the
> >antenna wires "dipoles" and coaxes running down the side of the mast
> >were untouched. The lightning strikes 10-15 ft from where I'm sitting.
>
> How are your ears???? :-)

Fine. Lightning is very quiet. Only the sonic boom overhead is loud.
The actual strike sounds like a light bulb being thrown on the ground
outside the window.
You also hear it in your auditory nerves from being so close. Sounds
like a "click". From what I hear, a deaf person can hear the "click"
if he's close enough to the strike.

>
> >It's hit my mast twice in 4 years. Or at least that I witnessed first
> >hand...The last big boomer a few months ago hit the big tree in the
> >front yard instead of my mast.
>
> I doubt you are taking direct hits, but secondary discharges are
> another matter. Not that they are not serious though! But you
> aren't seeing 100,000+ Amp discharges, or your descriptions
> would be a little more, shall we say "annimated".

I don't know how large a strikes they were. But they were direct hits
to the top of the mast. The blown out tape cap proved that. There was
no damage at all to the wire antennas or coaxes running down the mast.
The mast did most of the dirty work of conducting the strike to
ground.

>
> (I had the pleasure, many years ago, of working in a transmitter
> building sitting on a mountain top that took dozens of hits per
> day every summer afternoon. The three 300' towers took all the
> direct hits, but anything and everything that wasn't bonded
> would errupt with fireballs too.)

>
> >> The whole point in grounding the antenna (and the propane tank
> >> too, for that matter) is to prevent a direct hit by discharging
> >> any charge build up before it becomes excessive.

I thought being grounded would discharge the often struck towers? I
rest my case.... :/
> >
> >I disagree with this statement. Number one, trying to bleed off a
> >charge in a storm is nearly impossible. The charge is replenished too
> >fast. This was a selling point of the "brush discharger" things used
> >on buildings and towers.
>
> Well, disagree all you like, but that is the way it works and
> that is the purpose. It is not a guarantee against taking a
> direct hit, but it most certainly reduces the chances very
> significantly. If you are at the top of a mountain or the
> Empire State Building, it won't help, but in many places it
> will almost guarantee no direct hits.

I reserve the right to still disagree. It's wishful thinking that may
or may not pan out. The smart thing to do is make sure the
connections to ground are very good. I ALWAYS assume the object will
be struck sooner or later. Anything less is very foolish.
>
> >They don't work. They still are struck.
> >The whole point of grounding a structure that is prone to lightning
> >strikes is to provide a good low resistance path to ground. You can't
> >bleed off charges fast enough to do any good. But you can offer a
> >better and easier streaming target. IE: lightning rod. You can't avoid
> >strikes in your immediate area. You can only offer a better and/or
> >well grounded target.
>
> In some cases that is indeed true, but usually that is not what
> a lightning rod does. If the lightning rod is small and
> grounded via a #10 wire, it is intended to dissipate the charge,
> not to take direct hits. If it is grounded with 2 inch wide
> copper strap, it might handle direct hits.

Who would connect a lightning rod to ground with #10 wire? Of course
they would use strap. Any lightning rod that can not handle a direct
strike with no damage is one joke of a lightning rod.
>

> > Wrapping the
> >> coax around a metal tank that is grounded might be a good idea
> >> (wrapping it around an ungrounded tank might be a way to attract
> >> that direct hit).
> >

>
> >Connecting any kind of conductive line that is a potential path for
> >lightning to a propane gas tank is very foolish. Grounded or not. I
>
> Every pipe that goes to the tank qualifies. Does that make them
> a "very foolish" thing to have? How about the ground connection
> itself, that qualifies too?

Only the line that carries the strike would qualify. All grounds to
the tank would be tied to any other ground systems in the area. They
don't carry heavy strike currents so they don't count.

>
> >would never do that even if it's unlikely to actually blow up. Just
> >not a smart move and most likely against NEC code. Also, gas lines
> >or pipes should never be used as lightning returns. They should be
> >grounded to all other grounds though. IE: all grounds should be tied
> >together at a common point. This is usually at the power service
>
> Which makes them all "lightning returns".

No, it doesn't really. Only the feedline or whatever conductor carries
the lightning current to ground would be the "lightning return". If
you used a ground window system, it would be a second lesser lightning
return for the feedline shields at the entrance. I don't consider
plain ground wires that are unrelated as "lightning returns". They
should carry no real current being they should all be at the same
potential.
>
> All lightning ground systems should be
> >built on their own. IE: Own rods, radials, etc at the base of towers,
> >masts, etc. That system in turn should be tied to the rest of the
> >system. Very few household grounds/wires have a low enough resistence
> >to ground to avoid damage to the struck object. Thats why they use
> >additional rods, radials, ufer grounds, etc at the base of towers.
> >
> >MK
>
> True enough, but what has that got to do with what makes a propane
> tank dangerous or not?

Well, if if you run a feedline from a "mastless" unprotected antenna down directly to a propane tank, that is not a smart thing to do. In fact, I would consider it a fairly dumbass maneuver overall. I doubt the tank would blow up, except for a fluke happening, but that doesn't mean it's a smart thing to do. it surely wouldn't pass code. I don't know if a metal mast supports the antenna, but for now I assume not. I would run the feedline straight down to ground and it's own ground rod. I'd leave the tank totally out of the picture. MK

5721. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 08:32:15 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303160032.7a8d8b6f@posting.google.com>
Source record: 122408

Floyd Davidson <floyd@ptialaska.net> wrote in message news:<87d6ktqjxu.fld@barrow.com>...
> richardharrison@webtv.net (Richard Harrison) wrote:
> >Floyd Davidson wrote:
> >"So you are confirming that wrapping the coax around a propane tank is
> >not a threat to the propane tank."
> >
> >True, but propane is heavier than air and so it is persistant in low
> >spots. A coax wrap of a propane tank would not pass UAL or Factory
> >Mutual standards in any confined space.
>
> Thank you. That was my point. I did *not* say the tank was safe.
> Merely that worrying about lightning coming down the antenna/feedline
> is nonsense.

Why would that be nonsense? If there is no other mast or metal object
supporting the antenna to handle the strike, the strike goes to ground
via the feedline if it's fairly straight. Routing that line directly
to a propane tank would be nonsense. A sane person would route it
straight down to ground rods/radials. MK

5722. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 09:07:15 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87ptorptmk.fld@barrow.com>
Source record: 122409

nm5k@wt.net (Mark Keith) wrote:
>Floyd Davidson <floyd@ptialaska.net> wrote in message news:<87bs0es1cm.fld@barrow.com>...
>> nm5k@wt.net (Mark Keith) wrote:
>> >Floyd Davidson <floyd@ptialaska.net> wrote in message
>> >
>>
>> >> Your coax, not to mention your antenna wire, will vaporize in a
>> >> ball of fire. Not if, just how fast.
>> >
>> >Only if you have a lousy high resistance ground connection. If you
>> >have a good low resistance connection to ground, a #10 wire can be
>> >struck with little damage at all. The wire won't even hardly heat up.
>>
>> A #10 wire *cannot* provide a "good low resistance connection to
>> ground". If nothing else, just the inductance in a wire that small
>> is too high.
>
>The #10 wire is the antenna in my example. Not the connection to
>ground. If the base is grounded to a good ground system it will have a
>fairly low resistance to ground.
>The inductance may be borderline, but I don't think the wire would
>burn up if the resistance was low.

"A #10 wire *cannot* provide a "good low resistance connection to
ground". If nothing else, just the inductance in a wire that small
is too high."

That is still true. You cannot escape from that simple fact.

A #10 wire simply is not going to carry all of the current from
a direct hit. Whether the wire vaporizes or not just depends on
how much of the current finds another path to follow. But that
there will be anther path is guaranteed.

>> Regardless, if you want to claim that a #10 wire can handle a
>> direct hit of lightning, you most certainly are not going to say
>> that a propane tank will be destroyed by that same direct hit...
>
>Probably not, but drawing a strike to ground at that point would be a
>bad idea. Probably fail code also.

Make up your mind. You can't have it both ways.

"Probably fail code" doesn't get it. Cite the code.

>> >All I've ever seen so far was a tiny "arc" spot on the tip of my mast.
>> >The lightning blew out a cap of electrical tape which I had on top to
>> >seal out water. But it hardly effected the metal at all. All the
>> >antenna wires "dipoles" and coaxes running down the side of the mast
>> >were untouched. The lightning strikes 10-15 ft from where I'm sitting.
>>
>> How are your ears???? :-)
>
>Fine. Lightning is very quiet. Only the sonic boom overhead is loud.
>The actual strike sounds like a light bulb being thrown on the ground
>outside the window.

OK, so *you aren't taking direct hits*. That's what I thought.

What you are experiencing is induced discharges (indirect hits
if you will).

>> (I had the pleasure, many years ago, of working in a transmitter
>> building sitting on a mountain top that took dozens of hits per
>> day every summer afternoon. The three 300' towers took all the
>> direct hits, but anything and everything that wasn't bonded
>> would errupt with fireballs too.)

Trust me, the noise is *deafening*.

>> >> The whole point in grounding the antenna (and the propane tank
>> >> too, for that matter) is to prevent a direct hit by discharging
>> >> any charge build up before it becomes excessive.
>
>I thought being grounded would discharge the often struck towers? I
>rest my case.... :/

"Grounded", when sitting on top of a mountain, has no meaning. The
whole top of the mountain is charged up, including the towers.

Same with tall buildings. That's why they get hit.

>> >Connecting any kind of conductive line that is a potential path for
>> >lightning to a propane gas tank is very foolish. Grounded or not. I
>>
>> Every pipe that goes to the tank qualifies. Does that make them
>> a "very foolish" thing to have? How about the ground connection
>> itself, that qualifies too?
>
>Only the line that carries the strike would qualify. All grounds to
>the tank would be tied to any other ground systems in the area. They
>don't carry heavy strike currents so they don't count.

You cannot tell in advance which one is going to carry the current.
Any of them might. Hence, they all qualify.

>> Which makes them all "lightning returns".
>
>No, it doesn't really. Only the feedline or whatever conductor carries

>the lightning current to ground would be the "lightning return". If
>you used a ground window system, it would be a second lesser lightning
>return for the feedline shields at the entrance. I don't consider
>plain ground wires that are unrelated as "lightning returns". They
>should carry no real current being they should all be at the same
>potential.

You are ignoring inductance.

>> True enough, but what has that got to do with what makes a propane
>> tank dangerous or not?
>
>Well, if if you run a feedline from a "mastless" unprotected antenna
>down directly to a propane tank, that is not a smart thing to do. In

Why not? The antenna simply does not have the current carrying ability
to conduct enough current to damage the propane tank (which can carry
orders of magnitude more current, and supposedly is installed correctly
with sufficient ground connections).

>fact, I would consider it a fairly dumbass maneuver overall. I doubt

Just like those who said the ground system should not be connected to
the gas lines. Except of course the ground system *must* be connected
to the gas lines... if you want a proper ground system.

>the tank would blow up, except for a fluke happening, but that doesn't
>mean it's a smart thing to do. it surely wouldn't pass code. I don't

It won't "pass code" to have an antenna lead near a propane tank????

Cite please!

>know if a metal mast supports the antenna, but for now I assume not. I
>would run the feedline straight down to ground and it's own ground
>rod. I'd leave the tank totally out of the picture. MK

You had best ground the tank appropriately, and have that ground
connected to the same ground the antenna system is seeing too.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5723. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 09:14:44 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87llzfpta3.fld@barrow.com>
Source record: 122410

nm5k@wt.net (Mark Keith) wrote:
>Floyd Davidson <floyd@ptialaska.net> wrote in message news:<87d6ktqjxu.fld@barrow.com>...
>> richardharrison@webtv.net (Richard Harrison) wrote:
>> >Floyd Davidson wrote:
>> >"So you are confirming that wrapping the coax around a propane tank is
>> >not a threat to the propane tank."
>> >
>> >True, but propane is heavier than air and so it is persistant in low
>> >spots. A coax wrap of a propane tank would not pass UAL or Factory
>> >Mutual standards in any confined space.
>>
>> Thank you. That was my point. I did *not* say the tank was safe.
>> Merely that worrying about lightning coming down the antenna/feedline
>> is nonsense.
>
>Why would that be nonsense? If there is no other mast or metal object
>supporting the antenna to handle the strike, the strike goes to ground
>via the feedline if it's fairly straight. Routing that line directly
>to a propane tank would be nonsense. A sane person would route it
>straight down to ground rods/radials. MK

A direct hit on the antenna, even if it is made out of the #10
wire you have claimed, simply *cannot* conduct that much charge
to ground. The charge will necessarily find other paths.

The amount of current the feedline is able to conduct is not
enough to be anywhere near a danger to the tank (which can
easily conduct many times that much current).

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5724. Re: Miitary Freq

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 11:42:24 UTC
From: Ian <cls119@remove.spam.lycos.co.uk>
Message-ID: <wqZca.92$Fy5.45@newsfep3-gui.server.ntli.net>
Source record: 122411

Hello,

It was crossposted into many different newsgroups - a poor way of
advertising a book for sale. You obviously didn't have any interest, maybe
that's why the email address has changed and new messages are appearing -
another complaint to your ISP is on the way.

"Mr. & Mrs. James D. Green" <jdgreen@netdoor.com> wrote in message
news:a5Scnew-_s0WZ-6jXTWcrg@netdoor.com...
> Bob,
> I remember you wanting any info on military frequencies , ctc. I ran
> accross this on the Antenna Usergroup. I have not check it out but here
it
> is for what its worth,hi.
> JG
>
> --
> "A great new book 'Monitoring the Iraq War' has just been published giving
> the
> frequencies to monitor, background information and Internet links."
>
> Visit http://www**********.com/ for full details.
>
>

5725. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 12:40:10 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v78s88glg9j906@corp.supernews.com>
Source record: 122412

Doug

Check out http://www.steppir.com/.
They have a good product.

H.
NQ5H

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:v780gih8km69c@corp.supernews.com...
> Well.... it depends on what you wish to do.
> As a diversion from the crush that always arrives in March and
> April, I just modeled the path to VU4 - a DX entity I have not worked.
> It became clear that if I work VU4 when it is next on the air, it is
> likely to be on the 18 MHz band. Only occasionally will a band above or
> below be likely to have reasonable propagation.
> I am suggesting that a tri-bander is quite restrictive. The
> in-between bands can be very important. Perhaps you might wish to
> consider one of the five band antennas or a log-periodic antenna.
> ... just a thought. 73 Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>
> "Doug Niessen" <dniessen@pacbell.net> wrote in message
> news:3E738025.40204@pacbell.net...
> > I am considering the purchase of a 20-15-10 3 or 4 element yagi.
> > Does anyone have recommendations.
> >
> > Thank you,
> > Doug K6STS
> >
>

5726. Re: Miitary Freq

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 13:12:53 UTC
From: Walt K <k2wk@rcn.com>
Message-ID: <b51t8r$oj4$1@bob.news.rcn.net>
Source record: 122413

Top 100 Military Shortwave Frequencies
(Note: Some frequencies are changed occasionally, however the majority of the following are active.)

Frequency (MHz) Mode Description

1. 11.175 USB Air Force GHFS primary days
2. 6.739 USB Air Force GHFS primary nights
3. 4.725 USB Air Force GHFS
4. 8.993 USB Air Force GHFS
5. 9.014 USB Air Combat Command (ACC) ops.
6. 11.243 USB STRATCOM primary days
7. 6.761 USB STRATCOM primary nights
8. 6.812 USB MYSTIC STAR primary AF-1/AF-2 SAMs
9. 11.246 USB Air Force GHFS McClellan/MacDill AFB

10. 13.201 USB Air Force GHFS (old SAC S-394)
11. 13.215 USB Air Force GHS Andrews?MacDill AFB
12. 13.244 USB Air Force GHFS
13. 5.680 USB search & rescue all military
14. 5.696 USB Primary USCG aviation (nights)
15. 8.984 USB USCG (primary days) secondary nights
16. 6.697 USB U.S. Navy HICOM
17. 11.267 USB U.S. Navy HICOM
18. 9.023 USB NORAD primary nights
19. 13.241 USB STRATCOM (old SAC)

20. 3.113 USB STRATCOM Sierra 302
21. 13.205 USB STRATCOM
22. 13.217 USB STRATCOM X-Ray 906
23. 13.247 USB Mystic Star/Andrews AFB?STRATCOM
24. 15.091 USB ACC (secondary) tactical ops.
25. 3.369 USB STRATCOM Alpha Sierra
26. 4.495 USB STRATCOM Sierra 304
27. 4.721 USB Mystic Star/Andrews AFB
28. 18.002 USB Air Force GHFS (discrete)
29. 18.046 USB Air Force GHFS

30. 5.020 USB STRATCOM Foxtrtot
31. 17.972 USB STRATCOM (discrete)
32. 17.975 USB Air Force GHFS
33. 20.631 USB STRATCOM (old SAC Whiskey)
34. 20.846 USB ACC tactical (old SAC Charlie Alpha)
36. 8.872 USB Navy anti submarine warfare ops.

37. 5.197 USB Air Mobility Command (AMC) ops.
38. 18.027 USB AMC ops.
39. 11.214 USB NORAD

40. 5.297 USB NORAD
41. 9.793 USB NORAD
42. 10.194 USB NORAD
43. 10.452 USB NORAD
44. 5.328 USB STRATCOM
45. 11.441 USB NORAD
46. 14.364 USB NORAD
47. 20.855 USB NORAD
48. 5.826 USB STRATCOM Papa 382
49. 6.826 USB STRATCOM Golf

50. 7.330 USB STRATCOM X-ray-Yankee
51. 7.983 USB STRATCOM Foxtrot Charlie
52. 8.101 USB STRATCOM Alpha Papa
53. 9.057 USB STRATCOM Sierra 309
54. 10.452 USB STRATCOM Oscar
55. 6.735 USB NORAD Charlie Two
56. 9.232 USB NORAD/CAP
57. 14.894 USB NORAD
58. 20.855 USB NORAD
59. 3.383 USB ACC

60. 3.365 USB ACC
61. 3.394 USB ACC
62. 4.474 USB ACC
63. 11.016 USB ACC
64. 11.214 USB ACC
65. 6.715 USB Aerospace Rescue & Recovery Service
66. 11.440 USB Aerospace Rescue & Recovery Service
67. 4.582 USB Civil Air Patrol (emergency and calling)
68. 4.466 USB Civil Air Patrol (CAP)
69. 4.627 USB CAP

70. 5.700 USB ACC tactical ops.
71. 3.023 USB search & rescue
72. 4.416 USB Navy HICOM Pacific Fleet
73. 8.711 USB ACC tactical
74. 10.267 USB ACC
75. 10.665 USB ACC
76. 4.700 USB Navy Anti Submarine Warfare Pacific
77. 4.702 USB Navy Anti Submarine Warfare Atlantic
78. 5.446 USB USMC tactical nets
79. 6.687 USB USMC special convoys

80. 13.181 USB Navy HICOM Pacific
81. 6.673 USB Hurricane Hunters primary nights
82. 13.267 USB Hurricane Hunters primary days
83. 5.562 USB Hurricane Hunters secondary nights

84. 11.510 USB ACC
85. 11.240 USB ACC
86. 4.540 USB Royal Air Force
87. 5.729 USB Royal Air Force
88. 6.690 USB Royal Air Force
89. 6.730 USB Royal Air Force
90. 8.990 USB Royal Air Force
91. 11.249 USB Canadian Air Force
92. 6.746 USB Canadian Air Force
93. 13.257 USB Canadian Air Force
94. 5.800 USB ACC tactical/STRATCOM Whiskey 100
95. 6.753 USB ACC tactical
96. 8.964 USB ACC tactical (discrete)
97. 11.627 USB ACC tactical
98. 17.975 USB Air Force GHFS
99. 15.041 USB STRATCOM (old SAC Mike channel)
100. 23.419 USB STRATCOM/NORAD intercommunications

5727. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 13:59:10 UTC
From: richardharrison@webtv.net
Message-ID: <13980-3E74832E-116@storefull-2313.public.lawson.webtv.net>
Source record: 122414

Floyd Davidson wrote:
"I did "not" say the (propane) tank was safe."
At least I think it was he who wrote it.

Gas leak is the reason insurors won`t approve exposure of the tank to sources of possible ignition where leaks from the tank may collect. It isn`t blowing the tank. It should have no oxygen inside for the gas to combine with, explosively. The danger is setting leaked gas on fire.

Just any size ground conductor is not acceptable. Minimum a-c system ground copper conductor size is related to service conductor size by code, i.e., AWG No. 2 service requires AWG No. 8 minimum grounding wire. However, "A No. 6 grounding conductor, which is free from exposure to mechanical injury, may be run along the surface of the building construction without metal covering or protection; otherwise, it shall be in conduit, electrical metallic tubing or cable armor."

You often see ground conductors specified as No. 6 or larger.

Gas pipes are grounded. Your cook-stove likely has an electrical timer and outlets. The stove must be grounded to protect the user against shock.

Gas pipes only explode when they rupture because there`s no oxygen inside. Electrical current on their surfaces won`t blow them up in ordinary circumstances.

Best regards, Richard Harrison, KB5WZI

5728. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 14:57:26 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87fzpnpdex.fld@barrow.com>
Source record: 122416

richardharrison@webtv.net (Richard Harrison) wrote:
>Floyd Davidson wrote:
>"I did "not" say the (propane) tank was safe."
>At least I think it was he who wrote it.

You don't connect anything in your following article to a word
I've said, so I'm not sure why began with the above totally out
of context sentence.

However, what you do say is correct and valid information. And
it does demonstrate that those who said gas lines should not be
part of the ground system are simply mistaken (or, more like
"grossly mistaken", because they are *required* to be connected
to the ground system).

>Gas leak is the reason insurors won`t approve exposure of the tank to
>sources of possible ignition where leaks from the tank may collect. It
>isn`t blowing the tank. It should have no oxygen inside for the gas to
>combine with, explosively. The danger is setting leaked gas on fire.
>
>Just any size ground conductor is not acceptable. Minimum a-c system
>ground copper conductor size is related to service conductor size by
>code, i.e., AWG No. 2 service requires AWG No. 8 minimum grounding wire.
>However, "A No. 6 grounding conductor, which is free from exposure to
>mechanical injury, may be run along the surface of the building
>construction without metal covering or protection; otherwise, it shall
>be in conduit, electrical metallic tubing or cable armor."

If you are going to put something in quotes, please provide the
source. Are you quoting the 89 year old lady next door who has
never been on an airplane in her life? I hope not...

>You often see ground conductors specified as No. 6 or larger.
>
>Gas pipes are grounded. Your cook-stove likely has an electrical timer
>and outlets. The stove must be grounded to protect the user against
>shock.

However, that is *entirely* different than anything which will
be specified as a #6 or larger conductor. In fact it will
almost always be a #12 or even a #14 conductor.

Two different grounding specifications, for two distinctly
different purposes.

>Gas pipes only explode when they rupture because there`s no oxygen
>inside.

I assume what you meant to say was that gas pipes (and tanks too
for that matter) do not explode unless there is a rupture
prior to the explosion, because it is the rupture that allows
oxygen to mix with the gas.

>Electrical current on their surfaces won`t blow them up in
>ordinary circumstances.

Exactly.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5729. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 15:45:38 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93404EF1A1D5Bpookster@216.168.3.50>
Source record: 122418

"Carl Van Camp" <thevancamps@ameritech.netpickle> wrote in news:Us1da.1614
$we1.544246@newssrv26.news.prodigy.com:

> Subject says it all...thanks for any input.
>

Probably 1/4 wave. The 5/8 wave gets its gain by a narrower angle of
radiation, which means you have to hold it closer to vertical to be
effective. The 1/4 wave is less critical in that respect. Less of an
"eye-poker" too.

--
Bill, W7TI

5730. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 16:05:27 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <b5897vkj67odfi0h272qpc4dj1lmdnh7c3@4ax.com>
Source record: 122319

On Sat, 15 Mar 2003 22:02:28 -0600, "Chuck/KE4ETH"
<chuck_hawks@hotmailNOSPAMORAMA.com> wrote:

>Woudn't it be better to wrap the coax around a VW Beetle? <GRIN>

Maybe. But definitely not a Ford Pinto.

-fb-

5731. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 16:11:50 UTC
From: w_tom <w_tom1@hotmail.com>
Message-ID: <3E74A246.BDF78A7C@hotmail.com>
Source record: 122320

From the US Army's Training Manual 5-690
> Chapter 3
> FACILITY GROUND SYSTEM FOR NEW C4ISR FACILITIES
> 3-4. Lightning protection subsystem
> A lightning protection subsystem is frequently installed to
> protect the structure, personnel, and equipment of the C4ISR
> facility from damage due to lightning discharges. A major
> element of this protection is achieved by providing a means
> by which a lightning stroke can bypass the facility and enter
> the earth without causing damage. The stroke current must first
> be intercepted before it penetrates the structure. Air terminals
> are provided for this purpose.
> ...
> Table 3-3. Minimum requirements for roof and down conductors
> on structures not greater than 75 feet (23 meters) in height
> Cable Strand Size Material: Copper 14 AWG
> Solid Strip Thickness Material: Copper 14 AWG
> ...
> (i) Installation of surge arresters is shown for grounded and
> ungrounded service in figures 3-25 and 3-26 respectively. ...
> In order to prevent introducing excessive inductance and
> resistance in the transient path to the surge arrester, No. 4
> AWG (minimum) insulated stranded copper wire of the minimum
> feasible length must be used to make the interconnection(s)...

10 AWG wire is sufficient for earthing a direct lightning
strike since even smaller wire earths building air terminals.
4 AWG for earthing the service entrance surge protector. 10
AWG is not only sufficient in size. It is greater than called
for in the US Army's training manual

Floyd Davidson wrote:
>
> nm5k@wt.net (Mark Keith) wrote:
> >Floyd Davidson <floyd@ptialaska.net> wrote in message
news:<87bs0es1cm.fld@barrow.com>...
>>> A #10 wire *cannot* provide a "good low resistance connection to
>>> ground". If nothing else, just the inductance in a wire that small
>>> is too high.
>>
>> The #10 wire is the antenna in my example. Not the connection to
>> ground. If the base is grounded to a good ground system it will
>> have a fairly low resistance to ground.
>> The inductance may be borderline, but I don't think the wire
>> would burn up if the resistance was low.

>
> "A #10 wire *cannot* provide a "good low resistance connection to
> ground". If nothing else, just the inductance in a wire that small
> is too high."
>
> That is still true. You cannot escape from that simple fact.
>
> A #10 wire simply is not going to carry all of the current from
> a direct hit. Whether the wire vaporizes or not just depends on
> how much of the current finds another path to follow. But that
> there will be anther path is guaranteed.
> ...

5732. What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 16:17:56 UTC
From: Carl Van Camp <thevancamps@ameritech.netpickle>
Message-ID: <Us1da.1614$we1.544246@newssrv26.news.prodigy.com>
Source record: 122417

Subject says it all...thanks for any input.

5733. Autek RF-1 manual wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 16:29:56 UTC
From: youngkim@yksystems.com
Message-ID: <ecc0cb9c.0303160829.209226dc@posting.google.com>
Source record: 122321

Hello,
I need a manual for autek RF-1 SWR Analyst. Can anyone fax me or
e-mail me the manual? I think it is only couple of pages. I will be
glad to pay the cost for copying. My address is OK in the QRZ data
base.
Thanks for reading.
de K6hm
Young

5734. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 16:38:25 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87bs0bp8qm.fld@barrow.com>
Source record: 122322

w_tom <w_tom1@hotmail.com> wrote:
>
> 10 AWG wire is sufficient for earthing a direct lightning
>strike since even smaller wire earths building air terminals.

That is *not* the case, and that is *not* what the material
you quoted said.

There is a significant difference between a direct lightning
strike and just being able to dissipate normal charge build up
or even the induced current from a nearby strike.

>4 AWG for earthing the service entrance surge protector. 10
>AWG is not only sufficient in size. It is greater than called
>for in the US Army's training manual

Not if direct hits are expected.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5735. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 17:29:00 UTC
From: w_tom <w_tom1@hotmail.com>
Message-ID: <3E74B45C.3E04CB4D@hotmail.com>
Source record: 122323

Those air terminals are for direct lightning strikes. There is nothing about dissipating induced currents from a nearby strike. These wires are installed to earth the direct strike. How silly. Install wires to only earth built up charges or electromagnetic fields? But leave the facility totally exposed to direct strike? I don't think so. To suggest that the Army is not interested in protecting from direct strikes is absurd and not the purpose of that training manual. The Army wants their buildings protected from direct lightning strikes. So they demand wire of 14 AWG (12 is using aluminum) or larger to earth air terminals. They demand service entrance ground wires of 4 AWG. Those wires are sufficient for direct strikes.

First we have this myth that lightning rods discharge the air to prevent lightning. Now an idea that the US Army does not worry about protecting their buildings from a direct strike. 10 AWG is sufficient for earthing most direct strikes without damage or without any indication that the strike has even occurred.

It comes down to fundamental facts. Copper melting at 1083 degrees C is a number provided to calculate how many amps for microseconds would vaporize copper. If you disagree with the US Army, then put up some calculations. Demonstrate where the Army publication is in error. Copper takes 0.0921 calories per gram to raise its temperature one degree C. One foot of 10 AWG copper weighs about 14.25 grams. Please show us how many amps for microseconds will vaporize copper.

Floyd Davidson wrote:
>
> w_tom <w_tom1@hotmail.com> wrote:
> >
> > 10 AWG wire is sufficient for earthing a direct lightning
> >strike since even smaller wire earths building air terminals.
>
> That is *not* the case, and that is *not* what the material
> you quoted said.
>
> There is a significant difference between a direct lightning
> strike and just being able to dissipate normal charge build up
> or even the induced current from a nearby strike.
>
> >4 AWG for earthing the service entrance surge protector. 10

> >AWG is not only sufficient in size. It is greater than called
> >for in the US Army's training manual
>
> Not if direct hits are expected.
>
> --
> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
> Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5736. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 17:53:57 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <0ae97v8t4n9phfn8vjcp58hrsjs3roki00@4ax.com>
Source record: 122324

On Sun, 16 Mar 2003 16:17:56 GMT, "Carl Van Camp"
<thevancamps@ameritech.netpickle> wrote:

Based upon measurements (The 5/8-Wavelength Antenna Mystique, ARRL
Antenna Compendium - Volume 1) The 1/2-wave will produce a slightly
better gain (about 1 dB).

Ether the 1/2 or 5/8-wavelengths will beat the pants off of a rubber
duck.

Danny, K6MHE

5737. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 18:08:38 UTC
From: richardharrison@webtv.net
Message-ID: <11737-3E74BDA6-22@storefull-2311.public.lawson.webtv.net>
Source record: 122325

Floyd Davidson wrote:
"A #10 wire "cannot" provide a good low resistance to ground"."

Not if it`s too long.

The electric power company here must agree. I just went out to the poles on my street to see what they use to ground each pole. It`s a #5 wire, 0.182 in. dia..

Floyd questioned my code information. It`s ancient, from the 1952 edition of "Lincoln`s Industrial-Commercial Electrical Reference". It contains extracts from the NEC of that era. My education is from the same period, so we are a good match.

Best regards, Richard Harrison, KB5WZI

5738. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 18:26:40 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303161026.4e43aa57@posting.google.com>
Source record: 122326

Floyd Davidson <floyd@ptialaska.net> wrote in message news:<87ptorptmk.fld@barrow.com>...
> nm5k@wt.net (Mark Keith) wrote:
> >Floyd Davidson <floyd@ptialaska.net> wrote in message
news:<87bs0es1cm.fld@barrow.com>...
> >> nm5k@wt.net (Mark Keith) wrote:
> >> >Floyd Davidson <floyd@ptialaska.net> wrote in message
> >> >
>
> >> >> Your coax, not to mention your antenna wire, will vaporize in a
> >> >> ball of fire. Not if, just how fast.
> >> >
> >> >Only if you have a lousy high resistance ground connection. If you
> >> >have a good low resistance connection to ground, a #10 wire can be
> >> >struck with little damage at all. The wire won't even hardly heat up.
> >>
> >> A #10 wire *cannot* provide a "good low resistance connection to
> >> ground". If nothing else, just the inductance in a wire that small
> >> is too high.
> >
> >The #10 wire is the antenna in my example. Not the connection to
> >ground. If the base is grounded to a good ground system it will have a
> >fairly low resistance to ground.
> >The inductance may be borderline, but I don't think the wire would
> >burn up if the resistance was low.
>
> "A #10 wire *cannot* provide a "good low resistance connection to
> ground". If nothing else, just the inductance in a wire that small
> is too high."
>
> That is still true. You cannot escape from that simple fact.

Why are you quoting yourself? I didn't say that.
>
> A #10 wire simply is not going to carry all of the current from
> a direct hit. Whether the wire vaporizes or not just depends on
> how much of the current finds another path to follow. But that
> there will be anther path is guaranteed.
>
> >> Regardless, if you want to claim that a #10 wire can handle a
> >> direct hit of lightning, you most certainly are not going to say
> >> that a propane tank will be destroyed by that same direct hit...
> >
> >Probably not, but drawing a strike to ground at that point would be a
> >bad idea. Probably fail code also.

>
> Make up your mind. You can't have it both ways.

About what? I never said it would be a good idea.
>
> "Probably fail code" doesn't get it. Cite the code.

No, I don't have the time to look it up. Do your own homework. It may
or may not actually be there, but if it wasn't , I'd be surprised.
>
> >> >All I've ever seen so far was a tiny "arc" spot on the tip of my mast.
> >> >The lightning blew out a cap of electrical tape which I had on top to
> >> >seal out water. But it hardly effected the metal at all. All the
> >> >antenna wires "dipoles" and coaxes running down the side of the mast
> >> >were untouched. The lightning strikes 10-15 ft from where I'm sitting.
> >>
> >> How are your ears???? :-)
> >
> >Fine. Lightning is very quiet. Only the sonic boom overhead is loud.
> >The actual strike sounds like a light bulb being thrown on the ground
> >outside the window.
>
> OK, so *you aren't taking direct hits*. That's what I thought.

How do you come to that conclusion? Your thinking is flawed.
>
> What you are experiencing is induced discharges (indirect hits
> if you will).

Induced discharges don't blow kindergarten pencil sized holes in the
tape caps on the mast. You also don't hear a "click" with an induced
discharge.
>
> >> (I had the pleasure, many years ago, of working in a transmitter
> >> building sitting on a mountain top that took dozens of hits per
> >> day every summer afternoon. The three 300' towers took all the
> >> direct hits, but anything and everything that wasn't bonded
> >> would errupt with fireballs too.)
>
> Trust me, the noise is *deafening*.

Only the sonic booms overhead, or a strike to a poorly grounded object
like a tree. A strike to a well grounded object like my mast is very
quiet. Only the sonic boom overhead is loud. You can argue all you
want, but I was there 15 ft away from it. I know when I have been
struck by lightning without a doubt. And yes, there are 100's of near
misses. I went for 20 years without a single strike to my mast, and
then had two in four years time. That doesn't count any that might
have happened when I wasn't there. It's the ones that don't hit my
mast and it's low resistence connection to ground that are loud. The
one that hit the tree in the front yard was deafening.
>

>
> >> >> The whole point in grounding the antenna (and the propane tank
> >> >> too, for that matter) is to prevent a direct hit by discharging
> >> >> any charge build up before it becomes excessive.
> >
> >I thought being grounded would discharge the often struck towers? I
> >rest my case.... :/
>
> "Grounded", when sitting on top of a mountain, has no meaning. The
> whole top of the mountain is charged up, including the towers.

Exactly. To me, that has no meaning anywhere. Mountain top or not.

>
> You cannot tell in advance which one is going to carry the current.
> Any of them might. Hence, they all qualify.

How many frigging wires do you have running from the antenna or
object?
You are just being silly now. I don't have much time to argue B.S.
In my case, I know exactly where the current will flow, and where it
won't.
Thats why I never have any damage. And I've got wires, grounded and
ungrounded snaked all over this house. In the attic, in the house, and
underground.
If you can't tell in advance which conductor will carry the lightning
strike to ground, it's time to check it out. It's quite simple in my
case.
>
> >> Which makes them all "lightning returns".
> >
> >No, it doesn't really. Only the feedline or whatever conductor carries
> >the lightning current to ground would be the "lightning return". If
> >you used a ground window system, it would be a second lesser lightning
> >return for the feedline shields at the entrance. I don't consider
> >plain ground wires that are unrelated as "lightning returns". They
> >should carry no real current being they should all be at the same
> >potential.
>
> You are ignoring inductance.

No, I'm not. The inductance shoudn't really matter much, because the
currents are fairly low at those outlying points. Or should be anyway.
The main conductor to ground does 95% of the dirty work.
>
> >> True enough, but what has that got to do with what makes a propane
> >> tank dangerous or not?
> >
> >Well, if if you run a feedline from a "mastless" unprotected antenna
> >down directly to a propane tank, that is not a smart thing to do. In
>

> Why not? The antenna simply does not have the current carrying ability
> to conduct enough current to damage the propane tank (which can carry
> orders of magnitude more current, and supposedly is installed correctly
> with sufficient ground connections).

If you can't see why not, I give up.
>
> >fact, I would consider it a fairly dumbass maneuver overall. I doubt
>
> Just like those who said the ground system should not be connected to
> the gas lines. Except of course the ground system *must* be connected
> to the gas lines... if you want a proper ground system.

And I was one of the ones that said it should be grounded. But being
grounded, and running an antenna feedline directly to it are two
different things.
>
> >the tank would blow up, except for a fluke happening, but that doesn't
> >mean it's a smart thing to do. it surely wouldn't pass code. I don't
>
> It won't "pass code" to have an antenna lead near a propane tank????
>
> Cite please!

I thought the coax was proposed to be wrapped around the tank? Thats a
bit closer than "near" .

And no, I'm not going to to look it up. Besides, I don't care "that"
much. If you all want to do that, be my guest. It fails "my" code, so
thats all I need to really know, or care about on my end. BTW, I deal
with the city about code on a near daily basis, so it's not like I'm
just making that up. I'm fairly sure I have seen it somewhere. But,
I'm not going to waste my time looking for it. I have better things to
do.
>
> >know if a metal mast supports the antenna, but for now I assume not. I
> >would run the feedline straight down to ground and it's own ground
> >rod. I'd leave the tank totally out of the picture.
>
> You had best ground the tank appropriately, and have that ground
> connected to the same ground the antenna system is seeing too.

Of course. I already said that. Why are you repeating it to me?

I give up. You all do whatever the you want to do. I don't have the
time to argue about it. Wanna run the line to the tank? Be my guest.
I'm likely a few states away anyhow... MK

5739. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 18:41:51 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303161041.eac7627@posting.google.com>
Source record: 122327

"Carl Van Camp" <thevancamps@ameritech.netpickle> wrote in message news:<Us1da.1614$we1.544246@newssrv26.news.prodigy.com>...
> Subject says it all...thanks for any input.

In general the 1/2 wave. There may be cases where the 5/8 wins due to the radio being very low to the ground, and just the longer higher whip makes the difference, but I'd prefer the 1/2 wave usually. It doesn't require a ground plane to function as the 5/8 antenna does. The 5/8 antenna depends on capacitive coupling with your body to act as the ground plane to complete the antenna. The 1/2 wave doesn't. I'd go with the 1/2 wave. In many or even most cases, it will probably beat the 5/8 antenna if you are standing up with the radio. MK

5740. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 19:03:58 UTC
From: richardharrison@webtv.net
Message-ID: <11739-3E74CA9E-6@storefull-2311.public.lawson.webtv.net>
Source record: 122328

I`ve been amused by low-resistance ground statements about lightning protection. Low resistance is desirable for avoiding electric shock from shorted lines. Low resistance is needed for r-f efficiency. Low resistance may sometimes be needed to make sure a fuse blows when it should, but low resistance is not needed to get a lightning strike to the earth. Arresters should make near open-circuits before the lightning strikes. Then they should clamp the voltage to an acceptable value.

War Department TM 11-486 says this about line-pole protection:
(1) Shattering by lightning of wooden poles in a wire or aerial cable line can be largely avoided, where necessary, by running a wire (for example, 104 copper or 109 iron wire) from the top of the pole to a short distance below ground. If new poles are being placed, such wires can be stapled on for the entire length. For the protection of linemen, it is frequently desirable to avoid having a ground at the top of the pole. For this purpose a gap about a foot long may be left in the wire approximately 7 feet above the ground.

(2) The scheme just described cannot ordinarily be employed where wooden poles are used as antenna masts, since it may interfere with radio communication. For such cases, a series of short gaps may be placed in the wire at intervals not exceeding a quarter wavelength.

Best regards, Richard Harrison, KB5WZI

5741. Re: Medfer AM antenna loading question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 19:46:35 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <c8l97vg9c4lh4pvaudv1a4gman88h7emcv@4ax.com>
Source record: 122329

On Fri, 14 Mar 2003 01:05:01 GMT, "K7JEB" <k7jeb@arrl.no_spam.net>
wrote:

>> Gene A. Townsend wrote:
>
>> I'm using an AM transmitter called the "Gizmo" for this station, but
>> would like to give the kids all the range that I can, to make the
>> project the most fun for them.
>
>Couple the transmitter output back into the house power
>wiring. This should saturate the neighborhood with
>signal. This is called carrier-current operation. I
>don't have a neat scheme for doing this at hand, but
>I'll bet others on this NG do.
>
>Jim, K7JEB
>

Hi Jim,

I doubt it. Most pole pigs contain a faraday shield that prevents
exactly this sort of thing. You might be "in the house" but the
"hood" will no doubt be quite free of this transmission.

73's
Richard Clark, KB7QHC

5742. FM receive system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 20:31:50 UTC
From: CuriousMind <piratewebuk@yahoo.co.uk>
Message-ID: <b52mso$3pq$1@news6.svr.pol.co.uk>
Source record: 122330
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,uk.radio.amateur

I wish to install and distribute an FM yagi to my living room. I would like to use a masthead amplifier for this. Sounds straight forward but I wish to send it down the Sky Digital cable which has recently been installed - the reason for this is it is rented property and I don't want to have to drill an additional hole in the living room wall!!

The masthead amplifier runs off 12vdc. I am unsure about sending two seperate voltages up and down the cable (sky lnb voltage and masthead amp voltage). I understand that for the masthead amp, you can send voltage and RF up and down the one cable but having looked through CPC, the diplexers and alike, will only deal with VHF and UHF only cable or UHF and Satellite only. Please help me!!

Thanx in advance....

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.443 / Virus Database: 248 - Release Date: 10/01/2003

5743. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 21:27:52 UTC
From: "rick@rickfrazier.com" <rick@rickfrazier.com>
Message-ID: <3E74EC58.3DB2D830@rickfrazier.com>
Source record: 122348

The picture looks an awful lot like fine steel filings with a unipolar magnet under them...

The plot starts at 0.300 Mhz and goes to 0.0 Mhz..., or maybe 3.000Mhz, or even 3Ghz depending upon how you interpret the characters at the bottom of the graph. It is interesting to note the lack of visual resolution in the area of the numbers...

The actual size, relating to the pictures of the unit with fingers holding it, would put it's resonant frequency somewhere waaay up there, more likely in the _high_ Gigahertz region....

Methinks someone is trying to pull a few legs, and early for the season too! Well done!

:-) ;-)

--Rick AH7H

Casey Homeo wrote:

> This looks like a cool new invention.
>
> www.hedgehogantenna.com

5744. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 22:27:52 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <y_8da.38389$Yz5.2755@fe07.atl2.webusenet.com>
Source record: 122333

Heck of a choke.

--
73,
Chuck
KE4ETH
USA-NA

"funkbastler" <funkbastler@eudoramail.com> wrote in message
news:b5897vkj67odfi0h272qpc4dj1lmdnh7c3@4ax.com...
> On Sat, 15 Mar 2003 22:02:28 -0600, "Chuck/KE4ETH"
> <chuck_hawks@hotmailNOSPAMORAMA.com> wrote:
>
> >Woudn't it be better to wrap the coax around a VW Beetle? <GRIN>
>
> Maybe. But definitely not a Ford Pinto.
>
> -fb-
>

5745. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-16 23:39:44 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <6X7da.2099$544.104816@news20.bellglobal.com>
Source record: 122331

"Richard Harrison"
> ...a gap about a foot long may be left in the wire
> approximately 7 feet above the ground.

Aircraft antenna lightning diverter strips sometimes take the form of a series of 'stepping stones' each about one inch long and with small gaps between each part of the strip. These are apparently just as effective but without the performance issues associated with single long wires.

5746. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 00:20:28 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E7514CC.8AEAEF93@cwis.net>
Source record: 122332

Mark,
From the last part of your post; do you really
think that standing up or sitting down would make
much difference in the amount of coupling the
antenna sees? From attending hamfests, the average
'fundament' of a ham sitting down is enough for a
close approximation to a 1/4 wave on 10 meters, much
less 2 meters. Butt there are exceptions...
'Doc

5747. Re: FM receive system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 02:09:38 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <gVSdnQ75Xpn5s-ijXTWcoA@comcast.com>
Source record: 122334
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,uk.radio.amateur

I would make the hole big enough to pass two coaxes through, and eliminate all kinds of possible problems. You might consider patching a piece of small diameter coax on to the FM lead where it goes through the hole. You will have to look this up, but I think RG188 is 75 ohms, and about 0.1 inch OD.

Tam/WB2TT
"CuriousMind" <piratewebuk@yahoo.co.uk> wrote in message news:b52mso$3pq$1@news6.svr.pol.co.uk...
> I wish to install and distribute an FM yagi to my living room. I would like
> to use a masthead amplifier for this. Sounds straight forward but I wish to
> send it down the Sky Digital cable which has recently been installed - the
> reason for this is it is rented property and I don't want to have to drill
> an additional hole in the living room wall!!
>
> The masthead amplifier runs off 12vdc. I am unsure about sending two
> seperate voltages up and down the cable (sky lnb voltage and masthead amp
> voltage). I understand that for the masthead amp, you can send voltage and
> RF up and down the one cable but having looked through CPC, the diplexers
> and alike, will only deal with VHF and UHF only cable or UHF and Satellite
> only. Please help me!!
>
> Thanx in advance....
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.443 / Virus Database: 248 - Release Date: 10/01/2003
>
>

5748. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 02:13:51 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <wCOdnel-m5z_suijXTWcpg@comcast.com>
Source record: 122336

Doug,

Whatever you do, don't buy anybody's JUNIOR tribander. If you want it small, get the 2 element full size. I have a Hygain TH3Mk4, and it works like gangbusters

Tam/WB2TT
"Doug Niessen" <dniessen@pacbell.net> wrote in message news:3E738025.40204@pacbell.net...
> I am considering the purchase of a 20-15-10 3 or 4 element yagi.
> Does anyone have recommendations.
>
> Thank you,
> Doug K6STS
>

5749. Re: Spreader materials for Hex-Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 02:14:35 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E752F8E.C02B4899@silverstar.com>
Source record: 122335

Tinker Toys!!

5750. Re: FM receive system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 02:52:13 UTC
From: M5WJF <not@chance.com>
Message-ID: <b53d8tosa1@knossos.btinternet.com>
Source record: 122337
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,uk.radio.amateur

RG-174 is 50 Ohm

5751. FA: HY-GAIN CD-45-II Rotator

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 03:30:58 UTC
From: K6ME <k6me@adelphia.net>
Message-ID: <Sjbda.1253$1B.727573@news3.news.adelphia.net>
Source record: 122338

For auction on eBay. TELEX/HY-GAIN Rotator, NOS.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4671&item=3013744780&
rd=1

5752. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 04:04:10 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303162004.6b5478cc@posting.google.com>
Source record: 122339

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<11739-3E74CA9E-6@storefull-2311.public.lawson.webtv.net>...
> I`ve been amused by low-resistance ground statements about lightning
> protection. Low resistance is desirable for avoiding electric shock from
> shorted lines. Low resistance is needed for r-f efficiency. Low
> resistance may sometimes be needed to make sure a fuse blows when it
> should, but low resistance is not needed to get a lightning strike to
> the earth.

No, but it is if you don't want to burn up the conductor.

Arresters should make near open-circuits before the lightning
> strikes. Then they should clamp the voltage to an acceptable value.
>
> War Department TM 11-486 says this about line-pole protection:
> (1) Shattering by lightning of wooden poles in a wire or aerial cable
> line can be largely avoided, where necessary, by running a wire (for
> example, 104 copper or 109 iron wire) from the top of the pole to a
> short distance below ground. If new poles are being placed, such wires
> can be stapled on for the entire length. For the protection of linemen,
> it is frequently desirable to avoid having a ground at the top of the
> pole. For this purpose a gap about a foot long may be left in the wire
> approximately 7 feet above the ground.

What they are doing amounts to a "spark gap" much like you would use
with a ladder line setup. How this would effect the integrity of the
wire itself, I'm not sure. I've never tried it. Seems if the lower
section of the wire has a low resistance connection, it would stay
intact.
Not sure about the top section though. It might fry and need to be
replaced after a strike. Low resistance is required in any switch that
handles larges currents and voltages. And yes, to my way of thinking,
a lightning rod, mast, or whatever and it's ground system is acting
exactly like a switch contact to earth. Look at old circuit breakers
that get resistive. They get hot, and they eventually burn up.
Install a fresh clean breaker, and it will run cool. A ground
connection for lightning requires the same low resistance to avoid
overheating and burning up whatever is connected to it. If the antenna
is elevated as in a ground plane, the mast supporting it should be
metal and well grounded. Or at least have a wire running up it as you
mention. Of course, there are other considerations, but I think a low
resistance ground connection is at the top of the list as far as
importance. Of course, if one doesn't mind making or buying new
antennas after every strike, I guess it doesn't matter. Lightning is
going to connect with ground no matter what we do. If the connection

is high resistance, it's going to do it in a loud and ugly manner. The conductor if metal will be toast. If it's a tree or whatever, it's likely to strip some bark. In my setup, the antennas don't take the hit. The mast does. MK

5753. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 04:15:30 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303162015.372d0d40@posting.google.com>
Source record: 122340

w_tom <w_tom1@hotmail.com> wrote in message news:<3E74A246.BDF78A7C@hotmail.com>...
> From the US Army's Training Manual 5-690
> > Chapter 3
> > FACILITY GROUND SYSTEM FOR NEW C4ISR FACILITIES
> > 3-4. Lightning protection subsystem
> > A lightning protection subsystem is frequently installed to
> > protect the structure, personnel, and equipment of the C4ISR
> > facility from damage due to lightning discharges. A major
> > element of this protection is achieved by providing a means
> > by which a lightning stroke can bypass the facility and enter
> > the earth without causing damage. The stroke current must first
> > be intercepted before it penetrates the structure. Air terminals
> > are provided for this purpose.
> > ...
> > Table 3-3. Minimum requirements for roof and down conductors
> > on structures not greater than 75 feet (23 meters) in height
> > Cable Strand Size Material: Copper 14 AWG
> > Solid Strip Thickness Material: Copper 14 AWG
> > ...
> > (i) Installation of surge arresters is shown for grounded and
> > ungrounded service in figures 3-25 and 3-26 respectively. ...
> > In order to prevent introducing excessive inductance and
> > resistance in the transient path to the surge arrester, No. 4
> > AWG (minimum) insulated stranded copper wire of the minimum
> > feasible length must be used to make the interconnection(s)...
>
> 10 AWG wire is sufficient for earthing a direct lightning
> strike since even smaller wire earths building air terminals.
> 4 AWG for earthing the service entrance surge protector. 10
> AWG is not only sufficient in size. It is greater than called
> for in the US Army's training manual

I thought the thinner wires would handle the strike. I didn't realize
#14 would handle it though. I was thinking #10 would be at the
borderline point. But your info and views on lightning rods seem to
match mine. A lightning rod that does not cause direct strikes to
occur is not a working lightning rod. And such a device would protect
zilch. MK

5754. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 04:32:30 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303162032.670117f0@posting.google.com>
Source record: 122341

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<11737-3E74BDA6-22@storefull-2311.public.lawson.webtv.net>...
> Floyd Davidson wrote:
> "A #10 wire "cannot" provide a good low resistance to ground"."
>
> Not if it`s too long.
>
> The electric power company here must agree. I just went out to the poles
> on my street to see what they use to ground each pole. It`s a #5 wire,
> 0.182 in. dia..

Yep. They don't want to have to come back and replace it every few
years. Saves money in the long haul.
But as an example of how a micky mouse looking piece of wire can take
and divert direct lightning strikes, take a look at all the freeway
cams all over town. There are dozens of them. Each one has it's own
built in lightning rod. It's nothing more than a piece of curved stiff
wire that makes a "C" around the body of the camera, and then sticks
up straight on top. The base of the wire is grounded to the metal
poles under the cameras. The tip is sharp as with normal lightning
rods. The connection to ground through the metal poles should be
fairly low. Now, after looking at a good few, come back and tell me
how many look to be damaged in any way by a lightning strikes. I bet
you don't find many, if any. I've never seen one blown off yet. I bet
they get struck quite often with the sharp tips. MK

5755. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 04:35:26 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303162035.669af7e9@posting.google.com>
Source record: 122342

I said...
The connection to ground through the metal poles should be
fairly low.....

Ooops. didn't finish the sentence... Fairly low resistance....MK

5756. Re: FM receive system

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 04:41:15 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <I_adnSb-weVwzOijXTWcpg@comcast.com>
Source record: 122343
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.dx,uk.radio.amateur

I looked it up, RG179 and RG187 (not 188) are 75ohm, but might be hard to obtain in small quantities. He would only want about a foot. Might be better to go with all 50 ohm stuff, with the amp, there's signal galore.

Tam/WB2TT
"M5WJF" <not@chance.com> wrote in message
news:b53d8tosa1@knossos.btinternet.com...
> RG-174 is 50 Ohm
>
>

5757. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 04:51:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7al3786hc8125@corp.supernews.com>
Source record: 122344

The 1/2 wave. There's a lot more current flowing at the base of a 5/8 wave antenna than a 1/2 wave. This current flows over your body, making it a significant part of the actual radiating antenna. And your body is a pretty poor conductor, and unpredictable at best. A 1/2 wave antenna is more independent of your body, and does most of the radiating itself. The small difference in the theortical patterns of idealized antennas is completely swamped by this much larger effect.

Roy Lewallen, W7EL

Carl Van Camp wrote:
> Subject says it all...thanks for any input.
>
>

5758. ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 05:42:36 UTC
From: Casey Homeo <caseyhomeo@hotmail.com>
Message-ID: <8una7vontspqmj5proo0kqbdq2arnqhp4j@4ax.com>
Source record: 122345

This looks like a cool new invention.

www.hedgehogantenna.com

5759. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 06:24:32 UTC
From: whagen6@cs.com
Message-ID: <20030317012432.29099.00000081@mb-cn.news.cs.com>
Source record: 122346

fancy way to make a plain old cap hat, bet the line radiates all over the place.

5760. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 06:37:36 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E756D26.FA3F3C39@att.net>
Source record: 122347

Floyd Davidson wrote:

> nm5k@wt.net (Mark Keith) wrote:
> >Floyd Davidson <floyd@ptialaska.net> wrote in message
news:<87d6ktqjxu.fld@barrow.com>...
> >> richardharrison@webtv.net (Richard Harrison) wrote:
> >> >Floyd Davidson wrote:
> >> >"So you are confirming that wrapping the coax around a propane tank is
> >> >not a threat to the propane tank."
> >> >
> >> >True, but propane is heavier than air and so it is persistant in low
> >> >spots. A coax wrap of a propane tank would not pass UAL or Factory
> >> >Mutual standards in any confined space.
> >>
> >> Thank you. That was my point. I did *not* say the tank was safe.
> >> Merely that worrying about lightning coming down the antenna/feedline
> >> is nonsense.
> >
> >Why would that be nonsense? If there is no other mast or metal object
> >supporting the antenna to handle the strike, the strike goes to ground
> >via the feedline if it's fairly straight. Routing that line directly
> >to a propane tank would be nonsense. A sane person would route it
> >straight down to ground rods/radials. MK
>
> A direct hit on the antenna, even if it is made out of the #10
> wire you have claimed, simply *cannot* conduct that much charge
> to ground. The charge will necessarily find other paths.

Really? So please explain how it is that *air* conducts all that charge current.

Maybe you're convinced that a #10 wire wouldn't provide a better conduction core that thin air but I'm sure not.

5761. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 07:12:33 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87r896o49q.fld@barrow.com>
Source record: 122350

Dick Carroll <dickc58@att.net> wrote:
>> A direct hit on the antenna, even if it is made out of the #10
>> wire you have claimed, simply *cannot* conduct that much charge
>> to ground. The charge will necessarily find other paths.
>
>
>
> Really? So please explain how it is that *air* conducts all that charge current.
>
> Maybe you're convinced that a #10 wire wouldn't provide a better conduction core
>that thin air but I'm sure not.

Well dick, it *could* do the same thing to the #10 wire that it
does to the air, and yes then it would conduct all of that charge.

Just ionize the copper wire. Could happen too. :-)

But since that requires vaporizing the wire first, the usual
thing that happens is the air around it ionizes and the charge
goes flying off in random directions. Which is just one of the
reasons that #10 is not recommended for grounding and #6, which
has lower inductance, is.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5762. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 07:32:11 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <%Reda.112384$L1.17103@sccrnsc02>
Source record: 122349

There are fewer and fewer of these all the time.
"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E70DC64.89632C7D@attbi.com...
> A metal automobile, not plastic, not fiberglass, not convertible, etc.,
> is a Farraday Cage!!!
>

5763. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 09:55:56 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303170155.7c94d781@posting.google.com>
Source record: 122351

'Doc <w5lz@cwis.net> wrote in message news:<3E7514CC.8AEAEF93@cwis.net>...
> Mark,
> From the last part of your post; do you really
> think that standing up or sitting down would make
> much difference in the amount of coupling the
> antenna sees? From attending hamfests, the average
> 'fundament' of a ham sitting down is enough for a
> close approximation to a 1/4 wave on 10 meters, much
> less 2 meters. Butt there are exceptions...
> 'Doc

No. It's just I've seen cases where the taller radiator would do
better if the radio was real low to the ground. I always assumed just
from the radiator rising to a slightly higher level, and a slightly
better view to the rptr or whatever.
I'd prefer the 1/2 wave in most cases. But in the real world, if I use
an HT, I usually use the small stock micky mouse flexible whip which
is tuned for dual band use. "dual band ht"...Here in the big city I
can usually get away with that. it's much more convenient when I don't
have to worry about breaking it, or sticking it in my gizzard some
way. If I need better than that, I usually try a 1/4 wave first. I
like it as it needs no matching device. MK

5764. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 11:34:01 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <S8OdnTpF6-Y0L-ijXTWcpg@crocker.com>
Source record: 122352

looks like their plot goes from .3 to 3,000 mhz, but that would seem awfully
low for the size shown. maybe it is a new replacement for the fracky ant???

their 'methods' page does explain that it is made of iron filings potted in
epoxy resin.

one thing that is interesting is that they say 'patent pending, protected
under u.s. patent laws' but the site is registered to a Canadian address.

<rick@rickfrazier.com> wrote in message
news:3E74EC58.3DB2D830@rickfrazier.com...
>
> The picture looks an awful lot like fine steel filings with a unipolar
> magnet under them...
>
> The plot starts at 0.300 Mhz and goes to 0.0 Mhz..., or maybe 3.000Mhz,
> or even 3Ghz depending upon how you interpret the characters at the
> bottom of the graph. It is interesting to note the lack of visual
> resolution in the area of the numbers...
>
> The actual size, relating to the pictures of the unit with fingers
> holding it, would put it's resonant frequency somewhere waaay up there,
> more likely in the _high_ Gigahertz region....
>
> Methinks someone is trying to pull a few legs, and early for the season
> too! Well done!
>
> :-) ;-)
>
>
> --Rick AH7H
>
> Casey Homeo wrote:
>
> > This looks like a cool new invention.
> >
> > www.hedgehogantenna.com
>

5765. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 11:50:20 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <%Dida.689$sK6.181420@news20.bellglobal.com>
Source record: 122353

<rick@rickfrazier.com>
> ...with a unipolar magnet under them...

A 'unipolar magnet' !?!?! Now *that* would be quite the invention !

5766. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 11:56:06 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <qJida.708$sK6.181234@news20.bellglobal.com>
Source record: 122354

"David Robbins"
> ...they say 'patent pending, protected
> under u.s. patent laws' but the site is
> registered to a Canadian address.

US patents are available to anyone. It is common practice to apply in the US first thereby protecting the largest potential market. Furthermore, the USPTO would (in recent years) grant a patent for just about anything.

5767. Foxhunt antenna for near 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 13:19:54 UTC
From: cprstn54zz@att.net
Message-ID: <3e75c92f.344629171@news-server.optonline.net>
Source record: 122356

I am trying to find the source of QRM on my RS walkie talkies that operate on 49.830 MHz FM. The QRM is a whine with a wah-wah; it could be a carrier. It covers several square miles. It could, for example, be someone who is illegally amplifying his cordless phone base station.

I have avaliable a big (2 ft long) tri-band ducky from MFJ. Is there a way I can make this directional?

I have some aluminum and steel angle iron longer than the antenna that I could use as a reflector. WIll that help? Should it be grounded to the antenna ground, or will that destroy directionality?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

5768. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 13:31:19 UTC
From: Carl Van Camp <thevancamps@ameritech.netpickle>
Message-ID: <H6kda.2234$we1.758419@newssrv26.news.prodigy.com>
Source record: 122355

Thanks everybody, excellent input. I really appreciate it.
Carl Van Camp

5769. Re: Foxhunt antenna for near 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 13:35:18 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <0JGdnfAnvO-KUuijXTWcog@crocker.com>
Source record: 122357

for a cheap and quick hunt just turn the ht so it is horizontal and hold it in front of you... turn your whole body keeping the ht in the same position relative to your body. look for a null when pointing directly toward or away from the transmitter. this is of course best done well away from any metal including wires, cars, electric lines, etc as they will reflect the signal and cause incorrect readings.

another quick way is to get an attenuator and put it between the antenna and radio, keep increasing attenuation and driving/walking through the area, do a grid if possible or just drive down each road noting signal strength till you find the strongest signal source. if the signal is strong enough just take the antenna off the radio and walk to the source... if the radio case is plastic you may have to wrap it in aluminum foil to attenuate the signal enough.

if all that fails go to my web site at:
http://www.k1ttt.net/technote/doppler.html for a quicky project, or search the web for simple yagi designs.

"Ken" <cprstn54zz@att.net> wrote in message
news:3e75c92f.344629171@news-server.optonline.net...
> I am trying to find the source of QRM on my RS walkie talkies that
> operate on 49.830 MHz FM. The QRM is a whine with a wah-wah; it could
> be a carrier. It covers several square miles. It could, for example,
> be someone who is illegally amplifying his cordless phone base
> station.
>
> I have avaliable a big (2 ft long) tri-band ducky from MFJ. Is there
> a way I can make this directional?
>
> I have some aluminum and steel angle iron longer than the antenna that
> I could use as a reflector. WIll that help? Should it be grounded to
> the antenna ground, or will that destroy directionality?
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

5770. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 14:10:56 UTC
From: k3bu@aol.com
Message-ID: <20030317091056.28819.00000125@mb-ba.aol.com>
Source record: 122358

Looks like "secret" company, no address, no "scientwific" principals. They must be affraid on infringing of Freaktennas. This looks like iron filings electromagnetics. Innovative way to sell the scrap metal. Anyone tried to eznec this thing?
One more addition to the galery of "succer" or "laughin antennas".

Yuri

5771. WTB-DIAMOND ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 14:12:12 UTC
From: n2ion@aol.com
Message-ID: <20030317091212.27768.00000204@mb-cg.aol.com>
Source record: 122359

I'M LOOKING TO BUY A DIAMOND X6000 ANTENNA

IF YOU HAVE ONE, EMAIL

5772. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 14:12:26 UTC
From: David <davidaanderson@shaw.ca>
Message-ID: <eJkda.241820$na.12639294@news2.calgary.shaw.ca>
Source record: 122360

I'm certain that this invention could not have been made without the use of Calibrated and Certified Dust Bunnies to sprinkle the iron filings into the epoxy resin in such a fashion that design reproductive uniformity could be maintained. Do Dust Bunnies come under the authority of the SPCA and if so have they approved such labour for the 'Bunnies?

The Unipolar magnet, I should have thought of this, It makes perfec' sense, Quantum Mechanics String Theory, you know North can be here and South can be somewhere on the other side of the Universe.

Wow I'm getting a headache.

;-) VE7IFD ;-)

"David Robbins" <k1ttt@arrl.net> wrote in message
news:S8OdnTpF6-Y0L-ijXTWcpg@crocker.com...
> looks like their plot goes from .3 to 3,000 mhz, but that would seem
awfully
> low for the size shown. maybe it is a new replacement for the fracky
ant???
>
> their 'methods' page does explain that it is made of iron filings potted
in
> epoxy resin.
>
> one thing that is interesting is that they say 'patent pending, protected
> under u.s. patent laws' but the site is registered to a Canadian address.
>
> <rick@rickfrazier.com> wrote in message
> news:3E74EC58.3DB2D830@rickfrazier.com...
> >
> > The picture looks an awful lot like fine steel filings with a unipolar
> > magnet under them...
> >
> > The plot starts at 0.300 Mhz and goes to 0.0 Mhz..., or maybe 3.000Mhz,
> > or even 3Ghz depending upon how you interpret the characters at the
> > bottom of the graph. It is interesting to note the lack of visual
> > resolution in the area of the numbers...
> >
> > The actual size, relating to the pictures of the unit with fingers
> > holding it, would put it's resonant frequency somewhere waaay up there,
> > more likely in the _high_ Gigahertz region....
> >
> > Methinks someone is trying to pull a few legs, and early for the season
> > too! Well done!

> >
> > :-) ;-)
> >
> >
> > --Rick AH7H
> >
> > Casey Homeo wrote:
> >
> > > This looks like a cool new invention.
> > >
> > > www.hedgehogantenna.com
> >
>
>

5773. Telrex Trap dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 14:20:58 UTC
From: jonweiner@aol.com
Message-ID: <20030317092058.04838.00000225@mb-cu.aol.com>
Source record: 122362

Anyone have the dimensions for the wire sections of the Telrex trap dipole?

Jon

5774. Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 14:33:30 UTC
From: Bill Ogden <ogden@us.ibm.com>
Message-ID: <3E75DCBA.A32062FB@us.ibm.com>
Source record: 122361

As I grow older, I am more confused about simple subjects. Simple question: should I buy low-loss coax to improve my reception on 10 & 12 meters? (I will swap my self-supporting aluminum tower for a crank-up tower as soon as the ground here is firm enough to do the work, and this is a good time to think about changing the coax.)

I sometimes find myself trying to work signals just at the noise level (especially on 10m CW). I assume I am at the atmospheric noise level. (If I rotate my quad, the noise level changes with direction.) I am in a fairly quiet semi-rural area in New York. The rig is a Tentec Omni 6+, and both the RF and AF gain are close to "wide open" in these cases when the band is really quiet. I am talking about approximately 175' of coax.

The object, of course, is more-signal-and-less-noise (better S/N). I have enough overall gain to hear the signal+noise at a comfortable level. Would better coax (LMR400 instead of RG213) help the situation? In my simple thinking, it seems the answer is "no" --- better coax would simply let me hear more signal+noise, while the S/N ratio would remain the same. I could run the receiver with less gain (and perhaps less internally-added noise) but, as long as I am hearing the atmospheric noise level, is there any point in this?

Better coax would get more transmitter power to the antenna, of course, but that is not my concern for this question.

Bill
W2WO

5775. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 14:40:35 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns934143EA1A387pookster@216.168.3.50>
Source record: 122363

Bill Ogden <ogden@us.ibm.com> wrote in
news:3E75DCBA.A32062FB@us.ibm.com:

> Simple question: should I buy low-loss coax to improve my reception on
>10 & 12 meters?

The traditional method of answering your question is to listen as you
unplug the coax from the receiver. If the background noise level drops
significantly, your reception is limited by the atmospheric s/n ratio
and using lower loss coax would not help. If there is *no* change, then
do go to the lower loss coax, or add a low-noise preamp, or both.

--
Bill, W7TI

5776. Cell phone antenna - HELP :-)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 14:45:31 UTC
From: Gene S <genes@thegateway.net>
Message-ID: <adlda.5601$Zo.76597@dfw-read.news.verio.net>
Source record: 122364

Here's the sad story.

We live out in the country, in a valley.

There is a 200 foot cliff next to the house.

We can't get a signal on our Samsung SCH-8500 cell phone
at 824-896MHz CDMA (I think)"inside" the metal roof house.
Our service provider is Sprint. We can get "weak" signals at various
locations outside near the house.

If we walk up the 200' steep hill, then we get a full signal
when we have something close to line-of-sight to the tower.
(This is an assumption, as I have not figured out how to locate
the nearest Sprint tower to Briggs,TX 78608)

QUESTIONS:

1. What kind of an outside antenna should I get?
2. Can I put an antenna on the "metal" roof & get good
reception because the antenna has a good Ground plane"?
3. Is it practical to run a coax cable up the 200' cliff to something
like a Yagi antenna, or ?
4. Is there an inexpensive alternative to the expensive coax cable?
5. What are the dimensions to build a Yagi antenna for 824-896MHz CDMA ?
6. BTW - anyone know if that "little" connector on top of the
Samsung SCH-8500 cell phone neat to the antenna is an RF
connector. (It is NOT the earplug, as it's on the side.)

THANKS in advance to anyone that knows the answers to this seemingly
witchcraft RF stuff :-)

THANKS,
Gene
in the metropolis of Briggs, TX
-
E-mail: genes@thegateway.net

5777. Carolina Windom 80

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 15:13:54 UTC
From: Bill Grimwood <bill@grimwood.net>
Message-ID: <v7bpgv5p3hc47@corp.supernews.com>
Source record: 122365

Has anyone had any experience with this antenna and if so how did you like it?

Thanks

K1WEG

Bill

5778. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 15:15:26 UTC
From: richardharrison@webtv.net
Message-ID: <6011-3E75E68E-167@storefull-2317.public.lawson.webtv.net>
Source record: 122367

Roy Lewallen wrote:
"There`s a lot more current flowing at the base of a 5/8 wave antenna than a 1/2 wave. This current flows over your body, making it a significant part of the actual radiating antenna."

The human body, it seems to me, is more susceptible to capacitive coupling than to inductive coupling. I`ve worked in broadcast stations with high towers, in comparison with a 1/4-wave. Those towers near 1/2-wave would reach out and bite you! We had to open the r-f ammeter shunts to record the indications. 1/2-wave towers can produce prodigious arcs.

The 5/8-wave end-fed antenna will have a circuit to match it to the radio so it will take maximum current, just as the 1/2-wave antenna has. This may have some similarity to a loaded windom on its end. I would assume the same power for any antenna in making a comparison. So, coupling to the hand of the radio holder should be about the same. The difference is in the antenna voltage nearest the body of the operator. The antiresonant 1/2-wave antenna has the highest feedpoint voltage, and so is likely to capacitively couple more energy to the operator`s body in the VHF range. The 1/2-wave antenna will be most subject to detuning as it nears the operator`s face.

Best regards, Richard Harrison, KB5WZI

5779. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 15:23:02 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <0DIda.45648$Dp.25574@fe01.atl2.webusenet.com>
Source record: 122366

"Bill, W7TI" <jamspam@upyours.now> wrote in message
news:Xns934143EA1A387pookster@216.168.3.50...
> The traditional method of answering your question is to listen as you
> unplug the coax from the receiver. If the background noise level drops
> significantly, your reception is limited by the atmospheric s/n ratio
> and using lower loss coax would not help. If there is *no* change, then
> do go to the lower loss coax, or add a low-noise preamp, or both.
>

No, that is the test for too high a receiver noise. It tells you nothing about the coax. Now if you switch between the antenna and a dummy load at the antenna end of the coax and notice no difference, then that would indicate you need better coax. Of course, in that case you wouldn't be hearing anything anyway.

In the S/N equation, the loss in the coax degrades the S/N ratio, dB for dB. Theoretically going to a lower loss coax will help, but most modern HF receivers have a much lower noise floor than needed anyway.

Calculate the difference in loss between the types of coax you are considering. That will tell you how much the S/N will improve.

Jim
N8EE

5780. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 16:30:31 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E75F827.AF60B4EA@cwis.net>
Source record: 122368

How much epoxy, how big of a magnet, and how many pounds of
iron filings would I need to scale this thing up to 80 meters?
Will it fit on the average city lot? Do you think I would have
to paint it to keep it from rusting? Would copper plating it
lower it's radiation resistance? Then paint it?
'Doc

5781. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 16:32:19 UTC
From: tim conway <n9hmg@mailhot.reversethatanddropthis.com>
Message-ID: <pan.2003.03.17.16.31.57.567184@mailhot.reversethatanddropthis.com>
Source record: 122219

The end-fed 1/2 wave. Electrically, it's just like a J-pole. The bottom half of the antenna is the bottom half of the antenna, rather than trying to use your body to do the job, the way antennas that aren't meant to stand alone (5/8, 1/4) do. If you can provide a good groundplane (set the HT in the middle of a large metal table) and keep it vertical, the 5/8 might beat it, but if you can do that, you're even better off to use a 5/8 magmount, so the groundplane isn't hanging an HT-length below the feedpoint.

For portable use, the 1/2 wins hands-down. Of course, if you're going to be operating while moving, the rubber dummy load probably still wins, just because it won't wiggle your connector out of the case.

On Sun, 16 Mar 2003 16:17:56 +0000, Carl Van Camp wrote:

> Subject says it all...thanks for any input.

5782. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 16:43:38 UTC
From: richardharrison@webtv.net
Message-ID: <25703-3E75FB3A-593@storefull-2314.public.lawson.webtv.net>
Source record: 122228

Bill, W2WO wrote:
"---better coax would simply let me hear more signal+noise, while the S / N ratio would remain the same."

That is true at frequencies where external noise levels are high. At VHF and higher frequencies, external noise is low. Receiver internal noise becomes the competition for the signal. Coax loss is attenuating the signal, not the noise. Less signal attenuation improves the S / N ratio.

Best regards, Richard Harrison, KB5WZI

5783. Re: Foxhunt antenna for near 6M?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 16:44:45 UTC
From: arrow146@aol.com
Message-ID: <20030317114445.23752.00000062@mb-mw.aol.com>
Source record: 122220

<< I am trying to find the source of QRM on my RS walkie talkies that operate on 49.830 MHz FM. The QRM is a whine with a wah-wah; it could be a carrier. It covers several square miles. It could, for example, be someone who is illegally amplifying his cordless phone base station.

I have avaliable a big (2 ft long) tri-band ducky from MFJ. Is there a way I can make this directional?

I have some aluminum and steel angle iron longer than the antenna that I could use as a reflector. WIll that help? Should it be grounded to the antenna ground, or will that destroy directionality?

Ken KC2JDY >>

Try a <A HREF="http://arrowantennas.com/loop.html">DF Loop Antenna</A>

73 Al Lowe N0IMW

5784. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 16:53:57 UTC
From: F8BOE Olivier <f8boeNOSPAM@free.fr>
Message-ID: <3e75fda0$0$2743$626a54ce@news.free.fr>
Source record: 122221

It's:

a) a starfished mouse
b) some pussy hairs
c) another dummy load

What's your opinion?

73 de F8BOE ....-.-

5785. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 17:17:11 UTC
From: richardharrison@webtv.net
Message-ID: <25704-3E760317-222@storefull-2314.public.lawson.webtv.net>
Source record: 122227

Mark Keith wrote:
""No, but it is if you don`t want to burn up the conductor."

How does putting resistance in series with a conductor increase its current?

Heat is produced in resistance as in Mark`s example of poor switch contacts. In the arc gap, heat is produced in the ionized plasma of the arc.

When lightning strikes a highly conductive antenna it makes a tiny pit in the antenna. This is from the heat of the plasma transmitted to the conductor at the contact point. It`s a small pit because the arc doesn`t last long. In the example I gave of the auto running into a high-tension line, the arc lasted much longer. Sizeable holes were burnt into the roof, though the current was lower.

Best regards, Richard Harrison, KB5WZI

5786. Re: Cell phone antenna - HELP :-)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 17:21:34 UTC
From: Ian <cls119@remove.spam.lycos.co.uk>
Message-ID: <Aunda.412$DS2.97665@newsfep1-win.server.ntli.net>
Source record: 122222

Hello,

Have you ever thought about a "passive repeater"? Two antennas hooked up by a length of coax. It seems to be used in similar locations to what you mention for TV. I am not sure if they really work or not.

Ian.

5787. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 17:24:45 UTC
From: Ian <cls119@remove.spam.lycos.co.uk>
Message-ID: <uxnda.416$DS2.100745@newsfep1-win.server.ntli.net>
Source record: 122223

"Casey Homeo" <caseyhomeo@hotmail.com> wrote in message
news:8una7vontspqmj5proo0kqbdq2arnqhp4j@4ax.com...
> This looks like a cool new invention.
>
> www.hedgehogantenna.com

Hello,

The one for 88-108MHz is called a "peacock" and uses a similar design.

>

5788. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 17:25:29 UTC
From: Ian <cls119@remove.spam.lycos.co.uk>
Message-ID: <9ynda.417$DS2.100561@newsfep1-win.server.ntli.net>
Source record: 122224

"F8BOE Olivier" <f8boeNOSPAM@free.fr> wrote in message
news:3e75fda0$0$2743$626a54ce@news.free.fr...
> It's:
>
> a) a starfished mouse
> b) some pussy hairs
> c) another dummy load
>
> What's your opinion?
>
> 73 de F8BOE ....-.-
>
>
PARDON ?

5789. ICOM 737 Manual Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 17:27:25 UTC
From: Ken Coit <parfait@nc.rr.com>
Message-ID: <1Anda.143534$lf5.6151112@twister.southeast.rr.com>
Source record: 122225

Ken / ND7N

5790. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 17:27:38 UTC
From: richardharrison@webtv.net
Message-ID: <25703-3E76058A-616@storefull-2314.public.lawson.webtv.net>
Source record: 122229

Mark Keith wrote:
"I thought the thinner wires would handle the strike."

The problem may not be a melted wire. A small conductor`s high impedance has a big voltage drop which can cause flashover to the surroundings.

Best regards, Richard Harrison, KB5WZI

5791. Astron RS-35 A or M Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 17:27:59 UTC
From: Ken Coit <parfait@nc.rr.com>
Message-ID: <zAnda.143540$lf5.6151106@twister.southeast.rr.com>
Source record: 122226

Ken / ND7N

5792. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 17:41:39 UTC
From: richardharrison@webtv.net
Message-ID: <25704-3E7608D3-223@storefull-2314.public.lawson.webtv.net>
Source record: 122232

Mark Keith wrote:
"It`s nothing more than a piece of curved stiff wire that makes a "C"
around the body of the camera."

From the tiny pits I`ve seen on antennas, I think it`ll take a long time
and many lightning strikes to use up that wire around and above the
camera.

Best regards, Richard Harrison, KB5WZI

5793. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 18:01:57 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <45GcnaWzq7kLkOujXTWcqw@crocker.com>
Source record: 122230

"'Doc" <w5lz@cwis.net> wrote in message news:3E75F827.AF60B4EA@cwis.net...
>
>
> How much epoxy, how big of a magnet, and how many pounds of
> iron filings would I need to scale this thing up to 80 meters?
> Will it fit on the average city lot? Do you think I would have
> to paint it to keep it from rusting? Would copper plating it
> lower it's radiation resistance? Then paint it?
> 'Doc

on a guess i would say to order a 10,000 gal truck of resin, go to a car shredder and get a couple of old steel van bodies shredded , and borrow their scrap magnet and crane. fill an above ground swimming pool with the resin and pick up the scrap with the crane, it should form the correct shape, then slowly lower into the resin, add hardener and wait for it to set. use the crane to pick it up, peel off the pool liner and flip it over and you should be all set! you shouldn't have to paint it as the epoxy should protect it when it hardens. copper plating may be nice, but with so many parallel current paths it may not help much. remember when you try to model it to take into account the dielectric loading from the epoxy.

5794. Re: Cell phone antenna - HELP :-)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 18:02:12 UTC
From: Gene S <genes@thegateway.net>
Message-ID: <z5oda.5656$Zo.76950@dfw-read.news.verio.net>
Source record: 122231

Thanks, Lan.

I have not looked into a repeater.
I am told that a new G3 phone & not the G2 that
I now have, may solve the problem. Worth a try,
as getting the digital camera stuff would be nice.

THANKS,
Gene

--
E-mail: genes@thegateway.net

"Ian" <cls119@remove.spam.lycos.co.uk> wrote in message
news:Aunda.412$DS2.97665@newsfep1-win.server.ntli.net...
> Hello,
>
> Have you ever thought about a "passive repeater"? Two antennas hooked up
by
> a length of coax. It seems to be used in similar locations to what you
> mention for TV. I am not sure if they really work or not.
>
> Ian.
>
>

5795. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 18:07:44 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E760EF0.F0ACA401@uci.edu>
Source record: 122235

Walter Maxwell wrote:
> > |Wes, thanks for finding my error. l would not have discovered it, so
> without
> > |your finding it it probably would have gone on unnoticed.

You're welcome. The name here is Jim, Juliet India Mike.

ac6xg

5796. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 18:38:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8r5c7vsnf6g42kblvh5gsfd71508uqqn8i@4ax.com>
Source record: 122233

On Mon, 17 Mar 2003 11:34:01 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:

>but the site is registered to a Canadian address.

As was the original poster to this thread....

5797. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 18:39:22 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E76165A.79C202D5@cwis.net>
Source record: 122234

Dang! Forgot all about the resin. Wonder
where I can borrow a swimming pool...
'Doc

5798. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 18:53:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mf6c7v8eu69v7jnoeruqaj8nh8u4u61sn9@4ax.com>
Source record: 122236

On Mon, 17 Mar 2003 05:42:36 GMT, Casey Homeo <caseyhomeo@hotmail.com>
wrote:

>This looks like a cool new invention.
>
>www.hedgehogantenna.com

Hi Homeboy,

I am sure you could sell far more as designer hocky-pucks.

73's
Richard Clark, KB7QHC

5799. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 19:21:19 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <v58c7v0dqpcrl5vdgllg8fni8v82013r9@4ax.com>
Source record: 122237

On Mon, 17 Mar 2003 05:42:36 GMT, Casey Homeo <caseyhomeo@hotmail.com>
wrote:

>www.hedgehogantenna.com

Actually,
http://www.hedgehogantenna.com/page4.html
looks no more different than modeling a simple ground plane, and the
ground plane appears to be smaller than this skunk.

73's
Richard Clark, KB7QHC

5800. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 19:30:58 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <bg-dnbNqYP7pv-ujXTWcrg@crocker.com>
Source record: 122238

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:mf6c7v8eu69v7jnoeruqaj8nh8u4u61sn9@4ax.com...
> On Mon, 17 Mar 2003 05:42:36 GMT, Casey Homeo <caseyhomeo@hotmail.com>
> wrote:
>
> >This looks like a cool new invention.
> >
> >www.hedgehogantenna.com
>
> Hi Homeboy,
>
> I am sure you could sell far more as designer hocky-pucks.
>
> 73's
> Richard Clark, KB7QHC

i think they might make nice fireworks... just imagine one made out of iron filings trying to pass a kw or so, i can imagine arcing and sparking at all the poor connections between filings and interesting effects on the resin when it overheats. here would be an interesting experiment... use a strong magnet and filings without the epoxy, pump a few hundred watts into it (at a safe distance, don't try this in your shack!) and see if it lights up.

5801. FA: LAST DAY - Diamond SRH519 Dual Band Flexible SMA Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 19:39:18 UTC
From: STA <ken@not_a_real_site.com>
Message-ID: <170320031439188452%ken@not_a_real_site.com>
Source record: 122239
Cross-posted to: rec.radio.amateur.equipment,alt.ham-radio.marketplace,rec.radio.amateur.antenna

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3012757367

5802. Re: Transient Vs Steady-State

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 20:44:41 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <Zsqda.5207$jA2.559360@newsread2.prod.itd.earthlink.net>
Source record: 122240

> Walter Maxwell wrote:
> > > |Wes, thanks for finding my error. l would not have discovered it, so
> > without
> > > |your finding it it probably would have gone on unnoticed.
>
> You're welcome. The name here is Jim, Juliet India Mike.
>
> ac6xg

Jim, am I missing something? Am I wrong in thinking Wes found my second error? Was it you?

Walt

5803. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 20:53:11 UTC
From: dplatt@radagast.org
Message-ID: <v7cddn20ktup09@corp.supernews.com>
Source record: 122241

>> How much epoxy, how big of a magnet, and how many pounds of
>> iron filings would I need to scale this thing up to 80 meters?
>> Will it fit on the average city lot? Do you think I would have
>> to paint it to keep it from rusting? Would copper plating it
>> lower it's radiation resistance? Then paint it?
>> 'Doc
>
>on a guess i would say to order a 10,000 gal truck of resin, go to a car
>shredder and get a couple of old steel van bodies shredded , and borrow
>their scrap magnet and crane. fill an above ground swimming pool with the
>resin and pick up the scrap with the crane, it should form the correct
>shape, then slowly lower into the resin, add hardener and wait for it to
>set.

Make sure you use a slow-cure epoxy! Do _not_ try to save money by
using polyester resin and a catalyst. If you do, the rapid release of
exothermic energy from the resin-curing process will probably set the
whole mess on fire (fast-cure epoxy, and polyester resin can get quite
hot even in small quantities)!

You'll end up with a swimming pool full of flaming resin. It'll be
a public-health problem, on a par with that big storage yard full of
old rubber tires which caught fire a few years ago, and was oozing
flaming molten rubber for weeks.

Could even be as bad as one of those notorious fires-in-a-manure-pile,
or the towns in Pennsylvania built over old coal mines that are slowly
burning and causing the ground to collapse.

Then, of course, there's the risk that the fire would heat up the
steel to above its Curie temperature - it'd cease to be magnetic, drop
to the bottom of the pool before the resin finished hardening, and
you'd end up with a really lousy SWR.

Scarcely seems worth the trouble.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

5804. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 21:15:58 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <6dCcnedw0OeNpuujXTWcoQ@crocker.com>
Source record: 122243

"Dave Platt" <dplatt@radagast.org> wrote in message
news:v7cddn20ktup09@corp.supernews.com...
>
> >> How much epoxy, how big of a magnet, and how many pounds of
> >> iron filings would I need to scale this thing up to 80 meters?
> >> Will it fit on the average city lot? Do you think I would have
> >> to paint it to keep it from rusting? Would copper plating it
> >> lower it's radiation resistance? Then paint it?
> >> 'Doc
> >
> >on a guess i would say to order a 10,000 gal truck of resin, go to a car
> >shredder and get a couple of old steel van bodies shredded , and borrow
> >their scrap magnet and crane. fill an above ground swimming pool with
the
> >resin and pick up the scrap with the crane, it should form the correct
> >shape, then slowly lower into the resin, add hardener and wait for it to
> >set.
>
> Make sure you use a slow-cure epoxy! Do _not_ try to save money by
> using polyester resin and a catalyst. If you do, the rapid release of
> exothermic energy from the resin-curing process will probably set the
> whole mess on fire (fast-cure epoxy, and polyester resin can get quite
> hot even in small quantities)!
>
> You'll end up with a swimming pool full of flaming resin. It'll be
> a public-health problem, on a par with that big storage yard full of
> old rubber tires which caught fire a few years ago, and was oozing
> flaming molten rubber for weeks.
>
> Could even be as bad as one of those notorious fires-in-a-manure-pile,
> or the towns in Pennsylvania built over old coal mines that are slowly
> burning and causing the ground to collapse.
>
> Then, of course, there's the risk that the fire would heat up the
> steel to above its Curie temperature - it'd cease to be magnetic, drop
> to the bottom of the pool before the resin finished hardening, and
> you'd end up with a really lousy SWR.
>
> Scarcely seems worth the trouble.
>
yeah, but just think... if it fails as an antenna you could apply to
Guinness for a record for the worlds biggest paperweight.

5805. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 21:17:44 UTC
From: Bill Ogden <ogden@us.ibm.com>
Message-ID: <3E763B78.811BCDE5@us.ibm.com>
Source record: 122242

JLB wrote:

> snip=====
> In the S/N equation, the loss in the coax degrades the S/N ratio, dB for dB.
> Theoretically going to a lower loss coax will help, but most modern HF
> receivers have a much lower noise floor than needed anyway.
>

That confuses me even more (if possible). It seems to me that the coax will degrade the S+N, not the S/N --- again assuming that my receiver's noise level is below that of the atmospheric noise.

Unplugging the antenna, while listening to the incoming noise level, seems a reasonable way to verify that the noise I hear is primarily atmospheric noise, not internal noise. (Listening to different noise levels received from different directions seemed to be valid also, but perhaps not quite as definitive.)

Bill
W2WO

5806. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 21:27:52 UTC
From: dplatt@radagast.org
Message-ID: <v7cfeogh0h7k6c@corp.supernews.com>
Source record: 122244

In article <6dCcnedw0OeNpuujXTWcoQ@crocker.com>,
David Robbins <k1ttt@arrl.net> wrote:

>> Scarcely seems worth the trouble.
>>
>yeah, but just think... if it fails as an antenna you could apply to
>Guinness for a record for the worlds biggest paperweight.

Hmmm. To qualify, wouldn't you have to have a 15'-wide butterfly, or
a gigantic scorpion, inside the resin? I'm not sure that iron filings
by themselves have enough aesthetic appeal.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

5807. Ham radio swap meet...FREE!!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 21:34:59 UTC
From: denton <denton@oregontrail.net>
Message-ID: <b55eo2pts1@news.oregontrail.net>
Source record: 122245
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

The Pendleton Amateur Radio Club, in Pendleton Oregon is having a tailgate swap meet this coming Saturday, March 22nd at the South Pendleton City Hall parking lot.
There is no admission charge for either participants or sellers!
Time is from 8 in the morning to about noon.

5808. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 21:49:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <4hgc7voqtqvlfmt767mj746vp71g655c2f@4ax.com>
Source record: 122246

On Mon, 17 Mar 2003 19:30:58 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:
>
>i think they might make nice fireworks... just imagine one made out of iron
>filings trying to pass a kw or so, i can imagine arcing and sparking at all
>the poor connections between filings and interesting effects on the resin
>when it overheats. here would be an interesting experiment... use a strong
>magnet and filings without the epoxy, pump a few hundred watts into it (at a
>safe distance, don't try this in your shack!) and see if it lights up.
>

Hi David,

The bare magnet and filings WITH power applied would no doubt lead to
a re-arrangement of those same filings. Hmmm, sounds vaguely
familiar.

I got it! Genetic Algorithm design. The filings will arrange
themselves to match the frequency and power applied (the epoxy model
is simple a single, "fixed" band design). Toss a handful of fractal
pixie-dust chaff (separate product available, some assembly required)
into the air to tailor the lobe's characteristics and you have the
complete system solution.

73's
Richard Clark, KB7QJC

5809. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 22:39:28 UTC
From: G&R <spam@limbo.hell>
Message-ID: <t8sda.3280$544.290453@news20.bellglobal.com>
Source record: 122249

Hi Doug,

If your looking for a beam antenna consider our mini-quad which almost performs the same as a full size quad.

The advantages are that it is smaller that a yagi and more durable than both most yagis and quads on the market (at least the way we build it!)

The best way to describe it is to look at our page www.degendesigns.com

By the way we will be at DAYTON (climate allowing).

Please feel free to contact me at info@degendesigns.com

"Doug Niessen" <dniessen@pacbell.net> wrote in message news:3E738025.40204@pacbell.net...
> I am considering the purchase of a 20-15-10 3 or 4 element yagi.
> Does anyone have recommendations.
>
> Thank you,
> Doug K6STS
>

5810. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 22:39:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b55irp$5fn$1@venus.btinternet.com>
Source record: 122247

Dear Bill and Jim,

It is obvious to the casual reader both of you understand very well the simple arithmetical relationship between noise collected by the antenna, internal receiver noise and line attenuation and what comes out of the speaker.

What I find so inexplicable is why neither of you can understand the other. ;o) ;o)

But after all said and done it's only a few decibels - not barrels of oil.

Reg.

5811. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 22:40:47 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v7cjna693oo530@corp.supernews.com>
Source record: 122248

Oh, how my clients wish it were true.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"J. Harvey"
<snip?

Furthermore, the
> USPTO would (in recent years) grant a patent for just about anything.
>
>
>

5812. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 22:57:00 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <kMWcnToO6_I0_OujXTWcoQ@ctc.net>
Source record: 122254

> As I grow older, I am more confused about simple subjects. Simple
> question: should I buy low-loss coax to improve my reception on 10 & 12
> meters? (I will swap my self-supporting aluminum tower for a crank-up
> tower as soon as the ground here is firm enough to do the work, and this
> is a good time to think about changing the coax.)

If the rg-213 is in good shape then you will not notice any differance if you go to the lmr400. While the books say there is a differance, your ears and the external noise will not let you hear it. Just about lighting a candle in the noon sun, It is there but if you back off a few feet you can not tell any differance in the brightness.

5813. Re: Kraus antenna book

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 23:23:45 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <r4lc7vs57mu296k7p4op0q5amlkp7iq57l@4ax.com>
Source record: 122250

Even though it's a HOT book you'll get no flames from me. It's a great book, and there are lots of tutorial material concerning how antennas work, especially in MF range. I keep my copy on a very short leash.

I had the privilege of knowing Ed Laport very well while I was working at the antenna lab at the David Sarnoff Research Center, (RCA Labs). Ed was the Chief Engineer of the RCA International Division.

Walt Maxwell, W2DU

On Wed, 5 Mar 2003 19:48:58 -0600, "Crazy George" <munschNO@attglobal.net.SPAM> wrote:

>Don:
>
>I suspect I will get a lot of flames for this, but if you can find one, Ed
>LaPort's Antenna Engineering covers commercial versions of wire antennas
>which hams would like to emulate. Of course it also covers things like
>Sterba Curtains, but we can dream, can't we?

5814. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 23:24:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7cm8g752qfh3f@corp.supernews.com>
Source record: 122251

Your clients should take some lessons from David L. Strom, the inventor of the "Hyper-Light-Speed Antenna", U.S. Patent # 6,025,810.

I've had occasion to carefully read quite a large number of patents from time to time. A surprising number of them can't possibly work as claimed, and the explanations for how they supposedly do are just plain wrong. Strom's patent is simply so outrageous as to be obvious to even the casual observer, but it's far from unique, or even unusual, in its impossibility.

Roy Lewallen, W7EL

J. McLaughlin wrote:
> Oh, how my clients wish it were true.
> 73 Mac N8TT
>
"J. Harvey" <snip?

Furthermore, the
> USPTO would (in recent years) grant a patent for just about anything.

5815. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 23:48:41 UTC
From: k3bu@aol.com
Message-ID: <20030317184841.27730.00000175@mb-cg.aol.com>
Source record: 122252

Bill, W2WO writes:

>>I assume I am at the atmospheric noise level.
(If I rotate my quad, the noise level changes with direction.) <<

This is normal, noise sources can be locally generated (appliances, etc.) or atmospheric (Sun radiation/noise, thunderstorms). You will get more noise from south than when beaming north. If your noise drops down to receiver noise when say beaming N (if not masked by local noise), then using better, lower loss coax would help, esp. on 10m. If you still hear increase in noise on a dead band when connecting antenna, then you should be OK. If RG213 is not contaminated/flooded, it should be OK. Check the loss, if it is withing spec then leave it. 10m is going to die soon anyway.

Yuri, K3BU

5816. Re: Cell phone antenna - HELP :-)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-17 23:55:01 UTC
From: k3bu@aol.com
Message-ID: <20030317185501.27730.00000176@mb-cg.aol.com>
Source record: 122253

>
>We live out in the country, in a valley.
>
>There is a 200 foot cliff next to the house.

Use reflector. Install piece of sheet metal reflector, just like a mirror on the cliff. Aim it carefully so it will reflect between the favorite location in the house and cell tower. Don't let the metal roof to come between youze. I would say about 4x4' "mirror" made out of aluminum or steel should suffice. We are dealing with very small waves, so it should work. I have seen them setup in the Rockies, servicing whole town.

Yuri, K3BU

5817. Re: Mounting an FT100D in a Toyota Tacoma Extra Cab P/U Truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 00:14:50 UTC
From: starsekr@aol.com
Message-ID: <f2828edc.0303171614.3d48dce1@posting.google.com>
Source record: 122255

'Doc <w5lz@cwis.net> wrote in message news:<3E71DF8B.BC34FE88@cwis.net>...

> Antennas, especially on a truck, are always going to
> be in the way of something. Using a 'stake hole'
> mount seems to be a fairly 'convenient' place to mount
> an antenna, at least to me.

Can't with a Tacoma, they don't have stakeholes. Walls are double box construction on the bed, so a ball sidemount needs spacers between the walls to prevent collapse, but a ball mount inside the bed might not look too bad. One good option, a screwdriver on the rear bumper, through the ball hitch hole, take off the tailgate and put a net up instead, then pull the antenna down and forward with a line to either front corner of the box.
Another option, if you are just doing VHF/UHF, is to mount a bar behind the cab, sort of like a roll bar or driving light bar. This could be your antenna mount. Or get a big 3 magnet antenna mount and use ham sticks.

5818. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 00:45:56 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b55q7sees1@slb0.atl.mindspring.net>
Source record: 122256

ANY TRI-BANDER design is less effecient than a full sized system. No matter quad or yagi.

As one shortens the elements and the spacing you lower the bandwidth, overall gain and fb/fs.

Those things stated ...if you then make it even smaller....you figure it out.

You didn't state how much room you have to play with, size problems, etc.

If your looking for a straight forward simple and time proven design then consider the TA-33 series by Mosley. Ive had one for 40 years....still hanging in.

Dan/W4NTI

"G&R" <spam@limbo.hell> wrote in message news:t8sda.3280$544.290453@news20.bellglobal.com...
> Hi Doug,
>
> If your looking for a beam antenna consider our mini-quad which almost
> performs the same as a full size quad.
>
> The advantages are that it is smaller that a yagi and more durable than both
> most yagis and quads on the market (at least the way we build it!)
>
> The best way to describe it is to look at our page www.degendesigns.com
>
> By the way we will be at DAYTON (climate allowing).
>
> Please feel free to contact me at info@degendesigns.com
>
> "Doug Niessen" <dniessen@pacbell.net> wrote in message
> news:3E738025.40204@pacbell.net...
> > I am considering the purchase of a 20-15-10 3 or 4 element yagi.
> > Does anyone have recommendations.
> >
> > Thank you,
> > Doug K6STS
> >
>
>

5819. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 02:00:56 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <s5vda.1434$K37.288655@news20.bellglobal.com>
Source record: 122257

"J. Harvey"
> Furthermore, the USPTO would (in recent years)
> grant a patent for just about anything.

J. McLaughlin wrote:
> Oh, how my clients wish it were true.

"Roy Lewallen"
> Your clients should take some lessons from David L. Strom,
> the inventor of the "Hyper-Light-Speed Antenna",
> U.S. Patent # 6,025,810. <snip>

Or the World Famous Sideways Swinging Technique...
http://www.google.com/search?q=sideways+swing+patent
Note - it is so famous that it has it's own Google 'Hot Link'
(first hit on Google).

There are many such ludicrous examples.

5820. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 02:40:51 UTC
From: k3bu@aol.com
Message-ID: <20030317214051.03302.00000255@mb-fh.aol.com>
Source record: 122258

>
>Or the World Famous Sideways Swinging Technique...

Who is going to be the first to patent monkey swinging by the tail?
I can see all the fractal ZOOs paying royalties :-)

Bada BUm

5821. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 02:44:19 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v7d1vv502mmd2@corp.supernews.com>
Source record: 122259

Dear Roy:
No. My clients have real inventions or they are not my clients.

I too am amazed at some things that get through the PTO. My theory is that examiners can not find references against really over-the-top stuff and so decide to increase their "disposals" by letting it go by. Good, solid inventions almost always build on earlier inventions (I dealt with one exception and it was so obviously novel that it issued without fuss) and are met with examiners who wish to argue about superficial similarities.
I have just finished a case that dragged on for five years (including two trips to the appeals court, which ruled unanimously in our favor every time) for a nice improvement to a useful device. In the end, the inventor received what he should receive. Unfortunately for both of us, he is in no position to pay for the huge and unnecessary effort that was needed.
It is this type of thing that I see. You see the over-the-top patent or the non-functional patent that just got moved along. Good inventions tend to get hammered. That is what I meant by my statement.

As an aside: explanations (correct or incorrect) of how an invention works are not a requirement - telling how to use/make the invention is a requirement - telling which of several options is the preferred is a requirement

The days when it was common for a bright, young engineer/chemist/physicist to go to the PTO after graduation for four or five years as an examiner (while getting a law degree) and then go out into private practice, have about passed. It has to often become another civil service job!

Still, it is by far the best patenting system in the world. 73 Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Roy Lewallen" <w7el@eznec.com> wrote in message news:v7cm8g752qfh3f@corp.supernews.com...
> Your clients should take some lessons from David L. Strom, the inventor
> of the "Hyper-Light-Speed Antenna", U.S. Patent # 6,025,810.
>
> I've had occasion to carefully read quite a large number of patents from
> time to time. A surprising number of them can't possibly work as

> claimed, and the explanations for how they supposedly do are just
plain
> wrong. Strom's patent is simply so outrageous as to be obvious to even
> the casual observer, but it's far from unique, or even unusual, in its
> impossibility.
>
> Roy Lewallen, W7EL
>
> J. McLaughlin wrote:
> > Oh, how my clients wish it were true.
> > 73 Mac N8TT
> >
> "J. Harvey" <snip?
>
> Furthermore, the
> > USPTO would (in recent years) grant a patent for just about
anything.
>

5822. Re: Cell phone antenna - HELP :-)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 03:00:05 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v7d2thheqls0c@corp.supernews.com>
Source record: 122260

Ian has a good idea - if you are able to place an antenna at the top.

The idea was used in his country some years ago to extend the range of police handhelds (at 400 some MHz). One scheme that I saw described involved a large flat roof. A high gain antenna was placed at each end of the roof - one pointing towards the central office and the other pointing away. As I recall, a bidirectional amplifier was added having a gain less than the sum of the f/b ratios of the two antennas.
In your case, a passive system might work. ...if you are able to get to the top.
I think that I saw an active system being sold for cell phone use by one of the antenna companies. Their intended use was to extend coverage to and from a "tight" building. Do a search.
There is no reason to think that a new phone will do the trick. The new phone will have about the same noise-figure and the same output power.
73 Mac N8TT

J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Ian" <cls119@remove.spam.lycos.co.uk> wrote in message news:Aunda.412$DS2.97665@newsfep1-win.server.ntli.net...
> Hello,
>
> Have you ever thought about a "passive repeater"? Two antennas hooked up by
> a length of coax. It seems to be used in similar locations to what you
> mention for TV. I am not sure if they really work or not.
>
> Ian.
>
>

5823. Re: Carolina Windom 80

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 03:59:45 UTC
From: K6ME <k6me@adelphia.net>
Message-ID: <RQwda.1330$1B.899912@news3.news.adelphia.net>
Source record: 122261

Hey Bill, Yes I have had one from the Radio Works for 5 years now.
Put it up every year for field day as it does not need a tuner for most
CW portion of HF Bands. With a tuner it even works somewhat on 160.

Found out it works the CW & SSB portion of Six Meters without a tuner
last year at FD so now it is up at the house here slopping North from 70'
up.

It kicks my 6 on 6 Yagi's tail whenever there is an Aurora opening.

73: Terry, K6ME

5824. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 05:33:35 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303172133.67ab5be8@posting.google.com>
Source record: 122263

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<25703-3E76058A-616@storefull-2314.public.lawson.webtv.net>...
> Mark Keith wrote:
> "I thought the thinner wires would handle the strike."
>
> The problem may not be a melted wire. A small conductor`s high impedance
> has a big voltage drop which can cause flashover to the surroundings.
>
> Best regards, Richard Harrison, KB5WZI

Thats why I prefer to let my fairly fat mast do the work. But I also
think the quality of the ground connection would also have a bearing.
If the ground quality was so-so, you might need a bit thicker wire.
Also seems to me , the lower resistance of the ground connection, the
less likely the strike will want to go anywhere else. But like you say
if the wire were really too small, you could still have a problem.
I've never noticed any flashover problems here so far. And the breaker
box, cable TV run, gas meter, water pipe/faucet, and phone lines are
all within 5-10 ft of the mast. Being nothing was ever damaged in or
outside the house, I assume flashing was not a problem. Here in
Houston, I think we have it lucky in one respect. I think it's pretty
easy to get a usable lightning ground here due to the usually moist
gumbo which seems quite conductive, and the usual stated good ground
quality we have here. "15-30 range on the government conductivity
scale they use" A ham on rocky soil is not going to have it so easy.
He needs to pay even more attention to the ground connections,
radials, etc..Here in Houston, I think a single deep ground rod will
do a usable job most of the time. I use more than one myself though. I
have 4 or 5 rods of scrap copper tubing pounded into the ground around
the base, and they are tied together. I don't use the conventional
rods they sell. I have lots of scrap copper, so I use it. Mine are not
that deep. Only 3-4 feet or so. But that seems to be good enough here
at this QTH. MK

5825. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 10:12:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b56rf5$8pv$1@sparta.btinternet.com>
Source record: 122264

> Here in Houston, I think a single deep ground rod will
> do a usable job most of the time.

==========

The resistance of a single deep ground rod in average soil is in the region
of 50 to 100 ohms.

If you are satisfied with that, all's well and good.

Two of them close together doesn't make a lot of difference. Ohms Law
doesn't apply.

Reg, G4FGQ

5826. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 13:10:49 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <2NEda.50397$Dp.44213@fe01.atl2.webusenet.com>
Source record: 122265

Reg,

I doubt that the 'casual reader', however, has dug into the noise figure equations as deeply as I have. And I was actually paid to do it. On my last job (before being laid off) I had to develop the digital signal processing algorithms to calculate noise figure from a few simple measurements (DUT gain and noise density) and knowledge of the system losses.

What happens, Bill, is that the loss of the coax attenuates both the signal and external noise while contributing its own noise. The noise level contributed by the coax is determined by the ambient temperature.

A detailed description of what happens is too involved to describe in a news group message. There are a number of web sites that do a good job of this (over 21,000 web pages in google). One good one is http://cp.literature.agilent.com/litweb/pdf/5952-3706E.pdf. Another is http://www.satsig.net/noise.htm

Jim
N8EE

5827. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 13:45:44 UTC
From: richardharrison@webtv.net
Message-ID: <11732-3E772308-761@storefull-2311.public.lawson.webtv.net>
Source record: 122272

Reg wrote:
"The resistance of a single deep ground rod in average soil is in the region of 50 to 100 ohms."

Depends on where you are, it seems, because the U.S. National Bureau of Standards was less pessimistic. At low frequencies, my Lincoln`s Reference has graphs of effects on resistance for one grade of soil for ground rod depth, number of rods in parallel, and separation between pods.

At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms, 3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.

Two rods in parallel have about 60% of the resistance of one rod if their separation is 5ft. With three rods, the paralleled resistance is 40%.

A graph shows 5ft separation is almost as good as it gets and only slightly lowered resistance is gained by more separation.

Best regards, Richard Harrison, KB5WZI

5828. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 13:51:49 UTC
From: richardharrison@webtv.net
Message-ID: <11732-3E772475-762@storefull-2311.public.lawson.webtv.net>
Source record: 122274

Reg wrote:
"The resistance of a single deep ground rod in average soil is in the region of 50 to 100 ohms."

Depends on where you are, it seems, because the U.S. National Bureau of Standards was less pessimistic. At low frequencies, my Lincoln`s Reference has graphs of effects on resistance for one grade of soil for ground rod depth, number of rods in parallel, and separation between pods.

At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms, 3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.

Two rods in parallel have about 60% of the resistance of one rod if their separation is 5ft. With three rods, the paralleled resistance is 40%.

A graph shows 5ft separation is almost as good as it gets and only slightly lowered resistance is gained by more separation.

Best regards, Richard Harrison, KB5WZI

5829. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 14:03:39 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <DpWdnfAQXtiLq-qjXTWcqw@ctc.net>
Source record: 122267

```
"> It is not true that a lossy coax contributes more
> thermal noise, for a given temperature, than a
> lower loss coax, but it does attenuate the signal,
> therefore decreases the signal-to-noise ratio.
>
> Bill W0IYH

A lossey feedline will contribuit to the s/n ratio more than a feedline
that is not lossey. In most cases it will be hard to tell ,but in the uhf
and above ranges it will be noticed.
```

5830. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 14:14:16 UTC
From: richardharrison@webtv.net
Message-ID: <13979-3E7729B8-652@storefull-2313.public.lawson.webtv.net>
Source record: 122273

Reg wrote:
"The resistance of a single deep ground rod in average soil is in the region of 50 to 100 ohms."

Depends on where you are, it seems, because the U.S. National Bureau of Standards was less pessimistic. At low frequencies, my Lincoln`s Reference has graphs of effects on resistance for one grade of soil for ground rod depth, number of rods in parallel, and separation between pods.

At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms, 3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.

Two rods in parallel have about 60% of the resistance of one rod if their separation is 5ft. With three rods, the paralleled resistance is 40%.

A graph shows 5ft separation is almost as good as it gets and only slightly lowered resistance is gained by more separation.

Best regards, Richard Harrison, KB5WZI

5831. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 14:57:13 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E7733C9.6060606@mwci-news>
Source record: 122266

Bill Ogden wrote:
> should I buy low-loss coax to improve my reception on 10 & 12
> meters? (I will swap my self-supporting aluminum tower for a crank-up
> tower as soon as the ground here is firm enough to do the work, and this
> is a good time to think about changing the coax.)

A good test is to switch the receiver input (which has been designed for a 50 ohm antenna) back and forth between the antenna coax and a 50 ohm resistor. The difference between receiver-plus-antenna noise and receiver-only noise tests the weak-signal capability of the receiver-plus-antenna system. A difference of 10 dB is a very good number.

My homebrew solid-state receiver has a 12 dB noise figure, which is more that adequate (160 through 15 meters) when I use my very efficient transmitting antenna (matched to 50 ohms) for reception. But on the 12 and 10 meter bands I can switch in (when necessary) a solid-state preamp (6 dB gain, 4 dB noise figure) that lowers the overall noise figure to 8.8 dB. This improvement is significant for weak-signal reception on those bands. Atmospheric and galactic noise are both lower at these frequencies, compared to the lower frequency bands, so a lower noise figure can often be helpful.

Reducing coax loss can increase the signal strength a dB or so on the high bands, and may be a good idea for both receiving and transmitting, but this can be an expensive approach. This approach, by itself, is probably not worth the cost, but when used as part of a "package" of other improvements, can make a significant improvement.

A better antenna and a higher tower plus a better coax would be an example of an improved *system package*. I use RG-213 coax, a 7 element tribander (Cushcraft X-7) and a 55 foot crankup tower (US Tower HDX-555) and I believe it is plenty good enough on the 12-10 M bands.

It is not true that a lossy coax contributes more thermal noise, for a given temperature, than a lower loss coax, but it does attenuate the signal, therefore decreases the signal-to-noise ratio.

Bill W0IYH

5832. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 15:31:52 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93424C9C2D671pookster@216.168.3.50>
Source record: 122268

"JLB" <IHateSpam@nospam.net> wrote in
news:2NEda.50397$Dp.44213@fe01.atl2.webusenet.com:

> What happens, Bill, is that the loss of the coax attenuates both the
> signal and external noise while contributing its own noise.

Correct, and that's why the original poster can answer his question by simply unplugging his coax and seeing if the noise drops significantly. If it does, the external noise is the limiting factor. Installing new coax would only raise the total noise+signal delivered to the receiver and would not improve reception. Strictly speaking, he should connect a 50 ohm resistor to the receiver input for greatest accuracy.

Remember, he was only talking about receiving. If he were transmitting, I'd advise new coax regardless.

--
Bill, W7TI

5833. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 16:12:54 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E774586.6060708@mwci-news>
Source record: 122269

Bill, W7TI wrote:
> "JLB" <IHateSpam@nospam.net> wrote in
> news:2NEda.50397$Dp.44213@fe01.atl2.webusenet.com:
>
>
>> Strictly speaking, he should connect a
> 50 ohm resistor to the receiver input for greatest accuracy.
>

It is important to do this, because the
receiver-only noise level is correct only when the
input is terminated with 50 ohms (or whatever the
receiver was designed for).

Bill W0IYH

5834. RF Imp Br RadCom 7/95?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 16:12:56 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v7ehcbqahuqj2b@corp.supernews.com>
Source record: 122270

The July 95 issue of RadCom had a construction article titled "RF Impedance Bridge for 2-30MHz" by Jack Gentle G0RVN. I don't have access to that issue and would like a copy of the article. Any help appreciated.
tnx
hank wd5jfr

5835. Re: Medfer AM antenna loading question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 16:23:06 UTC
From: K7JEB <k7jeb@arrl.no_spam.net>
Message-ID: <KJHda.15842$S%3.859485@bgtnsc04-news.ops.worldnet.att.net>
Source record: 122271

>>Couple the transmitter output back into the house power
>>wiring. This should saturate the neighborhood with
>>signal...

> Hi Jim,
>
> I doubt it. Most pole pigs contain a faraday shield that prevents
> exactly this sort of thing. You might be "in the house" but the
> "hood" will no doubt be quite free of this transmission.
>
> 73's
> Richard Clark, KB7QHC

With old-fashioned, overhead distribution, I think you
would be surprised.

Jim

5836. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 17:22:22 UTC
From: richardharrison@webtv.net
Message-ID: <25704-3E7755CE-284@storefull-2314.public.lawson.webtv.net>
Source record: 122279

Reg wrote:
"The resistance of a single deep ground rod in average soil is in the region of 50 to 100 ohms."

Depends on where you are, it seems, because the U.S. National Bureau of Standards was less pessimistic. At low frequencies, my Lincoln`s Reference has graphs of effects on resistance for one grade of soil for ground rod depth, number of rods in parallel, and separation between pods.

At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms, 3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.

Two rods in parallel have about 60% of the resistance of one rod if their separation is 5ft. With three rods, the paralleled resistance is 40%.

A graph shows 5ft separation is almost as good as it gets and only slightly lowered resistance is gained by more separation.

Best regards, Richard Harrison, KB5WZI

5837. Re: Medfer AM antenna loading question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 17:40:25 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rnme7vc8dc0uqe70leunec5ek7tdjh1dtp@4ax.com>
Source record: 122275

On Tue, 18 Mar 2003 16:23:06 GMT, "K7JEB" <k7jeb@arrl.no_spam.net>
wrote:

>>>Couple the transmitter output back into the house power
>>>wiring. This should saturate the neighborhood with
>>>signal...
>
>> Hi Jim,
>>
>> I doubt it. Most pole pigs contain a faraday shield that prevents
>> exactly this sort of thing. You might be "in the house" but the
>> "hood" will no doubt be quite free of this transmission.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>With old-fashioned, overhead distribution, I think you
>would be surprised.
>
>Jim

Hi Jim,

Haven't been surprised in years like that, sadly speaking as to having
tried. I suppose there are depressed areas that skip on this common
engineering feature.

73's
Richard Clark, KB7QHC

5838. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 17:54:10 UTC
From: richardharrison@webtv.net
Message-ID: <6010-3E775D42-688@storefull-2317.public.lawson.webtv.net>
Source record: 122277

Reg wrote:
"The resistance of a single deep ground rod in average soil is in the region of 50 to 100 ohms."

Depends on where you are, it seems, because the U.S. National Bureau of Standards was less pessimistic. At low frequencies, my Lincoln`s Reference has graphs of effects on resistance for one grade of soil for ground rod depth, number of rods in parallel, and separation between pods.

At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms, 3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.

Two rods in parallel have about 60% of the resistance of one rod if their separation is 5ft. With three rods, the paralleled resistance is 40%.

A graph shows 5ft separation is almost as good as it gets and only slightly lowered resistance is gained by more separation.

Best regards, Richard Harrison, KB5WZI

5839. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 17:56:08 UTC
From: richardharrison@webtv.net
Message-ID: <16368-3E775DB8-677@storefull-2318.public.lawson.webtv.net>
Source record: 122278

Reg wrote:
"The resistance of a single deep ground rod in average soil is in the region of 50 to 100 ohms."

Depends on where you are, it seems, because the U.S. National Bureau of Standards was less pessimistic. At low frequencies, my Lincoln`s Reference has graphs of effects on resistance for one grade of soil for ground rod depth, number of rods in parallel, and separation between pods.

At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms, 3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.

Two rods in parallel have about 60% of the resistance of one rod if their separation is 5ft. With three rods, the paralleled resistance is 40%.

A graph shows 5ft separation is almost as good as it gets and only slightly lowered resistance is gained by more separation.

Best regards, Richard Harrison, KB5WZI

5840. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 19:14:59 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <qKSdnVIk1NKt7eqjXTWcqA@comcast.com>
Source record: 122276

> If your looking for a straight forward simple and time proven design then
> consider the TA-33 series by Mosley. Ive had one for 40 years....still
> hanging in.
>
> Dan/W4NTI

I had a TA33JR for almost 20 years, and thought it worked reasonably, until I put up a 20 meter dipole, 5 - 10 feet higher. The dipole consistently out performed the JR. Got rid of the Mosley after I burned out a trap by putting a KW of SSB into it. These things are an ancient design. The Hygain TH3Mk4 uses a hairpin match, so they don't have to fake the element spacing/length to get a decent SWR.

Tam/WB2TT

5841. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 19:44:08 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b57su8ats1@sparta.btinternet.com>
Source record: 122280

> Depends on where you are, it seems, because the U.S. National Bureau of
> Standards was less pessimistic. At low frequencies, my Lincoln`s
> Reference has graphs of effects on resistance for one grade of soil for
> ground rod depth, number of rods in parallel, and separation between
> pods.
>
> At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms,
> 3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.
>
==========

Rich,

The NBS forgot to measure the most important quantity. Their figures are meaningless unless accompanied by resistivity (or conductivity) of the soil.

There's also a significant negative temperature coefficient. Big difference between Alaska and Florida.

Reg.

5842. help with antenna....military direction finding

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 19:56:59 UTC
From: wb4una@aol.com
Message-ID: <20030318145659.23682.00000086@mb-mw.aol.com>
Source record: 122281

I have a type coc- 50061 coupler unit that I would like to find some info on.
.I have searched the web but no can find anyone help out there..?
more on antenna..tags read
type coc 50061coupler
unit3.9 lbs serial 12
a unit of model DU-1 or DW-1 aircraft radio equipment
manufactured for the Navy Department-Bureau of Ships
contractor..Continental radio & television corpchicago, ill
this is a neat piece for the shack just want to know more about it...
..thanks
Randy
ARS: WB4UNA
Randy Chavis
247 Goff Court
West Columbia S.C. 29172

ARS: WB4UNA
Randy Chavis
247 Goff Court
West Columbia
S.C. 29172

5843. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 20:17:25 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E777ED5.789457D8@uci.edu>
Source record: 122282

Reg Edwards wrote:
>
> > Depends on where you are, it seems, because the U.S. National Bureau of
> > Standards was less pessimistic. At low frequencies, my Lincoln`s
> > Reference has graphs of effects on resistance for one grade of soil for
> > ground rod depth, number of rods in parallel, and separation between
> > pods.
> >
> > At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms,
> > 3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.
> >
> ==========
>
> Rich,
>
> The NBS forgot to measure the most important quantity. Their figures are
> meaningless unless accompanied by resistivity (or conductivity) of the soil.

Yeah, right. Anything you say Reg.

Memo to NIST: examples of resistance as a function of depth for a given
soil type are meaningless unless Reg Edwards is informed of the
resistivity of the soil.

ac6xg

5844. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 20:54:35 UTC
From: Bill Ogden <ogden@us.ibm.com>
Message-ID: <3E77878B.3C7C2360@us.ibm.com>
Source record: 122283

I thank everyone who has contributed to this disucssion.

I must admit that I had not thought about thermal noise contributed by the coax. I assume this would be contributed only by the *real* resistance of the conductor and not related to the impedance of the coax. It was a long time ago, but I seem to recall that the thermal noise due to a few ohms in a bandwidth of, say, 500 Hz, would be way below my receiver level, although, in principle, it would add noise and degrade the S/N ratio delivered to the receiver.

Next time 10m is very quiet, I will try switching between my dummy load and the antenna and perhaps make a decision based on that.

Better coax would help transmitted power, of course, but I am much less concerned about this. (I usually run 100w or 600w output. An difference of 2 or 3 db does not get me excited.) I use a 2 element quad at 60 feet. More elements (one way or another) should help the S/N ratio, but I am not ready to face that yet. I like my quad. I would consider an antenna-mounted preamp, but I also like QSK and the two do not go together AFAIK.

It seems odd that such a basic topic (effects of transmission line on reception) is not discussed, at length, in the Handbook or other places.

Bill
W2WO

JLB wrote:

> Reg,
>
> I doubt that the 'casual reader', however, has dug into the noise figure
> equations as deeply as I have. And I was actually paid to do it. On my
> last job (before being laid off) I had to develop the digital signal
> processing algorithms to calculate noise figure from a few simple
> measurements (DUT gain and noise density) and knowledge of the system
> losses.
>
> What happens, Bill, is that the loss of the coax attenuates both the signal
> and external noise while contributing its own noise. The noise level
> contributed by the coax is determined by the ambient temperature.
>
> A detailed description of what happens is too involved to describe in a news
> group message. There are a number of web sites that do a good job of this
> (over 21,000 web pages in google). One good one is
> http://cp.literature.agilent.com/litweb/pdf/5952-3706E.pdf. Another is
> http://www.satsig.net/noise.htm
>

> Jim
> N8EE

5845. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 21:24:43 UTC
From: richardharrison@webtv.net
Message-ID: <25703-3E778E9B-799@storefull-2314.public.lawson.webtv.net>
Source record: 122284

Bill Ogden wrote:
"I must admit that I had not thought about thermal noise contributed by coax."

Not to worry. I built a transcontinental 2 GHz microwave on a shoestring. Grid dishes for low wind loading and rented tower space.

To save the cost of pressurization and dehydration equipment, I used foam coax. It was unheard of for such a long system, but the calculated dielectric noise accumulation would be acceptable. Repeaters were not much over 20 miles apart to produce huge received signals for propagation reliability and to keep the signal to noise ratio on each hop extremely high. It worked. The calculations were right. The system was very quiet despite all the lengths of foam coax.

The noise contribution of two or three hundred feet of coax is negligible.

Best regards, Richard Harrison, KB5WZI

5846. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 21:49:57 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <874f7vs49csvjre7ej4cv5qa3hofn0qj9l@4ax.com>
Source record: 122285

On Tue, 18 Mar 2003 19:44:08 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

|> Depends on where you are, it seems, because the U.S. National Bureau of
|> Standards was less pessimistic. At low frequencies, my Lincoln`s
|> Reference has graphs of effects on resistance for one grade of soil for
|> ground rod depth, number of rods in parallel, and separation between
|> pods.
|>
|> At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms,
|> 3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.
|>
|==================================
|
|Rich,
|
|The NBS forgot to measure the most important quantity. Their figures are
|meaningless unless accompanied by resistivity (or conductivity) of the soil.
|
|There's also a significant negative temperature coefficient. Big difference
|between Alaska and Florida.

Yep. Table VI in "Getting Down to Earth", published by Biddle
Instruments says:

Effects of Temperature on Earth Resistivity (for sandy loam, 15.2%
moisture)

Temperature Resistivity (ohm-cm)

20 C 7,200
10 C 9,900
0 C (water) 13,800
0 C (ice) 30,000
-5 C 79,000
-15 C 330,000

BTW, I once specified, and my employer paid for, some partial
discharge (corona) measuring equipment from Biddle. (When you stick a
+/- 15KV power supply in a 7" diameter missile, you worry about
insulation resistance)

I also took a short course from them on partial discharge testing.
Their facility looked like something out of a Frankenstein movie. I'm
glad I didn't live next door to them.

5847. Re: RF Imp Br RadCom 7/95?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 21:52:28 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v7f58vqsrr0278@corp.supernews.com>
Source record: 122286

Just got 2 emails with attachments. thanks
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v7ehcbqahuqj2b@corp.supernews.com...
> The July 95 issue of RadCom had a construction article titled "RF
Impedance
> Bridge for 2-30MHz" by Jack Gentle G0RVN. I don't have access to that
issue
> and would like a copy of the article. Any help appreciated.
> tnx
> hank wd5jfr
>
>

5848. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 21:55:11 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <l95f7vk3ml36940e0llnc1uf3qn78aobnf@4ax.com>
Source record: 122287

On Tue, 18 Mar 2003 07:51:49 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

|Reg wrote:
|"The resistance of a single deep ground rod in average soil is in the
|region of 50 to 100 ohms."
|
|Depends on where you are, it seems, because the U.S. National Bureau of
|Standards was less pessimistic. At low frequencies, my Lincoln`s
|Reference has graphs of effects on resistance for one grade of soil for
|ground rod depth, number of rods in parallel, and separation between
|pods.
|
|At a depth of 1ft for a rod, the graph shows 150 ohms. 2ft - 90 ohms,
|3ft - 65 ohms, 4ft - 50 ohms, 5ft - 40 ohms, 8ft - 30 ohms, etc.
|
|Two rods in parallel have about 60% of the resistance of one rod if
|their separation is 5ft. With three rods, the paralleled resistance is
|40%.
|
|A graph shows 5ft separation is almost as good as it gets and only
|slightly lowered resistance is gained by more separation.

True for only two rods. But as the number of rods increases, greater
spacing continues to lower resistance.

5849. SWAP: ATB-34 (Cushcraft) for 6 Mtr Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 22:41:24 UTC
From: Richard Solomon <w1ksz@tiac.net>
Message-ID: <i48f7vg2iu5lf5mpa4b4mn6tqfco57udni@4ax.com>
Source record: 122288

I have a Cushcraft ATB-34 Tri-Bander sitting on the deck.
I'll swap it even for a 6 Meter Beam, 4 - 6 el.
Local deal wanted, I am in Lexington, MA.

73, Dick, W1KSZ

5850. High SWR 40M on R7

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 23:15:53 UTC
From: Andrew J O'Brien <obrienaj@netsync.net>
Message-ID: <v7fa4ujs6kjia7@corp.supernews.com>
Source record: 122289

I recently bought an R7 from a deceased ham. I have checked 10,15,17,20 meters and all I have nice low SWR in the CW portions of each band. 40M and 30M have SWR of 10:1 (as far as my meter will go). I am assuming that the antenna's previous owner set it up as per the manual since the other bands work perfectly and also because another ham recalls that the previous owner mentioned he had "an intermittent on 40 meters". Does anyone on this list have any troubleshooting tips for finding the cause of "an intermittent" on 40 meters on an R7?

Thanks

Andy KB2EOQ

5851. Re: High SWR 40M on R7

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-18 23:44:27 UTC
From: G&R <spam@limbo.hell>
Message-ID: <kbOda.2419$sK6.445850@news20.bellglobal.com>
Source record: 122290

Andy,

If you do a search with GOOGLE you for a web page which describes how to rebuild to R5's and R7's.

Sorry don't remember the address as I have printed out a copy.

Good Luck,

73,

Guenther VE3CVS
"Andrew J O'Brien" <obrienaj@netsync.net> wrote in message news:v7fa4ujs6kjia7@corp.supernews.com...
> I recently bought an R7 from a deceased ham. I have checked 10,15,17,20
> meters and all I have nice low SWR in the CW portions of each band. 40M
> and 30M have SWR of 10:1 (as far as my meter will go). I am assuming that
> the antenna's previous owner set it up as per the manual since the other
> bands work perfectly and also because another ham recalls that the previous
> owner mentioned he had "an intermittent on 40 meters". Does anyone on this
> list have any troubleshooting tips for finding the cause of "an
> intermittent" on 40 meters on an R7?
>
> Thanks
>
> Andy KB2EOQ
>
>

5852. Re: High SWR 40M on R7

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 00:04:52 UTC
From: Bob Miller <bxmiller@texas.netNOSPAM>
Message-ID: <uqcf7v0knvfb1uhgpud8iqrsek333m9c0o@4ax.com>
Source record: 122291

On Tue, 18 Mar 2003 18:15:53 -0500, "Andrew J O'Brien"
<obrienaj@netsync.net> wrote:

>I recently bought an R7 from a deceased ham. I have checked 10,15,17,20
>meters and all I have nice low SWR in the CW portions of each band. 40M
>and 30M have SWR of 10:1 (as far as my meter will go). I am assuming that
>the antenna's previous owner set it up as per the manual since the other
>bands work perfectly and also because another ham recalls that the previous
>owner mentioned he had "an intermittent on 40 meters". Does anyone on this
>list have any troubleshooting tips for finding the cause of "an
>intermittent" on 40 meters on an R7?
>
>Thanks
>
>Andy KB2EOQ
>

Friend of mine had an R7, and said the resonant bandwidth was very
narrow on 40, about 20 or 30 khz, so you might look throughout the
whole band.

I'm not sure the antenna was ever meant for 30 meters. You might want
to check the specs.

Bob
k5qwg

5853. Re: High SWR 40M on R7

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 00:11:11 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <1BOda.544$CT.254@fed1read01>
Source record: 122292

Don't know about the intermittent part as you sed the VSWR was 10:1. But your assumption that the last owner set it up properly -- BIG MISTAKE. A local here did that and found that the insulated collar was installed too high and resulted in high VSWR, you must reassemble the antenna according to manufacturers directions. See Cuscraft on-line manuals.

Also be sure that the mounting mast is NOT above the U-Bolt up into the area of the insulator or black box. Just an inch or two above the U-Bolt, otherwise it upsets the antenna.

A poor connection can also give goofy VSWR (intermittent) results. Check and clean all connections.
Good Luck and Radiating.
--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Andrew J O'Brien" <obrienaj@netsync.net> wrote in message news:v7fa4ujs6kjia7@corp.supernews.com...
> I recently bought an R7 from a deceased ham. I have checked 10,15,17,20
> meters and all I have nice low SWR in the CW portions of each band. 40M
> and 30M have SWR of 10:1 (as far as my meter will go). I am assuming that
> the antenna's previous owner set it up as per the manual since the other
> bands work perfectly and also because another ham recalls that the previous
> owner mentioned he had "an intermittent on 40 meters". Does anyone on this
> list have any troubleshooting tips for finding the cause of "an
> intermittent" on 40 meters on an R7?
>
> Thanks
>
> Andy KB2EOQ
>
>

5854. Looking for multicoupler for RX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 00:18:58 UTC
From: John LeMay <jlemay@njmc.com>
Message-ID: <pan.2003.03.19.00.18.53.833250@njmc.com>
Source record: 122293

Hi all,

I'm looking for something like the Stridsberg multicouplers to
connect two receivers (my R75 and my R5000 to be precise) to the same
dipole antenna. I'd like to go with the amplified model instead of the
passive one, but I'm not sure the amp is 100% necessary.

I'd like to hear from folks that have tried these or other multicouplers
as far as how they perform, are there less expensive ones for consumer use
that may be just as good for casual listening, etc.

Also interested in a used one if someone has one that they aren't using.
Not exactly an item that pops up every day on ebay.

thanks!

--
John LeMay
KC2KTH
Senior Enterprise Consultant
NJMC | http://www.njmc.com | Phone 732-557-4848
Specializing in Microsoft and Unix based solutions

5855. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 01:19:07 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b58gib$5hc$1@slb0.atl.mindspring.net>
Source record: 122294

Give me a flippin break. You obviously dont know what your talking about. The Mosley is far superior in both design and mechanics to that HyGain junque.

I note with interest 'after I blew out the traps'. Then you compair to a dipole? Hmmmmmm.

I sold my TA-33SR Mosley once. The guy said the same thing. But this time it was his vertical was better.

What he didn't tell me was that when it fell off his tower he put it back together WRONG. Element traps on wrong length elements, in wrong position.

I got it back and re-built it properly....after replacing his melted traps.

Worked a lot better that way.

Dan/W4NTI

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:qKSdnVIk1NKt7eqjXTWcqA@comcast.com...
> > If your looking for a straight forward simple and time proven design then
> > consider the TA-33 series by Mosley. Ive had one for 40 years....still
> > hanging in.
> >
> > Dan/W4NTI
>
> I had a TA33JR for almost 20 years, and thought it worked reasonably, until
> I put up a 20 meter dipole, 5 - 10 feet higher. The dipole consistently out
> performed the JR. Got rid of the Mosley after I burned out a trap by putting
> a KW of SSB into it. These things are an ancient design. The Hygain TH3Mk4
> uses a hairpin match, so they don't have to fake the element spacing/length
> to get a decent SWR.
>
> Tam/WB2TT
>
>

5856. Re: Astron RS-35 A or M Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 01:39:15 UTC
From: Ken Coit <parfait@nc.rr.com>
Message-ID: <7TPda.91743$ki.3510055@twister.southeast.rr.com>
Source record: 122296

Got one.

"Ken Coit" <parfait@nc.rr.com> wrote in message
news:zAnda.143540$If5.6151106@twister.southeast.rr.com...
> Ken / ND7N
>
>

5857. Re: ICOM 737 Manual Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 01:39:32 UTC
From: Ken Coit <parfait@nc.rr.com>
Message-ID: <oTPda.91744$ki.3510138@twister.southeast.rr.com>
Source record: 122295

Got one.

"Ken Coit" <parfait@nc.rr.com> wrote in message
news:1Anda.143534$If5.6151112@twister.southeast.rr.com...
> Ken / ND7N
>
>

5858. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 01:47:48 UTC
From: richardharrison@webtv.net
Message-ID: <11733-3E77CC44-298@storefull-2311.public.lawson.webtv.net>
Source record: 122298

Wes Stewart wrote:
"True for only two rods (5ft separation is about as good as it gets). But as the number of rods increases, greater spacing continues to lower resistance."

Electrical distribution using a ground on every pole must produce a very low impedance at 50-60 Hz. Too bad the pole separations can be big distances at h-f.

Distance between serial connections shows why radial connections are good for r-f grounding. But, as skin effect confines current to the surface as frequency rises, there`s less use for ground rods and the radial connection system itself becomes an excellent energy terminal, if you have enough of them.

Best regards, Richard Harrison, KB5WZI

5859. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 02:06:12 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b58jaj$3q2$1@hercules.btinternet.com>
Source record: 122297

> > The NBS forgot to measure the most important quantity. Their figures are
> > meaningless unless accompanied by resistivity (or conductivity) of the
soil.
>
> Yeah, right. Anything you say Reg.
>
> Memo to NIST: examples of resistance as a function of depth for a given
> soil type are meaningless unless Reg Edwards is informed of the
> resistivity of the soil.

==========

Jim, I'm very sorry if I gave the impression I was twisting somebody's arm, using the third degree to oblige responsible institutions to tell the truth, the whole truth, and nothing but the truth.

What worries me about the present state of measurement reliabilty is the frequency at which engineers who report measurement results on these newsgroups qualify them with a statement they were paid by somebody else to provide them. It raises the question of bias - the very last thing which should be associated with engineering measurements.

Then someone reports the measurement contract was abruptly terminated by an employer immediately after a payoff. Was the employer dissatisfied because he disagreed with the figures he had been supplied with. There's unreliability somewhere!

For what reason should changing hands of Yankee Dollars be mentioned in connection with measurements?

I am reminded of the 3 people, whose names I forget, who concluded the magic number of 118.5 is the optimum quantity of radials to form the grounding system beneath all vertical broadcasting antennas. I am informed they too neglected to measure soil conductivity before leaving the site and going home. I wonder who paid their wages? Were they disgruntled after being paid short? In any event the magic number was rounded up to 120 which number became incorporated in the constitution.

Reg, G4FGQ

5860. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 03:05:23 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E77DE73.46B2AA13@uci.edu>
Source record: 122299

Reg Edwards wrote:
> Jim, I'm very sorry if I gave the impression I was twisting somebody's arm,
> using the third degree to oblige responsible institutions to tell the truth,
> the whole truth, and nothing but the truth.

That apollogy seems insincere to me.

> What worries me about the present state of measurement reliabilty is the
> frequency at which engineers who report measurement results on these
> newsgroups qualify them with a statement they were paid by somebody else to
> provide them. It raises the question of bias - the very last thing which
> should be associated with engineering measurements.

Who gets paid to report engineering measurements on newsgroups anyway?

> Then someone reports the measurement contract was abruptly terminated by an
> employer immediately after a payoff. Was the employer dissatisfied because
> he disagreed with the figures he had been supplied with. There's
> unreliability somewhere!

Those bastards!

> For what reason should changing hands of Yankee Dollars be mentioned in
> connection with measurements?

Perhaps they weren't on the Euro?

> I am reminded of the 3 people, whose names I forget, who concluded the magic
> number of 118.5 is the optimum quantity of radials to form the grounding
> system beneath all vertical broadcasting antennas. I am informed they too
> neglected to measure soil conductivity before leaving the site and going
> home. I wonder who paid their wages? Were they disgruntled after being
> paid short? In any event the magic number was rounded up to 120 which
> number became incorporated in the constitution.

What in the name of heaven are you going on about? Get a hold of
yourself, man.

5861. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 06:03:57 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E780833.70F5AA16@att.net>
Source record: 122300

Jim Kelley wrote:

> Reg Edwards wrote:
> > Jim, I'm very sorry if I gave the impression I was twisting somebody's arm,
> > using the third degree to oblige responsible institutions to tell the truth,
> > the whole truth, and nothing but the truth.
>
> That apollogy seems insincere to me.
>
> > What worries me about the present state of measurement reliabilty is the
> > frequency at which engineers who report measurement results on these
> > newsgroups qualify them with a statement they were paid by somebody else to
> > provide them. It raises the question of bias - the very last thing which
> > should be associated with engineering measurements.
>
> Who gets paid to report engineering measurements on newsgroups anyway?
>
> > Then someone reports the measurement contract was abruptly terminated by an
> > employer immediately after a payoff. Was the employer dissatisfied because
> > he disagreed with the figures he had been supplied with. There's
> > unreliability somewhere!
>
> Those bastards!
>
> > For what reason should changing hands of Yankee Dollars be mentioned in
> > connection with measurements?
>
> Perhaps they weren't on the Euro?
>
> > I am reminded of the 3 people, whose names I forget, who concluded the magic
> > number of 118.5 is the optimum quantity of radials to form the grounding
> > system beneath all vertical broadcasting antennas. I am informed they too
> > neglected to measure soil conductivity before leaving the site and going
> > home. I wonder who paid their wages? Were they disgruntled after being
> > paid short? In any event the magic number was rounded up to 120 which
> > number became incorporated in the constitution.
>
> What in the name of heaven are you going on about? Get a hold of
> yourself, man.

Aw, Jim, he thinks that Brown and Epstein also didn't have any clear idea of what
they were doing
way back when they decided that 120 radials was the optimum for a ground mounted
vertical. Evidently this since they didn't measure ground conductivity, he says.
Maybe he thinks they should have specified a 1/2 wave diameter metal disk. That

might take away his complaint.

Fer that matter, Reg doesn't seem to think that anyone on this side of the pond knows what they're
up to. It's a Reg thing, ya know.

5862. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 06:23:02 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E780CAD.2B15C73B@att.net>
Source record: 122301

Floyd Davidson wrote:

> Dick Carroll <dickc58@att.net> wrote:
> >> A direct hit on the antenna, even if it is made out of the #10
> >> wire you have claimed, simply *cannot* conduct that much charge
> >> to ground. The charge will necessarily find other paths.
> > >
> > >
> > >
> > > Really? So please explain how it is that *air* conducts all that charge current.
> > >
> > > Maybe you're convinced that a #10 wire wouldn't provide a better conduction core
> > >that thin air but I'm sure not.
> >
> Well dick, it *could* do the same thing to the #10 wire that it
> does to the air, and yes then it would conduct all of that charge.
>
> Just ionize the copper wire. Could happen too. :-)
>
> But since that requires vaporizing the wire first,

floyd, I hope you know that a #10 wire will handle a *LOT* of current for a short
period of time, without meting or vaporizing. Don't get stuck on the spec charts,
thats an entirely different situation.
If the wire is routed in a relatively straight line lightning will follow it.
If it (or coax) is wrapped around a steel propane tank when the lightning arrives
there it then looks for the low impedance path which is NOT the coiled inductance.
Might it then blow a hole in the tank? Wanta bet it never would?
Be my guest.

> the usual
> thing that happens is the air around it ionizes and the charge
> goes flying off in random directions.

Lightning never does anything at random. It seeks -and finds- the path of lowest
impedance.

> Which is just one of the
> reasons that #10 is not recommended for grounding and #6, which
> has lower inductance, is.
>

I've used a lot of #6 over the years. Most of it handled lightning strikes intact.
But not always.
I *have* seen chunks of strands blown off 4-0 tower grounding cables.

Bottom line is that there is a huge amount of variation in lightning. When a super strike hits
very unusual things can happen. But properly designed radio installations usually suffer a brief power glitch and continue on the air.

5863. 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 12:30:55 UTC
From: Rickie <rickiev@hotmail.com>
Message-ID: <b59nh0$26kdqf$1@ID-89515.news.dfncis.de>
Source record: 122302

I am in need to purchasing a good and strong 2 meter antenna for the windows. I'm not allow to setup anything on the firescape or on the window, so I'll need something that I could remove when not in use.

Any help would be great!

Thanks in advance,
Rickie / KC2KQQ

5864. Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 13:05:39 UTC
From: "owen.home" <owen.home@ntlworld.com>
Message-ID: <1YZda.304$vF.57772@newsfep1-win.server.ntli.net>
Source record: 122303
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Help
I need to find some GR type 774 connectors for a recently found 916-A RF bridge, I don't think I've ever seen any here in the UK. I'd appreciate any help or pointers including dimensions of the connector in case I have to make some, I'm thinking of maybe turning down the thread on an SO239 barrel (i.e. socket to socket) as a short term measure.
I'd also welcome any comments on the 916-A bridge from anyone with experience of using one, the construction looks amazing. What would you think of running it with a modulated noise source generator?
I didn't get the two "unknown" connecting cables (long and short), the manual tells me they have 250ohm resistors in series - do you see any problems with making my own? I guess I should try it and see if I can balance the bridge.
Thanks
John

5865. Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 13:15:12 UTC
From: Gene S <genes@thegateway.net>
Message-ID: <w4_da.6310$Zo.78218@dfw-read.news.verio.net>
Source record: 122304
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

Is there an easy way to do this?

Permanently attach a cell phone, powered by
a 110VAC source, to an outside antenna for
the exclusive purpose of linking one or more
of our existing RJ11 home phones to "replace"
the existing copper wire (POTS) phone service
provider?

To say it another way: All we want to do is use the
Sprint voice cell phone to drive "all" of our existing
home phones, and terminate the existing POTS
service. We do not want to actually put the tiny
cell phone to our ears - it's uncomfortable, we like
the touch & feel of our existing RJ11 phones :-)
We just want to use the cell phone as a link to the
existing phone & two extension phones - which all
connect via RJ11 to the outside copper 2 wire line.

THANKS,
Gene

--
E-mail: genes@thegateway.net

5866. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 13:20:19 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <m8_da.2725$lQ4.649327@news20.bellglobal.com>
Source record: 122305

"Gene S" per Subject line...

Google hits on 'cell phone rj11'

http://www.thehightechstore.com/cellsocket.html

http://www.kidslake.com/cell_phone_link.htm *
(*same thing all over again a second time)

5867. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 13:32:19 UTC
From: Jeroen Belleman <Jeroen.Belleman@cern.ch>
Message-ID: <3E787163.46C2BA4F@cern.ch>
Source record: 122308

"William E. Sabin" wrote:
> [...]
> It is not true that a lossy coax contributes more
> thermal noise, for a given temperature, than a
> lower loss coax,[...]

I don't think so. Any loss mechanism which converts
energy into heat also does the opposite. Lossy coax
does produce thermal noise. A piece of lossy coax
long enough to look like a simple 50 Ohm resistor
generates as much noise as that resistor.

> [...] but it does attenuate the signal,
> therefore decreases the signal-to-noise ratio.

Of course...

I have this noise source, which is basically a
50 Ohm terminator immersed into a bath of liquid
nitrogen. If I add a piece of coax between it and
the amplifier under test, the output noise level
goes *up*.

Jeroen Belleman

5868. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 13:52:22 UTC
From: Gene S <genes@thegateway.net>
Message-ID: <nD_da.6315$Zo.78448@dfw-read.news.verio.net>
Source record: 122306

I could have done that :-)

Hmmmm ... wonder if I could still use the old
Sportster 56k modem to connect to the ISP
over the cell connection - through the existing
RJ11 ?

Gene

--
E-mail: genes@thegateway.net

"J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote in message
news:m8_da.2725$lQ4.649327@news20.bellglobal.com...
> "Gene S" per Subject line...
>
> Google hits on 'cell phone rj11'
>
> http://www.thehightechstore.com/cellsocket.html
>
> http://www.kidslake.com/cell_phone_link.htm *
> (*same thing all over again a second time)
>
>
>

5869. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 13:54:49 UTC
From: Leigh W3NLB <w3nlbREMOVETHIS@amsat.org>
Message-ID: <fcsg7vsb7b0m4s1bkg6bjl0oj6girpeo7a@4ax.com>
Source record: 122307
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Are you sure this isn't an 874? I've never heard of a 774, but there
are things in this world that I've not heard of ;-)

The 874 is a hermaphroditic connector. Any one will mate with any
other. There is no concept of male and female. The barrel is divided
into four segments, two are pushed in, and two pushed out, so if you
rotate the connector 90 degrees, you get a mating orientation. The
center conductor is simiilarly arranged.

You can find these all the time on ebay. They're not expensive. The
connector is rated for operation to 7.4 GHz (hence the name). The
simplest thing is to get adapters to BNC or such.

Search for 874 in Business & Industrial > Test, Measurement Equipment

There's an attenuator on ebay at the moment which includes two
874-to-BNC adapters, two 875-to-PL259 adapters and a 50-ohm terminator
with an 874 connector. The attenuator itself might be of interest.
And it's in the UK. See

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3013904397&category=1502

I'll try to dig up some info on the 916 bridge.

73 de Leigh W3NLB

On Wed, 19 Mar 2003 13:05:39 -0000, "owen.home"
<owen.home@ntlworld.com> wrote:

>Help
>I need to find some GR type 774 connectors for a recently found 916-A RF
>bridge, I don't think I've ever seen any here in the UK. I'd appreciate any
>help or pointers including dimensions of the connector in case I have to
>make some, I'm thinking of maybe turning down the thread on an SO239 barrel
>(i.e. socket to socket) as a short term measure.
>I'd also welcome any comments on the 916-A bridge from anyone with
>experience of using one, the construction looks amazing. What would you
>think of running it with a modulated noise source generator?
>I didn't get the two "unknown" connecting cables (long and short), the
>manual tells me they have 250ohm resistors in series - do you see any
>problems with making my own? I guess I should try it and see if I can
>balance the bridge.
>Thanks
>John
>
>

5870. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 14:03:24 UTC
From: richardharrison@webtv.net
Message-ID: <25590-3E7878AC-6@storefull-2313.public.lawson.webtv.net>
Source record: 122309

Dick Carroll wrote:
"Aw, Jim, he thinks that Brown and Epstein also didn`t have any idea of what they were doing way back when they decided that 120 radials was the optimum for a ground mounted vertical."

Don`t exonerate Mr. Lewis. He was part of the dastardly plot too. G.H. Brown, R.F. Lewis, and J. Epstein reported their findings in "Ground Systems as a Factor in Antenna Efficiency", Proc. IRE, 25:753, June 1937.

BL&E`s sponsor was RCA who wanted to sell senders and receivers. They made nothing from earthing systems but success in radio sales.

Read all about it in Ed Laport`s chapter on "Medium-Frequency Broadcast Antennas" in "Radio Antenna Engineering". Ed also worked at RCA.. As Walter Maxwell reported, Ed was Chief Engineer of RCA`s International Division.

Best regards, Richyard Harrison, KB5WZI

5871. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 14:31:18 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E787F36.1080901@ieee.org>
Source record: 122310

Dick Carroll wrote:
> Fer that matter, Reg doesn't seem to think that anyone on this side of the pond
> knows what they're up to. It's a Reg thing, ya know.

I'll bet Reg is up and at 'em every morning long before you are, Dick. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

5872. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 14:59:14 UTC
From: richardharrison@webtv.net
Message-ID: <10346-3E7885C2-32@storefull-2312.public.lawson.webtv.net>
Source record: 122314

CAM wrote:
"I`ll bet Reg is up and at `em every morning long before you are, Dick.
:-)"
Reg has spent half a day before dawn here. Early birds get worms. As the
fisherman said: "Yeah, I got worms, but I`m going fishing anyway."

Best regards, Richard Harrison, KB5WZI

5873. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 15:01:05 UTC
From: "owen.home" <owen.home@ntlworld.com>
Message-ID: <gE%da.484$vF.77600@newsfep1-win.server.ntli.net>
Source record: 122311
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Leigh
Thanks for the reply, the connector is not the hemaphrodite type and the manual details it as a 774 series, it is from the 1940s so I guess it's an earlier type. The panel connector has a recessed hole about 1/2" diameter with a sunken centre pin, there is a lip raised above the panel around the hole which may mate with an outer sleeve on the cable jack - shouldn't be too hard to fabricate something.
Thanks
John

"Leigh W3NLB" <w3nlbREMOVETHIS@amsat.org> wrote in message news:fcsg7vsb7b0m4s1bkg6bjl0oj6girpeo7a@4ax.com...
> Are you sure this isn't an 874? I've never heard of a 774, but there
> are things in this world that I've not heard of ;-)
>
> The 874 is a hermaphroditic connector. Any one will mate with any
> other. There is no concept of male and female. The barrel is divided
> into four segments, two are pushed in, and two pushed out, so if you
> rotate the connector 90 degrees, you get a mating orientation. The
> center conductor is simiilarly arranged.
>
> You can find these all the time on ebay. They're not expensive. The
> connector is rated for operation to 7.4 GHz (hence the name). The
> simplest thing is to get adapters to BNC or such.
>
> Search for 874 in Business & Industrial > Test, Measurement Equipment
>
> There's an attenuator on ebay at the moment which includes two
> 874-to-BNC adapters, two 875-to-PL259 adapters and a 50-ohm terminator
> with an 874 connector. The attenuator itself might be of interest.
> And it's in the UK. See
>
>
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3013904397&category=1502
>
> I'll try to dig up some info on the 916 bridge.
>
> 73 de Leigh W3NLB
>
> On Wed, 19 Mar 2003 13:05:39 -0000, "owen.home"
> <owen.home@ntlworld.com> wrote:
>
> >Help

> >I need to find some GR type 774 connectors for a recently found 916-A RF
> >bridge, I don't think I've ever seen any here in the UK. I'd appreciate
any
> >help or pointers including dimensions of the connector in case I have to
> >make some, I'm thinking of maybe turning down the thread on an SO239
barrel
> >(i.e. socket to socket) as a short term measure.
> >I'd also welcome any comments on the 916-A bridge from anyone with
> >experience of using one, the construction looks amazing. What would you
> >think of running it with a modulated noise source generator?
> >I didn't get the two "unknown" connecting cables (long and short), the
> >manual tells me they have 250ohm resistors in series - do you see any
> >problems with making my own? I guess I should try it and see if I can
> >balance the bridge.
> >Thanks
> >John
> >
> >
>

5874. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 15:07:20 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E7887A8.3BF6B645@cwis.net>
Source record: 122312

Rickie,
Set a 'J'-pole, on a stand, next to the window,
or use 'burgler alarm tape' on the window as the
antenna.
'Doc

5875. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 15:12:49 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <y8acnUfh4q5tFeWjXTWcoA@comcast.com>
Source record: 122313
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Have you opened up theunit to see how much space there is? If all else
fails, you might consider replacing the connector with an N type, or such.

Tam/WB2TT
"owen.home" <owen.home@ntlworld.com> wrote in message
news:1YZda.304$vF.57772@newsfep1-win.server.ntli.net...
> Help
> I need to find some GR type 774 connectors for a recently found 916-A RF
> bridge, I don't think I've ever seen any here in the UK. I'd appreciate
any
> help or pointers including dimensions of the connector in case I have to
> make some, I'm thinking of maybe turning down the thread on an SO239
barrel
> (i.e. socket to socket) as a short term measure.
> I'd also welcome any comments on the 916-A bridge from anyone with
> experience of using one, the construction looks amazing. What would you
> think of running it with a modulated noise source generator?
> I didn't get the two "unknown" connecting cables (long and short), the
> manual tells me they have 250ohm resistors in series - do you see any
> problems with making my own? I guess I should try it and see if I can
> balance the bridge.
> Thanks
> John
>
>
>

5876. F6KEH Site updated today

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 15:18:20 UTC
From: F5LCY <f5lcy@libertysurf.fr>
Message-ID: <newscache$0850ch$1dm$1@news.tiscali.fr>
Source record: 122315

French, english and spanish language site
Ham ressources links

http://f6keh.free.fr/index_r

5877. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 15:23:12 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <itGcncgk4PjCFuWjXTWcqA@comcast.com>
Source record: 122316

The dipole was better BEFORE I blew the trap. The TA33 series are about a 1955 design. When I put up the Hygain, I worked Armenia, Mongolia, China, Thailand, and Philipines the first afternoon on 15 m SSB. Last year, Ducie Island took about 10 minutes to work.

Tam/WB2TT

5878. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 15:33:03 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <IY%da.53377$Dp.26337@fe01.atl2.webusenet.com>
Source record: 122317

I still don't completely agree.

It depends on your definition of 'external noise'. If the noise temperature of the receiver is less than the ambient temperature then removing the coax from the receiver input only proves that the noise coming out of the coax is more than the receiver noise. It says nothing about the SNR at the antenna. You could have a coax with a high loss, such as using 100 ft of rg174 on 1296 GHz.

In order to do this test properly, you have to disconnect the antenna from the coax at the antenna, and put a dummy load in place of it. The dummy load. of course, will be at ambient temperature. If there is a big difference in receiver output (10 dB is a good number), then changing the coax will make little difference for reception. (This assumes that the ohmic loss of the antenna itself is negligible.)

Remember that the coax is part of the 'system', along with the antenna. I consider the external noise as that being picked up by the antenna.

Jim
N8EE
"Bill, W7TI" <jamspam@upyours.now> wrote in message
news:Xns93424C9C2D671pookster@216.168.3.50...
> "JLB" <IHateSpam@nospam.net> wrote in
> news:2NEda.50397$Dp.44213@fe01.atl2.webusenet.com:
>
> > What happens, Bill, is that the loss of the coax attenuates both the
> > signal and external noise while contributing its own noise.
>
> ----------
>
> Correct, and that's why the original poster can answer his question by
> simply unplugging his coax and seeing if the noise drops significantly.
> If it does, the external noise is the limiting factor. Installing new
> coax would only raise the total noise+signal delivered to the receiver
> and would not improve reception. Strictly speaking, he should connect a
> 50 ohm resistor to the receiver input for greatest accuracy.
>
> Remember, he was only talking about receiving. If he were transmitting,
> I'd advise new coax regardless.
>
> --
> Bill, W7TI

5879. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 15:39:18 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns93434DDF658Epookster@216.168.3.50>
Source record: 122318

"JLB" <IHateSpam@nospam.net> wrote in
news:lY%da.53377$Dp.26337@fe01.atl2.webusenet.com:

> In order to do this test properly, you have to disconnect the antenna
> from the coax at the antenna, and put a dummy load in place of it.
> The dummy load. of course, will be at ambient temperature. If there
> is a big difference in receiver output (10 dB is a good number), then
> changing the coax will make little difference for reception. (This
> assumes that the ohmic loss of the antenna itself is negligible.)
>

That's basically what I said. Remember, he's doing this at 10 meters,
not VHF/UHF. Unless he's using some really old, noisy receiver, the
receiver itself will not be the limiting factor.

--
Bill, W7TI

5880. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 16:06:01 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <0r4h7v43rh529ookjf5s8qqpn8ba0jn7ln@4ax.com>
Source record: 122169

On Wed, 19 Mar 2003 09:07:20 -0600, 'Doc <w5lz@cwis.net> wrote:

>
>
>Rickie,
> Set a 'J'-pole, on a stand, next to the window,
>or use 'burgler alarm tape' on the window as the
>antenna.
> 'Doc

Or, better than burgler alarm tape, is 3M #1181 "Copper Foil
Shielding Tape". It has a conductive adhesive, which makes
connections very easy - just tape it over the stripped ends
of the transmission line and you're done.

-fb-

5881. Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 17:19:08 UTC
From: ke4ruu@iag.net
Message-ID: <1e2b1776.0303190919.73103b18@posting.google.com>
Source record: 122170

I'm looking for the formula to calculate the line of site distance to the horizon. I seem to remember that at 5 ft the horizon is 2.7 miles and at 26 ft the horizon is 9 miles. Alan

5882. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 17:25:28 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <7aoovZGIgKe+EAnK@ifwtech.co.uk>
Source record: 122171

Jeroen Belleman wrote:
>"William E. Sabin" wrote:
>> [...]
>> It is not true that a lossy coax contributes more
>> thermal noise, for a given temperature, than a
>> lower loss coax,[...]
>
>I don't think so. Any loss mechanism which converts
>energy into heat also does the opposite. Lossy coax
>*does* produce thermal noise. A piece of lossy coax
>long enough to look like a simple 50 Ohm resistor
>generates as much noise as that resistor.
>
>> [...] but it does attenuate the signal,
>> therefore decreases the signal-to-noise ratio.
>
>Of course...
>
>I have this noise source, which is basically a
>50 Ohm terminator immersed into a bath of liquid
>nitrogen. If I add a piece of coax between it and
>the amplifier under test, the output noise level
>goes *up*.

That's correct. The effect of a lossy element (coax or attenuator) on signal/noise ratio involves two terms:

1. The attenuation of the signal *and* the input noise accompanying the signal

2. The extra thermal noise generated in the lossy element, which is proportional to its absolute physical temperature.

So if Jeroen pours liquid nitrogen over the added length of coax, to cool it, the second term will make the output noise level go down again... but not all the way back to where it was before the coax is inserted.

There is one special case: if the physical temperature of the attenuator is exactly 290K, which is the reference temperature in the definition of noise figure. In that one special case, the input noise removed by the attenuator is exactly replaced by thermal noise generated inside the attenuator. Then the two separate terms merge together and Bill's viewpoint becomes exactly correct - the noise figure is simply increased by the attenuation placed ahead of the device.

That viewpoint is near-enough true for many lab measurements, because the output attenuator of a signal generator, attenuators and coax leads are all fairly close to 290K (about 62F) in most labs. It's even closer to being true for any measurements on HF receivers, because noise figures are relatively high and the correction terms are very small.

But that approximation won't work for precision measurements, measurements on modern low-noise devices, or measurements where temperatures far from 290K are involved (admittedly uncommon in amateur radio, but quite common in other applications).

For example, the latest Agilent Technologies noise figure analysers make great efforts to get the calculation right under all conditions. The noise source has an internal thermometer that signals its true physical temperature to the analyser. If the temperatures of any other lossy devices ahead of and following the device under test are not 290K, you can tell that to the analyser. The analyser always makes the full and exact calculation.

For more details, see the Agilent Application Note on 'Noise Figure Measurement Accuracy', at:
http://literature.agilent.com/litweb/pdf/5952-3706E.pdf
(if they haven't moved it again)

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

5883. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 17:27:25 UTC
From: G&R <spam@limbo.hell>
Message-ID: <0M1ea.2941$sK6.573090@news20.bellglobal.com>
Source record: 122173

Dan,

I agree that most multi-band antennas perform less than mono band antennas as some compromises must be made.

Again I agree that full size antennas perform better than shrunken units, again size versus performance compromises.

All that we have indicated is that our antenna performs similar to a full size quad of similar multi-band (or mono band design) with a significant size reduce and little loss of performance.

As you are aware 2 element quads and 3 element yagis are about par in performance with quads having advantages of less height sensitivity and lower noise over yagis (yes, yagis do have advantages).

The main disadvantages of most quads is that they are difficult to erect and break easy. In our case I have erected our quad in 45 minutes by myself. Secondly, our quad is built to very heavy duty standards (as I was the tower monkey and would be doing repairs if anything failed on our personal antenna).

For those looking for permanent/portable, heavy duty, high performance, low space requirement antenna's we might be their solution.

If you're at DAYTON this year check us out, and please feel free to look me up at the show.

73,

Guenther VE3CVS
info@degendesigns.com
www.degendesigns.com

"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message news:b55q7sees1@slb0.atl.mindspring.net...
> ANY TRI-BANDER design is less effecient than a full sized system. No matter
> quad or yagi.
>
> As one shortens the elements and the spacing you lower the bandwidth,
> overall gain and fb/fs.
>
> Those things stated ...if you then make it even smaller....you figure it
> out.
>
> You didn't state how much room you have to play with, size problems, etc.

>
> If your looking for a straight forward simple and time proven design then
> consider the TA-33 series by Mosley. Ive had one for 40 years....still
> hanging in.
>
> Dan/W4NTI
>
>
>
> "G&R" <spam@limbo.hell> wrote in message
> news:t8sda.3280$544.290453@news20.bellglobal.com...
> > Hi Doug,
> >
> > If your looking for a beam antenna consider our mini-quad which almost
> > performs the same as a full size quad.
> >
> > The advantages are that it is smaller that a yagi and more durable than
> both
> > most yagis and quads on the market (at least the way we build it!)
> >
> > The best way to describe it is to look at our page www.degendesigns.com
> >
> > By the way we will be at DAYTON (climate allowing).
> >
> > Please feel free to contact me at info@degendesigns.com
> >
> > "Doug Niessen" <dniessen@pacbell.net> wrote in message
> > news:3E738025.40204@pacbell.net...
> > > I am considering the purchase of a 20-15-10 3 or 4 element yagi.
> > > Does anyone have recommendations.
> > >
> > > Thank you,
> > > Doug K6STS
> > >
> >
> >
>
>

5884. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 17:29:59 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e78a594.261372609@news.galilei.com>
Source record: 122172
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

Hi Gene

Within 6 months to a year the market will be flooded with just what you are looking for.

You won't be allowed to affix a separate antenna because cell-phones are FCC type accepted with its fixed antenna. Adding an antenna alters the unit and voids the FCC type acceptance making it an illegal device to own, unless you are licensed by the FCC for that frequency and service. Some removable, glass and gutter mount antennas for use with certain cell phone styles are FCC type accepted for that application only. It is doubtful that externally mounted (outdoor roof antennas) will ever become approved for the user end of cellular service. At UHF frequencies and above the cost of the feedline coaxial cable would be quite cost prohibitive, thus the odds of someone using RG-58 instead of 9913 at UFH frequencies is highly probably and the interferrence it would cause, not to mention the signal loss, would be unbearable to the communications industry at large. The signal strength inside a house on a cellular phone antenna as is would be much greater than a roof mount antenna without the proper feedline for the frequency used by your phone service. Then each antenna would have to be carefully tuned so it matched the phones frequency exactly to keep the SWR low enough to keep from burning out the transmitter portion of your cellphone.

But one of the cellphone industries greatest desires is to take over the landline telephone business and they are currently waiting for approval on many designs of docking devices for cellular phones that can handle the requirements needed to run stationery telephones.

I believe a few of these have already been approved and are on the market already, but without a lot of competition, the cost is still prohibitive. What you buy for a grand today, will be selling for 100 bucks in about a year.

TTUL
Gary

5885. Re: Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 17:39:50 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <4gah7v0jf580529qrf0epu9dm8ksivmlpv@4ax.com>
Source record: 122174

On 19 Mar 2003 09:19:08 -0800, ke4ruu@iag.net (Alan P) wrote:

>I'm looking for the formula to calculate the line of site distance to
>the horizon. I seem to remember that at 5 ft the horizon is 2.7 miles
>and at 26 ft the horizon is 9 miles. Alan

Not to be picky, but do you want the radio horizon or the geometric
horizon? They're not quite the same.

For the geometric horizon, there's a nice page at
http://www.wolfram.demon.co.uk/rp_horizon_distance.html

For the radio horizon,

d=sqrt(3*K*h/2)

d = distance in miles
h = height in feet
K = 1.33

Note that 1.33 is a typical value for K, which in practice can range
from 0.6 to 5.0.

(This confusion brought to you by "Reference Data for Radio
Engineers")

-fb-

5886. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 17:45:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mr7h7vk2h75kf1h3s7f35928kmb1gcvnnu@4ax.com>
Source record: 122175
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Wed, 19 Mar 2003 13:05:39 -0000, "owen.home"
<owen.home@ntlworld.com> wrote:

>I'd also welcome any comments on the 916-A bridge from anyone with
>experience of using one, the construction looks amazing. What would you
>think of running it with a modulated noise source generator?

Hi John,

Modulated noise source? Well, anyway, noise used as a source will
require a VERY large amplifier to work to any degree of precision.
The problem here is that noise sources suffer both from evenness of
output level across frequency for one, and low output level at any one
frequency for another.

These class of bridges will exhibit extremely deep nulls (100dB
easily) that in turn require at least drive levels of 0dBm to allow
you to find the bottom of the balance at 1ï¿½V (using a communications
receiver as the detector). 0dBM doesn't sound like much from a
source, until you spread it across the spectrum instead of offering it
to one frequency.

My noise source is a Photomultiplier tube that is weakly illuminated
by a constant illumination and offers a very wideband and flat
operation out to a hundred MHz, but needs amplification (which then
upsets this even power distribution) to do a low precision measurement
(not very satisfying). Instead, I use an HP 608F VHF Signal Generator
(actually starts at 10MHz) which has a rock solid stable output (very
important that 100dB deep nulls don't drift).

As far as connectors go, the only one that counts is the "unknown"
terminal. The source and detector can easily be converted (easily in
the sense of just go ahead and do it without concern) to any connector
technology you wish. For that matter, the "unknown" connector is (for
my bridge) a simple stud. I converted that to accept a connector (a
flying design where the center pin screws into the stud, and the shell
is supported by a sheet of copper tied off to the nearby ground
connection).

A picture of this is available on request.

73's
Richard Clark, KB7QHC

5887. Re: Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 18:01:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <isbh7v42fmdl7ede5vv9vpuc8cnh0u3m0p@4ax.com>
Source record: 122176

On Wed, 19 Mar 2003 11:39:50 -0600, funkbastler
<funkbastler@eudoramail.com> wrote:

>On 19 Mar 2003 09:19:08 -0800, ke4ruu@iag.net (Alan P) wrote:
>
>>I'm looking for the formula to calculate the line of site distance to
>>the horizon. I seem to remember that at 5 ft the horizon is 2.7 miles
>>and at 26 ft the horizon is 9 miles. Alan
>
>Not to be picky, but do you want the radio horizon or the geometric
>horizon? They're not quite the same.
>
>For the geometric horizon, there's a nice page at
>http://www.wolfram.demon.co.uk/rp_horizon_distance.html
>
>For the radio horizon,
>
>d=sqrt(3*K*h/2)
>
>d = distance in miles
>h = height in feet
>K = 1.33
>
>Note that 1.33 is a typical value for K, which in practice can range
>from 0.6 to 5.0.
>
>(This confusion brought to you by "Reference Data for Radio
>Engineers")
>
>-fb-

Hi OM,

Picky or otherwise, the usual formula of
Horizon in miles = SQRT (2*H)
where H is height in feet
serves quite well.

Any issue of "radio horizon" is usually offset by actual physical
clutter between the antenna and the actual physical horizon. As such,
all of this is just a SWAG for amateurs who don't have 200' towers or
mountain peak locations. It probably works quite well even for those
with 30' towers.

The range of point-to-point is simply twice that if assuming the
second point has an equally high antenna (and similar terrain, clutter

and all).

73's
Richard Clark, KB7QHC

5888. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 18:43:21 UTC
From: Gene S <genes@thegateway.net>
Message-ID: <8U2ea.6362$Zo.78782@dfw-read.news.verio.net>
Source record: 122177
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

Yeah, that is the conclusion that I came to as well.
It's a bit expensive & not for my Samsung 8500.
http://www.thehightechstore.com/cellsocket.html

The ability to have a land line and dock you cell into
the home RJ11 setup is the way to go. It has to be
popular:-)

Gene

--
E-mail: genes@thegateway.net

"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message
news:3e78a594.261372609@news.galilei.com...
> Hi Gene
>
> Within 6 months to a year the market will be flooded with just what
> you are looking for.
>
> You won't be allowed to affix a separate antenna because cell-phones
> are FCC type accepted with its fixed antenna. Adding an antenna
> alters the unit and voids the FCC type acceptance making it an illegal
> device to own, unless you are licensed by the FCC for that frequency
> and service. Some removable, glass and gutter mount antennas for use
> with certain cell phone styles are FCC type accepted for that
> application only. It is doubtful that externally mounted (outdoor
> roof antennas) will ever become approved for the user end of cellular
> service. At UHF frequencies and above the cost of the feedline
> coaxial cable would be quite cost prohibitive, thus the odds of
> someone using RG-58 instead of 9913 at UFH frequencies is highly
> probably and the interferrence it would cause, not to mention the
> signal loss, would be unbearable to the communications industry at
> large. The signal strength inside a house on a cellular phone antenna
> as is would be much greater than a roof mount antenna without the
> proper feedline for the frequency used by your phone service. Then
> each antenna would have to be carefully tuned so it matched the phones
> frequency exactly to keep the SWR low enough to keep from burning out
> the transmitter portion of your cellphone.
>
> But one of the cellphone industries greatest desires is to take over
> the landline telephone business and they are currently waiting for
> approval on many designs of docking devices for cellular phones that
> can handle the requirements needed to run stationery telephones.

>
> I believe a few of these have already been approved and are on the
> market already, but without a lot of competition, the cost is still
> prohibitive. What you buy for a grand today, will be selling for 100
> bucks in about a year.
>
> TTUL
> Gary
>

5889. Re: Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 18:47:36 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <stdh7vkt0s3hr849hdlv3lcm7akubu3fpf@4ax.com>
Source record: 122178

On Wed, 19 Mar 2003 18:01:05 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:
>
>Hi OM,
>
>Picky or otherwise, the usual formula of
> Horizon in miles = SQRT (2*H)
> where H is height in feet
>serves quite well.

Well, 3*1.333/2 = 2, so it's the same equation assuming the
average value for K. Yours is a bit easier to remember though ;-)

73,
-fb-

5890. fritzel

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 18:52:47 UTC
From: Rollo Tomassi <rollotomassi1@hotmail.com>
Message-ID: <3e78bc76$0$6125$fb624cd1@news1.zeelandnet.nl>
Source record: 122180

Hello,

Can someone say about the 1:1 baluns which are suitable for an Fritzel FB13-23-33 ??? Which kind of baluns are the best ? current or voltage ? I think the current one ?

5891. Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 18:54:54 UTC
From: ke4ruu@iag.net
Message-ID: <1e2b1776.0303191054.389c4fe@posting.google.com>
Source record: 122179

Second try, first never made it to the group ...
I'm looking for the formula to calculate the line of site distance to the horizon. I seem to remember at 5 ft altitude the horizon is 2.7 miles and at 26 ft the horizon is 9 miles. Being brain dead I can't figure out the formula.
Can someone help? Alan

5892. Re: Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 19:10:58 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e78c0ad$0$135$edfadb0f@dtext02.news.tele.dk>
Source record: 122181

Hello Alan

> Second try, first never made it to the group ...

Must be a problem on your end, I have your question and
3 replys 2 lines below this.

Regards Max

5893. Re: Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 19:21:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cogh7vo791ug6kmrv5uuihd0tet5p1kdb2@4ax.com>
Source record: 122182

On Wed, 19 Mar 2003 12:47:36 -0600, funkbastler
<funkbastler@eudoramail.com> wrote:

>On Wed, 19 Mar 2003 18:01:05 GMT, Richard Clark <kb7qhc@attbi.com>
>wrote:
>>
>>Hi OM,
>>
>>Picky or otherwise, the usual formula of
>> Horizon in miles = SQRT (2*H)
>> where H is height in feet
>>serves quite well.
>
>Well, 3*1.333/2 = 2, so it's the same equation assuming the
>average value for K. Yours is a bit easier to remember though ;-)
>
>73,
>-fb-

Hi OM,

It was the rule-of-thumb we used in the Navy where the horizon was
literally all around us. That doesn't mean that range couldn't go
beyond this as ducting allowed for tremendous exceptions. One such
case a friend of mine related how, when coming into Long Beach they
contacted harbor control and got some confusing instructions. They
asked about this and harbor control was equally confused about what
the fuss was about. They figured it out when it was determined that
the tin can off the coast of California was actually talking to the
Philippines. Seems unlikely, but I had the experience of receiving TV
stations in Colorado from Calgary and Edmonton during some notable
"skip."

73's
Richard Clark, KB7QHC

5894. Name that antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 19:36:06 UTC
From: konr@hotmail.com
Message-ID: <53e61ff.0303191136.301c3c7c@posting.google.com>
Source record: 122183

I was just given a yagi antenna that was installed on a 10' pole on a building in vertical polarization. I have no experience with yagi antennas, and would like to know if anyone could figure out the frequency of this antenna, and perhaps what it was used for.

Pictures with measurements are at:
http://www.webterrace.net/yagi/yagi1.jpg
http://www.webterrace.net/yagi/yagi2.jpg

Thank You,
Konr Ness
konr@hotmail.com

5895. Re: Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 19:36:42 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <89hh7v8vp4h6r273t7e1ivg7a06613um6h@4ax.com>
Source record: 122184

On Wed, 19 Mar 2003 19:21:40 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>Hi OM,
>
>It was the rule-of-thumb we used in the Navy where the horizon was
>literally all around us. That doesn't mean that range couldn't go
>beyond this as ducting allowed for tremendous exceptions. One such
>case a friend of mine related how, when coming into Long Beach they
>contacted harbor control and got some confusing instructions. They
>asked about this and harbor control was equally confused about what
>the fuss was about. They figured it out when it was determined that
>the tin can off the coast of California was actually talking to the
>Philippines. Seems unlikely, but I had the experience of receiving TV
>stations in Colorado from Calgary and Edmonton during some notable
>"skip."
>
>73's
>Richard Clark, KB7QHC

Yep - I'm in SE Oklahoma, and have logged TV stations in Pennsylvania,
Canada, Cuba, and Mexico City, among other places, along with an FM
broadcast station in San Diego.

73,
-fb- (wa5rrh)

5896. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 19:39:53 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <dI3ea.14222$ja4.967193@bgtnsc05-news.ops.worldnet.att.net>
Source record: 122185
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I have a 0dBm nouse source design up on my website, flat from 100kHz to 1.3GHz. The URL is:
http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html

Pete

Richard Clark <kb7qhc@attbi.com> wrote in message news:mr7h7vk2h75kf1h3s7f35928kmb1gcvnnu@4ax.com...
> On Wed, 19 Mar 2003 13:05:39 -0000, "owen.home"
> <owen.home@ntlworld.com> wrote:
>
> >I'd also welcome any comments on the 916-A bridge from anyone with
> >experience of using one, the construction looks amazing. What would you
> >think of running it with a modulated noise source generator?
>
> Hi John,
>
> Modulated noise source? Well, anyway, noise used as a source will
> require a VERY large amplifier to work to any degree of precision.
> The problem here is that noise sources suffer both from evenness of
> output level across frequency for one, and low output level at any one
> frequency for another.
>
> These class of bridges will exhibit extremely deep nulls (100dB
> easily) that in turn require at least drive levels of 0dBm to allow
> you to find the bottom of the balance at 1 V (using a communications
> receiver as the detector). 0dBM doesn't sound like much from a
> source, until you spread it across the spectrum instead of offering it
> to one frequency.
>
> My noise source is a Photomultiplier tube that is weakly illuminated
> by a constant illumination and offers a very wideband and flat
> operation out to a hundred MHz, but needs amplification (which then
> upsets this even power distribution) to do a low precision measurement
> (not very satisfying). Instead, I use an HP 608F VHF Signal Generator
> (actually starts at 10MHz) which has a rock solid stable output (very
> important that 100dB deep nulls don't drift).
>
> As far as connectors go, the only one that counts is the "unknown"
> terminal. The source and detector can easily be converted (easily in
> the sense of just go ahead and do it without concern) to any connector
> technology you wish. For that matter, the "unknown" connector is (for
> my bridge) a simple stud. I converted that to accept a connector (a

> flying design where the center pin screws into the stud, and the shell
> is supported by a sheet of copper tied off to the nearby ground
> connection).
>
> A picture of this is available on request.
>
> 73's
> Richard Clark, KB7QHC

5897. Telerex 40M335 info

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 20:00:15 UTC
From: w3frg <w3frg@comcast.net>
Message-ID: <MRadnfLBGtbMUeWjXTWcoA@comcast.com>
Source record: 122186

Does anyone have any paper work on this 40M beam they can furnish ?
Thanks Tom

5898. Re: Telerex 40M335 info

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 20:19:21 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <dh4ea.171405$6b3.468789@rwcrnsc51.ops.asp.att.net>
Source record: 122187

"w3frg" <w3frg@comcast.net> wrote in message
news:MRadnfLBGtbMUeWjXTWcoA@comcast.com...
> Does anyone have any paper work on this 40M beam they can furnish ?
> Thanks Tom

I used to own one, still have the driven element assembly info, anything I
can help with?

W4ZCB
>

5899. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:11:23 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b5amdi$p4l$1@slb2.atl.mindspring.net>
Source record: 122188

I checked out your site and basically quit reading when I saw a tuner was
needed. Not having seen the antenna, or to my knowledge worked one on the
air I have no way to comment how it works.

I can only state again that a compromise antenna is a compromise performer,
in my opinion.

Dan/W4NTI

"G&R" <spam@limbo.hell> wrote in message
news:0M1ea.2941$sK6.573090@news20.bellglobal.com...
> Dan,
>
> I agree that most multi-band antennas perform less than mono band antennas
> as some compromises must be made.
>
> Again I agree that full size antennas perform better than shrunken units,
> again size versus performance compromises.
>
> All that we have indicated is that our antenna performs similar to a full
> size quad of similar multi-band (or mono band design) with a significant
> size reduce and little loss of performance.
>
> As you are aware 2 element quads and 3 element yagis are about par in
> performance with quads having advantages of less height sensitivity and
> lower noise over yagis (yes, yagis do have advantages).
>
> The main disadvantages of most quads is that they are difficult to erect
and
> break easy. In our case I have erected our quad in 45 minutes by myself.
> Secondly, our quad is built to very heavy duty standards (as I was the
tower
> monkey and would be doing repairs if anything failed on our personal
> antenna).
>
> For those looking for permanent/portable, heavy duty, high performance,
low
> space requirement antenna's we might be their solution.
>
> If you're at DAYTON this year check us out, and please feel free to look
me
> up at the show.
>
> 73,
>

> Guenther VE3CVS
> info@degendesigns.com
> www.degendesigns.com
>
>
>
>
> "Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
> news:b55q7sees1@slb0.atl.mindspring.net...
> > ANY TRI-BANDER design is less effecient than a full sized system. No
> matter
> > quad or yagi.
> >
> > As one shortens the elements and the spacing you lower the bandwidth,
> > overall gain and fb/fs.
> >
> > Those things stated ...if you then make it even smaller....you figure it
> > out.
> >
> > You didn't state how much room you have to play with, size problems,
etc.
> >
> > If your looking for a straight forward simple and time proven design
then
> > consider the TA-33 series by Mosley. Ive had one for 40 years....still
> > hanging in.
> >
> > Dan/W4NTI
> >
> >
> >
> > "G&R" <spam@limbo.hell> wrote in message
> > news:t8sda.3280$544.290453@news20.bellglobal.com...
> > > Hi Doug,
> > >
> > > If your looking for a beam antenna consider our mini-quad which almost
> > > performs the same as a full size quad.
> > >
> > > The advantages are that it is smaller that a yagi and more durable
than
> > both
> > > most yagis and quads on the market (at least the way we build it!)
> > >
> > > The best way to describe it is to look at our page
www.degendesigns.com
> > >
> > > By the way we will be at DAYTON (climate allowing).
> > >
> > > Please feel free to contact me at info@degendesigns.com
> > >

> > > "Doug Niessen" <dniessen@pacbell.net> wrote in message
> > > news:3E738025.40204@pacbell.net...
> > > > I am considering the purchase of a 20-15-10 3 or 4 element yagi.
> > > > Does anyone have recommendations.
> > > >
> > > > Thank you,
> > > > Doug K6STS
> > > >
> > >
> > >
> >
> >
>
>

5900. Re: Name that antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:15:43 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <AZ4ea.53522$Dp.38275@fe01.atl2.webusenet.com>
Source record: 122189

My calculations, based on the driven element length, put it somewhere around 900 MHz. It will be hard to get any closer than that without doing an SWR sweep on it.

Jim
N8EE

"Konr Ness" <konr@hotmail.com> wrote in message news:53e61ff.0303191136.301c3c7c@posting.google.com...
> I was just given a yagi antenna that was installed on a 10' pole on a
> building in vertical polarization. I have no experience with yagi
> antennas, and would like to know if anyone could figure out the
> frequency of this antenna, and perhaps what it was used for.
>
> Pictures with measurements are at:
> http://www.webterrace.net/yagi/yagi1.jpg
> http://www.webterrace.net/yagi/yagi2.jpg
>
> Thank You,
> Konr Ness
> konr@hotmail.com

5901. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:19:00 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E78DEC4.4094C92F@silverstar.com>
Source record: 122190

Why not obtain some 450 ohm ladder line or 1/2" copper pipe and build a J-Pole? Hang it from ceiling [or climb up into crawl space if you have same] and if building doesn't use sheet metal roofing you'll have equivalent of 5/8-wave antenna which is great for flat to rolling hill lands. W4ABT site has pix with formulas for building J-Poles.

Other alternative would be either copper-tape 1/4-wave or J-Pole stuck to least checkable window or thru-glass 2M or dual 2M/440 antenna [R-S #19-324 @ 39.99] or 5/8-wave magmount [R-S#19-210 @ 39.99] on top of fridge. Local cellphone/DSS dealer here sells precut/tuned @ 146 MHz 1/4-wave magmount antenna for 24.50.

5902. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:22:49 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <e45ea.53525$Dp.12190@fe01.atl2.webusenet.com>
Source record: 122191

"Bill, W7TI" <jamspam@upyours.now> wrote in message
news:Xns93434DDF658Epookster@216.168.3.50...
> That's basically what I said. Remember, he's doing this at 10 meters,
> not VHF/UHF. Unless he's using some really old, noisy receiver, the
> receiver itself will not be the limiting factor.

I hate to be picky, but this is what you said on 3/17:

The traditional method of answering your question is to listen as you
unplug the coax from the receiver. If the background noise level drops
significantly, your reception is limited by the atmospheric s/n ratio
and using lower loss coax would not help. If there is *no* change, then
do go to the lower loss coax, or add a low-noise preamp, or both.

...which is *not* the same as removing the coax from the antenna end.
Granted in most practical cases below 30 MHz the coax won't matter much, but
theoretically it does matter which end you unplug. That is why a lot of
hams use a mast mounted preamp on VHF and UHF, even with 'good' coax.

Jim
N8EE

5903. Easy take down HF Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:23:11 UTC
From: Nige <nomailthanks@ntlworld.com>
Message-ID: <Wc5ea.2971$ug.357@newsfep4-winn.server.ntli.net>
Source record: 122192

I want to buy an HF beam that is going to be used for portable use. It needs to be able to stand up to being put up and taken down several times a week. It will work on 10, 20 and 40 metres and have boom length of about 20 feet. Does anybody have experience of a commercial antenna that will match up to this spec please. The important thing is that it will stand being taken to pieces time and again and the simpler that process is the better. The Cushcraft beams look good but I have no experience of how sturdy they are for this sort of application. Any advice greatly appreciated guys.

5904. Re: Easy take down HF Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:27:48 UTC
From: Nige <nomailthanks@ntlworld.com>
Message-ID: <fh5ea.2972$ug.588@newsfep4-winn.server.ntli.net>
Source record: 122193

"Nige" <nomailthanks@ntlworld.com> wrote in message
news:Wc5ea.2971$ug.357@newsfep4-winn.server.ntli.net...
> I want to buy an HF beam that is going to be used for portable use. It
> needs to be able to stand up to being put up and taken down several times
a
> week. It will work on 10, 20 and 40 metres and have boom length of about
20
> snip

Oops. Embarassing mistake. Should be 10, 15 and 20 metres :)

5905. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:29:33 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <i5oh7vk4a8q0dapke7m3cnuf36occ6jg06@4ax.com>
Source record: 122194
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Wed, 19 Mar 2003 19:39:53 GMT, "Pete KE9OA"
<n.gianakopoulos@worldnet.att.net> wrote:

>I have a 0dBm nouse source design up on my website, flat from 100kHz to
>1.3GHz. The URL is:
>http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html
>
>Pete
>

Hi Pete,

Useful, I am sure, but with only 1mW across 1.3GHz, this works out to
roughly -60dBm for any frequency that is received with a 10kHz BW.
This is being quite generous, but for the purposes of driving a good
bridge, this excitation (albeit well over S9) is just not enough.

73's
Richard Clark, KB7QHC

5906. Re: Easy take down HF Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:39:28 UTC
From: "H. Adam Stevens" <solo@totalaccess.net>
Message-ID: <v7hovmlspg0nf2@corp.supernews.com>
Source record: 122196

that's better, the 40 meter spec was a problem
look at www.steppir.com
73
H.
NQ5H

"Nige" <nomailthanks@ntlworld.com> wrote in message
news:fh5ea.2972$ug.588@newsfep4-winn.server.ntli.net...
>
> "Nige" <nomailthanks@ntlworld.com> wrote in message
> news:Wc5ea.2971$ug.357@newsfep4-winn.server.ntli.net...
> > I want to buy an HF beam that is going to be used for portable use. It
> > needs to be able to stand up to being put up and taken down several
times
> a
> > week. It will work on 10, 20 and 40 metres and have boom length of about
> 20
> > snip
>
> Oops. Embarassing mistake. Should be 10, 15 and 20 metres :)
>
>

5907. Re: Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:39:29 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <ls5ea.8631$cT4.7960@news2.west.cox.net>
Source record: 122195

Try URL:
http://www.vwlowen.demon.co.uk/java/horizon.htm

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Alan P" <ke4ruu@iag.net> wrote in message
news:1e2b1776.0303190919.73103b18@posting.google.com...
> I'm looking for the formula to calculate the line of site distance to
> the horizon. I seem to remember that at 5 ft the horizon is 2.7 miles
> and at 26 ft the horizon is 9 miles. Alan

5908. Re: Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:41:23 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <7u5ea.8633$cT4.8203@news2.west.cox.net>
Source record: 122197

Also try http://users.crosspaths.net/~wallio/ALTvDIST.html

--
Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"Alan P" <ke4ruu@iag.net> wrote in message
news:1e2b1776.0303190919.73103b18@posting.google.com...
> I'm looking for the formula to calculate the line of site distance to
> the horizon. I seem to remember that at 5 ft the horizon is 2.7 miles
> and at 26 ft the horizon is 9 miles. Alan

5909. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 21:50:44 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E78E636.13624978@silverstar.com>
Source record: 122198
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

Earliest Radio Shack portable cell phone came with optional screw-on battery/charger case with DC power cord and external 5 dB gain magmount antenna. I may have to buy/build a PROM reader/writer since the Shack says they can no longer program this model. Problem with newer cellphones is that even with stubby rooftop antenna on van there are spots in my valley with no access to cell sites. I believe the 5 dB antenna would overcome this deficiency.

Hammacher-Schlemmer [www.hammacher.com] sells cordless phone with 1-mile range handset to base using base antenna and handset to handset using digital radio in handsets with long antenna supplied with holster/belt clip. With external antenna on rooftop range base to handset is five miles. 299.95 for complete system [handset has its own charger base and extra set rechargeable batteries], extra handset/charge base is 159.95 and external antenna is 99.95.

5910. Re: Easy take down HF Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 22:10:28 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E78EAD4.7B1C8B49@osite.com.br>
Source record: 122199

Nige wrote:
>
> "Nige" <nomailthanks@ntlworld.com> wrote in message
> news:Wc5ea.2971$ug.357@newsfep4-winn.server.ntli.net...
> > I want to buy an HF beam that is going to be used for portable use. It
> > needs to be able to stand up to being put up and taken down several times
> a
<snip>

> Oops. Embarassing mistake. Should be 10, 15 and 20 metres :)

look at http://groups.yahoo.com/group/hex-beam
http://www.hexbeam.com
--
Paulo E.P. Marcondes
Geï¿½logo - Mestrando USP
pepm@osite.com.br

5911. Re: Name that antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 22:37:33 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E78F0F8.D9555CB7@attbi.com>
Source record: 122200

Also, it looks like a possible for 902.0-928.0 MHz [33 cm band].

But as stated in another response actual VSWR measurements, or network
analyzer measurements are required to tie it down.

Deacon Dave, W1MCE

Konr Ness wrote:
>
> I was just given a yagi antenna that was installed on a 10' pole on a
> building in vertical polarization. I have no experience with yagi
> antennas, and would like to know if anyone could figure out the
> frequency of this antenna, and perhaps what it was used for.
>
> Pictures with measurements are at:
> http://www.webterrace.net/yagi/yagi1.jpg
> http://www.webterrace.net/yagi/yagi2.jpg
>
> Thank You,
> Konr Ness
> konr@hotmail.com

5912. Re: High SWR 40M on R7

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 22:40:36 UTC
From: Rollo Tomassi <rollotomassi1@hotmail.com>
Message-ID: <3e78f1db$0$6125$fb624cd1@news1.zeelandnet.nl>
Source record: 122201

http://www.iol.ie/~bravo/r7_vertical.htm

73,Rollo

"Bob Miller" <bxmiller@texas.netNOSPAM> schreef in bericht
news:uqcf7v0knvfb1uhgpud8iqrsek333m9c0o@4ax.com...
> On Tue, 18 Mar 2003 18:15:53 -0500, "Andrew J O'Brien"
> <obrienaj@netsync.net> wrote:
>
> >I recently bought an R7 from a deceased ham. I have checked 10,15,17,20
> >meters and all I have nice low SWR in the CW portions of each band. 40M
> >and 30M have SWR of 10:1 (as far as my meter will go). I am assuming
that
> >the antenna's previous owner set it up as per the manual since the other
> >bands work perfectly and also because another ham recalls that the
previous
> >owner mentioned he had "an intermittent on 40 meters". Does anyone on
this
> >list have any troubleshooting tips for finding the cause of "an
> >intermittent" on 40 meters on an R7?
> >
> >Thanks
> >
> >Andy KB2EOQ
> >
>
> Friend of mine had an R7, and said the resonant bandwidth was very
> narrow on 40, about 20 or 30 khz, so you might look throughout the
> whole band.
>
> I'm not sure the antenna was ever meant for 30 meters. You might want
> to check the specs.
>
> Bob
> k5qwg
>

5913. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 22:59:11 UTC
From: Allodoxaphobia <nobody@frontier.net>
Message-ID: <slrnb7hthu.fcu.nobody@animas.frontier.net>
Source record: 122202

```
< Cross Posting Trimmed >

On Wed, 19 Mar 2003 14:50:44 -0700, Dean Arthur hath writ:
>
> Hammacher-Schlemmer [www.hammacher.com] sells cordless phone with 1-mile
> range handset to base using base antenna and handset to handset using
> digital radio in handsets with long antenna supplied with holster/belt
> clip. With external antenna on rooftop range base to handset is five
> miles. 299.95 for complete system [handset has its own charger base and
> extra set rechargeable batteries], extra handset/charge base is 159.95
> and external antenna is 99.95.

Some of this `type` of equipment has been found to be operating
in the 144-148 Mcs. range -- and to be totally illegal imports.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK
```

5914. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 23:49:51 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns9343A1098A3EApookster@216.168.3.50>
Source record: 122203

"JLB" <IHateSpam@nospam.net> wrote in news:e45ea.53525$Dp.12190
@fe01.atl2.webusenet.com:

> ...which is *not* the same as removing the coax from the antenna end.
>

Sorry, I missed the part about removing it from the *antenna* end. Why would anyone do that on a ten meter system?

Not wanting to beat a dead horse, but the original question was whether replacing some old, lossy coax would improve reception. I said, and I still say, that if the background noise drops significantly when the coax is removed from the RECEIVER and replaced with a 50 ohm resistor, then the limiting factor is atmospheric noise, and replacing the coax will NOT improve reception.

For the eighty-leventh time, this is on TEN meters, where atmospheric noise is almost always the limiting factor. VHF/UHF/microwave is another question.

--
Bill, W7TI

5915. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-19 23:54:35 UTC
From: Dick
Message-ID: <d20i7vsji0l87tmdrpd6gdql8ldt636gua@4ax.com>
Source record: 122205
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

On Wed, 19 Mar 2003 18:37:56 GMT, Spray On <aerosol@can.exxon.au>
wrote:

>On Wed, 19 Mar 2003 07:15:12 -0600, "Gene S" <genes@thegateway.net> wrote:
>
>>
>>Permanently attach a cell phone, powered by
>>a 110VAC source, to an outside antenna for
>>the exclusive purpose of linking one or more
>>of our existing RJ11 home phones to "replace"
>>the existing copper wire (POTS) phone service
>>provider?
>
> You can do this, but you should not replace your landline telephone service
>with cellular service. There are numerous reasons not to do this. If there is
>a problem with the cellular service you will not be able to contact any one in
>a emergency.

You speak as though pots lines always work.
FWIW, before I dumped my landline, I used my cellphone several times
to report an outage on my landline.

> In a natural disaster or other emergency if you call 911 you will
>not have caller location and ID and the police or fire department may not be
>able to locate where you are at if you are disabled.

Now you are being silly. If I can dial the phone I can probably talk.

> If you have analog cell phone then people with receivers capable of receiving
>those frequencies will be able to easily monitor all your telephone calls.

Wired phones can be tapped. Never assume your conversation is private.
In fact, most buildings have the network interface on the outside of
the building. Just plug a splitter and a phone in and away you go.
Free phone calls.

> Some type of radio frequency interference a week or month from now may
>disable your cellular service.

A drunk driver may take out a cross connect box too.

5916. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 00:06:58 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E790622.BC04A82F@cwis.net>
Source record: 122204

OR, find one sheet of poster paper and
one graphite pencil. Draw antenna on the
poster paper, connect feed line with staple.
Better than a wet string, no puddles, no
re-wetting the string...
'Doc

5917. Re: Name that antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 00:36:21 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303191636.674af00@posting.google.com>
Source record: 122206

konr@hotmail.com (Konr Ness) wrote in message
news:<53e61ff.0303191136.301c3c7c@posting.google.com>...
> I was just given a yagi antenna that was installed on a 10' pole on a
> building in vertical polarization. I have no experience with yagi
> antennas, and would like to know if anyone could figure out the
> frequency of this antenna, and perhaps what it was used for.
>
> Pictures with measurements are at:
> http://www.webterrace.net/yagi/yagi1.jpg
> http://www.webterrace.net/yagi/yagi2.jpg
>
> Thank You,
> Konr Ness
> konr@hotmail.com

Looks be be built for appx 900 mhz. Hard to say what it was used for.
There is a ham band in that area, "902-928 mhz" and other services
nearby. MK

5918. Re: High SWR 40M on R7

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 00:48:07 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <bn3i7vsdtrqcei2618ik7fac56ev2k1e32@4ax.com>
Source record: 122207

On Tue, 18 Mar 2003 18:15:53 -0500, "Andrew J O'Brien" <obrienaj@netsync.net> wrote:

>I recently bought an R7 from a deceased ham. I have checked 10,15,17,20
>meters and all I have nice low SWR in the CW portions of each band. 40M
>and 30M have SWR of 10:1 (as far as my meter will go). I am assuming that
>the antenna's previous owner set it up as per the manual since the other
>bands work perfectly and also because another ham recalls that the previous
>owner mentioned he had "an intermittent on 40 meters". Does anyone on this
>list have any troubleshooting tips for finding the cause of "an
>intermittent" on 40 meters on an R7?

Dear Andy,

I flew an R-7 for quite a while, so might suggest two things.
1) the post that mentioned that 40 m is not very broad band is quite true, but I don't think it
would be so extreme as 10:1 unless there is a problem somewhere.
2) It would be a good idea to open up the black box matching network and make sure that nothing has
been charred.

BTW, my R-7 now hangs hrizontally from the ceiling in the barn - which is exactly where it belongs.

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

5919. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 00:50:19 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303191650.2fbba6e4@posting.google.com>
Source record: 122208

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b56rf5$8pv$1@sparta.btinternet.com>...
> > Here in Houston, I think a single deep ground rod will
> > do a usable job most of the time.
>
> ==========
>
> The resistance of a single deep ground rod in average soil is in the region
> of 50 to 100 ohms.
>
> If you are satisfied with that, all's well and good.

I don't think that number would be good enough to avoid damage to an antenna or wire during a strike. Makes me think our ground is better than "average". But it will vary from season to season. We hardly freeze here, so thats not a strong issue. But the ground does dry out at times in the summer. Right now, we have had plenty of rain and the ground conductivity should be very good. I never have done an accurate test of the conductivity. I once considered it, but it looked to be a pain, and not worth the trouble...:/ To give you an idea though, I can take an average VOM and stretch the leads apart and just sticking the short probes of an inch or so into the ground will usually give me a near full peg meter reading. I have a phone company resistance meter which uses about 45 volts or so. I usually show a dead short between any earthing points unless I'm really far apart. I can stick a probe lead on the metal mast, and then run a probe wire all the way across the yard and measure to any other grounding point, and usually show near or full scale. IE: One lead on my mast, and another lead on a chain link fence 50 ft away that has grounded poles as an example.
>
> Two of them close together doesn't make a lot of difference. Ohms Law
> doesn't apply.

I just like overkill, and more overall copper surface area. MK

5920. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 00:54:17 UTC
From: Bob Miller <bxmiller@texas.netNOSPAM>
Message-ID: <k04i7vgfakv7amf3oq4di445meu7eao103@4ax.com>
Source record: 122209

On Wed, 19 Mar 2003 07:30:55 -0500, "Rickie" <rickiev@hotmail.com>
wrote:

>I am in need to purchasing a good and strong 2 meter antenna for the
>windows. I'm not allow to setup anything on the firescape or on the window,
>so I'll need something that I could remove when not in use.
>
>Any help would be great!
>
>Thanks in advance,
> Rickie / KC2KQQ
>
>

A standard 1/4 wave mobile whip on a magnetic mount, stuck to a pizza
pan or serving platter, sitting on a table by the window, will work
well -- assuming you have decent power and the repeaters are
reasonably local.

You could also search the internet -- look for j-poles made from
300-ohm twinlead. Build one yourself. Also, I think MJF sells one.
Tape or hang the j-pole to your window.

Bob
k5qwg

5921. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 02:31:32 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5b963amr1@hercules.btinternet.com>
Source record: 122210

"Jim Kelley" wrote
> Reg Edwards wrote:
> > Jim, I'm very sorry if I gave the impression I was twisting somebody's
arm,
> > using the third degree to oblige responsible institutions to tell the
truth,
> > the whole truth, and nothing but the truth.
==========
> That apollogy seems insincere to me.
>
==========

You're quite right Jim. Where did I slip up? ;o)

5922. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 03:16:41 UTC
From: richardharrison@webtv.net
Message-ID: <29631-3E793299-125@storefull-2318.public.lawson.webtv.net>
Source record: 122211

Mark Keith wrote:
"I don`t think that number (50 to 100 ohms) would be good enough to avoid damage to an antenna or wire during a lightning strike."

More ground resistance means less, not more, current through an antenna or wire during a lightning strike, if the current changes at all. So, the likelihood of a melted wire or antenna is not increased at all by poor contact between a ground rod and the soil.

More ground contact resistance heats the soil directly around the rod, steaming the worms, and increasing the flashovers from the higher potential that the rod and everything connected to it float at as compared to the surrounding earth and other independent ground connections.

Flashovers shouldn`t hurt good metal antennas and associated cables, supports, etc. The flashover might hurt low-melting-point and flammable surrounding items.

Antenna manufacturers would like to use plastic with plated, glued, or otherwise deposited conductors. Uniform fabrication is easier with plastic than with old-fashioned construction. However, every one of these plastic constructions that my company acquiesced to try, exploded with probably the first direct strike, and usually within weeks. We always went back to our solid stanless steel models. These old construction antennas took direct hits with negligible damage. After a number of attempts to help advance science by trying novel antennas, we learned just to say no. We were bearing the cost of putting these plastic monstrosities up and replacing them with our old models. Free antennas? Big deal!

Best regards, Richard Harrison, KB5WZI

5923. Re: Cell phone antenna - HELP :-)

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 04:28:57 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <b5bg32$54n$1@news.orst.edu>
Source record: 122212

Hi Gene,

"Gene S" <genes@thegateway.net> wrote in message
news:adlda.5601$Zo.76597@dfw-read.news.verio.net...
> We live out in the country, in a valley.

Doesn't sound sad yet...

> There is a 200 foot cliff next to the house.

Oh!

> We can't get a signal on our Samsung SCH-8500 cell phone
> at 824-896MHz CDMA (I think)"inside" the metal roof house.

That's the same one I use (with Spring). I thought CDMA was up at 1.8GHz,
though, and the old analog FM and TDM digital stuff was down at 900MHz?

> QUESTIONS:
>
> 1. What kind of an outside antenna should I get?

Well, since you get a good signal with the 'not much better than a dipole'
antenna on your cell phone at the top of the cliff, pretty much anything
with enough gain to overcome the loss in, e.g., coax -- if you take that
approach -- will work.

> 2. Can I put an antenna on the "metal" roof & get good
> reception because the antenna has a good Ground plane"?

Certainly.

> 3. Is it practical to run a coax cable up the 200' cliff to something
> like a Yagi antenna, or ?

Relatively practical, although not exactly cheap. Times Microwave LMR-400
is commonly available and losses 3.9dB/100' at 900MHz... for a list price of
$.64/ft and slightly less than that at many stores on-line.

> 4. Is there an inexpensive alternative to the expensive coax cable?

I like the 'passive repeater' idea that people are suggesting in other
responses; I haven't tried it myself. (My problem was that outside the
house the signal ranged from mediocre to excellent, inside it was
non-existant to highly marginal. Now it's always excellent inside when then
phone is plugged into the coax leading to the outside antenna.)

> 5. What are the dimensions to build a Yagi antenna for 824-896MHz CDMA ?

That I couldn't help you with off hand.

> 6. BTW - anyone know if that "little" connector on top of the
> Samsung SCH-8500 cell phone neat to the antenna is an RF
> connector. (It is NOT the earplug, as it's on the side.)

Yes, that's exactly what is it!

The coax approach is pretty surefire is not exactly cheap, whereas the passive repeated idea would be a lot of fun to try and takes more time than money. Let us know what you end up doing!

---Joel Kolstad

5924. Measuring antenna bandwidth with a spectrum analyzer and tracking generator

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 04:37:53 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <b5bgjp$5bb$1@news.orst.edu>
Source record: 122213

If I want to measure the bandwidth of an antenna, and have at my disposal a spectrum analyzer with a tracking generator, what's a good way to proceed? I've thought of:

1) Connect tracking generator's output to antenna, connect some small loop around the antenna and plug it into the analyzer. Since we're very much in the near field, hopefully the small loop is being coupled to inductively and therefore performs as a wideband sensor.

2) Assuming I also have a wide bandwidth directional coupler around, connect the tracking generator to the input port, the antenna to the output port, and the analyzer to the 'isolated' port which will tell give me the reflection power off the mismatched antenna. But... where do you get a wide bandwidth directional coupler at, e.g., 900MHz?

Other options I haven't considered???

The analyzer I have goes up to 1GHz, and it would actually be nice to say something about antennas meant for 2.4GHz WLAN usage, but I'm pretty much out of luck there, right?

Thanks,
---Joel

5925. Re: Measuring antenna bandwidth with a spectrum analyzer and tracking generator

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 04:49:09 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e7949bf_3@news1.prserv.net>
Source record: 122214

First, you are going to have to define bandwidth. Forward gain? SWR? F/B ratio? To what degradation from best performance? All of these are semi-independent variables, and none are easy to measure with any provable accuracy with your two instruments.

--
Crazy George
Remove NO and SPAM from return address
"Joel Kolstad" <JKolstad71HatesSpam@Yahoo.Com> wrote in message news:b5bgjp$5bb$1@news.orst.edu...
> If I want to measure the bandwidth of an antenna, and have at my disposal a
> spectrum analyzer with a tracking generator, what's a good way to proceed?
> I've thought of:
>
> 1) Connect tracking generator's output to antenna, connect some small loop
> around the antenna and plug it into the analyzer. Since we're very much in
> the near field, hopefully the small loop is being coupled to inductively and
> therefore performs as a wideband sensor.
>
> 2) Assuming I also have a wide bandwidth directional coupler around, connect
> the tracking generator to the input port, the antenna to the output port,
> and the analyzer to the 'isolated' port which will tell give me the
> reflection power off the mismatched antenna. But... where do you get a wide
> bandwidth directional coupler at, e.g., 900MHz?
>
> Other options I haven't considered???
>
> The analyzer I have goes up to 1GHz, and it would actually be nice to say
> something about antennas meant for 2.4GHz WLAN usage, but I'm pretty much
> out of luck there, right?
>
> Thanks,
> ---Joel
>
>

5926. Re: Help - General Radio type 774 connectors for 916-A RF bridge

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 05:31:30 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <Smcea.15053$ja4.1019229@bgtnsc05-news.ops.worldnet.att.net>
Source record: 122215
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I think I know what you mean; I had been using it with a Spectrum Analyzer,
to characterize filters. It sounds like it would need extra amplification
in order to meet the needs of a bridge.

Pete

Richard Clark <kb7qhc@attbi.com> wrote in message
news:i5oh7vk4a8q0dapke7m3cnuf36occ6jg06@4ax.com...
> On Wed, 19 Mar 2003 19:39:53 GMT, "Pete KE9OA"
> <n.gianakopoulos@worldnet.att.net> wrote:
>
> >I have a 0dBm nouse source design up on my website, flat from 100kHz to
> >1.3GHz. The URL is:
> >http://home.att.net/~n.gianakopoulos/wsb/html/view.cgi-home.html-.html
> >
> >Pete
> >
>
> Hi Pete,
>
> Useful, I am sure, but with only 1mW across 1.3GHz, this works out to
> roughly -60dBm for any frequency that is received with a 10kHz BW.
> This is being quite generous, but for the purposes of driving a good
> bridge, this excitation (albeit well over S9) is just not enough.
>
> 73's
> Richard Clark, KB7QHC

5927. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 05:42:30 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E7954A8.5AEA864E@att.net>
Source record: 122216

Richard Harrison wrote:

> Read all about it in Ed Laport`s chapter on "Medium-Frequency Broadcast
> Antennas" in "Radio Antenna Engineering".

I've been watching for years for that book with no success. Looks like
they're being held by those fortunate enough to have found one. Still
looking.

Dick

> Ed also worked at RCA.. As
> Walter Maxwell reported, Ed was Chief Engineer of RCA`s International
> Division.
>
> Best regards, Richyard Harrison, KB5WZI

5928. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 05:44:06 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E795508.73CAD2A4@att.net>
Source record: 122217

OC_CAM's Razor wrote:

> Dick Carroll wrote:
> > Fer that matter, Reg doesn't seem to think that anyone on this side of the pond
> > knows what they're up to. It's a Reg thing, ya know.
>
> I'll bet Reg is up and at 'em every morning long before you are, Dick. :-)

Cecil, I bet you're right!

5929. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 05:51:18 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E7956B7.76E87394@att.net>
Source record: 122218

Richard Harrison wrote:

> Antenna manufacturers would like to use plastic with plated, glued, or
> otherwise deposited conductors. Uniform fabrication is easier with
> plastic than with old-fashioned construction. However, every one of
> these plastic constructions that my company acquiesced to try, exploded
> with probably the first direct strike, and usually within weeks. We
> always went back to our solid stanless steel models. These old
> construction antennas took direct hits with negligible damage. After a
> number of attempts to help advance science by trying novel antennas, we
> learned just to say no. We were bearing the cost of putting these
> plastic monstrosities up and replacing them with our old models. Free
> antennas? Big deal!

There have been a lot of ham radio repeater operators who've learned the
same lesson.
Fiberglass and plastic resins don't survive lightning. The debris field
present the next morning
tells the story.

Dick

5930. WILSON TETRA TOWER SPECS and drawings needed

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 08:18:07 UTC
From: "Peter M. Ackermann" <w4sfd@ispwest.com>
Message-ID: <26ui7v49dfteec5l1ob5vh7chj9udnvmqp@4ax.com>
Source record: 122119

Looking for Wilson Tetra Tower Drawing and Specs Needed.

Please send DIRECT E-mail

w4sfd@ispwest.com

5931. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 08:36:04 UTC
From: "Peter M. Ackermann" <w4sfd@ispwest.com>
Message-ID: <5cui7vs0qb8jgm97v66h9mhjsm1i2cb6ec@4ax.com>
Source record: 122120

How about a truckers vice grip mount with a WD4BUM Colinear "HamStick"

www.hamstick.com

On Wed, 19 Mar 2003 07:30:55 -0500, "Rickie" <rickiev@hotmail.com>
wrote:

>I am in need to purchasing a good and strong 2 meter antenna for the
>windows. I'm not allow to setup anything on the firescape or on the window,
>so I'll need something that I could remove when not in use.
>
>Any help would be great!
>
>Thanks in advance,
> Rickie / KC2KQQ
>
>

5932. HELP NEEDED ANTENNA MATCHING & SWITCHING NETWORK

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 12:16:15 UTC
From: James Hilins <jhilins@wi.rr.com.REMOVE>
Message-ID: <jiiea.29213$qL4.595166@twister.rdc-kc.rr.com>
Source record: 122121

Hi,
I hope to use the expertise of this group to assist me with some antenna design/work.

Last fall I built a flag pole vertical it is appx 34 feet high, and made of two 20' aluminum flag pole kits from Sams Club. I used appx 5000' of wire to form the radial ground system, and I feed it through a AH4 automatic antenna tuner located at the base of the antenna. (I can provide photos upon request) This easily loads the antenna on all bands 160-6 meters

The antenna has a natural resonance on 40M but needs the tuner for all other bands. The AH4 is only rated for 100W.

HELP NEEDED
I want to replace the AH4 with a matching network capable of handling full legal limit. Currently My plan is to construct a loading coil and tapping it for 160, 80, and 40. 30M and up will need some additional capacitance at the antenna begins to look more and more inductive as you climb in frequency.

What I need help with are design ideas for building a relay network capable of selecting 10 different feedpoints or taps, and perhaps some construction ideas on the loading coil and fixed capacitor choice.

I was going to consider a vacuum variable cap, but after seeing the price I have, reconsidered this and am probably going to look at using a cap from a antenna tuner and just setting it and locking it in place.

Please email me directly with your ideas or suggestions

KA4UPW@wi.rr.com

5933. Re: Want to buy tri-bander

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 12:23:49 UTC
From: G&R <spam@limbo.hell>
Message-ID: <mpiea.4790$sK6.695911@news20.bellglobal.com>
Source record: 122122

Sorry to hear that Dan,

Maybe next time.

Guenther VE3CVS
info@degendesigns.com
"An open mind is better than a closed mind."
"Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
news:b5amdi$p4l$1@slb2.atl.mindspring.net...
> I checked out your site and basically quit reading when I saw a tuner was
> needed. Not having seen the antenna, or to my knowledge worked one on the
> air I have no way to comment how it works.
>
> I can only state again that a compromise antenna is a compromise
performer,
> in my opinion.
>
> Dan/W4NTI
>
> "G&R" <spam@limbo.hell> wrote in message
> news:0M1ea.2941$sK6.573090@news20.bellglobal.com...
> > Dan,
> >
> > I agree that most multi-band antennas perform less than mono band
antennas
> > as some compromises must be made.
> >
> > Again I agree that full size antennas perform better than shrunken
units,
> > again size versus performance compromises.
> >
> > All that we have indicated is that our antenna performs similar to a
full
> > size quad of similar multi-band (or mono band design) with a
significant
> > size reduce and little loss of performance.
> >
> > As you are aware 2 element quads and 3 element yagis are about par in
> > performance with quads having advantages of less height sensitivity and
> > lower noise over yagis (yes, yagis do have advantages).
> >
> > The main disadvantages of most quads is that they are difficult to erect
> and
> > break easy. In our case I have erected our quad in 45 minutes by
myself.

> > Secondly, our quad is built to very heavy duty standards (as I was the
> tower
> > monkey and would be doing repairs if anything failed on our personal
> > antenna).
> >
> > For those looking for permanent/portable, heavy duty, high performance,
> low
> > space requirement antenna's we might be their solution.
> >
> > If you're at DAYTON this year check us out, and please feel free to look
> me
> > up at the show.
> >
> > 73,
> >
> > Guenther VE3CVS
> > info@degendesigns.com
> > www.degendesigns.com
> >
> >
> >
> >
> > "Dan/W4NTI" <w4nti@NOSPAMmindspring.com> wrote in message
> > news:b55q7sees1@slb0.atl.mindspring.net...
> > > ANY TRI-BANDER design is less effecient than a full sized system. No
> > matter
> > > quad or yagi.
> > >
> > > As one shortens the elements and the spacing you lower the bandwidth,
> > > overall gain and fb/fs.
> > >
> > > Those things stated ...if you then make it even smaller....you figure
it
> > > out.
> > >
> > > You didn't state how much room you have to play with, size problems,
> etc.
> > >
> > > If your looking for a straight forward simple and time proven design
> then
> > > consider the TA-33 series by Mosley. Ive had one for 40
years....still
> > > hanging in.
> > >
> > > Dan/W4NTI
> > >
> > >
> > >
> > > "G&R" <spam@limbo.hell> wrote in message
> > > news:t8sda.3280$544.290453@news20.bellglobal.com...

> > > > Hi Doug,
> > > >
> > > > If your looking for a beam antenna consider our mini-quad which
almost
> > > > performs the same as a full size quad.
> > > >
> > > > The advantages are that it is smaller that a yagi and more durable
> than
> > > both
> > > > most yagis and quads on the market (at least the way we build it!)
> > > >
> > > > The best way to describe it is to look at our page
> www.degendesigns.com
> > > >
> > > > By the way we will be at DAYTON (climate allowing).
> > > >
> > > > Please feel free to contact me at info@degendesigns.com
> > > >
> > > > "Doug Niessen" <dniessen@pacbell.net> wrote in message
> > > > news:3E738025.40204@pacbell.net...
> > > > > I am considering the purchase of a 20-15-10 3 or 4 element yagi.
> > > > > Does anyone have recommendations.
> > > > >
> > > > > Thank you,
> > > > > Doug K6STS
> > > > >
> > > >
> > > >
> > > >
> > >
> > >
> > >
> > >
> >
> >
>
>

5934. Re: Measuring antenna bandwidth with a spectrum analyzer and tracking generator

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 13:10:49 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <ZYiea.55917$Dp.44774@fe01.atl2.webusenet.com>
Source record: 122123

I would pick #2, but fully agree with 'Crazy George'.

Your method 2 would give you the SWR bandwidth, after some mathematical handwaving.

900 MHz directional couplers are quite common. You should have no trouble finding them. Have you tried a web search? Before testing your antenna you should sweep the directional coupler with a 50 ohm load on the unused port. You will have to do two such sweeps, one on the thru path and one on the reverse coupled port path. This data would then be used to correct the antenna measurements before calculating the SWR.

You do not want to put a loop around the antenna. To measure gain bandwidth you could put a dipole several wavelengths away and hook it to the analyzer input. First do a sweep using two dipoles to get a reference level, then connect your antenna to one of the ports (TG or analyzer), shouldn't matter which, and do another sweep. Keep in mind that measuring the gain bandwidth will include the effects of SWR bandwidth.

Obviously, if your analyzer only goes up to 1 GHz you can't test a 2 GHz antenna.

Jim
N8EE

"Joel Kolstad" <JKolstad71HatesSpam@Yahoo.Com> wrote in message
news:b5bgjp$5bb$1@news.orst.edu...
> If I want to measure the bandwidth of an antenna, and have at my disposal
a
> spectrum analyzer with a tracking generator, what's a good way to proceed?
> I've thought of:
>
> 1) Connect tracking generator's output to antenna, connect some small loop
> around the antenna and plug it into the analyzer. Since we're very much
in
> the near field, hopefully the small loop is being coupled to inductively
and
> therefore performs as a wideband sensor.
>
> 2) Assuming I also have a wide bandwidth directional coupler around,
connect
> the tracking generator to the input port, the antenna to the output port,
> and the analyzer to the 'isolated' port which will tell give me the
> reflection power off the mismatched antenna. But... where do you get a
wide

> bandwidth directional coupler at, e.g., 900MHz?
>
> Other options I haven't considered???
>
> The analyzer I have goes up to 1GHz, and it would actually be nice to say
> something about antennas meant for 2.4GHz WLAN usage, but I'm pretty much
> out of luck there, right?
>
> Thanks,
> ---Joel
>
>

5935. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 13:49:40 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <tfhj7vc62kkru5rr5opb8p8mbhrdgd7r9t@4ax.com>
Source record: 122124

On Wed, 19 Mar 2003 18:06:58 -0600, 'Doc <w5lz@cwis.net> wrote:

>
>
> OR, find one sheet of poster paper and
>one graphite pencil. Draw antenna on the
>poster paper, connect feed line with staple.
>Better than a wet string, no puddles, no
>re-wetting the string...
> 'Doc

ok - i'll use the copper tape, you draw a picture,
and let's see (1) who's on the air first, and
(2) which antenna works better.

-fb-

5936. Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 14:41:08 UTC
From: bruceandkarla@ziggycom.net
Message-ID: <7192d525.0303200641.7274c97b@posting.google.com>
Source record: 122125

Iam getting ready to build a multiband antenna the design is a simple dipole
but i was wondering if i would be able to hang the other dipoles from it example

```
-------------> <-------------
-----------> <----------
--------> <--------
```

all the feed points will be tied together on a bolt sorry i can not illistrate what iam talking about better, Iam going to have a 2ft spacing between each antenna will this work or will i need more spacing. the bands are 40,20,10

Thanks

5937. Counterpoise ground for end-fed HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 14:45:13 UTC
From: bob31439 <bob31439@ix.netcom.com>
Message-ID: <3E79D3F9.85DC7A3@ix.netcom.com>
Source record: 122126

There has been much written here about counterpoise ground installation, but after reading many post, reference books, etc., I'm still not clear on the correct way to install the system.

I have installed an inverted L, end fed antenna, with a single wire feed length of 31'-6" connected to an MFJ-941 Versa Tuner II. The horizontal wire length is 56' long. My radio room is on the ground floor, with a ground rod placed just outside of a window. The transceiver ground lug is connected to a copper buss bar inside the radio room, and the buss bar is connected to the ground rod. My question is.

1. Should I connect 1/4 wave insulated or uninsulated counterpoise ground radial(s) directly to the tuner ground lug and not make a connection to the ground rod or any other equipment ground, OR should I run a ground wire from the tuner ground lug to the ground rod, and THEN connect the counterpoise ground radials to the ground rod. If the latter is the solution, is the 1/4 wave length for the radials measured from the ground rod or from the tuner ground lug?

I hope this is perfectly clear...

****

Bob Gaudio
WD8AWS
http://pw2.netcom.com/~bob31439/

"Living at risk is jumping off the cliff
and building your wings on the way down" (Ray Bradbury)

5938. Re: Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 15:28:22 UTC
From: ke4ruu@iag.net
Message-ID: <1e2b1776.0303200728.341795f1@posting.google.com>
Source record: 122127

Thanks all. By line of sight I meant the geometric horizon.
However, I can put all this information to use!
All the websites have been bookmarked too.
Alan

ke4ruu@iag.net (Alan P) wrote in message
news:<1e2b1776.0303190919.73103b18@posting.google.com>...
> I'm looking for the formula to calculate the line of site distance to
> the horizon. I seem to remember that at 5 ft the horizon is 2.7 miles
> and at 26 ft the horizon is 9 miles. Alan

5939. Re: Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 15:31:00 UTC
From: ke4ruu@iag.net
Message-ID: <1e2b1776.0303200731.77779b35@posting.google.com>
Source record: 122128

Yep! It's a problem on my end. I have to use Google from the office
and I guess it takes a few hours for the postings to be updated
through the website. My home cable modum beats teh pants of the
partial Tq we have in the office!

"Max" <Max_Jens@post9.tele.dk> wrote in message
news:<3e78c0ad$0$135$edfadb0f@dtext02.news.tele.dk>...
> Hello Alan
>
> > Second try, first never made it to the group ...
>
> Must be a problem on your end, I have your question and
> 3 replys 2 lines below this.
>
> Regards Max

5940. Re: High SWR 40M on R7

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 15:53:24 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E79E3D8.3D7450AA@shaw.ca>
Source record: 122129

"Robert Lay (W9DMK)" wrote:

>
> BTW, my R-7 now hangs hrizontally from the ceiling in the barn - which is exactly where it belongs.
>
>
Do you find the change in polarization beneficial? :-)

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

5941. Re: Distance to Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 16:01:01 UTC
From: richardharrison@webtv.net
Message-ID: <10346-3E79E5BD-181@storefull-2312.public.lawson.webtv.net>
Source record: 122130

Alan, KE4RUU wrote:
"By line of sight I meant the geometric horizon."

Atmospherics affect the radio horizon. Terman, in "Electronic and Radio Engineering" covers this on page 818 of his 1955 edition.

In the usual case, the earth appears to have a radius 4/3 actual. In this case, Terman gives the formula on page 820 for the so-called line-of-sight. Radio horizon distance in miles equals: sq rt of 2h, where h is in feet.

Best regards, Richard Harrison, KB5WZI

5942. Re: ultra wide band antenna invention

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 16:52:37 UTC
From: Massi <msignorini@calearotlc.com>
Message-ID: <b5csdbdjk1@grillo.cs.interbusiness.it>
Source record: 122134

"Casey Homeo" <caseyhomeo@hotmail.com> ha scritto nel messaggio
news:8una7vontspqmj5proo0kqbdq2arnqhp4j@4ax.com...
> This looks like a cool new invention.
>
> www.hedgehogantenna.com
>

The impedence has a correct matching but to define an antenna we must know
its gain.
This ultra wide band antenna for me can be a calibration load at 50 ohm.
With regards,
Massimo and Michele.

5943. Re: Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 17:05:22 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e79f4bb$0$120$edfadb0f@dtext02.news.tele.dk>
Source record: 122131

Hello Bruce

> -------------> <-------------
> -----------> <----------
> --------> <--------
>
> all the feed points will be tied together on a bolt sorry i can not
> illistrate what iam talking about better, Iam going to have a 2ft
> spacing between each antenna will this work or will i need more
> spacing. the bands are 40,20,10

It would work, and you do not need space between them.

Regards Max

5944. Re: Counterpoise ground for end-fed HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 17:24:06 UTC
From: Bill Grimwood <bill@grimwood.net>
Message-ID: <v7ju9g6om8i857@corp.supernews.com>
Source record: 122132

My rig is on the second floor but otherwise a similar setup. I ran my wire from my ground to the counterpoise post and then ran a wire from the ground lug on the tuner to my ground bus that has the rest of my equipment grounds going to it. Like you I was a bit confused about what to do. I had a long wire that would not tune up with a regular mfj tuner but after purchasing the one with the artifical ground it tunes up and everything seems to work fine.

Contact me if I can be of any further help.

Bill

K1WEG

"bob31439" <bob31439@ix.netcom.com> wrote in message
news:3E79D3F9.85DC7A3@ix.netcom.com...
> There has been much written here about counterpoise ground installation,
> but after reading many post, reference books, etc., I'm still not clear
> on the correct way to install the system.
>
> I have installed an inverted L, end fed antenna, with a single wire feed
> length of 31'-6" connected to an MFJ-941 Versa Tuner II. The
> horizontal wire length is 56' long. My radio room is on the ground
> floor, with a ground rod placed just outside of a window. The
> transceiver ground lug is connected to a copper buss bar inside the
> radio room, and the buss bar is connected to the ground rod. My
> question is.
>
> 1. Should I connect 1/4 wave insulated or uninsulated counterpoise
> ground radial(s) directly to the tuner ground lug and not make a
> connection to the ground rod or any other equipment ground, OR should I
> run a ground wire from the tuner ground lug to the ground rod, and THEN
> connect the counterpoise ground radials to the ground rod. If the
> latter is the solution, is the 1/4 wave length for the radials measured
> from the ground rod or from the tuner ground lug?
>
> I hope this is perfectly clear...
>
> **********
>
> Bob Gaudio
> WD8AWS
> http://pw2.netcom.com/~bob31439/
> ----------
> "Living at risk is jumping off the cliff

> and building your wings on the way down" (Ray Bradbury)
> -----------------------------------
>
>

5945. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 17:25:51 UTC
From: ovni90902@aol.com
Message-ID: <20030320122551.04696.00000299@mb-fk.aol.com>
Source record: 122133

>Most people do not use analog cellular service any longer. As for
>location there are new standards being put into place that will
>triangulate your location within 300 meters. And there's no guarantee
>that your regular phone won't ever go out either. You have to look at
>the limitations and decide what is right for you. I have been without
>regular land line service for almost a year and haven't had any
>problems at all.
>
>- -
And there is another advantage...
technically, it is illegal to "telemarket" to a cellphone.

5946. Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 18:08:37 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <7f0k7v84itj7geck419qrannv4d5ekb1mp@4ax.com>
Source record: 122135
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

I do plan on doing the experiment myself, but before I get lost in the lab, I thought I'd put this out for comment.

Suppose there is a distant transmitter and antenna putting out a CW signal at 1 MHz.. Suppose further that I have a coil of wire to which I have attached a phasemeter or oscilloscope with a reference antenna some distance from the coil (i.e. not in the field of the coil) connected as the reference phase. It matters little to me what the absolute phase difference is at this point.

Let me now put the coil broadside to the incoming wave to maximize the amount of signal. We will call the left end of the coil "ground" and the right end of the coil "hot". We now get a reference phase reading and can, if we wish, adjust the zeroing mechanism to put the waves in phase on the meter.

Now without moving the coil, I swap the "ground" and "hot" wires going to the meter. What happened to the phase? No change? 180ï¿½ change? Mentally I can argue for both results and I don't really know what to expect.

Comments?

Jim

5947. Re: Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 18:40:54 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b5d1vhddf1@slb0.atl.mindspring.net>
Source record: 122136

Simply tie them all together at the center insulator. Put up a 80/75, which will also work on 10 meters(may need a tuner depending on radio.) Hang a element for 40m, will also work 15 (again may need a tuner). This gives you 4 bands with but two elements. If ya gotta have twenty, stick one of those on it too.

Try to seperate the wires as much as possible to avoid too much interaction.

Dan/W4NTI

"Bruce" <bruceandkarla@ziggycom.net> wrote in message
news:7192d525.0303200641.7274c97b@posting.google.com...
> Iam getting ready to build a multiband antenna the design is a simple
> dipole
> but i was wondering if i would be able to hang the other dipoles from
> it example
>
> -------------> <-------------
> -----------> <----------
> --------> <--------
>
> all the feed points will be tied together on a bolt sorry i can not
> illistrate what iam talking about better, Iam going to have a 2ft
> spacing between each antenna will this work or will i need more
> spacing. the bands are 40,20,10
>
> Thanks

5948. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 18:48:08 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <1s2k7vchmsl5t5acmsogdtqh5b4l2bi89f@4ax.com>
Source record: 122137
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

On Thu, 20 Mar 2003 10:08:37 -0800, Jim Weir <jim@rst-engr.com> wrote:

>Now without moving the coil, I swap the "ground" and "hot" wires going to the
>meter. What happened to the phase?

Hi Jim,

Your loop orientation may make it difficult for the practical side of
this (cross polarization is a possibility). However, as to your
question of phase - in relation to what? To an ambiguous wave? To
itself at a former time? To a reference loop?

If you think in terms of the left hand rule, then yes you have
inverted the physics of the coil, but without a reference, this is not
a phase issue. You may have changed phase by the text-book, but all
practical evidence to prove it is missing.

73's
Richard Clark, KB7QHC

5949. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:13:08 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <mh4k7v0ddvdnmmemfpmqc9q48oodvrsast@4ax.com>
Source record: 122138
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Richard...

Thanks for your reply. If you have access to the original message, you will note that I stated that there was a reference antenna out of the field of the coil that did not change as I swapped ends. The phase relationship was not absolute...that is, I didn't care what the absolute phase of the coil was relative to the reference antenna, only what happened to the phase as I swapped ends.

Jim

Richard Clark <kb7qhc@attbi.com>
shared these priceless pearls of wisdom:

->On Thu, 20 Mar 2003 10:08:37 -0800, Jim Weir <jim@rst-engr.com> wrote:
->
->>Now without moving the coil, I swap the "ground" and "hot" wires going to the
->>meter. What happened to the phase?
->
->Hi Jim,
->
->Your loop orientation may make it difficult for the practical side of
->this (cross polarization is a possibility). However, as to your
->question of phase - in relation to what? To an ambiguous wave? To
->itself at a former time? To a reference loop?
->
->If you think in terms of the left hand rule, then yes you have
->inverted the physics of the coil, but without a reference, this is not
->a phase issue. You may have changed phase by the text-book, but all
->practical evidence to prove it is missing.
->
->73's
->Richard Clark, KB7QHC

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

5950. Re: Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:29:41 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E7A16A5.8157179@cwis.net>
Source record: 122139

Bruce,
If I understand you corretly, yes, it will work
fine after you tune it.
'Doc

5951. Re: What's better for a handie: 1/2 or 5/8 wave?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:30:24 UTC
From: Pict <rogerspam@spammaitland9.freeserve.co.uk>
Message-ID: <b5d4uq$a6g$1@newsg2.svr.pol.co.uk>
Source record: 122141

snip snip

did some test on this some year ago. Used a 1/2 by Sandpiper, a Superod 2 (can work as 1/4 or 5/8) a home brew 1/4 & for a laugh a riubber duck. Set was an Alinco DJF1E.

We did the test over about 12 miles,mostly countryside but the other station was in the middle of a medium size town (Blackpool in NW England).

Results:
1 Sandpiper 1/2
2 Superod 2 as 5/8
3 homebrew 1/4
4 Superod 2 as 1/4
5 rubber duck.

The only 'problem' I've had with the Sandpiper was last summer at Glasgow airport when a security person decided it was a bit cosh like & had to go in hold luggage!

Mobile, I prefer a 5/8 - I've tried 1/2, 1/4 & 7/8.

cheers

GM0TUB
"> On Sun, 16 Mar 2003 16:17:56 +0000, Carl Van Camp wrote:
>
> > Subject says it all...thanks for any input.
>

5952. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:31:03 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E7A16F7.D6EE45EA@cwis.net>
Source record: 122140
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Jim,
I don't think you will see any change.
'Doc

5953. FS:GR 916-A RF Bridge

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:32:25 UTC
From: Jeff Hutchinson <jeff@hutchinson.org>
Message-ID: <dHoea.15438$o8.237965@twister.tampabay.rr.com>
Source record: 122142

Rarely-available 916-A RF Bridge. See eBay:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2517447294&ssPageName=ADM
E:B:LC:US:1

5954. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:33:23 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <7Ioea.152099$L1.20934@sccrnsc02>
Source record: 122143
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Jim;
1 are you talking about a coil or a loop?

2 what are the dimensions in terms of wavelengths?

Malcolm

"Jim Weir" <jim@rst-engr.com> wrote in message
news:mh4k7v0ddvdnmmemfpmqc9q48oodvrsast@4ax.com...
> Richard...
>
> Thanks for your reply. If you have access to the original message, you
will
> note that I stated that there was a reference antenna out of the field of
the
> coil that did not change as I swapped ends. The phase relationship was
not
> absolute...that is, I didn't care what the absolute phase of the coil was
> relative to the reference antenna, only what happened to the phase as I
swapped
> ends.
>
> Jim
>
>
> Richard Clark <kb7qhc@attbi.com>
> shared these priceless pearls of wisdom:
>
> ->On Thu, 20 Mar 2003 10:08:37 -0800, Jim Weir <jim@rst-engr.com> wrote:
> ->
> ->>Now without moving the coil, I swap the "ground" and "hot" wires going
to the
> ->>meter. What happened to the phase?
> ->
> ->Hi Jim,
> ->
> ->Your loop orientation may make it difficult for the practical side of
> ->this (cross polarization is a possibility). However, as to your
> ->question of phase - in relation to what? To an ambiguous wave? To
> ->itself at a former time? To a reference loop?
> ->
> ->If you think in terms of the left hand rule, then yes you have
> ->inverted the physics of the coil, but without a reference, this is not
> ->a phase issue. You may have changed phase by the text-book, but all

> ->practical evidence to prove it is missing.
> ->
> ->73's
> ->Richard Clark, KB7QHC
>
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

5955. Re: Counterpoise ground for end-fed HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:38:35 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E7A18BB.C7CFB159@cwis.net>
Source record: 122144

Bob,
I'd choose the second method and measure from
the ground rod. A radial that's too long works
'better' than a radial that's too short.
'Doc

5956. Re: Horizon

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:38:38 UTC
From: Bibby <bibby@attbi.com>
Message-ID: <2Noea.150238$eG2.18979@sccrnsc03>
Source record: 122145

The distance to the horizon = sqrt(h(2R+h)) where all dimensions have the same units. h is the height above the ground and R is the radius of the earth. For practical purposes d=sqrt(2hR).

Malcolm

"Alan P" <ke4ruu@iag.net> wrote in message news:1e2b1776.0303191054.389c4fe@posting.google.com...
> Second try, first never made it to the group ...
> I'm looking for the formula to calculate the line of site distance to
> the horizon. I seem to remember at 5 ft altitude the horizon is 2.7
> miles and at 26 ft the horizon is 9 miles. Being brain dead I can't
> figure out the formula.
> Can someone help? Alan

5957. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:47:48 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <7Noea.56044$Dp.4910@fe01.atl2.webusenet.com>
Source record: 122147
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Could you explain why he won't see any change? I think he should see a 180
degree phase with respect to reference and the original configuration.

Jim
N8EE

"'Doc" <w5lz@cwis.net> wrote in message news:3E7A16F7.D6EE45EA@cwis.net...
>
>
> Jim,
> I don't think you will see any change.
> 'Doc

5958. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 19:52:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3o6k7vs3tuqvetp7u5kvmmk8fcqfta1gom@4ax.com>
Source record: 122148
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

On Thu, 20 Mar 2003 11:13:08 -0800, Jim Weir <jim@rst-engr.com> wrote:

>Richard...
>
>Thanks for your reply. If you have access to the original message, you will
>note that I stated that there was a reference antenna out of the field of the
>coil that did not change as I swapped ends. The phase relationship was not
>absolute...that is, I didn't care what the absolute phase of the coil was
>relative to the reference antenna, only what happened to the phase as I swapped
>ends.
>
>Jim
>

Hi Jim,

Sorry about snipping that out.

180ï¿½ in phase
with all remaining variables held constant;
OR
180ï¿½ inversion
with all remaining variables held constant;
OR
both.

73's
Richard Clark, KB7QHC

5959. RF Propagation Prediction Software???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 20:06:33 UTC
From: Ted Nugent <eclip01@hotmail.com>
Message-ID: <01c2ef1c$9f27bea0$82878685@clip>
Source record: 122149

Thanks in advance for taking the time to read
and possibly respond to this question. I was
wondering if anyone knew of a shareware program
that is EASY TO USE and runs under Windows
for making predictions of coverage of VHF
signals. I have heard of a program (I thought
it was called mimmic, or something that sounds
like that) that does this. What I am looking to
do is plug in variables such as frequency, ant height,
gain etc. and have the program predict the coverage
area for a repeater system. It would be really
helpful if it used or interfaced to a mapping program
to do "actual" predictions based on longitude and
latitude. I have found a program that does this,
but I don't exactly want to spend $1000+ for it.
Everyone tells me there is shareware that will fit
my need, but can't give me any names or websites.
So....I am tapping the vast knowledge base here, and
hoping someone can help me out.

5960. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 20:20:12 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303201220.3b6c6750@posting.google.com>
Source record: 122150

richardharrison@webtv.net (Richard Harrison) wrote in message news:<29631-3E793299-125@storefull-2318.public.lawson.webtv.net>...
> Mark Keith wrote:
> "I don`t think that number (50 to 100 ohms) would be good enough to
> avoid damage to an antenna or wire during a lightning strike."

I was wondering about the required impedance. I did a search on that, and reading one of Gary Coffmans old posts, he says 25 ohms is required by NEC for a lightning ground. But he also said that is really not good enough either. Just a bare minimum.
>
> More ground resistance means less, not more, current through an antenna
> or wire during a lightning strike, if the current changes at all. So,
> the likelihood of a melted wire or antenna is not increased at all by
> poor contact between a ground rod and the soil.

Yep, I think I was confusing the effects of path resistance "wire or antenna structure" with the ground "earth" resistance itself. MK

5961. Re: Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 20:25:33 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303201225.61bbc897@posting.google.com>
Source record: 122151

bruceandkarla@ziggycom.net (Bruce) wrote in message
news:<7192d525.0303200641.7274c97b@posting.google.com>...
> Iam getting ready to build a multiband antenna the design is a simple
> dipole
> but i was wondering if i would be able to hang the other dipoles from
> it example
>
> -------------> <-------------
> -----------> <----------
> --------> <--------
>
> all the feed points will be tied together on a bolt sorry i can not
> illistrate what iam talking about better, Iam going to have a 2ft
> spacing between each antenna will this work or will i need more
> spacing. the bands are 40,20,10
>
> Thanks

There will much less coupling between elements if you spread them
apart. Close coupling can still work, but it's much pickier to get
tuned up. I presently have
80-40-20 dipoles fed with one coax feed. But my antenna legs are
spread apart quite a bit. When tuning one of these things, always
start with the lowest band first, and go up band by band. MK

5962. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 20:30:07 UTC
From: ben_nospam_bradley@mindspring.com
Message-ID: <3e7a20a0.16898067@65.82.44.187>
Source record: 122152
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

In
sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna,
Jim Weir <jim@rst-engr.com> wrote:

>I do plan on doing the experiment myself, but before I get lost in the lab, I
>thought I'd put this out for comment.
>
>Suppose there is a distant transmitter and antenna putting out a CW signal at 1
>MHz.. Suppose further that I have a coil of wire to which I have attached a
>phasemeter or oscilloscope with a reference antenna some distance from the coil
>(i.e. not in the field of the coil) connected as the reference phase. It
>matters little to me what the absolute phase difference is at this point.
>
>Let me now put the coil broadside to the incoming wave to maximize the amount of
>signal. We will call the left end of the coil "ground" and the right end of the
>coil "hot". We now get a reference phase reading and can, if we wish, adjust
>the zeroing mechanism to put the waves in phase on the meter.
>
>Now without moving the coil, I swap the "ground" and "hot" wires going to the
>meter. What happened to the phase? No change? 180° change? Mentally I can
>argue for both results and I don't really know what to expect.

This is technically a polarity inversion. For a constant sine wave
signal, it will look identical to a phase shift of 180 degrees, but
there IS a technical difference.
The difference between polarity and phase becomes apparent when
using different waveshapes such as sawtooth or rectangular
(non-square). To show this you really need an oscilloscope (as you
originally mentioned) rather than a phase meter.

>Comments?
>
>Jim

---
http://mindspring.com/~benbradley

5963. Re: Counterpoise ground for end-fed HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 20:33:53 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87k7et6amm.fld@barrow.com>
Source record: 122153

bob31439 <bob31439@ix.netcom.com> wrote:
>There has been much written here about counterpoise ground installation,
>but after reading many post, reference books, etc., I'm still not clear
>on the correct way to install the system.
>
>I have installed an inverted L, end fed antenna, with a single wire feed
>length of 31'-6" connected to an MFJ-941 Versa Tuner II. The
>horizontal wire length is 56' long. My radio room is on the ground
>floor, with a ground rod placed just outside of a window. The
>transceiver ground lug is connected to a copper buss bar inside the
>radio room, and the buss bar is connected to the ground rod. My
>question is.
>
>1. Should I connect 1/4 wave insulated or uninsulated counterpoise
>ground radial(s) directly to the tuner ground lug and not make a
>connection to the ground rod or any other equipment ground, OR should I

Insulated or not won't make any difference. Connect them to the
ground rod. Actually, put a ring of wire, say 1 foot in
diameter, around the ground rod, and connect them all to that.
Have perhaps 4 points on the ring connecting to the rod.

>run a ground wire from the tuner ground lug to the ground rod, and THEN

Connect the tuner ground lug to the same copper bus bar that the
rest of your equipment is connected to, AND/OR run a connection
directly to the ground rod. Use whichever of the two is shorter
and has less inductance (fewer bends in the connection). Use
the largest, lowest inductance connection you can. For example,
the ideal connection would be 1" copper strap. #6 or larger
copper wire is another possible conductor. Multiple separate
runs of copper wire, such as #12, would also be good.

The intent is to have the least inductive connection you can get
between the tuner and the ground rod, and also between the
transmitter and the ground rod (not to mention between the
counterpoise and the ground rod too, but that is easier to do).

>connect the counterpoise ground radials to the ground rod. If the
>latter is the solution, is the 1/4 wave length for the radials measured
>from the ground rod or from the tuner ground lug?

The length is from the common point where they all meet, but be
aware that it is very non-critical. A few feet short, or long,
just doesn't make any difference. If the easy way to install any
given radial would be to have it 5 feet longer... make it 5

feet longer. The same is true if it would be 5 feet short.

Also note that you could use more ground rods too, spacing them apart by a few feet, the more the better. The effectiveness of ground rods depends on the conductivity of the soil you put them into. If the ground is totally dry sand, there is little point is using any ground rods, because 50 of them won't get you a thing! If you are on a wet salt water marsh, maybe one rod will do very well. In between the extremes, the optimum is somewhere between 2 and 49 rods, perhaps... :-)

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5964. Re: Easy take down HF Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 20:37:09 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303201237.7497c2e4@posting.google.com>
Source record: 122154

"Nige" <nomailthanks@ntlworld.com> wrote in message
news:<Wc5ea.2971$ug.357@newsfep4-winn.server.ntli.net>...
> I want to buy an HF beam that is going to be used for portable use. It
> needs to be able to stand up to being put up and taken down several times a
> week. It will work on 10, 20 and 40 metres and have boom length of about 20
> feet. Does anybody have experience of a commercial antenna that will match
> up to this spec please. The important thing is that it will stand being
> taken to pieces time and again and the simpler that process is the better.
> The Cushcraft beams look good but I have no experience of how sturdy they
> are for this sort of application. Any advice greatly appreciated guys.

I think about any brand would work. Many like the lightweight force
beams for portable use from what I hear. I've been using a cushcraft
A4S for this type of thing. I haven't had any trouble with it so far.
If it has a weak link, it's probably the glass center insulator, but
mine has not broken yet. I am careful not to overly stress it. The
last FD, we used two separate beams. My A4S, and also another
cushcraft A3S on a different tower. Both seemed to do fine. Of course
the A4 is a bit bigger. "18 ft boom" and a 32 ft reflector for 20/15
m. Not a whole lot though. The main difference between the two is the
added reflector for 10m with the A4. That way you have a more optimum
element spacing for that band with the A4S. But overall, I don't think
there was a real drastic difference between them. The A4S has "near"
full size 3 el performance on the 3 bands. The A3 will probably be
about a db or so back...MK

5965. Re: Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 21:34:55 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E7A33FF.3060305@ieee.org>
Source record: 122146

Dan/W4NTI wrote:
> Simply tie them all together at the center insulator. Put up a 80/75, which
> will also work on 10 meters(may need a tuner depending on radio.).

Good point. A half-wavelength on 10m is about 17 feet. A half-wavelength
on 75m is about 120 feet. Therefore, you can cut a 75m dipole to
resonance on 10m while maintaining resonance within the 75m band.

EZNEC sez that a 120 ft dipole at 40 ft will be resonant on 3.93 MHz
and 28.53 MHz. Since you are probably feeding it with coax, there
should be enough loss in the coax on 10m to drop the SWR to an
acceptable value.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

5966. Re: Counterpoise ground for end-fed HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 21:36:45 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3E7A346D.7040709@oda.com.au>
Source record: 122155

bob31439 wrote:
> There has been much written here about counterpoise ground installation,
> but after reading many post, reference books, etc., I'm still not clear
> on the correct way to install the system.
>
> I have installed an inverted L, end fed antenna, with a single wire feed
> length of 31'-6" connected to an MFJ-941 Versa Tuner II. The
> horizontal wire length is 56' long. My radio room is on the ground
> floor, with a ground rod placed just outside of a window. The
> transceiver ground lug is connected to a copper buss bar inside the
> radio room, and the buss bar is connected to the ground rod. My
> question is.
>

There is merit in choosing a wire length that is not close to an odd or even number of quarter waves on any frequency of interest. (That is not to criticise the length you are using, the length you have is a good starting point.)

In avoiding odd quarter waves, you are raising the feedpoint equivalent series resistance, and in so doing relaxing the demands on the earth system for reasonable efficiency.

In so doing, you don't need as good a ground system as warranted for a loaded vertical for instance.

As to whether a single ground rod of unspecified type of unspecified length in unspecified earth s sufficient, I wouldn't hazard a guess.

I do have an antenna for the low HF bands at a holiday place. It is a 26m sloping wire from near ground to about 15m high. It is fed with an automatic end wire tuner and the ground side of the tuner connects to a 12mm copper clad earth rod driven 2.4m into heavy damp clay and measures around 10 ohms (depending on recent rainfall) at power frequencies. Experience indicates that it works well, and on 7MHz compares favourably with a similarly mounted centre fed sloping dipole.

Owen

PS: avoiding even quarter waves keeps impedance down, and therefore keeps the voltage on tuner components lower.

5967. Re: Looking for multicoupler for RX

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 21:52:53 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e7a381d$0$145$edfadb0f@dtext02.news.tele.dk>
Source record: 122156

Hello John

> I'm looking for something like the Stridsberg multicouplers to
> connect two receivers (my R75 and my R5000 to be precise) to the same
> dipole antenna. I'd like to go with the amplified model instead of the
> passive one, but I'm not sure the amp is 100% necessary.

You might consider to build your own system, there is a good system here

http://www.webex.net/~skywaves/ANTENNA/antsys.htm

Regards Max

5968. Re: Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 22:59:40 UTC
From: kg4ggx@aol.com
Message-ID: <20030320175940.17392.00000117@mb-me.aol.com>
Source record: 122157

Hi
Yes it will work just fine. No need to space them apart 2 feet. I have one up thats 75 thru 10, and have made 2 others for friends. They are all 80 thru 10 with four dipoles to one feed point. I made spacers that space them 6 inches apart. Spacing isn't critical The reactance will make tuning a little tricky. A tip, make all of the diploes longer than needed. It is easier to trim some off than to add some on. Also I have found just as Mark said, trim the lowest band (longest diploe) first, then go to the next lowest band. But be sure all of the dipoles are attached when you begin tuning. I have also found that the higher band dipoles had to be longer than normal to tune out the reactance from the longer wire above them. Once tuned they work great.
Good luck 73 Rob K4MAU

5969. Re: Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 23:15:35 UTC
From: dplatt@radagast.org
Message-ID: <v7kisn7bejij0b@corp.supernews.com>
Source record: 122158

> A
>tip, make all of the diploes longer than needed. It is easier to trim some off
>than to add some on.

Related tip - don't trim. Instead, bend the wire where you want it to
end, fold the excess back along the wire coming from the feedpoint,
and tape the excess tightly to the main wire. This has the same
electrical effect as trimming off the end, to a very close
approximation... the folded-back-and-taped end of the wire
"disappears" electrically.

If you ended up folding back too much, and raised the antenna's
resonant frequency farther than you had planned, just un-tape,
un-bend, and re-bend/tape the wire. It's a lot more convenient than
having to strip the end and solder on a few inches.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

5970. Re: Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 23:20:28 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E7A4C9E.C42296A3@shaw.ca>
Source record: 122159

Bruce wrote:
>
> Iam getting ready to build a multiband antenna the design is a simple
> dipole
> but i was wondering if i would be able to hang the other dipoles from
> it example
>
> -------------> <-------------
> -----------> <----------
> --------> <--------
>
> all the feed points will be tied together on a bolt sorry i can not
> illistrate what iam talking about better, Iam going to have a 2ft
> spacing between each antenna will this work or will i need more
> spacing. the bands are 40,20,10
>
> Thanks

You don't tell us what the transmission line will be -- coax or
twin lead. If you use twinlead and a tuner you only need the
40 meter elements. If you have room, make them as long as possible
and you will probably get reasonable performance on all bands (somewhat
down on 80 and 160). If you use coax, then you will need separate
elements.

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

5971. WTB-MIDLAND RIGS

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 23:26:25 UTC
From: n2ion@aol.com
Message-ID: <20030320182625.17523.00000405@mb-mq.aol.com>
Source record: 122160

I'M LOOKING TO BUY A FEW MIDLAND RADIOS
MODEL# 70-565B, OR 70-530A,
THE RADIOS MUST BE CAPABLE OF GOING DOWN TO THE 430 MHz PORTION OF THE BAND.
MUST HAVE MICROPHONE AND MOUNTING BRACKETS.

IF YOU HAVE ANY OF THESE RIGS, EMAIL ME WITH THE CORRESPONDING DETAILS.

THANKS IN ADVANCE

5972. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 23:52:32 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <ctkk7vsfi8v5p591c4qp6gsl0hb37dbcqj@4ax.com>
Source record: 122161

On 20 Mar 2003 12:20:12 -0800, nm5k@wt.net (Mark Keith) wrote:

>richardharrison@webtv.net (Richard Harrison) wrote in message
news:<29631-3E793299-125@storefull-2318.public.lawson.webtv.net>...
>> Mark Keith wrote:
>> "I don`t think that number (50 to 100 ohms) would be good enough to
>> avoid damage to an antenna or wire during a lightning strike."
>
>I was wondering about the required impedance. I did a search on that,
>and reading one of Gary Coffmans old posts, he says 25 ohms is
>required by NEC for a lightning ground. But he also said that is
>really not good enough either. Just a bare minimum.
>>
>> More ground resistance means less, not more, current through an antenna
>> or wire during a lightning strike, if the current changes at all. So,
>> the likelihood of a melted wire or antenna is not increased at all by
>> poor contact between a ground rod and the soil.
>
>Yep, I think I was confusing the effects of path resistance "wire or
>antenna structure" with the ground "earth" resistance itself. MK

One or two ground rods are not adequate for a good lightning ground.
One problem is that the ground becomes saturated around a rod and the
ground will accept no more current in the short time of the strike.
The voltage goes up.
A general rule is to space ground rods by about the sum of the length
of two rods.

Too high a ground resistance will cause arcing in the ground and turn
the sand into glass. The next strike will then see even a higher
resistance with the glass insulation.

Lightning is a constant current source. With higher resistance in the
path of the strike the voltage is going to rise high enough to develop
the strike current. You can not reduce the current developed by
providing a higher resistance path to ground.

As the voltage is allowed to rise there is much more chance for flash
over to other (unwanted) paths. Also as the voltage is allowed to rise
high, because of poor ground or poor ground connection, there will be
much higher voltages seen at unwanted places like equipment. A
fraction of an ohm of resistance in a ground lead connection can mean
thousands of volts developed across it during a strike. That is why it
is recommended that ground connections be welded to maintain good low
resistance connections.

73
Gary K4FMX

5973. Re: RF Propagation Prediction Software???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 23:54:53 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Mosea.56145$Dp.40060@fe01.atl2.webusenet.com>
Source record: 122162

Check out RadioMobile at the link below.

Jim
N8EE

http://www.cplus.org/rmw/english1.html

"Ted Nugent" <eclip01@hotmail.com> wrote in message
news:01c2ef1c$9f27bea0$82878685@clip...
> Thanks in advance for taking the time to read
> and possibly respond to this question. I was
> wondering if anyone knew of a shareware program
> that is EASY TO USE and runs under Windows
> for making predictions of coverage of VHF
> signals. I have heard of a program (I thought
> it was called mimmic, or something that sounds
> like that) that does this. What I am looking to
> do is plug in variables such as frequency, ant height,
> gain etc. and have the program predict the coverage
> area for a repeater system. It would be really
> helpful if it used or interfaced to a mapping program
> to do "actual" predictions based on longitude and
> latitude. I have found a program that does this,
> but I don't exactly want to spend $1000+ for it.
> Everyone tells me there is shareware that will fit
> my need, but can't give me any names or websites.
> So....I am tapping the vast knowledge base here, and
> hoping someone can help me out.

5974. Re: Help with MUltiband 40,20,10

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-20 23:56:59 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b5dkg4$642$1@slb9.atl.mindspring.net>
Source record: 122163

As a matter of fact I just built a single 40m inverted vee. Cut it about a foot longer than the 'standard' 468/Fmc formula. Got it FB at 7150.

Then decided to add a 75 meter element. I took down the seperate 75m I had up for years and hooked it to the brand new 40m inv vee.

First thing that happened is BOTH antenna resonated way higher in the band.

I normally add about 5percent to the 'formula' length for inv vees and that makes it neater when you remove wire instead of adding it.

Dan/W4NTI

"KG4GGX" <kg4ggx@aol.com> wrote in message
news:20030320175940.17392.00000117@mb-me.aol.com...
> Hi
> Yes it will work just fine. No need to space them apart 2 feet. I have
one up
> thats 75 thru 10, and have made 2 others for friends. They are all 80
thru 10
> with four dipoles to one feed point. I made spacers that space them 6
inches
> apart. Spacing isn't critical The reactance will make tuning a little
tricky. A
> tip, make all of the diploes longer than needed. It is easier to trim some
off
> than to add some on. Also I have found just as Mark said, trim the lowest
band
> (longest diploe) first, then go to the next lowest band. But be sure all
of the
> dipoles are attached when you begin tuning. I have also found that the
higher
> band dipoles had to be longer than normal to tune out the reactance from
the
> longer wire above them. Once tuned they work great.
> Good luck 73 Rob K4MAU

5975. Re: RF Propagation Prediction Software???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 00:02:04 UTC
From: Scott <scott2rp789@netscape.net>
Message-ID: <3E7A567C.99178BF5@netscape.net>
Source record: 122164

Cat scratch fever! Perhaps somebody will come in with some
recommendations, but here is a list of software you could try:

http://www.dxzone.com/catalog/Software/Propagation/

Scott.

Ted Nugent wrote:

> Thanks in advance for taking the time to read
> and possibly respond to this question. I was
> wondering if anyone knew of a shareware program
> that is EASY TO USE and runs under Windows
> for making predictions of coverage of VHF
> signals. I have heard of a program (I thought
> it was called mimmic, or something that sounds
> like that) that does this. What I am looking to
> do is plug in variables such as frequency, ant height,
> gain etc. and have the program predict the coverage
> area for a repeater system. It would be really
> helpful if it used or interfaced to a mapping program
> to do "actual" predictions based on longitude and
> latitude. I have found a program that does this,
> but I don't exactly want to spend $1000+ for it.
> Everyone tells me there is shareware that will fit
> my need, but can't give me any names or websites.
> So....I am tapping the vast knowledge base here, and
> hoping someone can help me out.

5976. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 00:20:45 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303201620.765e3e53@posting.google.com>
Source record: 122165
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Jim Weir <jim@rst-engr.com> wrote in message
news:<7f0k7v84itj7geck419qrannv4d5ekb1mp@4ax.com>...
> I do plan on doing the experiment myself, but before I get lost in the lab, I
> thought I'd put this out for comment.
>
> Suppose there is a distant transmitter and antenna putting out a CW signal at 1
> MHz.. Suppose further that I have a coil of wire to which I have attached a
> phasemeter or oscilloscope with a reference antenna some distance from the coil
> (i.e. not in the field of the coil) connected as the reference phase. It
> matters little to me what the absolute phase difference is at this point.
>
> Let me now put the coil broadside to the incoming wave to maximize the amount of
> signal. We will call the left end of the coil "ground" and the right end of the
> coil "hot". We now get a reference phase reading and can, if we wish, adjust
> the zeroing mechanism to put the waves in phase on the meter.
>
> Now without moving the coil, I swap the "ground" and "hot" wires going to the
> meter. What happened to the phase? No change? 180i¿½ change? Mentally I can
> argue for both results and I don't really know what to expect.

Seems like you should pick just one to argue for. I'd love to see
your arguement for "no change." I know you've been presented with an
answer or two, but I'd seriously like to see how you would reason the
"no change."

Cheers,
Tom

5977. HY-GAIN 18AVT

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 03:48:47 UTC
From: Vince ve3elb <vcl@sympatico.ca>
Message-ID: <uYvea.4391$lQ4.989565@news20.bellglobal.com>
Source record: 122166

Hi guys, can anyone help me find a manual for a hy-gain 18avt hf 5 band vertical antenna. I got one but i don't have a manual to put it up. If anyone has a copy please let know thank you.

--

Vince ve3elb - Vanessa va3vcp
==========
Email: vcl@sympatico.ca
Visit Our Webpages @ :
www.qsl.net/ve3elb
www.qsl.net/va3vcp
http://www3.sympatico.ca/vcl

5978. Re: Measuring antenna bandwidth with a spectrum analyzer and tracking generator

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 03:59:43 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <b5e2o5$3n9$1@news.orst.edu>
Source record: 122006

"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
news:3e7949bf_3@news1.prserv.net...
> First, you are going to have to define bandwidth. Forward gain? SWR? F/B
> ratio? To what degradation from best performance?

The goal was to obtain a plot of S21 vs. frequency down to some tens of dB below the peak, that's all. Clearly SWR measurement would work for this application. Thanks for the comments!

---Joel

5979. Re: HY-GAIN 18AVT

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 04:52:56 UTC
From: Jeff <007alfred@comcast.net>
Message-ID: <3E7A9AA8.7090401@comcast.net>
Source record: 122167

It's on line at
http://www.hy-gain.com/manuals.php

Vince ve3elb wrote:
> Hi guys, can anyone help me find a manual for a hy-gain 18avt hf 5 band
> vertical antenna. I got one but i don't have a manual to put it up. If
> anyone has a copy please let know thank you.
>
> --
>
>
>
> Vince ve3elb - Vanessa va3vcp
> ========================
> Email: vcl@sympatico.ca
> Visit Our Webpages @ :
> www.qsl.net/ve3elb
> www.qsl.net/va3vcp
> http://www3.sympatico.ca/vcl
>
>

5980. Re: HY-GAIN 18AVT

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 05:02:06 UTC
From: Vince ve3elb <vcl@sympatico.ca>
Message-ID: <g2xea.5700$K37.808230@news20.bellglobal.com>
Source record: 122168

ok guys the manuals on the hy-gain website is a bit had to make out the measurements so if anyone has a had copy for me i will be more then happy to pay for it thank you

--

5981. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 06:01:49 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E7AAACD.5A834631@cwis.net>
Source record: 122019
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

JLB,
But that would be 'telling', and he hasn't done
the experiment yet...
'Doc

5982. Re: Counterpoise ground for end-fed HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 06:13:18 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E7AAD5D.AEF1D934@att.net>
Source record: 122020

'Doc wrote:

> Bob,
> I'd choose the second method and measure from
> the ground rod. A radial that's too long works
> 'better' than a radial that's too short.
> 'Doc

Hey Doc, it's hard to argue with such a general statement, 'specially
since it doesn't
say what's "just right"!

Dick

5983. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 06:47:43 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <4tcl7vgdjh0seghgpili4hb70fr9d2etop@4ax.com>
Source record: 122021

On Thu, 20 Mar 2003 23:52:32 GMT, Gary Schafer <gaschafer@attbi.com>
wrote:

>On 20 Mar 2003 12:20:12 -0800, nm5k@wt.net (Mark Keith) wrote:
>
>>richardharrison@webtv.net (Richard Harrison) wrote in message
news:<29631-3E793299-125@storefull-2318.public.lawson.webtv.net>...
>>> Mark Keith wrote:
>>> "I don`t think that number (50 to 100 ohms) would be good enough to
>>> avoid damage to an antenna or wire during a lightning strike."
>>
>>I was wondering about the required impedance. I did a search on that,
>>and reading one of Gary Coffmans old posts, he says 25 ohms is
>>required by NEC for a lightning ground. But he also said that is
>>really not good enough either. Just a bare minimum.
>>>
>>> More ground resistance means less, not more, current through an antenna
>>> or wire during a lightning strike, if the current changes at all. So,
>>> the likelihood of a melted wire or antenna is not increased at all by
>>> poor contact between a ground rod and the soil.
>>
>>Yep, I think I was confusing the effects of path resistance "wire or
>>antenna structure" with the ground "earth" resistance itself. MK
>
>
>One or two ground rods are not adequate for a good lightning ground.
>One problem is that the ground becomes saturated around a rod and the
>ground will accept no more current in the short time of the strike.
>The voltage goes up.
>A general rule is to space ground rods by about the sum of the length
>of two rods.
Even then it's not quite that simple.
The ground has to provide a direct line, low impedance path. That
means no sharp turns and use large area conductors.

I've seen lightening come down a grounded steel tower and get off part
way down. I had a steel mast that was hit directly. The lightening
jumped off about half way down and went out into the yard instead of
into the house.

What happens in those cases is the "rise time" for the pulse is so
rapid that even a straight conductor offers enough reverse polarity,
induced current that it quenches the current which requires the
lightening to jump around that particular spot. This can result in
the lightening coming out at almost right angles to the tower, or mast

a good many feet.

The same can happen in a ground system.
The grounding cables should be banded to the tower legs a ways above the bottom, and gently curved to meet the first set of grounds fairly close to the tower base. Those ground runs of heavy, bare copper wire should run more or less straight with the ground rods inserted roughly every 16 feet.

This is the route I've followed and it's worked well. This year I'm planning on adding "static balls" to reduce the chance of a strike as I've been averaging somewhere between two and three per year.
>

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>Too high a ground resistance will cause arcing in the ground and turn
>the sand into glass. The next strike will then see even a higher
>resistance with the glass insulation.
>
>Lightning is a constant current source. With higher resistance in the
>path of the strike the voltage is going to rise high enough to develop
>the strike current. You can not reduce the current developed by
>providing a higher resistance path to ground.
>
>As the voltage is allowed to rise there is much more chance for flash
>over to other (unwanted) paths. Also as the voltage is allowed to rise
>high, because of poor ground or poor ground connection, there will be
>much higher voltages seen at unwanted places like equipment. A
>fraction of an ohm of resistance in a ground lead connection can mean
>thousands of volts developed across it during a strike. That is why it
>is recommended that ground connections be welded to maintain good low
>resistance connections.
>
>73
>Gary K4FMX

5984. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 07:15:02 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303202315.4cad41cf@posting.google.com>
Source record: 122022

"Rickie" <rickiev@hotmail.com> wrote in message
news:<b59nh0$26kdqf$1@ID-89515.news.dfncis.de>...
> I am in need to purchasing a good and strong 2 meter antenna for the
> windows. I'm not allow to setup anything on the firescape or on the window,
> so I'll need something that I could remove when not in use.
>
> Any help would be great!

I had the same basic problem.

I bought the biggest throwaway aluminum foil "pan" I could find at a
supermarket. I flattened it and formed it around the old iron radiator
under the second floor window. I plopped a magmount antenna in the
center of the pan and connected it to my 2m mobile xcvr and fired it
up. At 50W output the radio went nuts, apparently my FT-1500M does not
like to be operated in an intense RF field without filtering the power
and mic cables. I reduced the power to 5W and can access ten repeaters
and two packet stations from this mediocre location in suburban
Philly. I've also done the same non-trick using aluminum foil on a
wooden TV table.

Any magmount antenna on any aluminum foil "plane" should work.

> Thanks in advance,
> Rickie / KC2KQQ

w3rv

5985. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 07:33:25 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <9tfl7vo38da3sph3uumb79g2qc7e2jglcm@4ax.com>
Source record: 122023
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

"Bibby" <bibby@attbi.com>
shared these priceless pearls of wisdom:

->Jim;
->1 are you talking about a coil or a loop?

A loop is a single turn coil. However, for argument sake, let's talk about a multiturn loop or coil.

->
->2 what are the dimensions in terms of wavelengths?

Again, for argument sake, let's say ten turns wound around an eighth inch drill bit and then the bit removed. What's that at a MHz? A ten-thousandth of a wavelength or so?

Jim

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

5986. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 08:21:03 UTC
From: Repeating Decimal <SalmonFly@attbi.com>
Message-ID: <BAA00B6F.46CC9%SalmonFly@attbi.com>
Source record: 122024
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

in article 9tfl7vo38da3sph3uumb79g2qc7e2jglcm@4ax.com, Jim Weir at jim@rst-engr.com wrote on 3/20/03 11:33 PM:

> A loop is a single turn coil. However, for argument sake, let's talk about a
> multiturn loop or coil.

Not so.

They are basically the same thing. If the diameter of the winding is considerably greater than the axial length of the winding, there is a tendency to call that a loop. What would be the advantage of having only one turn?

One advantage of a loop is that it can be almost entirely enclosed within a metal toroid. This provides electrostatic shielding for the loop. It is necessary, however, to provide a circumferential gap so that the coil is not shielded completely from the field it is trying to measure.

Bill

5987. Construct your own BAL-UN.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 11:17:56 UTC
From: dutchmill <dutchmill@zeelandnet.nl>
Message-ID: <3E7AF4E4.8080200@zeelandnet.nl>
Source record: 122025

Hello,

Intresting to construct your BAL-UN.

And if so, take a look at: http://www.inter.nl.net/hcc/Shortwave

Best regards and good dx-ing.

Dutchmill

5988. Re: Easy take down HF Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 12:22:11 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0303210422.13830799@posting.google.com>
Source record: 122026

Take a look at Vern Wright's (W6MMA) Portable Yagi System. It covers
20 thru 6 meters. (http://www.superantennas.com/___Products/Yagi/yagi.html
)

Usual disclaimer....I have no connection with Superantennas, etc.

Rich K2CPE

5989. Re: WILSON TETRA TOWER SPECS and drawings needed

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 13:41:04 UTC
From: Jeff Maass <jmaass@columbus.rr.com>
Message-ID: <QDEea.50431$s75.16026578@twister.columbus.rr.com>
Source record: 122027

Wow! That's a blast from the past!

Erector set tower, well suited for DXpeditioning!

I took 30 feet of Tetra Tower to Anguilla for the 1980
operation as VP2E. Transported nicely, assembled
easily, and supported a SY33 quite well for the two
weeks! We left it in storage down there, and eventually
it went who-knows-where.

I don't have any of the documentation here any more.
They didn't sell it for too long.

--
Jeff Maass jmaass@columbus.rr.com Located near Columbus Ohio
USPSA # L-1192 NROI/CRO Amateur Radio K8ND
Maass' IPSC Resources Page: http://home.columbus.rr.com/jmaass

"Peter M. Ackermann" <w4sfd@ispwest.com> wrote in message
news:26ui7v49dfteec5l1ob5vh7chj9udnvmqp@4ax.com...
> Looking for Wilson Tetra Tower Drawing and Specs Needed.
>
> Please send DIRECT E-mail
>
> w4sfd@ispwest.com

5990. Re: RF Propagation Prediction Software???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 14:19:23 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e7b6410_4@news1.prserv.net>
Source record: 122041

I think this is the same link that JLB has supplied, and here are a few caveats about it. The process is not simple, and some aspects are obscure. One gotcha is that the default antenna is a directional pattern, so change that to reflect your actual antenna. Then go through ALL the defaults, and make sure they correspond to your requirements. The program is EASY TO USE, and hard as hell to set up first.

http://www.cplus.org/rmw/english1.html
--
Crazy George
Remove NO and SPAM from return address
"Ted Nugent" <eclip01@hotmail.com> wrote in message
news:01c2ef1c$9f27bea0$82878685@clip...
> Thanks in advance for taking the time to read
> and possibly respond to this question. I was
> wondering if anyone knew of a shareware program
> that is EASY TO USE and runs under Windows
> for making predictions of coverage of VHF
> signals. I have heard of a program (I thought
> it was called mimmic, or something that sounds
> like that) that does this. What I am looking to
> do is plug in variables such as frequency, ant height,
> gain etc. and have the program predict the coverage
> area for a repeater system. It would be really
> helpful if it used or interfaced to a mapping program
> to do "actual" predictions based on longitude and
> latitude. I have found a program that does this,
> but I don't exactly want to spend $1000+ for it.
> Everyone tells me there is shareware that will fit
> my need, but can't give me any names or websites.
> So....I am tapping the vast knowledge base here, and
> hoping someone can help me out.

5991. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 15:04:12 UTC
From: Cindy <cindy.malone@nospam.com>
Message-ID: <3E7B29EB.6DB9724@nospam.com>
Source record: 122028

Hi,

Try using a steel pan instead of the aluminum, magmount likes steel better.

Also how long is the feedline ? Try coil up six turns 10" coil and could help rf.

bye

Brian wrote:

> "Rickie" <rickiev@hotmail.com> wrote in message
news:<b59nh0$26kdqf$1@ID-89515.news.dfncis.de>...
> > I am in need to purchasing a good and strong 2 meter antenna for the
> > windows. I'm not allow to setup anything on the firescape or on the window,
> > so I'll need something that I could remove when not in use.
> >
> > Any help would be great!
>
> I had the same basic problem.
>
> I bought the biggest throwaway aluminum foil "pan" I could find at a
> supermarket. I flattened it and formed it around the old iron radiator
> under the second floor window. I plopped a magmount antenna in the
> center of the pan and connected it to my 2m mobile xcvr and fired it
> up. At 50W output the radio went nuts, apparently my FT-1500M does not
> like to be operated in an intense RF field without filtering the power
> and mic cables. I reduced the power to 5W and can access ten repeaters
> and two packet stations from this mediocre location in suburban
> Philly. I've also done the same non-trick using aluminum foil on a
> wooden TV table.
>
> Any magmount antenna on any aluminum foil "plane" should work.
>
>
> > Thanks in advance,
> > Rickie / KC2KQQ
>
> w3rv

5992. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 15:06:31 UTC
From: Cindy <cindy.malone@nospam.com>
Message-ID: <3E7B2A76.87ED7DE@nospam.com>
Source record: 122029

Hi,

Try this antenna, will cost a few dollars to make it, works great with 50 ohm feedline, no
matching stuff needed ! It has gain over the common jpoles and is super easy to make it.

http://www.cebik.com/hs.html

this site is great, I learned all I know (a little) about antenna from Dr. Cebik site.

bye

Rickie wrote:

> I am in need to purchasing a good and strong 2 meter antenna for the
> windows. I'm not allow to setup anything on the firescape or on the window,
> so I'll need something that I could remove when not in use.
>
> Any help would be great!
>
> Thanks in advance,
> Rickie / KC2KQQ

5993. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 15:43:50 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <YvOdnaSPv9CuruajXTWcoA@comcast.com>
Source record: 122030

I see this thread is still going. It might be worthwhile to note that the guy who first made the comment about wrapping the feeeline around the propane tank was NOT suggesting doing that. He merely stated that it would not affect the coax. BTW, what happened to Floyd - did his propane tank blow up?

Tam/WB2TT

5994. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 16:03:22 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87of444shh.fld@barrow.com>
Source record: 122031

"Tarmo Tammaru" <t-tammaru@home.com> wrote:
>I see this thread is still going. It might be worthwhile to note that the
>guy who first made the comment about wrapping the feeeline around the
>propane tank was NOT suggesting doing that. He merely stated that it would
>not affect the coax. BTW, what happened to Floyd - did his propane tank blow
>up?
>
>Tam/WB2TT

I'm still reading, and laughing...

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

5995. Re: HY-GAIN 18AVT

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 16:09:48 UTC
From: for-sale <nospam@spam.net>
Message-ID: <n8em7vo9sa9hutfdp4mgvsim218m0pavrv@4ax.com>
Source record: 122032

There are several manuals, for different versions, at the BAMA site.
http://bama.sbc.edu/

73

On Thu, 20 Mar 2003 22:48:47 -0500, "Vince ve3elb" <vcl@sympatico.ca>
wrote:

>Hi guys, can anyone help me find a manual for a hy-gain 18avt hf 5 band
>vertical antenna. I got one but i don't have a manual to put it up. If
>anyone has a copy please let know thank you.

5996. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 16:23:54 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <k0fm7vkstt5055quti3ntim1f88ec9mkc3@4ax.com>
Source record: 122033

On Fri, 21 Mar 2003 10:43:50 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:

>I see this thread is still going. It might be worthwhile to note that the
>guy who first made the comment about wrapping the feeeline around the
>propane tank was NOT suggesting doing that. He merely stated that it would
>not affect the coax. BTW, what happened to Floyd - did his propane tank blow
>up?
>
>Tam/WB2TT
>

Yep, that's all I said. But I sure have enjoyed watching where the
thread went after that ;-)

-fb-

5997. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 16:24:56 UTC
From: richardharrison@webtv.net
Message-ID: <29131-3E7B3CD8-84@storefull-2317.public.lawson.webtv.net>
Source record: 122034

Gary, K4FMX wrote:
"One or two ground rods are not adequate for a good lightning ground."

Often true, but not nscessarily so. Depends on the impedance one or two rods make. Imagine a salt marsh, for example.

Gary also wrote:
"Too high a ground resistance will cause arcing in the ground and turn sand into glass."

Depends on soil composition. Most soil is not sand, but contains carbon derived from organic matter. Carbon is conductive and tends to bypass current around silicon dioxide in the soil. Sand melt is irrelevant. An arc gap has near infinite resistance but doesn`t significantly impede a lightning bolt.

Gary also wrote:
"A general rule is to space ground rods by about the sum of the length of two rods."

Depends on rod length. NBS shows 5ft separation is about good enough for minimum resistance using only two ordinary rods.

Gary also wrote:
"You can not reduce the current developed by provding a higher resstance."

A current source produces a constant current which has path choices. Current takes the easier path. Provde a high resistance in one path, and current takes another path. It`s a diversion and a current reduction in the high resistance path.

Gary also wrote:
"A fraction of an ohm of resistance in a ground lead connection can mean thousands of volts developed across it during a strike."

Very unlikely for very long. Voltage of the strike will arc across a high impedance in its path, if the path isn`t too long. One-foot arc gaps are short enough and used for lightning on some power poles. Arc plasma reduces the voltage drop to only a few volts.

Gary also wrote::
"That is why it is recommended that ground connections be welded to maintain good low resistance connections."

Low resistance is needed for the safety ground protection from much lower voltages as used for normal power distribution. Lightning can arc across poor connections. Often the power frequency voltage can`t.

Welding or an approved clamp is specified because heat in a poor connection may unmake it. This could leave a shock hazard at the power frequency and a gap too wide for the next lightning leap.

Best regards, Richard Harrison, KB5WZI

5998. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 16:55:47 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <4ofm7vse79tsc14sk0ih9pueh81bnl7kn1@4ax.com>
Source record: 122035

On Fri, 21 Mar 2003 06:47:43 GMT, Roger Halstead <rdhalste@tm.net>
wrote:

>On Thu, 20 Mar 2003 23:52:32 GMT, Gary Schafer <gaschafer@attbi.com>
>wrote:
>

>>
>>One or two ground rods are not adequate for a good lightning ground.
>>One problem is that the ground becomes saturated around a rod and the
>>ground will accept no more current in the short time of the strike.
>>The voltage goes up.
>>A general rule is to space ground rods by about the sum of the length
>>of two rods.

>Even then it's not quite that simple.
>The ground has to provide a direct line, low impedance path. That
>means no sharp turns and use large area conductors.
>
>I've seen lightening come down a grounded steel tower and get off part
>way down. I had a steel mast that was hit directly. The lightening
>jumped off about half way down and went out into the yard instead of
>into the house.
>
>What happens in those cases is the "rise time" for the pulse is so
>rapid that even a straight conductor offers enough reverse polarity,
>induced current that it quenches the current which requires the
>lightening to jump around that particular spot. This can result in
>the lightening coming out at almost right angles to the tower, or mast
>a good many feet.

All conductors, even straight towers have inductance. A small tower
can present significant inductance to lightning. There can be a
voltage rise of thousands of volts between one part of a tower and
another part during a strike.

>
>The same can happen in a ground system.
>The grounding cables should be banded to the tower legs a ways above
>the bottom, and gently curved to meet the first set of grounds fairly
>close to the tower base.

That may or may not be true. It depends on how far up you have to go
to get a "minimum curve" in the lead. The higher up you go to make the
connection to the tower leg the greater amount of inductance you are
inserting. The tower leg usually being much larger will have much less

inductance than a ground lead connected to it. Sometimes the amount of wire you add in this manor increases the inductance more than if you go nearer to the bottom of the tower and make a sharper bend. You can calculate the amount of inductance a particular bend offers. You can also calculate the amount of inductance the tower offers in comparison to the length of small ground lead wire with the bend offers.

>Those ground runs of heavy, bare copper wire
>should run more or less straight with the ground rods inserted roughly
>every 16 feet.
>
>This is the route I've followed and it's worked well. This year I'm
>planning on adding "static balls" to reduce the chance of a strike as
>I've been averaging somewhere between two and three per year.
>>
>
A "static ball" will only help to reduce a strike if it is used to replace a sharp point on the tower.

>Roger Halstead (K8RI EN73 & ARRL Life Member)
>www.rogerhalstead.com
>N833R World's oldest Debonair? (S/# CD-2)
>>Too high a ground resistance will cause arcing in the ground and turn
>>the sand into glass. The next strike will then see even a higher
>>resistance with the glass insulation.
>>
>>Lightning is a constant current source. With higher resistance in the
>>path of the strike the voltage is going to rise high enough to develop
>>the strike current. You can not reduce the current developed by
>>providing a higher resistance path to ground.
>>
>>As the voltage is allowed to rise there is much more chance for flash
>>over to other (unwanted) paths. Also as the voltage is allowed to rise
>>high, because of poor ground or poor ground connection, there will be
>>much higher voltages seen at unwanted places like equipment. A
>>fraction of an ohm of resistance in a ground lead connection can mean
>>thousands of volts developed across it during a strike. That is why it
>>is recommended that ground connections be welded to maintain good low
>>resistance connections.
>>
>>73
>>Gary K4FMX

5999. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 16:57:10 UTC
From: richardharrison@webtv.net
Message-ID: <1985-3E7B4466-18@storefull-2316.public.lawson.webtv.net>
Source record: 122036

Roger, K8RI wrote:
"The grounding cables should be bonded to the tower legs a ways above the bottom, and gently curved to meet the first set of grounds fairly close to the tower base."

Nothing wrong with Roger`s advice, but I always got by with simpler measures in countless cases.

For me, a separate standard ground rod for each tower leg just outside the base and connected to the leg at the base with a heavy copper cable or strap external ro the base provided adequate lightning protection. No lightning hopped, skipped, or jumped off the tower.

Best regards, Richard Harrison, KB5WZI

6000. Re: Antenna/Feedline Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 17:43:29 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <pcim7v0a1e566k82ll5oqn9n0g6gbd9t8a@4ax.com>
Source record: 122037

On Fri, 21 Mar 2003 10:24:56 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Gary, K4FMX wrote:
>"One or two ground rods are not adequate for a good lightning ground."
>
>Often true, but not nscessarily so. Depends on the impedance one or two
>rods make. Imagine a salt marsh, for example.
>

A salt marsh is a rare place for a typical tower. We are usually
blessed with the poorest soil conditions.

>Gary also wrote:
>"Too high a ground resistance will cause arcing in the ground and turn
>sand into glass."
>
>Depends on soil composition. Most soil is not sand, but contains carbon
>derived from organic matter.

Here in Florida most soil is sand.

>Carbon is conductive and tends to bypass
>current around silicon dioxide in the soil. Sand melt is irrelevant. An
>arc gap has near infinite resistance but doesn`t significantly impede
>a lightning bolt.
>
By the time the voltage rises high enough to jump the glass insulator
in the ground it can easily flash over to some unwanted path above
ground. It can also allow enough voltage rise to damage equipment tied
to that ground lead too.

>Gary also wrote:
>"A general rule is to space ground rods by about the sum of the length
>of two rods."
>
>Depends on rod length. NBS shows 5ft separation is about good enough for
>minimum resistance using only two ordinary rods.

That is true for ground resistance but is not necessarily true for
ground saturation levels.

>
>Gary also wrote:
>"You can not reduce the current developed by provding a higher
>resstance."
>

>A current source produces a constant current which has path choices.
>Current takes the easier path. Provde a high resistance in one path, and
>current takes another path.

That is my point. If you provide a high resistance in the ground lead
you will most probably get a flash over to another (unwanted) path.
But you have not reduced the amount of current that the antenna
handles, If that is what was hit.

>It`s a diversion and a current reduction in
>the high resistance path.
>
>Gary also wrote:
>"A fraction of an ohm of resistance in a ground lead connection can mean
>thousands of volts developed across it during a strike."
>
>Very unlikely for very long. Voltage of the strike will arc across a
>high impedance in its path, if the path isn`t too long. One-foot arc
>gaps are short enough and used for lightning on some power poles. Arc
>plasma reduces the voltage drop to only a few volts.

It can allow enough of a voltage rise to do damage to equipment
connected above the poor connection before an arc occurs. It may never
arc depending on the severity of the strike. High resistance
connections are never a good idea.

>
>Gary also wrote::
>"That is why it is recommended that ground connections be welded to
>maintain good low resistance connections."
>
>Low resistance is needed for the safety ground protection from much
>lower voltages as used for normal power distribution. Lightning can arc
>across poor connections. Often the power frequency voltage can`t.
>
>Welding or an approved clamp is specified because heat in a poor
>connection may unmake it. This could leave a shock hazard at the power
>frequency and a gap too wide for the next lightning leap.

True enough.
A poor connection is also an invitation for equipment damage. from
voltage differential.

73
Gary K4FMX
>
>Best regards, Richard Harrison, KB5WZI
>
>

6001. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 18:31:51 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303211031.4ec55221@posting.google.com>
Source record: 122038
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Repeating Decimal <SalmonFly@attbi.com> wrote in message
news:<BAA00B6F.46CC9%SalmonFly@attbi.com>...
> in article 9tfl7vo38da3sph3uumb79g2qc7e2jglcm@4ax.com, Jim Weir at
> jim@rst-engr.com wrote on 3/20/03 11:33 PM:
>
> > A loop is a single turn coil. However, for argument sake, let's talk about a
> > multiturn loop or coil.
>
> Not so.
>
> They are basically the same thing. If the diameter of the winding is
> considerably greater than the axial length of the winding, there is a
> tendency to call that a loop. What would be the advantage of having only one
> turn?
>
> One advantage of a loop is that it can be almost entirely enclosed within a
> metal toroid. This provides electrostatic shielding for the loop. It is
> necessary, however, to provide a circumferential gap so that the coil is not
> shielded completely from the field it is trying to measure.

The external "metal toroid" is then the antenna, for it is on the
outside of that "toroid" that antenna currents must exist, and not
inside it. The gap is then the feedpoint, to which the internal wire
couples and then acts as a simple feedline. To best reject response
to electric fields, the gap must be properly positioned...

References available on request.

Cheers,
Tom

6002. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 18:46:21 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <wZIea.58519$Dp.52527@fe01.atl2.webusenet.com>
Source record: 122039
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

> The external "metal toroid" is then the antenna, for it is on the
> outside of that "toroid" that antenna currents must exist, and not
> inside it. The gap is then the feedpoint, to which the internal wire
> couples and then acts as a simple feedline. To best reject response
> to electric fields, the gap must be properly positioned...
>

No, the gap is usually opposite the feed point and the sheild is grounded.
It shields the loop from electric fields but it still responds to magnetic
fields. This is common practice and the idea has been around for many
decades. From personal experience I can say that it makes a tremendous
difference in the sensitivity pattern of the loop, even when extremely close
to other conductors (including AC house wiring).

> References available on request.
>
Ok, what are they?

Jim
N8EE

6003. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 18:47:03 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <c8nm7vkctv5942npk5e6qhni3ae1vcj056@4ax.com>
Source record: 122040
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

On 21 Mar 2003 10:31:51 -0800, k7itm@aol.com (Tom Bruhns) wrote:

>Repeating Decimal <SalmonFly@attbi.com> wrote in message
news:<BAA00B6F.46CC9%SalmonFly@attbi.com>...
>> in article 9tfl7vo38da3sph3uumb79g2qc7e2jglcm@4ax.com, Jim Weir at
>> jim@rst-engr.com wrote on 3/20/03 11:33 PM:
>>
>> > A loop is a single turn coil. However, for argument sake, let's talk about a
>> > multiturn loop or coil.
>>
>> Not so.
>>
>> They are basically the same thing. If the diameter of the winding is
>> considerably greater than the axial length of the winding, there is a
>> tendency to call that a loop. What would be the advantage of having only one
>> turn?
>>
>> One advantage of a loop is that it can be almost entirely enclosed within a
>> metal toroid. This provides electrostatic shielding for the loop. It is
>> necessary, however, to provide a circumferential gap so that the coil is not
>> shielded completely from the field it is trying to measure.
>
>The external "metal toroid" is then the antenna, for it is on the
>outside of that "toroid" that antenna currents must exist, and not
>inside it. The gap is then the feedpoint, to which the internal wire
>couples and then acts as a simple feedline. To best reject response
>to electric fields, the gap must be properly positioned...
>
>References available on request.
>
>Cheers,
>Tom

I did it with a 8" diameter loop made of 1/2" copper pipe, and used a
insulated pipe fitting(**) to provide the "gap".

(**) Readily available at Home Depot, etc., used to connect copper to
iron without electrolysis problems.

To make winding easy I sawed a slot in the outer edge of the loop
making winding trivial, squeezed the slot closed and soldered it.

...Jim Thompson
--
| James E.Thompson, P.E. | mens |

Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

6004. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 19:30:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7mq26ft2m7cb3@corp.supernews.com>
Source record: 122042
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

It's fairly easy to see that what Tom wrote (the first paragraph of quoted material below) is true. "Shielding" a loop simply moves the feedpoint to the gap, and the outside of the "shield" becomes the loop. It's no more or less immune to electric fields than any other loop. What "shielding" does (and all it does) is to increase rejection of common mode excitation, improving loop balance and the resulting pattern null in practical installations. The sensitivity of a "shielded" loop to both electric and magnetic fields is exactly the same as for an "unshielded" loop.

The myth that "shielding" a loop somehow rejects the electric field without affecting the magnetic field is one that's been kicking around the amateur community for decades. I don't suppose it'll ever die.

Another thing that seems to be unknown or overlooked is that a small (so-called "magnetic") loop antenna is actually more sensitive to an electric field and less sensitive to a magnetic field than a short ("electric") dipole, at all distances from the antenna unless the radiation source is very close -- within less than a wavelength.

Roy Lewallen, W7EL

JLB wrote:
>>The external "metal toroid" is then the antenna, for it is on the
>>outside of that "toroid" that antenna currents must exist, and not
>>inside it. The gap is then the feedpoint, to which the internal wire
>>couples and then acts as a simple feedline. To best reject response
>>to electric fields, the gap must be properly positioned...
>>
>
>
> No, the gap is usually opposite the feed point and the sheild is grounded.
> It shields the loop from electric fields but it still responds to magnetic
> fields. This is common practice and the idea has been around for many
> decades. From personal experience I can say that it makes a tremendous
> difference in the sensitivity pattern of the loop, even when extremely close
> to other conductors (including AC house wiring).
>
>
>>References available on request.
>>
>
> Ok, what are they?
>

> Jim
> N8EE
>
>
>

6005. Re: High SWR 40M on R7

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 19:35:52 UTC
From: "Robert Lay (W9DMK)" <w9dmk@crosslink.net>
Message-ID: <e8qm7v46o04682fh3mj7g9soi78p4rcb8m@4ax.com>
Source record: 122043

On Thu, 20 Mar 2003 15:53:24 GMT, Irv Finkleman <finkirv@shaw.ca> wrote:

>"Robert Lay (W9DMK)" wrote:
>
>>
>> BTW, my R-7 now hangs hrizontally from the ceiling in the barn - which is exactly where it belongs.
>>
>>
>Do you find the change in polarization beneficial? :-)

Perhaps I forgot to mention - it's completely disassembled :-)

==========
73 de W9DMK - Bob in Dahlgren, VA
http://www.qsl.net/w9dmk
http://www.fortunecity.com/meltingpot/albania/784
http://www.geocities.com/w9dmk/W9DMK.html
==========

6006. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 20:39:35 UTC
From: Repeating Decimal <SalmonFly@attbi.com>
Message-ID: <BAA0B887.46FB1%SalmonFly@attbi.com>
Source record: 122044
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

in article 3200347.0303211031.4ec55221@posting.google.com, Tom Bruhns at k7itm@aol.com wrote on 3/21/03 10:31 AM:

> The external "metal toroid" is then the antenna, for it is on the
> outside of that "toroid" that antenna currents must exist, and not
> inside it. The gap is then the feedpoint, to which the internal wire
> couples and then acts as a simple feedline. To best reject response
> to electric fields, the gap must be properly positioned...

Maybe I was not explicit. The reason for the gap is to prevent the metal toroid from being a shorted turn coupling to the loop.

Bill

6007. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 22:01:14 UTC
From: richardharrison@webtv.net
Message-ID: <29132-3E7B8BAA-50@storefull-2317.public.lawson.webtv.net>
Source record: 122045

Roy, W7EL wrote:
"What shielding (a loop antenna) does (and all it does) is to increase rejection of common mode excitation, improving loop balance and the resulting pattern null in practical installations."

Terman writes:
"Such a shield ensures that all parts of the loop will always have the same capacitance to ground irrespective of the loop orientation in relation to neighboring objects"

There`s much more, but I tired of arguing it years ago.

Best rergards, Richard Harrison, KB5WZI

6008. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 22:16:22 UTC
From: dennis@wawa.juniper.net
Message-ID: <b5g2vm$1bft$1@heap.juniper.net>
Source record: 122046
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

Gary V. Deutschmann, Sr. <raiar@slacc.com.nospam> wrote:
>You won't be allowed to affix a separate antenna because cell-phones
>are FCC type accepted with its fixed antenna. Adding an antenna
>alters the unit and voids the FCC type acceptance making it an illegal
>device to own, unless you are licensed by the FCC for that frequency
>and service.

I'm curious about what regulation in Title 47 leads you to the
above conclusion? I know Part 15 devices are sometimes constrained
that way, but I can't find a similar constraint in Parts 22 or 24, nor
in the general authorization procedures in Part 2. I don't doubt
what you say could possibly be true, but I'd like to understand where
the regulation comes from.

As a practical matter the FCC often seems to leave it up to its cellular
and PCS licensees to determine the regulations (and I'm not sure there
are any for external antennas) which are strictly enforced in any case.
For example, every day thousands of handsets with (potentially) no FCC
certification are brought into the country and used by international
travellers. This seems to violate 24.51, but enforcing that strictly
would be unfortunate, and likely bad for licensees' business, as it
would impede international roaming.

Dennis Ferguson

6009. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-21 23:08:06 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7n6qlfgjmqhcf@corp.supernews.com>
Source record: 122047

Yes, Terman (in _Radio Engineering_) explains that the purpose of the shield is to effect loop balance (i.e., reduction of sensitivity to common mode, or unbalanced, excitation), as I said. It's unfortunate that Terman refers to the shield as an "electrostatic shield" -- that might be some of the reason for the persistent misunderstanding of its function.

Another good explanation of the purpose and operation of the "shield" is in Johnson, _Antenna Engineering Handbook_. This quote begins on p. 5-19 in the Third Edition:

"For certain applications, it is desirable to position the terminals of the loop antenna precisely so as to produce geometrical symmetry for the loop and its connections about a plane perpendicular to the loop. This can often be accomplished by using the so-called shielded loop. . . The effective terminals of the loop antenna are at the ends of the small gap AB. . . The incident field produces current on the external surface of the shield. . ."

This is followed by an example showing how the null is improved by balancing the antenna about the feed point by means of the "shield".

There's another, very good, explanation in King, Mimno, and Wing's _Transmission Lines, Antennas, and Wave Guides_ which follows along the same path as the Johnson explanation. I'll just quote a few sentences -- I highly recommend that anyone interested in the topic read the entire explanation:

"Consequently, complete driving symmetry obtains, and only a circulating current around the outer surface of the circular shield can be excited; there is no codirectional up-and-down current, and a true loop field is set up. . . Under these conditions, currents on the inside of the coaxial line, excited by the electric field across the gap, are due only to true circulating currents on the outside of the shield. Therefore, the voltage maintained across the load is due only to these currents, and the ideal loop characteristics obtain."

Of immediate relevance is a footnote (p. 235 of the soft cover Dover edition) which the above text references:

"The operation of the shielded loop is explained popularly by first stating the the desired loop current is due to the magnetic field, the undesired up-and-down current to the electric field, and then maintaining that the metal shield cannot be penetrated by the electric field but can be penetrated by the magnetic field. All these statements are incorrect in the light of fundamental electromagnetic principles."

I don't believe you'll find any professional text (as opposed to books written by and oriented toward amateurs) that claim that a shield blocks the electric field while permitting the magnetic field to pass. If you do, please let me know -- I'd like to see it.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy, W7EL wrote:
> "What shielding (a loop antenna) does (and all it does) is to increase
> rejection of common mode excitation, improving loop balance and the
> resulting pattern null in practical installations."
>
> Terman writes:
> "Such a shield ensures that all parts of the loop will always have the
> same capacitance to ground irrespective of the loop orientation in
> relation to neighboring objects"
>
> There`s much more, but I tired of arguing it years ago.
>
> Best rergards, Richard Harrison, KB5WZI
>

6010. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 00:13:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5g9rh$9f3$1@sparta.btinternet.com>
Source record: 122048
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Roy says -

> - - - - a small
> (so-called "magnetic") loop antenna is actually more sensitive to an
> electric field and less sensitive to a magnetic field than a short
> ("electric") dipole - - - -

Roy,

What are your units of "sensitivity"?

How are things to be measured (even hypothetically) and compared?

In any case, the statement is meaningless unless loop diameter and dipole length are incorporated.

Explanation please.

A simple learned reference will not be of much use since 99.9 percent of readers will have no chance of ever getting their hands on it.

Yours, Reg, G4FGQ

6011. Re: RF Propagation Prediction Software???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 01:49:14 UTC
From: Ian <cls119@remove.spam.lycos.co.uk>
Message-ID: <tiPea.247$595.199@newsfep3-gui.server.ntli.net>
Source record: 122049

Hello,

There was a program I saw yars ago for use in the UK. You put the grid reference from an OS Map in for both sites, the frequency, power and heights. It returned a very accurate measurement and showed a map profile so you could see obstructions - sort of a side view!

Excellent stuff but I can't remember what it is called.

Ian.

6012. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 02:51:00 UTC
From: "Jack Rabbit"
Message-ID: <b1jn7v06dint3kpgkc0iftivhlefbl0kb4@4ax.com>
Source record: 122050
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

In my opinion, he is just a telco shill spreading more telco lies,
trying to protect his employer's aging copper POTS infrastructure.

With cable broadband, high-speed wireless and VOIP coming around the
corner and poised to squash the telco's switched-circuit cash-cow, he
is scared to death that his head will be the next one on the chopping
block.

Hook an antenna up to your PCS phone and call those dingleberries at
your wireline telco and tell them to stick their connection droppin'
slow-assed pots line where the sun doesn't shine.

On 21 Mar 2003 22:16:22 GMT, dennis@wawa.juniper.net (Dennis Ferguson)
wrote:

>Gary V. Deutschmann, Sr. <raiar@slacc.com.nospam> wrote:
>>You won't be allowed to affix a separate antenna because cell-phones
>>are FCC type accepted with its fixed antenna. Adding an antenna
>>alters the unit and voids the FCC type acceptance making it an illegal
>>device to own, unless you are licensed by the FCC for that frequency
>>and service.
>
>I'm curious about what regulation in Title 47 leads you to the
>above conclusion? I know Part 15 devices are sometimes constrained
>that way, but I can't find a similar constraint in Parts 22 or 24, nor
>in the general authorization procedures in Part 2. I don't doubt
>what you say could possibly be true, but I'd like to understand where
>the regulation comes from.
>
>As a practical matter the FCC often seems to leave it up to its cellular
>and PCS licensees to determine the regulations (and I'm not sure there
>are any for external antennas) which are strictly enforced in any case.
>For example, every day thousands of handsets with (potentially) no FCC
>certification are brought into the country and used by international
>travellers. This seems to violate 24.51, but enforcing that strictly
>would be unfortunate, and likely bad for licensees' business, as it
>would impede international roaming.
>
>Dennis Ferguson

6013. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 06:52:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7o21b46ub6l80@corp.supernews.com>
Source record: 122051
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

After some reflection, I see that I can't really justify the statement I made. Thanks for questioning it.

Let me explain what I do know. The following discussion assumes that all antennas are lossless, to eliminate a factor that would obscure the subject under discussion.

If you put 100 watts into a very short dipole, the ratio of the E field it produces to the H field it produces is called the wave impedance. At a distance of considerably less than a wavelength, or greater, this ratio is about 377 ohms (in air or free space), and E and H are in phase. The same thing is true for a very small loop antenna, or any other small antenna. If you get far enough away, the E/H ratio is the same for any kind of antenna, although you might have to get a farther from an antenna that's large in terms of wavelength. Invoking the reciprocity principle, you find that the relative response of a small loop to E and H fields is the same as for a small dipole if the field originates some distance from the antenna. The so-called "magnetic" loop responds just the same as any other antenna to fields originating beyond a wavelength or so from the antenna.

What's interesting is the relative strength of radiated E and H fields close to the antenna. My overstatement was the implication that the ratio of E to H transmitted fields represent relative "sensitivity" to E and H fields when receiving. Contrary to what the CFA and EH proponents claim, it's not possible to generate E and H fields independently. And contrary to what people who misunderstand "shielded" loops say, it's not possible to isolate E and H fields. (It is possible to change the impedance of a wave -- that is, the E/H ratio -- in a region, but it always reverts back to the impedance of the medium -- 377 ohms for free space -- within a pretty small distance of the disturbance.) So sensitivity to an E or H field is somewhat problematic, since you can't create either one in isolation for a test. Consequently, I'll just discuss the E and H fields that the antennas produce when transmitting. I believe that an antenna with high transmit E/H ratio will be relatively insensitive to a wave with low E/H ratio (which would have to be created nearby), and vice-versa. But I can't quantify the relationship. I only know it involves the concept of transfer impedance, and I haven't given the topic enough study to say more about it. It is discussed in a number of texts, for those who are interested.

What I've done is look at the E/H ratio radiated by a small loop and a small dipole at various distances, in the direction of the maximum far field radiation (in the plane of the loop and broadside to the dipole).

The following analysis was done with EZNEC/4 using its double precision NEC-4 calculating engine. This was necessary because of problems NEC codes have with very small loops, and the size of loop I chose was too small for analysis with NEC-2. However, it could probably be done with MININEC, or it could be done with an NEC-2 based program like the EZNEC demo if the loop is made a bit larger. It's vital to set the loss to zero so that a negative feed point impedance isn't concealed by positive loss resistance. I've gotten email from a person who was skeptical of the results and did the calculations analytically. He came to the same conclusion, which gives me added confidence in the results. The following calculations were done at 3 MHz (100 meter wavelength).

Here's what happens. A small loop is sometimes called a "low impedance" antenna because of the low E/H ratio close to the antenna. This might be adequate justification for calling it a "magnetic" antenna as amateurs have taken to doing, but the term unfortunately conveys the mistaken impression that the antenna somehow responds only to or more strongly to magnetic fields coming far from the antenna, which isn't true. But very close to the antenna, the E/H ratio is indeed lower than the 377 ohm value this ratio always has far from the antenna. In exactly complementary fashion, a small dipole is a "high impedance" antenna, having an E/H ratio higher than 377 ohms very close to the antenna. Here are the values of the magnitude of E/H for a 2 meter (1/50 wavelength) circumference octagonal loop and a 2 meter long dipole at 3 MHz. The distance is measured from the center of the loop or dipole, and the direction is in the plane of the loop or broadside to the dipole.

Distance (m) E/H (ohms)
Dipole Loop
2 2630 63.9
4 1360 110
6 862 169
8 597 241
10 440 326
12 345 414
14 291 490
16 265 538
18 257 555
20 258 552
22 264 538
24 273 522
26 281 506
28 290 491
30 297 478
50 342 415
100 367 386

The curious thing is that, while the dipole field impedance is high close to the dipole, and low close to the loop, in both cases it overshoots 377 ohms by a considerable amount, reaching a peak (lowest Z for the dipole and highest for the loop) at about 18 meters, then asymptotically approaches 377 ohms from the "wrong side" beyond that. At

all distances of 12 meters (about 1/8 wavelength) and beyond, the E/H ratio of the loop is actually higher than that of the dipole! That was the basis for my original statement. Whatever might be said about the "sensitivity" of a "magnetic" loop to E and H fields, it certainly can't be said to be more sensitive to H fields, or less sensitive to E fields, than a small dipole, at any distance greater than about 1/8 wavelength.

The exact sizes of the loop and dipole aren't important. The near fields at these distances are essentially equal for all small dipoles and for all small loops for a given input power, provided that they're much smaller than a wavelength in any dimension.

Roy Lewallen, W7EL

Reg Edwards wrote:
> Roy says -
>
>
>>- - - - a small
>>(so-called "magnetic") loop antenna is actually more sensitive to an
>>electric field and less sensitive to a magnetic field than a short
>>("electric") dipole - - - -
>
>
> ----------
>
> Roy,
>
> What are your units of "sensitivity"?
>
> How are things to be measured (even hypothetically) and compared?
>
> In any case, the statement is meaningless unless loop diameter and dipole
> length are incorporated.
>
> Explanation please.
>
> A simple learned reference will not be of much use since 99.9 percent of
> readers will have no chance of ever getting their hands on it.
>
> Yours, Reg, G4FGQ
>
>
>
>
>

6014. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 07:08:01 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303212308.1e425a95@posting.google.com>
Source record: 122052
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

"JLB" <IHateSpam@nospam.net> wrote in message
news:<wZIea.58519$Dp.52527@fe01.atl2.webusenet.com>...
> > The external "metal toroid" is then the antenna, for it is on the
> > outside of that "toroid" that antenna currents must exist, and not
> > inside it. The gap is then the feedpoint, to which the internal wire
> > couples and then acts as a simple feedline. To best reject response
> > to electric fields, the gap must be properly positioned...
> >
>
> No, the gap is usually opposite the feed point and the sheild is grounded.
> It shields the loop from electric fields but it still responds to magnetic
> fields. This is common practice and the idea has been around for many
> decades. From personal experience I can say that it makes a tremendous
> difference in the sensitivity pattern of the loop, even when extremely close
> to other conductors (including AC house wiring).
>
> > References available on request.
> >
> Ok, what are they?

Johnson and Jasik, "Antenna Engineering Handbook," Second Edition,
section 5-4 (pg. 5-19), "Shielded-Loop Antenna."

King, Mimno and Wing, "Transmission Lines, Antennas and Wave Guides."
See section 47 of the Antennas chapter, around page 231-234. Original
copyright 1945; the edition I have is (c) 1965, a Dover reprint. In
fact, the edition I have shows the "shielded loop" on the front cover
of the book.

I'd suggest you check out those references before you say, "No."

As Roy says, the rejection of electric fields comes from symmetry. Of
course, for an electromagnetic wave, the electric and magnetic fields
are inseparable; it's the nearby electric fields which are rejected.
The "shield" may make it considerably easier to achieve good symmetry,
but I've seen lots of articles in amateur journals that show a
connection with terrible symmetry. They missed the point entirely.

Cheers,
Tom

6015. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 07:23:04 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303212323.6ad42eb1@posting.google.com>
Source record: 122053

Cindy <cindy.malone@nospam.com> wrote in message news:<3E7B29EB.6DB9724@nospam.com>...
> Hi,
>
> Try using a steel pan instead of the aluminum, magmount likes steel better.

. . . I only have one frying pan . . and I'm not giving up my morning
eggs for the sake of any stupid ham antenna.

> Also how long is the feedline ?

'Bout ten feet.

>Try coil up six turns 10" coil and could help rf.

'Snot a problem a "balun" can fix. There are two fixes: Move the
antenna farther away from the radio. Load ferrite beads onto every
cable attached to the radio; mic, power, data cable, coax. I'm too
cheap and lazy to go thru all that nonsense. Reducing the output to 5W
fixed everything with a punch of a button.

>
> bye

Dit-dit.

w3rv

>
> Brian wrote:
>
> > "Rickie" <rickiev@hotmail.com> wrote in message
news:<b59nh0$26kdqf$1@ID-89515.news.dfncis.de>...
> > > I am in need to purchasing a good and strong 2 meter antenna for the
> > > windows. I'm not allow to setup anything on the firescape or on the window,
> > > so I'll need something that I could remove when not in use.
> > >
> > > Any help would be great!
> >
> > I had the same basic problem.
> >
> > I bought the biggest throwaway aluminum foil "pan" I could find at a
> > supermarket. I flattened it and formed it around the old iron radiator
> > under the second floor window. I plopped a magmount antenna in the
> > center of the pan and connected it to my 2m mobile xcvr and fired it
> > up. At 50W output the radio went nuts, apparently my FT-1500M does not
> > like to be operated in an intense RF field without filtering the power
> > and mic cables. I reduced the power to 5W and can access ten repeaters

> > and two packet stations from this mediocre location in suburban
> > Philly. I've also done the same non-trick using aluminum foil on a
> > wooden TV table.
> >
> > Any magmount antenna on any aluminum foil "plane" should work.
> >
> >
> > > Thanks in advance,
> > > Rickie / KC2KQQ
> >
> > w3rv

6016. Helically wound dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 07:28:17 UTC
From: Qamun <qamun@noc.mach-nine.com>
Message-ID: <tdUea.314$NS3.17200@eagle.america.net>
Source record: 122054

What is a good source of information for helically wound antennas? More specifically, I am looking for information on helically wound dipoles or other helically wound horizontally polarized antennas.

NL7IW

6017. Re: Counterpoise ground for end-fed HF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 11:34:49 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E7C4A59.3F553A9E@cwis.net>
Source record: 122055

Dick,
But that's simple! It just has to be neither too long,
or too short. And since it's usually used over a fairly
broad range of frequencies, there's nothing all that exact
about it's length.
'Doc

6018. Re: Helically wound dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 12:37:27 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5hle7nap1@hercules.btinternet.com>
Source record: 122056

For analysis, design, performance of short helically-wound verticals and
horizontal dipoles, download in a few seconds from website below, programs -

HELICAL3.exe
MIDLOAD.exe
VERTLOAD.exe

See one-line descriptions of related programs on download page.

========================
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
========================

6019. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 15:12:20 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3E7C7D54.7080501@mwci.net>
Source record: 122057

William E. Sabin wrote:

> Bill Ogden wrote:
>
>> should I buy low-loss coax to improve my reception on 10 & 12
>> meters? (I will swap my self-supporting aluminum tower for a crank-up
>> tower as soon as the ground here is firm enough to do the work, and this
>> is a good time to think about changing the coax.)
>
> It is not true that a lossy coax contributes more thermal noise, for a
> given temperature, than a lower loss coax, but it does attenuate the
> signal, therefore decreases the signal-to-noise ratio.
>
> Bill W0IYH

For Amateur Radio work on the HF bands, a useful perspective on coax loss follows.

If a coax has a moderate loss (say 2 dB or less per 100 feet), its Z0 characteristic impedance changes from its "nominal" value and becomes slightly reactive. For practical Amateur Radio purposes at HF and for moderate (say 2:1 or less) values of standing waves, this small change can almost always be neglected. Also, the temperature of the coax, for purposes of calculating thermal noise, is measured in Kelvins. The temperature can be assumed to be 290K, with very little effect on the final results.

Under these "reasonable" conditions the coax can be thought of as a lossless coax in tandem with a lumped resistive attenuator that has a Z0 the same as the nominal value of the coax and the same attenuation as the actual coax. That is, the loss per foot of the coax, times the length in feet, is the value of the lumped attenuator.

The noise factor of a device, or element in a chain of devices, is based on the "available power" concept. For example, for a resistor the open-circuit noise voltage is

En = sqrt (4 k T R B)

If we square both sides and divide by 4 R, the noise power that is "available" from the resistor is

Pn(available) = En^2 / 4R = k T B

This available thermal noise power is also the thermal noise power that is available from the hypothetical attenuator. In other words the thermal noise power that is available from the attenuator is the same

for any value of attenuation (at a given temperature). The noise factor of the attenuator (that is, the degradation of signal to noise ratio) is identical to its value of attenuation because the signal power available from the attenuator is less, but the noise power available from the attenuator is the same.

Using this value of attenuator's noise factor and the available power gain idea, the Friis formula (e.g. see ARRL Handbook) when used correctly can be used to find the noise factor of a complete system of cascaded elements, such as an HF receiver that is operating at normal Ham Radio station temperatures.

In practice, at HF it is almost never necessary to "sweat" the approximations mentioned above. At frequencies where atmospheric and galactic noise are small, very low noise factors are important and coax loss can become high and things get tougher. Various publications (including the ARRL Handbook) go into more detail.

Bill W0IYH

>
>

6020. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 16:26:12 UTC
From: mark <markus@nospam.com>
Message-ID: <3E7C8EA1.637523CF@nospam.com>
Source record: 122058

Interesting,

I agree, would not want to bother about a fix,

would be more interested in protecting my body from 50W out within 10 feet or less.
so 5W is good idea.

Now is the signal out really 5W or much less ?

73

Brian Kelly wrote:

> Cindy <cindy.malone@nospam.com> wrote in message news:<3E7B29EB.6DB9724@nospam.com>...
> > Hi,
> >
> > Try using a steel pan instead of the aluminum, magmount likes steel better.
>
> . . . I only have one frying pan . . and I'm not giving up my morning
> eggs for the sake of any stupid ham antenna.
>
> > Also how long is the feedline ?
>
> 'Bout ten feet.
>
> >Try coil up six turns 10" coil and could help rf.
>
> 'Snot a problem a "balun" can fix. There are two fixes: Move the
> antenna farther away from the radio. Load ferrite beads onto every
> cable attached to the radio; mic, power, data cable, coax. I'm too
> cheap and lazy to go thru all that nonsense. Reducing the output to 5W
> fixed everything with a punch of a button.
>
> >
> > bye
>
> Dit-dit.
>
> w3rv
>
> >
> > Brian wrote:
> >
> > > "Rickie" <rickiev@hotmail.com> wrote in message
news:<b59nh0$26kdqf$1@ID-89515.news.dfncis.de>...
> > > > I am in need to purchasing a good and strong 2 meter antenna for the

> > > > windows. I'm not allow to setup anything on the firescape or on the window,
> > > > so I'll need something that I could remove when not in use.
> > > >
> > > > Any help would be great!
> > >
> > > I had the same basic problem.
> > >
> > > I bought the biggest throwaway aluminum foil "pan" I could find at a
> > > supermarket. I flattened it and formed it around the old iron radiator
> > > under the second floor window. I plopped a magmount antenna in the
> > > center of the pan and connected it to my 2m mobile xcvr and fired it
> > > up. At 50W output the radio went nuts, apparently my FT-1500M does not
> > > like to be operated in an intense RF field without filtering the power
> > > and mic cables. I reduced the power to 5W and can access ten repeaters
> > > and two packet stations from this mediocre location in suburban
> > > Philly. I've also done the same non-trick using aluminum foil on a
> > > wooden TV table.
> > >
> > > Any magmount antenna on any aluminum foil "plane" should work.
> > >
> > >
> > > > Thanks in advance,
> > > > Rickie / KC2KQQ
> > >
> > > w3rv

6021. Re: Loop Antenna questions I have done the experiemnt

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 17:32:22 UTC
From: "Marc H.Popek" <LVMarc@worldnet.att.net>
Message-ID: <G61fa.19026$ja4.1306990@bgtnsc05-news.ops.worldnet.att.net>
Source record: 122059
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

You can and do get a 180 phase reversal by switching the hot and ground lead!

I have taken this data Friday!

Marco

"Ben Bradley" <ben_nospam_bradley@mindspring.com> wrote in message news:3e7a20a0.16898067@65.82.44.187...
> In
>
sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna,
> Jim Weir <jim@rst-engr.com> wrote:
>
> >I do plan on doing the experiment myself, but before I get lost in the lab, I
> >thought I'd put this out for comment.
> >
> >Suppose there is a distant transmitter and antenna putting out a CW signal at 1
> >MHz.. Suppose further that I have a coil of wire to which I have attached a
> >phasemeter or oscilloscope with a reference antenna some distance from the coil
> >(i.e. not in the field of the coil) connected as the reference phase. It
> >matters little to me what the absolute phase difference is at this point.
> >
> >Let me now put the coil broadside to the incoming wave to maximize the amount of
> >signal. We will call the left end of the coil "ground" and the right end of the
> >coil "hot". We now get a reference phase reading and can, if we wish, adjust
> >the zeroing mechanism to put the waves in phase on the meter.
> >
> >Now without moving the coil, I swap the "ground" and "hot" wires going to the
> >meter. What happened to the phase? No change? 180° change? Mentally I can
> >argue for both results and I don't really know what to expect.
>
> This is technically a polarity inversion. For a constant sine wave
> signal, it will look identical to a phase shift of 180 degrees, but

> there IS a technical difference.
> The difference between polarity and phase becomes apparent when
> using different waveshapes such as sawtooth or rectangular
> (non-square). To show this you really need an oscilloscope (as you
> originally mentioned) rather than a phase meter.
>
> >Comments?
> >
> >Jim
>
> -----
> http://mindspring.com/~benbradley
>

6022. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 17:41:48 UTC
From: richardharrison@webtv.net
Message-ID: <5235-3E7CA05C-45@storefull-2317.public.lawson.webtv.net>
Source record: 122062

There is a difference in the rates of decline between near-field energies in the E&H fields. It is advantageous to use shielded antennas to reduce received noise, but I won`t argue the point. I`ll ignore Faraday shielding.

Consider a shielded loop with a shield gap opposite the feedpoint. It is symmetrical.

The form is two coax semicircles with exposed conductor in the gap.

Only current on the outside of the loop shield is coupled with the outside world. Current inside the shielded empire is shielded. It can`t directly communicate with the world outside. The "coax" shield blocks energy transfer through shield penetration anywhere except through the small gap. Skin effect means only energy conducted from the inside surface of the shield to the outside surface of the shield and vice versa, is via the butt-ends of the shields in the gap if through conduction.

Capacitively coupled energy via the exposed conductor in the gap is balanced at the loop`s feedpoint. Equal signal is connected by identical lengths of "coax" to either side of a balanced load, so it cancels in that load.

A small loop has a pattern null perpendicular to the plane of the loop. Current is significantly the same in magnitude and direction throughout the loop as seen perpendicular to the plane of the loop. Current on one side of the loop is balanced by current on the opposite side of the loop.

Seen from edge of the loop, there is a time difference in the signal between the near edge of the loop and the far edge of the loop due to the time taken for the signal to cross the diameter of the loop. There will be a differential signal across the loop gap for a signal traveling in the direction of the plane of the loop.

Signal picked up on the outside of the loop shield must be conducted to the loop terminals via the path around the shield butt-ends. A transmitted signal at the loop feedpoint must get to the radiating outer shield surface by the same path.

Directly opposite the gap in the loop shield is a neutral point for differential voltage in the loop. So, the loop can be grounded here.

Best regards, Richard Harrison, KB5WZI

6023. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 17:55:25 UTC
From: "Marc H.Popek" <LVMarc@worldnet.att.net>
Message-ID: <hs1fa.19053$ja4.1308612@bgtnsc05-news.ops.worldnet.att.net>
Source record: 122060
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Funny how tricky the loop and all this field business can be!

The "shielded loop" idea eventually does not work exactly cancel out the E-field component. Symmetry is to nebulous a thing to rely on for the E field on one shield to be 180 phased with the field on the other shield is magic and will not work over an appreciable band.

What can work at this juncture, is to use differential signal processing to produce a voltage signal proportionate to "only" the magnetic field vector or the B- Field. So what's this mean???

You form the coil and do not ground one end or the other at all. You maintain two signals, Va (one end of the coil) and Vb the other. It can be shown ((-:) that Va-Vb produces a signal that is only a function of B-field.

How do you make a Va-Vb function? a transformer Balanced to unbalanced, or an active differential amplifier circuits. Both paths will be followed as the transformer will "easier" (all passive) will have frequency bandwidth limitation due to the transformer itself! The difference amplifier with transistors with an ft >25 GHz, should be able to provide a nice wide band subtraction and single ended output.. then the trick is fitting it all into a 1/4 copper pipe and swaglock into the vacuum diode!

Marc

"Jim Thompson" <Jim-T@analog_innovations.com> wrote in message news:c8nm7vkctv5942npk5e6qhni3ae1vcj056@4ax.com...
> On 21 Mar 2003 10:31:51 -0800, k7itm@aol.com (Tom Bruhns) wrote:
>
> >Repeating Decimal <SalmonFly@attbi.com> wrote in message news:<BAA00B6F.46CC9%SalmonFly@attbi.com>...
> >> in article 9tfl7vo38da3sph3uumb79g2qc7e2jglcm@4ax.com, Jim Weir at
> >> jim@rst-engr.com wrote on 3/20/03 11:33 PM:
> >>
> >> > A loop is a single turn coil. However, for argument sake, let's talk about a
> >> > multiturn loop or coil.
> >>
> >> Not so.
> >>
> >> They are basically the same thing. If the diameter of the winding is
> >> considerably greater than the axial length of the winding, there is a
> >> tendency to call that a loop. What would be the advantage of having only one

> >> turn?
> >>
> >> One advantage of a loop is that it can be almost entirely enclosed
within a
> >> metal toroid. This provides electrostatic shielding for the loop. It is
> >> necessary, however, to provide a circumferential gap so that the coil
is not
> >> shielded completely from the field it is trying to measure.
> >
> >The external "metal toroid" is then the antenna, for it is on the
> >outside of that "toroid" that antenna currents must exist, and not
> >inside it. The gap is then the feedpoint, to which the internal wire
> >couples and then acts as a simple feedline. To best reject response
> >to electric fields, the gap must be properly positioned...
> >
> >References available on request.
> >
> >Cheers,
> >Tom
>
> I did it with a 8" diameter loop made of 1/2" copper pipe, and used a
> insulated pipe fitting(**) to provide the "gap".
>
> (**) Readily available at Home Depot, etc., used to connect copper to
> iron without electrolysis problems.
>
> To make winding easy I sawed a slot in the outer edge of the loop
> making winding trivial, squeezed the slot closed and soldered it.
>
> ...Jim Thompson
> --
> | James E.Thompson, P.E. | mens |
> | Analog Innovations, Inc. | et |
> | Analog/Mixed-Signal ASIC's and Discrete Systems | manus |
> | Phoenix, Arizona Voice:(480)460-2350 | |
> | Jim-T@analog_innovations.com Fax:(480)460-2142 | Brass Rat |
> | http://www.analog-innovations.com | 1962 |
>
> For proper E-mail replies SWAP "-" and "_"
>
> I love to cook with wine. Sometimes I even put it in the food.

6024. Antenna Mart SW-5

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 18:09:08 UTC
From: Gene McCalmont <gmcalmo@direcway.com>
Message-ID: <VF1fa.58400$NV.1327841@news.direcpc.com>
Source record: 122061

I have an Antenna Mart SW-5 and need to repair the control box power supply. Unfortunately, I have been unable to locate a schematic for this older unit. In particular, I need the power resistor value and rating or at least the voltage rating for the switching stepper motor. The control box uses no transformer but instead uses a 40mfd electrolytic and single diode through a power resistor to achieve the proper voltage drop to the motor. If I knew the proper stepper motor control voltage, I could build a power supply. Any help would be appreciated. Please email to WD5DDW@arrl.net. Thanks and best regards, Gene

6025. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 18:32:44 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <10ap7v4e7c7rgi37pfqq4hncm73ebvg53f@4ax.com>
Source record: 122063

On Fri, 21 Mar 2003 15:08:06 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Yes, Terman (in _Radio Engineering_) explains that the purpose of the
>shield is to effect loop balance (i.e., reduction of sensitivity to
>common mode, or unbalanced, excitation), as I said. It's unfortunate
>that Terman refers to the shield as an "electrostatic shield"
snip
>"The operation of the shielded loop is explained popularly by first
>stating the the desired loop current is due to the magnetic field, the
>undesired up-and-down current to the electric field, and then
>maintaining that the metal shield cannot be penetrated by the electric
>field but can be penetrated by the magnetic field. All these statements
>are incorrect in the light of fundamental electromagnetic principles."
>

Hi Roy,

There is obviously a middle ground explanation that is, in turn,
mis-interpreted as decried by the footnote quoted above.

That problem lies in the term "electrostatic shield" as you noted.
This "electrostatic" business is simply your observation concerning
Common Modality, a very poorly handled concept in this group and
easily the genesis of the mis-interpretations.

With caution, I would suggest there are two fields being discussed by
inference when the term "electrostatic shield" is employed. In other
words, the sensor (antenna in this case) is not remote enough to
escape the coupling effects of being in a nearby hi-tension region
(one of those fields) that creates a gradient of energy by virtue of
its geometry encompassing the sensor (antenna). Being "electrostatic"
it is not a propagating field (thus the static of "electrostatic");
60Hz interference is classic in that regard given that its wavelength
is outrageously huge in contrast to the source's physical size making
the notion of radiating this energy absurd, and yet considerable
voltage gradients persist by sheer brute force in the proximity of the
excitation source.

The faraday shield or cage operates to short out those "static" fields
while being entirely transparent to radiation non-"static" fields. It
seems obvious that a 60Hz disturbing source in near proximity, if
large enough, would couple energy to a far greater distance by this
action than by what could possible be detected as arriving as
radiation of the same frequency (which we are completely immersed in,
and entirely insensate to it). If some roll their eyes at this notion

of my invented fields, then blame it as a near-field problem (which could be considerable at frequencies below 10KHz).

73's
Richard Clark, KB7QHC

6026. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 18:43:42 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e7cad66.131037406@news.galilei.com>
Source record: 122064

Hi Dennis

To obtain FCC Type Acceptance on any consumer transmitting device has always required the device to be reasonably user tamper proof in regards to the transmiter section.

The FCC is not going to waste its time tracking down a guy with a longer rubber duckie or window mount or roof mount antenna, unless of course his installation is interferring with other radio services.

Just like CB, it won't be long before illegal amplifiers are used to boost the signal to massive antenna's if you give the unlicensed users too much leeway.

I don't have the manufacturers regulations books to check them, but most manufactured cellualar equipment is designed to prevent mixing and matching of components related to the transmission of a signal. Which is how one device may get FCC acceptance and another identical product does not.

TTUL
Gary

6027. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 18:57:14 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <ntbp7v8ab7kq6dja1ml0n7ae18g6b6k3l9@4ax.com>
Source record: 122065
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

On Fri, 21 Mar 2003 22:52:21 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>
>The curious thing is that, while the dipole field impedance is high
>close to the dipole, and low close to the loop, in both cases it
>overshoots 377 ohms by a considerable amount, reaching a peak (lowest Z
>for the dipole and highest for the loop) at about 18 meters, then
>asymptotically approaches 377 ohms from the "wrong side" beyond that. At
>all distances of 12 meters (about 1/8 wavelength) and beyond, the E/H
>ratio of the loop is actually higher than that of the dipole! That was
>the basis for my original statement. Whatever might be said about the
>"sensitivity" of a "magnetic" loop to E and H fields, it certainly can't
>be said to be more sensitive to H fields, or less sensitive to E fields,
>than a small dipole, at any distance greater than about 1/8 wavelength.

Hi Roy,

If anything, your work contributes to the notion of these "notable"
differences rather than eliminates them. You forcefully detail how
different the short dipole is from a small loop to exactly the same
degree as offered by CFA/EH proponents as that being its boon - even
if they invert the rationale of what constitutes the sensitivity.
This is to say, that if they are entirely wrong about a magnetic
antenna being sensitive to the magnetic field (something you reject
and offer compelling numbers as evidence); they do have a point about
the magnitude of difference (they are not entirely wedded to the
principle as they are the effect - if in fact that effect is not
another figment of wish fulfillment).

The argument about being less sensitive to neighborhood noise for
magnetic antennas, small loops, or loops in general, seems to be
justified by your data supporting very different E/H ratios out to
about 10M, which for me is easily the most disruptive region to any
antenna in a noisy neighborhood and makes that case in some sense.

It seems to me that the difference applies only to situations where
that first 10M is significant, and to what degree coupling of
interference within that region becomes meaningful.

73's
Richard Clark, KB7QHC

6028. Re: Easy take down HF Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 21:07:04 UTC
From: G&R <spam@limbo.hell>
Message-ID: <Tf4fa.7597$K37.1080120@news20.bellglobal.com>
Source record: 122066

Hi Nige,

An antenna that you may consider is the Baby Boomer Quad by Degen Designs.

www.degendesigns.com

If you have any questions, please call me or drop me an email.

73 Guenther VE3CVS
info@degendesigns.com

"Nige" <nomailthanks@ntlworld.com> wrote in message
news:fh5ea.2972$ug.588@newsfep4-winn.server.ntli.net...
>
> "Nige" <nomailthanks@ntlworld.com> wrote in message
> news:Wc5ea.2971$ug.357@newsfep4-winn.server.ntli.net...
> > I want to buy an HF beam that is going to be used for portable use. It
> > needs to be able to stand up to being put up and taken down several
times
> a
> > week. It will work on 10, 20 and 40 metres and have boom length of about
> 20
> > snip
>
> Oops. Embarassing mistake. Should be 10, 15 and 20 metres :)
>
>

6029. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 21:15:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7pkjv5cmnvmee@corp.supernews.com>
Source record: 122067
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Richard Clark wrote:

> If anything, your work contributes to the notion of these "notable"
> differences rather than eliminates them. You forcefully detail how
> different the short dipole is from a small loop to exactly the same
> degree as offered by CFA/EH proponents as that being its boon - even
> if they invert the rationale of what constitutes the sensitivity.
> This is to say, that if they are entirely wrong about a magnetic
> antenna being sensitive to the magnetic field (something you reject
> and offer compelling numbers as evidence); they do have a point about
> the magnitude of difference (they are not entirely wedded to the
> principle as they are the effect - if in fact that effect is not
> another figment of wish fulfillment).

My understanding of the CFA/EH antenna is undeniably vague, but I think it goes something like this: The E and H fields are created independently, one by a capacitor-like part of the antenna and the other by a coil-like part of the antenna. This, as I said and as many others have pointed out, can't be done. Creation of a time-varying E field always results in a time-varying H field, and vice-versa. The E and H fields thus "independently" created are done so in the ratio of 377 ohms. This being the ratio of the the components in the far field, the direct synthesis results in the lack of a near field. This lack of near field is credited somehow with the magical properties of these antennas (high efficiency despite small size) by mechanisms that have never been clear to me. At any rate, these wonderful properties have never been demonstrated with either believable measurements or modeling despite more than a decade of hype, so it sure looks like they're fiction also. The EH antenna further distinguishes itself by requiring a magic inductor whose current at one terminal is shifted in phase 90 degrees from the current at the other terminal, adding yet another layer of impossibility.

If I've misinterpreted the explanations for how these things are supposed to work, I apologize -- it wasn't intentional.

> The argument about being less sensitive to neighborhood noise for
> magnetic antennas, small loops, or loops in general, seems to be
> justified by your data supporting very different E/H ratios out to
> about 10M, which for me is easily the most disruptive region to any
> antenna in a noisy neighborhood and makes that case in some sense.

It might. Remember, though, that this is constant in terms of wavelength, so the range drops by a factor of two at twice the frequency. (But on the other hand, the range will be greater at 160

meters.) Also, note that the difference isn't very great even at a distance of 10 meters. You have to get very close indeed to see a truly major difference. I suspect that major differences in interference rejection are as likely to be due to differences in balance (causing better or worse nulls) or polarization.

> It seems to me that the difference applies only to situations where
> that first 10M is significant, and to what degree coupling of
> interference within that region becomes meaningful.

Yes, that's the conclusion I reach.

Roy Lewallen, W7EL

6030. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 21:20:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7pksfm9r2ii72@corp.supernews.com>
Source record: 122068
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Does this Va - Vb signal remain a function of only the B field in all directions and polarizations? That is, is it totally insensitive to an E field from all directions and of all polarizations?

Roy Lewallen, W7EL

Marc H.Popek wrote:
> Funny how tricky the loop and all this field business can be!
>
> The "shielded loop" idea eventually does not work exactly cancel out the
> E-field component. Symmetry is to nebulous a thing to rely on for the E
> field on one shield to be 180 phased with the field on the other shield is
> magic and will not work over an appreciable band.
>
> What can work at this juncture, is to use differential signal processing to
> produce a voltage signal proportionate to "only" the magnetic field vector
> or the B- Field. So what's this mean???
>
> You form the coil and do not ground one end or the other at all. You
> maintain two signals, Va (one end of the coil) and Vb the other. It can be
> shown ((-:) that Va-Vb produces a signal that is only a function of
> B-field.
>
> How do you make a Va-Vb function? a transformer Balanced to unbalanced, or
> an active differential amplifier circuits. Both paths will be followed as
> the transformer will "easier" (all passive) will have frequency bandwidth
> limitation due to the transformer itself! The difference amplifier with
> transistors with an ft >25 GHz, should be able to provide a nice wide band
> subtraction and single ended output.. then the trick is fitting it all into
> a 1/4 copper pipe and swaglock into the vacuum diode!
>
> Marc

6031. group post Test

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 21:34:55 UTC
From: Lex-Lutor <lex-lutor@post.hinet.hr>
Message-ID: <b5il9k$c8jd$1@as201.hinet.hr>
Source record: 122069

[No readable article body recovered]

6032. Where to find teflon coax and other things ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 21:36:35 UTC
From: Lex-Lutor <lex-lutor@post.hinet.hr>
Message-ID: <b5ilcp$cja8$2@as201.hinet.hr>
Source record: 122070

Hi,

I'm looking where to find or to buy next items:

- Semi-rigid coax or rigid coax

- low impedance Teflon coax (to make broadband transformers)

- other good resources to make some FM amplifiers 50-100 MHz (300-600W)

- ferrite breads and cores

Thanks !

6033. Where to find small rigid coax and other items ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 22:16:35 UTC
From: Lex-Lutor <lex-lutor@post.hinet.hr>
Message-ID: <b5inc3anu1@xuxa.iecc.com>
Source record: 122071
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.broadcasting

Hi,

I'm looking where to find or to buy next items:

- Semi-rigid coax or rigid coax

- low impedance Teflon coax (to make broadband transformers)

- other good resources to make some FM amplifiers 50-100 MHz (300-600W)

- ferrite breads and cores

Thanks !

6034. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 22:18:25 UTC
From: richardharrison@webtv.net
Message-ID: <26606-3E7CE131-102@storefull-2314.public.lawson.webtv.net>
Source record: 122073

Jim Weir wrote:
"Let me now put the coil (loop) broadside to the incoming wave to maximize the amount of signal."

You will likely be disappointed as broadside placement minimizes signal in a small loop. Point the edge of the loop at the signal.

Jim also wrote:
"---I swap the "ground" and "hot" wires going to the (phase) meter. What happened to the phase---?"

It inverts.

Anyone familiar with a broadcast phase monitor such as the once highly popular RCA WM-30A, used by shortwave and medium wave broadcasters, would have seen this. There is a "sense" button on the phase meter. Pushing this button blanks half the displayed view of the X-Y circle when seen as closed or as an edge view. This makes a quadrant pointer which indicates one of 4 corners (0-90 deg. etc.). Reversing polarity of a signal, flips the quadrant.

Best regards, Richard Harrison, KB5WZI

6035. Re: Where to find teflon coax and other things ???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 22:26:28 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <oq5fa.203183$S_4.114912@rwcrnsc53>
Source record: 122072

"Lex-Lutor" <lex-lutor@post.hinet.hr> wrote in message
news:b5ilcp$cja8$2@as201.hinet.hr...
> Hi,
>
>
>
> I'm looking where to find or to buy next items:
>
> - Semi-rigid coax or rigid coax
>
> - low impedance Teflon coax (to make broadband transformers)
>
> - other good resources to make some FM amplifiers 50-100 MHz (300-600W)
>
> - ferrite breads and cores

Communications Concepts-Dayton Ohio.

W4ZCB

6036. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 22:36:32 UTC
From: richardharrison@webtv.net
Message-ID: <26606-3E7CE570-103@storefull-2314.public.lawson.webtv.net>
Source record: 122074

Roy, W7EL wrote:
"The E & H fields are created independently, one by a capacitor-like
part of the antenna and the other by a coil-like part of the antenna.
This, as I said and as many others have pointed out, can`t be done."

I know nothing of the CFA / EH antenna. I do know that you can easily
separate the E & H fields. Capacitive coupling eliminates the H field. A
Faraday shield between transformer coils eliminates the E field.

Best regards, Richard Harrison, KB5WZI

6037. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-22 23:50:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7ptm62usgc2d3@corp.supernews.com>
Source record: 122075

We've had this discussion before. I encourage anyone interested in the topic to do a google search and read the earlier postings.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy, W7EL wrote:
> "The E & H fields are created independently, one by a capacitor-like
> part of the antenna and the other by a coil-like part of the antenna.
> This, as I said and as many others have pointed out, can`t be done."
>
> I know nothing of the CFA / EH antenna. I do know that you can easily
> separate the E & H fields. Capacitive coupling eliminates the H field. A
> Faraday shield between transformer coils eliminates the E field.
>
> Best regards, Richard Harrison, KB5WZI
>

6038. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 00:08:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5ittr$sv3$1@hercules.btinternet.com>
Source record: 122076

> I know nothing of the CFA / EH antenna. I do know that you can easily
> separate the E & H fields. Capacitive coupling eliminates the H field. A
> Faraday shield between transformer coils eliminates the E field.
>
> Best regards, Richard Harrison, KB5WZI

==========

Richard, that's the most sensible, understandable, practical, plain English comment on the subject for many days.

Do you think you could get Bush and Blair to take an interest. It might take their minds off solving the World's overpopulation problem.

Reg

6039. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 00:26:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7pvprd35p4q01@corp.supernews.com>
Source record: 122077

Isn't it unfortunate that so many sensible, understandable, practical, plain English statements (like Richard's) are false. They're sure a lot easier to understand than all that complicated stuff in the textbooks. But I suppose that's exactly what makes it so easy to sway the masses to just about any point of view you'd like to convey.

In this country, we call 'em "sound bites". Very effective.

Roy Lewallen, W7EL

Reg Edwards wrote:
>>I know nothing of the CFA / EH antenna. I do know that you can easily
>>separate the E & H fields. Capacitive coupling eliminates the H field. A
>>Faraday shield between transformer coils eliminates the E field.
>>
>>Best regards, Richard Harrison, KB5WZI
>
>
> ==========
>
> Richard, that's the most sensible, understandable, practical, plain English
> comment on the subject for many days.
>
> Do you think you could get Bush and Blair to take an interest. It might take
> their minds off solving the World's overpopulation problem.
> ---
> Reg
>
>

6040. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 02:08:54 UTC
From: richardharrison@webtv.net
Message-ID: <26607-3E7D1736-41@storefull-2314.public.lawson.webtv.net>
Source record: 122078

Reg wrote:
"Do you think you could get Bush and Blair to take an interest?"

B&B are occupied with an unprecedented war. It`s much more complicated than a quest for oil or a holy crusade. All the many actors have their diverse reasons.

The big provocation has festered ever since WW-2 ended. It`s the partition of Palestine.

It`s long been clear that the same political actions in the infected region were producing the same results.

The players have tired of the hands they`ve been delt and are reshuffling and redealing. A new deal is long overdue, and wanted in the worst way. I just hope, they now get a new deal in the best available way.

Best regards, Richard Harrison, KB5WZI

6041. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 02:40:18 UTC
From: Jackie <buzzygirl@REMOVETHIS.attbi.com>
Message-ID: <l89fa.207869$sf5.120795@rwcrnsc52.ops.asp.att.net>
Source record: 122079

"Brian Kelly" <kelly@dvol.com> wrote in message
news:d22b54c3.0303202315.4cad41cf@posting.google.com...

> Any magmount antenna on any aluminum foil "plane" should work.

I have also used a mag-mount 2 meter antenna set on a cookie sheet, with
good results indoors.

Jackie
KC0ODY

6042. Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 02:49:17 UTC
From: Jackie <buzzygirl@REMOVETHIS.attbi.com>
Message-ID: <Ng9fa.204158$6b3.576759@rwcrnsc51.ops.asp.att.net>
Source record: 122080

Hi there,

I'm getting ready to set up a 5 band vertical antenna and I'm thinking ahead to the upcoming storm season. Here in the Midwestern US, we can get some pretty nasty thunderstorms, and though my lot has lots of trees that're taller than my 5-BTV is, I want to take some precautions to keep lightning and static charge far from the house.

I am wondering what sort of lightning arrestors you folks use and recommend.

I will, of course, be grounding the antenna well (to a metal pole that's sunk quite far down into the ground) but I should probably use something to arrest electrical spikes between the feedline and antenna... unless there is something out there that attaches differently, and works better than the ones I've found at the local radio store. Forgive me in advance for not knowing a whole lot about these items- I have heard them referred to and know people use 'em, but since I'm pretty new to amateur radio, I don't know which are best to use, so I thought I'd go to the source (actual hams). :-)

TIA,

Jackie kc0ody

6043. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 03:56:51 UTC
From: richardharrison@webtv.net
Message-ID: <19036-3E7D3083-22@storefull-2318.public.lawson.webtv.net>
Source record: 122082

Roy, W7EL wrote:
"In this country, we call `em "sound bites"."

I`ll elaborate.

If magnetic lines of force from the current in one circuit couple to another circuit inducing a voltage in it, the coupling factor is called a "mutual inductance".

Electric lines of force arising in one circuit can fall upon another circuit. Electrons in the second circuit may be repelled by those in the first circuit without any interconnecting wire. this extended charge coercion and force transmission through the insulation of free-space is called "displacement" or "capacitive" current.

We can and will allow either mutual inductive or capacitive coupling and deny the other. We use shields (screens) to control coupling.

For inductive coupling without capacitive coupling, we can use a "Faraday screen". This screen is used between two inductively coupled coils. The screen is special. In this case it may be shaped like a conductive fork with its handle buried up to the tines in the grounding material.

Coils are on the same axis and close on either side to the perpendicular screen. Inductive coupling is not affected by the screen. The open-circuit tines deny a completed circuit for current circulation through the tines. Counter-EMF is not generated in the tines to oppose magnetic coupling through the screen. However, capacitive lines must treminate on the tines and are shorted to ground. This blocks capsacitive coupling between the coils.

Broadcast stations use Faraday screens to block capacitive coupling of harmonics to their antennas. They make ideal lightning protectors too.

It is obvious that a capacitive plate can be placed inside a continuous coil shield can to extract r-f by way of a wire brought out through a hole in the can. The can blocks inductive coupling to the coil inside, but the capacitive plate permits capacitive input or output.

That`s the long-form return.

Best regards, Richard Harrison, KB5WZI

6044. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 03:58:03 UTC
From: KC7ZRU - Tate <73kc7zru73@arrl.net>
Message-ID: <3E7D30CA.9080409@arrl.net>
Source record: 122081

Jackie wrote:
> Hi there,
>
> I'm getting ready to set up a 5 band vertical antenna and I'm thinking ahead
> to the upcoming storm season.

...

>
> TIA,
>
> Jackie kc0ody
>

Jackie,

I highly recomend reading up first:

http://www.polyphaser.com/ppc_PEN1016.asp (Ham radio station protection)

http://www.polyphaser.com/ppc_PEN1020.asp (What is lightning?)

http://www.polyphaser.com/ppc_PEN1021.asp (lightning protection facts
and falicies)

All found at:

http://www.polyphaser.com/ppc_pen_home.asp

One VERY good start point.

Good luck and enjoy!!

As one of the guys I work with has pointed out, "After that lightning
has jumped damn near 2 miles of air gap - what the hell good is that 6"
of gap between your disconnected antenna cable and grounded radio going
to do for you?"

73

--
"The Dungeon" online at http://go.to/kc7zru
Casper, WY | CARC Repeater
DN62tt | 146.940-
http://www.trib.com/~carc

6045. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 05:59:45 UTC
From: James <james27613nospam@att.net>
Message-ID: <3E7D4D4E.8BF6E674@att.net>
Source record: 122083
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

A member of our radio club posted the same question.

another member who works for nortel answered that many newer telco no longer run copper from customer to central office where pots always worked, batteries lasted days,
and standby generators could power the pots as long as necessary.

Now most lines are off a T1 or better, all fiber optical and the small batteries at the
circuits boxes are limited capacity and the phones go out within a short time.
There the copper runs to the customer.

One plus to dropping the pots is saving money, and with all the taxes and fcc fees for the pots, long distance telco and the cell phone the fees and taxes addup to a lot of money
that can buy a large cellphone package with lots of air time and longdistance included.

regards.

Joseph wrote:

> On Wed, 19 Mar 2003 18:37:56 GMT, Spray On <aerosol@can.exxon.au>
> wrote:
>
> >You can do this, but you should not replace your landline telephone service
> >with cellular service. There are numerous reasons not to do this. If there is
> >a problem with the cellular service you will not be able to contact any one in
> >a emergency. In a natural disaster or other emergency if you call 911 you will
> >not have caller location and ID and the police or fire department may not be
> >able to locate where you are at if you are disabled.
> > If you have analog cell phone then people with receivers capable of receiving
> >those frequencies will be able to easily monitor all your telephone calls.
> > Some type of radio frequency interference a week or month from now may
> >disable your cellular service.
>
> Most people do not use analog cellular service any longer. As for
> location there are new standards being put into place that will
> triangulate your location within 300 meters. And there's no guarantee
> that your regular phone won't ever go out either. You have to look at
> the limitations and decide what is right for you. I have been without
> regular land line service for almost a year and haven't had any
> problems at all.
>
> -

> Replies are seldom read. Please reply in the group

6046. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 06:20:58 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E7D5247.A133EABC@att.net>
Source record: 122085

Richard Harrison wrote:

> Roy, W7EL wrote:
> "In this country, we call `em "sound bites"."
>
> I`ll elaborate.
>
> If magnetic lines of force from the current in one circuit couple to
> another circuit inducing a voltage in it, the coupling factor is called
> a "mutual inductance".
>
> Electric lines of force arising in one circuit can fall upon another
> circuit. Electrons in the second circuit may be repelled by those in the
> first circuit without any interconnecting wire. this extended charge
> coercion and force transmission through the insulation of free-space is
> called "displacement" or "capacitive" current.
>
> We can and will allow either mutual inductive or capacitive coupling and
> deny the other. We use shields (screens) to control coupling.
>
> For inductive coupling without capacitive coupling, we can use a
> "Faraday screen". This screen is used between two inductively coupled
> coils. The screen is special. In this case it may be shaped like a
> conductive fork with its handle buried up to the tines in the grounding
> material.
>
> Coils are on the same axis and close on either side to the perpendicular
> screen. Inductive coupling is not affected by the screen. The
> open-circuit tines deny a completed circuit for current circulation
> through the tines. Counter-EMF is not generated in the tines to oppose
> magnetic coupling through the screen. However, capacitive lines must
> treminate on the tines and are shorted to ground. This blocks
> capsacitive coupling between the coils.
>
> Broadcast stations use Faraday screens to block capacitive coupling of
> harmonics to their antennas. They make ideal lightning protectors too.
>
> It is obvious that a capacitive plate can be placed inside a continuous
> coil shield can to extract r-f by way of a wire brought out through a
> hole in the can. The can blocks inductive coupling to the coil inside,
> but the capacitive plate permits capacitive input or output.
>
> That`s the long-form return.

BUT- neither eliminates either field from the antenna's field of radiation. They
just eliminate either E or H from coupling into the antenna circuit. The radiation field
will still include both E and H fields.
I remember when I was a kid we used a Faraday shield at the transmitter output
to keep from capacitively coupling harmonic energy into the antenna's feedline.
I don't think it affected what the antenna radiated otherwise.

Dick

6047. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 06:21:38 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E7D5272.3050801@mwci-news>
Source record: 122084

Richard Harrison wrote:
>
> A Faraday shield between transformer coils eliminates the E field.
>

Not true.

The Faraday shield eliminates (or greatly reduces)
direct capacitive coupling from one coil to the
other. The E field is electromagnetically
recreated intact on the other side.

A time-varying magnetic field always generates a
time-varying E field.

At high frequencies, a practical problem is to
establish a credible "ground" for the Faraday
shield. A ground connection on a schematic diagram
often does correspond to a true ground in the
hardware because of lead-wire impedance.

Bill W0IYH

Bill W0IYH

6048. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 08:51:21 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <3Wpr8xBJWXf+EA+x@ifwtech.co.uk>
Source record: 122089

William E. Sabin wrote:
>
>At high frequencies, a practical problem is to establish a credible
>"ground" for the Faraday shield. A ground connection on a schematic
>diagram often does correspond to a true ground in the hardware because
>of lead-wire impedance.
>
Exactly - so when we have achieved a balanced loop, what are we supposed
to "ground" the mid-point *to*? And how do we know when it's balanced?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

6049. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 09:46:52 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e7d828e$1_2@news.vo.lu>
Source record: 122086

Hello Jackie !
I cannot really help you, but I searching - in case of....

Thierry
ON1SKY

"Jackie" <buzzygirl@REMOVETHIS.attbi.com> wrote in message
news:Ng9fa.204158$6b3.576759@rwcrnsc51.ops.asp.att.net...
> Hi there,
>
> I'm getting ready to set up a 5 band vertical antenna and I'm thinking
ahead
> to the upcoming storm season. Here in the Midwestern US, we can get some
> pretty nasty thunderstorms, and though my lot has lots of trees that're
> taller than my 5-BTV is, I want to take some precautions to keep lightning
> and static charge far from the house.
>
> I am wondering what sort of lightning arrestors you folks use and
recommend.
>
> I will, of course, be grounding the antenna well (to a metal pole that's
> sunk quite far down into the ground) but I should probably use something
to
> arrest electrical spikes between the feedline and antenna... unless there
is
> something out there that attaches differently, and works better than the
> ones I've found at the local radio store. Forgive me in advance for not
> knowing a whole lot about these items- I have heard them referred to and
> know people use 'em, but since I'm pretty new to amateur radio, I don't
know
> which are best to use, so I thought I'd go to the source (actual hams).
:-)
>
> TIA,
>
> Jackie kc0ody
>
>
>

6050. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 10:03:51 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e7d8688$1_2@news.vo.lu>
Source record: 122087

"KC7ZRU - Tate" <73kc7zru73@arrl.net> wrote in message
news:3E7D30CA.9080409@arrl.net...
> Jackie wrote:
> > Hi there,
> >
> > I'm getting ready to set up a 5 band vertical antenna and I'm thinking
ahead
> > to the upcoming storm season.
>
>... snip
>
> As one of the guys I work with has pointed out, "After that lightning
> has jumped damn near 2 miles of air gap - what the hell good is that 6"
> of gap between your disconnected antenna cable and grounded radio going
> to do for you?"
>

Hi,
That remind me that one day the lightning stoke a few meters from the house
of my friend. It received such a static that most of his electronics was
damaged because all his devices were connected to the power line during the
thunder : TV, hamshack (RTX, PA) and a microw. oven. He told me that smoke
get out of his shack (cabling, etc) ...

NB about electrical devices.
If US works as European standards, or so, it is good to know that
A differential circuit breaker (disjoncteur diff&#65533;rentiel) only protect
people whereas a circuit breaker (simple) protects also assets in
short-circuiting when the current exceed a threshold.
The solution to use a lower amp is useless because there are always leaking
by induction.

Thierry
ON1SKY

>
> 73
>
> --
> "The Dungeon" online at http://go.to/kc7zru
> Casper, WY | CARC Repeater
> DN62tt | 146.940-
> http://www.trib.com/~carc
>

6051. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 11:28:20 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e7d9a59$1_2@news.vo.lu>
Source record: 122088

Hi,

I have found some more infrtomation:

Speaking in general, for all readers, we can say there are various aspects to consider dealing with grounding an antenna.

1. the antenna image

2. the flux of electrostatic charges

3. the people and assets electrical protection

Then one have to make a difference between the electrical protection provided by your house electrical circuit and a radioelectrical protection suited for HF needs of an ham radio.

At last all depend of the kind of antenna you are using.

Speaking about radio, we have to define radioelectrical ground : from my radio cursus I learnt that this is the conductive plan in which the antenna is reflected. That can be a true ground, radians matched to the working frequencies or even (usually) an artificial ground plane made of numerous electrical wire (some use tins also, Hi) place on the air or at ground level.

Kind of Antenna : a symmetrical antenna does not request a ground to work properly as its provides its own imlage by symmetry. This concern all lamnda/2 longwires, a levy or even a Yagi using radiator that are also symmetrical.

Even an asymmetrical antenna like a ground plane creates its own image through its radians and does not request a ground.

This way of working are mainly used in HF and upper frequencies where most antenna do not request a ground.

Grounding:

The problem of grounding an antenna mainly occur when hams want to work on the lower bands with vertical standing at ground level, with longwires, windom and other oldies.
The objective in building an antenna is to get a excellent "output" by designing ita such a way we can find a symmetry in the ground (using a wet surface, grass, etc, working near the sea, etc). The goal is to find the ground as less resistive as possible and as close as the antenna base as possible.

As we all have seen mobile antenna, you will see that the ground is never over 1/10th of the working frequency from the antenna base. This value is valid for all verticals.

NB. There is also the problem of the ground itself, how it affect the radiation pattern of the antenna, how it radiates in space, depending of its output.

Then there is the way that the ground plug flow out in the ground electrostatic charges accumulated by the antenna and/or the pylon/mast.

You must avoid that the antenna and near area get a too high potential (several thousands volts) due to thundery discharges (but also under strong wind of snow). You have to find a way to conduct these charged particles to the ground in offering the least resistivity as possible. Good new there is no critical length as for grounding (see previous).

The bad and good practices :

We have to know that when the lighting strike directly a device, the lightning conductor is subject to huge currents that exceed dozen of thousands amperes. (+20 kA). Induction generated in electrical circuits of houses can generate voltage exceeding >100 kV. Therefore such a power can easily destroy (damage or even burn to smoke) concrete but also your electronics and up to dozen meters away from the strike.

But the antenna itself does no more attract the lightning than any other object. In fact, like water, you all know that voltage looks for the shortest path to reach the ground, and if you make it its path easy in providing it a conductor, it will you please of course in using it !

Therefore your state or county has probably ruled some regulations for those who want to erect a pylon in their garden and probably even for short mast placed on the balconery. So ask first for some information from your local authority before erecting a large or small antenna.

So we do not improvise a ground plug. Worst a lighrning conductor (paratonnerre) has nothing to do with a domestic grounding, as in the case of lightning we speak of HIGH frequencies. A post or short mast burried in the ground is useless (mainly if it is thin and not made of Cu). It is mandatory to build a network in shape of goose foot (X). If the antenna is erected on the roof, the descent has to go outdoor, along the house walls, well fixed each 0.5m to masonry and using a plane surface (meplat) to reduce the impedance. All this aspect is subject to strict rules (see your electrician).

By way of conclusion, the installation of a lightning conductor should be entrusted to a specialized enterprise. This work has to overhang all works to protect.

A cheaper solution is to disconnect all coax from all your expensive electrical devicesc including the antenna and RTX during a thunder.

In that case if the lightning strikes the building or your house it will probably strikes an area of less resistivity and far from your isolated

antenna.

A usual lightning displays a sphere of influence of a radius of about 20m, what mean that after a direct strike, avoid to touch your car if it is park a few meter away from your home. the shock can be hard ! That explaisn why the lightning does not necessary strikes the highest point and that a good protection request a serious study, case per case and that a lightning conductor can be useless if badly placed.

This is very important subject, very complex which requests deep knowledges. Do check your installation with experts. That is worth much more that the risks your incour in doing the so-called work yourself.

Thierry

ON1SKY

http://www.astrosurf.com/lombry/qsl-longwire.htm

"Jackie" <buzzygirl@REMOVETHIS.attbi.com> wrote in message
news:Ng9fa.204158$6b3.576759@rwcrnsc51.ops.asp.att.net...
> Hi there,
>
> I'm getting ready to set up a 5 band vertical antenna and I'm thinking
ahead
> to the upcoming storm season. Here in the Midwestern US, we can get some
> pretty nasty thunderstorms, and though my lot has lots of trees that're
> taller than my 5-BTV is, I want to take some precautions to keep lightning
> and static charge far from the house.
>
> I am wondering what sort of lightning arrestors you folks use and
recommend.
>
> I will, of course, be grounding the antenna well (to a metal pole that's
> sunk quite far down into the ground) but I should probably use something
to
> arrest electrical spikes between the feedline and antenna... unless there
is
> something out there that attaches differently, and works better than the
> ones I've found at the local radio store. Forgive me in advance for not
> knowing a whole lot about these items- I have heard them referred to and
> know people use 'em, but since I'm pretty new to amateur radio, I don't
know
> which are best to use, so I thought I'd go to the source (actual hams).
:-)
>
> TIA,
>
> Jackie kc0ody
>
>
>

6052. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 12:47:01 UTC
From: richardharrison@webtv.net
Message-ID: <26606-3E7DACC5-180@storefull-2314.public.lawson.webtv.net>
Source record: 122098

Dick Carroll wrote:
"BUT - neither eliminates either field from the antenna`s field of radiation."

Correct. One or the other field can be killed at a point, more or less like a wave on a shorted or open transmission line. Kill an E field and its energy is loaned at a spot to the H field for an instant and is immediately restored to the E field thereafter. Current flow makes a voltage drop.

Electrostatic fields and magnetic fields can exist independently as long as they are truly static. When either is oscillating it creates the other.

Best regards, Richard Harrison, KB5WZI

6053. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 12:49:07 UTC
From: richardharrison@webtv.net
Message-ID: <5235-3E7DAD43-167@storefull-2317.public.lawson.webtv.net>
Source record: 122100

Dick Carroll wrote:
"BUT - neither eliminates either field from the antenna`s field of radiation."

Correct. One or the other field can be killed at a point, more or less like a wave on a shorted or open transmission line. Kill an E field and its energy is loaned at a spot to the H field for an instant and is immediately restored to the E field thereafter. Current flow makes a voltage drop.

Electrostatic fields and magnetic fields can exist independently as long as they are truly static. When either is oscillating it creates the other.

Best regards, Richard Harrison, KB5WZI

6054. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 13:25:50 UTC
From: richardharrison@webtv.net
Message-ID: <8783-3E7DB5DE-52@storefull-2316.public.lawson.webtv.net>
Source record: 122101

Dick Carroll wrote:
"BUT - neither eliminates either field from the antenna`s field of radiation."

Correct. One or the other field can be killed at a point, more or less like a wave on a shorted or open transmission line. Kill an E field and its energy is loaned at a spot to the H field for an instant and is immediately restored to the E field thereafter. Current flow makes a voltage drop.

Electrostatic fields and magnetic fields can exist independently as long as they are truly static. When either is oscillating it creates the other.

Best regards, Richard Harrison, KB5WZI

6055. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 13:56:29 UTC
From: richardharrison@webtv.net
Message-ID: <741-3E7DBD0D-132@storefull-2312.public.lawson.webtv.net>
Source record: 122099

Dick Carroll wrote:
"BUT - neither eliminates either field from the antenna`s field of radiation."

Correct. One or the other field can be killed at a point, more or less like a wave on a shorted or open transmission line. Kill an E field and its energy is loaned at a spot to the H field for an instant and is immediately restored to the E field thereafter. Current flow makes a voltage drop.

Electrostatic fields and magnetic fields can exist independently as long as they are truly static. When either is oscillating it creates the other.

Best regards, Richard Harrison, KB5WZI

6056. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 14:13:54 UTC
From: k9sqg@aol.com
Message-ID: <20030323091354.18123.00000320@mb-fg.aol.com>
Source record: 122090

Lightning arrestors, at least those within the financial means of most amateurs, provide very limited protection against nearby strikes. An economical, effective means of protection is to ensure that the feedline and all ground leads are disconnected from the house during periods of storm activity. Although of short impulse, a multimegavolt strike that has ten of thousands of amps is not going to be dissipated by a simple air gap or other device. With 5v CMOS it doesn't take much to take them out.

73s,

Evan

6057. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 14:17:43 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <ucgr7vgskv6hsg9f23jmlaqmnuksgfrqrl@4ax.com>
Source record: 122091

On Sun, 23 Mar 2003 00:21:38 -0600, "William E. Sabin"
<sabinw@mwci-news> wrote:

[snip]

|A ground connection on a schematic diagram
|often does correspond to a true ground in the
|hardware because of lead-wire impedance.

"often does *NOT* correspond", maybe?

6058. Yagi instructions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 15:09:02 UTC
From: M3*** <happyraveruk@yahoo.com>
Message-ID: <b5kimc$2a1kes$1@ID-155271.news.dfncis.de>
Source record: 122092

I'd like to build my own Yagi for 2m. 3 element if possible. Anyone know of an idiots style guide to building one, pref with pictures and precise instructions etc as im useless at this sort of thing !

Cheers

Richard

6059. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 15:15:38 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0303230715.16f93da0@posting.google.com>
Source record: 122093

mark <markus@nospam.com> wrote in message news:<3E7C8EA1.637523CF@nospam.com>...
> Interesting,
>
> I agree, would not want to bother about a fix,
>
> would be more interested in protecting my body from 50W out within 10 feet or less.
> so 5W is good idea.

Toasted ham?

> Now is the signal out really 5W or much less ?

Dunno. Whatever it is I can hit ten machines with the thing so
whatever the output is it's enough.

w3rv

6060. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 15:26:30 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E7DD226.2000403@mwci-news>
Source record: 122094

Wes Stewart wrote:
> On Sun, 23 Mar 2003 00:21:38 -0600, "William E. Sabin"
> <sabinw@mwci-news> wrote:
>
> [snip]
>
> |A ground connection on a schematic diagram
> |often does correspond to a true ground in the
> |hardware because of lead-wire impedance.
>
>
> "often does *NOT* correspond", maybe?

Roger to that.

Bill W0IYH

6061. Re: Yagi instructions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 15:33:23 UTC
From: Vince ve3elb <vcl@sympatico.ca>
Message-ID: <%skfa.282$Yz2.37435@news20.bellglobal.com>
Source record: 122096

hi there you would like to try this website i build the yagi and it works
greatttttttttttt.................i love it ....
http://www.qsl.net/w4sat/antenna.htm

Vince ve3elb
==========
Visit My Webpages @ :
www.qsl.net/ve3elb
http://www3.sympatico.ca/vcl

"M3***" <happyraveruk@yahoo.com> wrote in message
news:b5kimc$2a1kes$1@ID-155271.news.dfncis.de...
> I'd like to build my own Yagi for 2m. 3 element if possible. Anyone know
of
> an idiots style guide to building one, pref with pictures and precise
> instructions etc as im useless at this sort of thing !
>
> Cheers
>
> Richard
>
>

6062. Re: Yagi instructions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 15:35:56 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e7dd442$0$146$edfadb0f@dtext02.news.tele.dk>
Source record: 122095

Hello Richard

> I'd like to build my own Yagi for 2m. 3 element if possible. Anyone know
of
> an idiots style guide to building one, pref with pictures and precise
> instructions etc as im useless at this sort of thing !

Try these

http://www.clarc.org/Articles/uhf.htm

http://home.t-online.de/home/df8gh/7-2-funk.htm

http://home.att.net/~dale.keller/ham/antenna/yagi3.htm

http://www.darc.de/referate/ardf/junior2/junior2.html

just a few from the internet, there is plenty of them out there.

Regards Max

6063. Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 16:06:33 UTC
From: KOP <opskar@hotmail.com>
Message-ID: <eYkfa.43985$Rc7.647098@news2.e.nsc.no>
Source record: 122097

Hi !

Some questions:
1. I feed a lambda\2 dipole (Z0= 75 ohm) with a balanced feeder, for instance a 300 ohm low loss open wire line. Will this work or is the SWR (4:1) too high ?

2. I understand that feeding a dipole with a balanced feeder makes it resonant at any harmic frequency while feeding it with an ubalanced feeder (coax) makes it resonant at the fundamental an odd harmoics. Is this true ?

3. Anyone having experience with an OFC sloping dipole ? Is this usabel on all harmonics - and what about directivity ?

73 de
LA7---

6064. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 17:22:41 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <3E7DED34.ACB6A2F2@shaw.ca>
Source record: 122102

KOP wrote:
>
> Hi !
>
> Some questions:
> 1. I feed a lambda\2 dipole (Z0= 75 ohm) with a balanced feeder, for
> instance a 300 ohm low loss open wire line. Will this work or is the SWR
> (4:1) too high ?

The losses due to mismatch when using 300 ohm or other open wire line
are negligible. You will be fine!
>
> 2. I understand that feeding a dipole with a balanced feeder makes it
> resonant at any harmic frequency while feeding it with an ubalanced feeder
> (coax) makes it resonant at the fundamental an odd harmoics. Is this true ?

False -- it does not make it resonant, but it will radiate OK. The thing
is that you will require a tuner with balanced output.
>
> 3. Anyone having experience with an OFC sloping dipole ? Is this usabel on
> all harmonics - and what about directivity ?

Do you mean OCF (off-center fed)? Sorry, I don't know the
answer to that one.
>
> 73 de
> LA7---

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

6065. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 17:40:11 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <G8OdnZ_Y46flbOCjXTWcpg@comcast.com>
Source record: 122103

Jackie,

The only sure way is to disconnect the feedline, and I don't mean with a switch. Put a connector in the line somewhere before the coax enters the house. When you disconnect, get several feet of separation between the two halves.

Tam/WB2TT
"Jackie" <buzzygirl@REMOVETHIS.attbi.com> wrote in message news:Ng9fa.204158$6b3.576759@rwcrnsc51.ops.asp.att.net...
> Hi there,
>
> I'm getting ready to set up a 5 band vertical antenna and I'm thinking ahead
> to the upcoming storm season. Here in the Midwestern US, we can get some
> pretty nasty thunderstorms, and though my lot has lots of trees that're
> taller than my 5-BTV is, I want to take some precautions to keep lightning
> and static charge far from the house.
>
> I am wondering what sort of lightning arrestors you folks use and recommend.
>
> I will, of course, be grounding the antenna well (to a metal pole that's
> sunk quite far down into the ground) but I should probably use something to
> arrest electrical spikes between the feedline and antenna... unless there is
> something out there that attaches differently, and works better than the
> ones I've found at the local radio store. Forgive me in advance for not
> knowing a whole lot about these items- I have heard them referred to and
> know people use 'em, but since I'm pretty new to amateur radio, I don't know
> which are best to use, so I thought I'd go to the source (actual hams). :-)
>
> TIA,
>
> Jackie kc0ody
>
>
>

6066. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 17:52:58 UTC
From: richardharrison@webtv.net
Message-ID: <19034-3E7DF47A-148@storefull-2318.public.lawson.webtv.net>
Source record: 122104

Bill, W0IYH wrote:
"The Faraday shield eliminates (or greatly reduces) "direct" capacitive coupling from one coil to the other."

Exactly. That was the idea I meant to convey.

When an electric field ends on a grounded shield, that`s where the field ends, nowhere else. "Greatly reduces" just clouds the issue.

Capacitive coupling is intended to be reduced to insignificance by a Faraday shield. That`s its job. In a broadcast transmitter that happens without loss of signal.

Overwhelmingly, odds are that the AM broadcast you listen to has been strained through a Faraday screen. Signal to the antenna has volts and amps which produce E&H fields almost identical to those produced without a Faraday screen. With the screen, harmonics of the fundamentals in the signal are lower due to absence of capacitive coupling. Capacitive coupling tends to favor the harmonics.

Bill also wrote:
"At high frequencies, a practical problem is to establish a credible "ground" for the Faraday shield."

100m to 10m wavelengths are implied by "high frequencies". Wire lengths which are neither short nor long with respect to wavelength are certainly easier to make at h-f than at extremes of wavelength. Bill`s remark may be only a complaint that grounding is difficult.

Best regards, Richard Harrison, KB5WZI

6067. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 18:19:09 UTC
From: richardharrison@webtv.net
Message-ID: <14291-3E7DFA9D-27@storefull-2313.public.lawson.webtv.net>
Source record: 122107

Ian, G3SEK wrote:
"Exactly - so when we have achieved a balanced loop, what are we supposed to "ground" the mid-point "to"?"

A symmetrical ground plane to keep it balanced.

Ian also wrote:
"And, how do we know when it is balanced?"

First, it should be symmetrical.

Second, it should be shielded if its surroundings aren`t symmetrical.

Third, it should make a good null in the expected direction.

Fourth, see page 231 of King, Mimno, and Wing`s "Transmission Lines, Antennas, and Wave Guides" for more answers.

Best regards, Richard Harrison, KB5WZI

6068. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 18:21:48 UTC
From: Chris W <chrisw3@cox.net>
Message-ID: <3E7DFB65.9836008@cox.net>
Source record: 122105
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

"Gary V. Deutschmann, Sr." wrote:

> Hi Gene
>
> Within 6 months to a year the market will be flooded with just what
> you are looking for.
>
> You won't be allowed to affix a separate antenna because cell-phones
> are FCC type accepted with its fixed antenna.

Then why does my cell phone have a jack for an external antenna and why
are there numerous web sites that sell external antennas for cell phones?

Chris W

6069. Re: Yagi instructions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 18:29:25 UTC
From: Aspiring Elmer <elmer@nowhere.com>
Message-ID: <42nfa.38$%15.4@fed1read07>
Source record: 122106

Richard See ARRL Page 7dB for 7 Bucks --
URL: http://www.arrl.org/tis/info/Yagi-V.html

Another at URL:
http://www.qsl.net/w4sat/antlegn.htm

Good Luck es Radiating

Caveat Lector - Ya All
I Doubt, Therefore I Might Be
73 From AC6V, who is QBF most of the time !!
Rod In Oceanside, CA
Home Page http://ac6v.com
DX Book http://ac6v.com/DXSAMPLE.htm

"M3***" <happyraveruk@yahoo.com> wrote in message
news:b5kimc$2a1kes$1@ID-155271.news.dfncis.de...
> I'd like to build my own Yagi for 2m. 3 element if possible. Anyone know
of
> an idiots style guide to building one, pref with pictures and precise
> instructions etc as im useless at this sort of thing !
>
> Cheers
>
> Richard
>
>

6070. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 19:21:51 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e7e08fc.220019000@news.galilei.com>
Source record: 122108
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

Chris W <chrisw3@cox.net> verbositized:

>"Gary V. Deutschmann, Sr." wrote:
>
>> Hi Gene
>>
>> Within 6 months to a year the market will be flooded with just what
>> you are looking for.
>>
>> You won't be allowed to affix a separate antenna because cell-phones
>> are FCC type accepted with its fixed antenna.
>
>Then why does my cell phone have a jack for an external antenna and why
>are there numerous web sites that sell external antennas for cell phones?
>
>Chris W
>

Probably because your cellphone was type accepted for use with an
external antenna that is also type accepted.

Does your jack accept ANY antenna, like 5 element quad up 50 feet or a
40 foot long yagi, without making your own connection hardware?

TTUL
Gary

6071. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 19:24:14 UTC
From: KOP <opskar@hotmail.com>
Message-ID: <zRnfa.44109$Rc7.648756@news2.e.nsc.no>
Source record: 122109

Tnx for answer.
Yes, I do mean OCF-dioples. I've read that a OCF dipole fed lambda/3 from the end will operate on all harmonics. Is this still true if we slope the dipole, and does anyone have chart stating if there is a directivity ? I plan to use a conducting metall tower as support structure.Will this act as a reflector ?

tnx
LA7--

----- Original Message -----
From: "Irv Finkleman" <finkirv@shaw.ca>
Newsgroups: rec.radio.amateur.antenna
Sent: Sunday, March 23, 2003 6:22 PM
Subject: Re: Dipoles

> KOP wrote:
> >
> > Hi !
> >
> > Some questions:
> > 1. I feed a lambda\2 dipole (Z0= 75 ohm) with a balanced feeder, for
> > instance a 300 ohm low loss open wire line. Will this work or is the SWR
> > (4:1) too high ?
>
> The losses due to mismatch when using 300 ohm or other open wire line
> are negligible. You will be fine!
> >
> > 2. I understand that feeding a dipole with a balanced feeder makes it
> > resonant at any harmic frequency while feeding it with an ubalanced
feeder
> > (coax) makes it resonant at the fundamental an odd harmoics. Is this
true ?
>
> False -- it does not make it resonant, but it will radiate OK. The thing
> is that you will require a tuner with balanced output.
> >
> > 3. Anyone having experience with an OFC sloping dipole ? Is this usabel
on
> > all harmonics - and what about directivity ?
>
> Do you mean OCF (off-center fed)? Sorry, I don't know the
> answer to that one.
> >
> > 73 de

> > LA7---
>
>
> --
> ------------------------------------
> Diagnosed Type II Diabetes March 5 2001
> Beating it with diet and exercise!
> 297/215/210 (to be revised lower)
> 58"/43"(!)/44" (already lower too!)
> ------------------------------------
> Visit my HomePage at http://members.shaw.ca/finkirv/
> Visit my very special website at http://members.shaw.ca/finkirv4/
> Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
> http://members.shaw.ca/finkirv5/
> -------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada
"Irv Finkleman" <finkirv@shaw.ca> skrev i melding
news:3E7DED34.ACB6A2F2@shaw.ca...
> KOP wrote:
> >
> > Hi !
> >
> > Some questions:
> > 1. I feed a lambda\2 dipole (Z0= 75 ohm) with a balanced feeder, for
> > instance a 300 ohm low loss open wire line. Will this work or is the SWR
> > (4:1) too high ?
>
> The losses due to mismatch when using 300 ohm or other open wire line
> are negligible. You will be fine!
> >
> > 2. I understand that feeding a dipole with a balanced feeder makes it
> > resonant at any harmic frequency while feeding it with an ubalanced
feeder
> > (coax) makes it resonant at the fundamental an odd harmoics. Is this
true ?
>
> False -- it does not make it resonant, but it will radiate OK. The thing
> is that you will require a tuner with balanced output.
> >
> > 3. Anyone having experience with an OFC sloping dipole ? Is this usabel
on
> > all harmonics - and what about directivity ?
>
> Do you mean OCF (off-center fed)? Sorry, I don't know the
> answer to that one.
> >
> > 73 de
> > LA7---

>
>
> --
> ------------------------------------
> Diagnosed Type II Diabetes March 5 2001
> Beating it with diet and exercise!
> 297/215/210 (to be revised lower)
> 58"/43"(!)/44" (already lower too!)
> ------------------------------------
> Visit my HomePage at http://members.shaw.ca/finkirv/
> Visit my very special website at http://members.shaw.ca/finkirv4/
> Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
> http://members.shaw.ca/finkirv5/
> --------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

6072. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 19:36:47 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <zFoao1TPzgf+EAvM@ifwtech.co.uk>
Source record: 122114

Richard Harrison wrote:
>Ian, G3SEK wrote:
>"Exactly - so when we have achieved a balanced loop, what are we
>supposed to "ground" the mid-point "to"?"
>
>A symmetrical ground plane to keep it balanced.
>
And that's the problem... I don't have too many of those under the roof,
where the Top Band loop lives.

>Ian also wrote:
>"And, how do we know when it is balanced?"
>
>First, it should be symmetrical.
>
>Second, it should be shielded if its surroundings aren`t symmetrical.
>
Those are indications that it could be balanced; but the question was
about "is balanced".

>Third, it should make a good null in the expected direction.
>
Now that's a good point - it's indirect, but probably about the only
measurable indication of balance in the absence of any groundplane.

>Fourth, see page 231 of King, Mimno, and Wing`s "Transmission Lines,
>Antennas, and Wave Guides" for more answers.
>
Thanks for the reference.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

6073. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 20:17:00 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E7E163C.7030701@ieee.org>
Source record: 122110

KOP wrote:
> 1. I feed a lambda\2 dipole (Z0= 75 ohm) with a balanced feeder, for
> instance a 300 ohm low loss open wire line. Will this work or is the SWR
> (4:1) too high ?

4:1 is quite acceptable for "300 ohm low loss open wire line".
I am happy with any SWR below 12:1. Hint: 300/12 = 25 ohms.

> 2. I understand that feeding a dipole with a balanced feeder makes it
> resonant at any harmic frequency while feeding it with an ubalanced feeder
> (coax) makes it resonant at the fundamental an odd harmoics. Is this true ?

Close, but no cigar. Feeding a dipole with a *tuned* balanced feeder makes
it resonant at virtually any frequency. The length of a tuned balanced
feeder is very important. And there's no guarantee that resonance will be
anywhere near 50 ohms.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6074. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 20:18:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E7E16AA.3070001@ieee.org>
Source record: 122111
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

Chris W wrote:
> Then why does my cell phone have a jack for an external antenna and why
> are there numerous web sites that sell external antennas for cell phones?

And why do we see so many external cellphone antennas on vehicles?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

6075. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 20:23:39 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E7E17CB.10803@ieee.org>
Source record: 122112

Richard Harrison wrote:
> Best regards, Richard Harrison, KB5WZI

Richard, what is your newsreader telling you that makes you
think your article was not posted the first of N times?
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6076. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 21:03:50 UTC
From: richardharrison@webtv.net
Message-ID: <12791-3E7E2136-221@storefull-2311.public.lawson.webtv.net>
Source record: 122113

CAM wrote:
"---what is your newsreader telling you---?"
Roulette has taken control of the Microsoft Network and I don`t know what will happen to the message I want to send. A box appears on the screen informing me that the addressee hasn`t responded for more than one minute. Press go to try again. If I do that, the message may clear the screen or the decision box may appear again after a minute or two.

Eventually, I`ll power down the system to get rid of the screen if it never clears. Sometimes all those clicks have been stored and forwarded. Other times, some or none have been sent, received, and posted. If none were posted, I may retype the message, but I often just don`t repost.

It was better before Microsoft bought Web TV.

Best regards, Richard Harrison, KB5WZI

6077. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 22:05:38 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <eg8s7v0qp0nhl9bor46fta0vml2sref8ut@4ax.com>
Source record: 122115

On Sat, 22 Mar 2003 20:08:54 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Reg wrote:
>"Do you think you could get Bush and Blair to take an interest?"
>
>B&B are occupied with an unprecedented war. It`s much more complicated
>than a quest for oil or a holy crusade. All the many actors have their
>diverse reasons.
>
>The big provocation has festered ever since WW-2 ended. It`s the
>partition of Palestine.
>
>It`s long been clear that the same political actions in the infected
>region were producing the same results.
>
>The players have tired of the hands they`ve been delt and are
>reshuffling and redealing. A new deal is long overdue, and wanted in the
>worst way. I just hope, they now get a new deal in the best available
>way.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard

You hit the nail on the head with this one.

The problems of the "crescent" in the middle east extending from
Palestine to Malaysia can be found in the outright failure of two
countries who now stand to one side taking "moral" stands: England and
France. This is not to pretend we are doing anyone a favor - and
certainly not the Iraqis ("Iraqi Freedom" notwithstanding).

France has let the world know that they will stand in the way of
redevelopment of Iraq so as to cause the US the pain due us from the
errors of our ways. In other words France never stood with Iraq
(neither Despotic nor Democratic) nor for humanitarian concern, simply
against the US. The machinations of Turkey and England during and
following WWI lead to the English "inspired" partition that created
Syria, Jordan, Iraq and possibly a host of sheikdoms that have no love
for us (nor the Brits). For a short period during WWI, an English
sargent McLaglen served as the military commander of Baghdad - such
was the importance of the office (McLagen subsequently became a film
star, winning the Oscar for his portrayal of an Irish stoolie in "The
Informer").

Our bringing "democracy" to the middle east will have the Saudis less disposed to our needs, not more. From that quarter we can fully expect their charities' increase to reflect their agenda as it did one September morning. No doubt the Right Whiners will be surprised (again) and "hurt" (such pain they feel for us/US) when that evidence (again) is transformed into terror in our country (again).

I anticipate the squeals from those same Right Whiners who wail away about supporting the troops and I will point out that they are at this time whittling away at the basics needs for the serviceman's family (cutting taxes you should understand requires some to go without). Do I foresee the prospects of a pay raise for our troops' exemplary service, for putting their live's in jeopardy, for going in harm's way? Well, pay raises may be in the offing - for the Right Whiners' politicos. This is, after all, the age when Enron's collapse is signaled with golden parachutes for the criminals that brought it down.

It cannot escape irony that a president "elected" by 42% of the nation shrugs off 46% of those who stood against war as being an inconsequential focus group. The Right Whiners have us on a toboggan run to ruin as the United States walks away from countless allies that we will need in REAL contests. Is it any surprise that from that effete and gutless crowd that blustered us into war that only ONE of more than 553 individuals who claim to be our representatives has their child fighting in the front? The Washington crowd is the single greatest accumulation of cowards in the world (including France).

73's
Richard Clark, KB7QHC

6078. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 22:18:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <jgcs7vgnrfoam57bldcbqr0dvmqsn60v88@4ax.com>
Source record: 122116

On Sun, 23 Mar 2003 19:36:47 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Those are indications that it could be balanced; but the question was
>about "is balanced".
>
>
>>Third, it should make a good null in the expected direction.
>>
>Now that's a good point - it's indirect, but probably about the only
>measurable indication of balance in the absence of any groundplane.
>

Hi Ian,

I don't know how you come up with Richard's observation being an
"indirect" proof of balance - it seems to illustrate the point quite
clearly. However, if it being indirect is a good point, many more
good points can be made through rather more tedious tests of
indirection if you need them, but I would suspect you could as easily
offer a list of such tests yourself.

73's
Richard Clark KB7QHC

6079. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 22:22:48 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <trcs7v4bo9gbs1e4nojpav4deq5ise0o5f@4ax.com>
Source record: 122117

On Sun, 23 Mar 2003 15:03:50 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:
>
>It was better before Microsoft bought Web TV.

I hope you are paying attention when you offer a credit card number
through one of their "secure servers."

73's
Richard Clark, KB7QHC

6080. seeking marantz 2385

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 22:41:06 UTC
From: Louis <lou1@westnet.com>
Message-ID: <6Kqfa.104$a52.102618@monger.newsread.com>
Source record: 121969

does anyone have a marantz 2385? if so please email me.
thanks

louis

6081. Re: Where to find small rigid coax and other items ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 22:47:16 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <b5ldhk$o5o$1@xuxa.iecc.com>
Source record: 122118
Cross-posted to: rec.radio.broadcasting,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

For the coax, try www.cablexperts.com . Amidon and Palomar would have cores, but I don't know what the exact urls are. If nobody else comes up with it, I can find out about the teflon coax.

Tam/WB2TT
"Lex-Lutor" <lex-lutor@post.hinet.hr> wrote in message
news:b5inc3anu1@xuxa.iecc.com...
> Hi,
>
>
>
> I'm looking where to find or to buy next items:
>
> - Semi-rigid coax or rigid coax
>
> - low impedance Teflon coax (to make broadband transformers)
>
> - other good resources to make some FM amplifiers 50-100 MHz (300-600W)
>
> - ferrite breads and cores
>
>
>
> Thanks !
>
>
>

6082. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 23:22:45 UTC
From: richardharrison@webtv.net
Message-ID: <5237-3E7E41C5-29@storefull-2317.public.lawson.webtv.net>
Source record: 121970

Richard Clark wrote:
"The Washington crowd is the single greatest accumulation of cowards in the world (including France).

A broad brush indeed. John McCain is part of the Washington crowd, and he`s no coward. Washington has its quota, but surely there are some more brave souls. Why don`t they come to mind?

Bravery in France seems to have been lacking among the French during the past century. Maybe bravery got exported by France to Indo-China. France is still smarting from our refusal to suport their colonialism. Also, Ike ordered the French and British out of Suez when Egypt announced expropriation of the canal. You take your soldiers out or we will, he said.They left.

It was an Iraqui French-made Exocet missile, fired from a French-made Mirage jet fighter that ripped into the U.S.S. Stark on 17 May 1987 while it escorted tankers carrying oil to the world, including France, from the Persian Gulf during the Iran Iraq war. 37 American sailors were killed.

Russia supplied other missiles, tanks, and assorted arms to Iraq.

China supplied Silkworm missiles,etc.

These arms suppliers are still owed for the arms. I hope we see to it that they are never paid.

I admire the post-war German foreign relations policy. Recognize the powers that be and trade with them whether you approve of them or not. Do as much business as you can with all of them.

Best regards, Richard Harrison, KB5WZI

6083. Re: Horizontal Polarization with Ground Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 23:25:39 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <qp6dnTBMkczLzOOjXTWcqA@ctc.net>
Source record: 121975

> I am trying to use my ground plane antenna that is normally vertical for
> satellite operations. I would like to use it horizontally to eliminate
the
> null point overhead. Can i just turn the whole antenna 90 degrees? How
> does having a ground plane being in a different plan than the earth affect
> things?
>
> The antenna is a 140/440 groundplane currently about 15ft above the ground
> on my porch.

The patern will still be the same , just rotated 90 deg. If the sat passes to the back side of the gound plane , it will be in a big null. If you turn it just right for every pass then it should work. Might just be simpler to make a dipole antenna and mount it horizontal. Even beter put a single reflector under it like a two element beam but make the spacing a lot more. Never can remember if it is 3/8 or 5/8 wavelenghts that gives a good upward patern without cutting off too much at the horizon.

6084. Horizontal Polarization with Ground Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-23 23:46:17 UTC
From: James Cook <j.l.cook@mindspring.com>
Message-ID: <b5lgvvooa1@slb3.atl.mindspring.net>
Source record: 121971

I am trying to use my ground plane antenna that is normally vertical for satellite operations. I would like to use it horizontally to eliminate the null point overhead. Can i just turn the whole antenna 90 degrees? How does having a ground plane being in a different plan than the earth affect things?

The antenna is a 140/440 groundplane currently about 15ft above the ground on my porch.

Thanks
Cook
KG4YTL

6085. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 00:02:52 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <k6is7v4o36lgg4h1vjmujjf3ad8a80j9h9@4ax.com>
Source record: 121972

On Sun, 23 Mar 2003 17:22:45 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>Richard Clark wrote:
>"The Washington crowd is the single greatest accumulation of cowards in
>the world (including France).
>
>A broad brush indeed. John McCain is part of the Washington crowd, and
>he`s no coward. Washington has its quota, but surely there are some more
>brave souls. Why don`t they come to mind?
>

Hi Richard,

Come to mind? Why don't they step up? This isn't a broad brush, it
is their backs to the wall.

When one of my senators voted to "support the troops" I immediately
responded to her with:
This is sentimentality masking the abandonment of responsibility. Am
I to be cajoled later that you had to vote as you did to support our
leader and the troops? Need I point out how circular and self-serving
that is for both sides against the middle? I can fully appreciate
the challenge put to the political animal to vote for a united front,
with the obvious extortion implied of future negative campaigning.
You are the greater fool when that campaign arrives anyway and you
have little to show other than a sulking enfant terrible who sat in
the back seat. These are petty standards when we mock the world and
invade Iraq.

You now stand in direct conflict with the Constitution of the United
States that explicitly puts the power of War in your hands. That you
continue to countenance the prostitution of that document's mandate is
repugnant, weak, and lazy.

I demand a higher standard of leadership than has been evidenced by
you of late in these matters. If you find the issues too demanding,
or tasking of your ability, I suggest you step aside to allow those
with more stamina and ability to take over. You may want to reflect
that you have already done that by your capitulatory vote, the
citizens may as well appreciate it by its actuality to prevent that
same vote's reoccurrence.

This applies to McCain no less so - is he waiting for this message to
be morse code tapped against his cell wall?

73's
Richard Clark, KB7QHC

6086. Re: Horizontal Polarization with Ground Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 00:06:36 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <asis7v87robnqh28q7kijfa0bmtd8mo8bl@4ax.com>
Source record: 121973

On Sun, 23 Mar 2003 18:46:17 -0500, "James Cook"
<j.l.cook@mindspring.com> wrote:

>I am trying to use my ground plane antenna that is normally vertical for
>satellite operations. I would like to use it horizontally to eliminate the
>null point overhead. Can i just turn the whole antenna 90 degrees? How
>does having a ground plane being in a different plan than the earth affect
>things?
>
>The antenna is a 140/440 groundplane currently about 15ft above the ground
>on my porch.
>
>
>Thanks
>Cook
>KG4YTL
>

Hi Cook,

That is certainly one way, and possibly the easiest (you should've
been able to confirm this by now).

Another possibility is to use a very large vertical such that it can
hear directly above, with gain.

73's
Richard Clark, KB7QHC

6087. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 00:23:08 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <lsjs7v0vbhevug16fnjm7gqnn29gdkeqg9@4ax.com>
Source record: 121974

Jeezus, I'm sure glad I started this thread to find out about loop antennas.
How it metamorphized into a forum on the Iraq situation has me stumped.

Can we get back to the topic at hand, or at least re-iterate the subject so that
I'm not wasting my time looking for OT answers?

Jim

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

6088. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 00:29:49 UTC
From: Don Lancaster <don@tinaja.com>
Message-ID: <3E7E517D.2BB1B17A@tinaja.com>
Source record: 121976
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Tarmo Tammaru wrote:
>
> You realize that nobody under the age of 60 knows what a chopper amplifier
> is?
>
> Tam/WB2TT

A Chevvy V8 on a Harley, obviously.

--
Many thanks,

Don Lancaster
Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462

Please visit my GURU's LAIR web site at http://www.tinaja.com

6089. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 00:35:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <r1ks7v028ilk5e8fecn23m0cd87ajpdsr0@4ax.com>
Source record: 121977

On Sun, 23 Mar 2003 16:23:08 -0800, Jim Weir <jim@rst-engr.com> wrote:

>Jeezus, I'm sure glad I started this thread to find out about loop antennas.
>How it metamorphized into a forum on the Iraq situation has me stumped.
>
>Can we get back to the topic at hand, or at least re-iterate the subject so that
>I'm not wasting my time looking for OT answers?
>
>Jim
>
>
>Jim Weir, VP Eng. RST Eng. WX6RST
>A&P, CFI, and other good alphabet soup

Hi Jim,

Thread ownership is one of those strange "entitlements" that some
think come with their throwing a subject out.

Haven't had seen much participation from you. Maybe four of 51
postings would suggest you don't have much to offer, or ask. This
posting of yours is itself off topic - odd you had a choice to post
one way or the other and you chose to follow the drift. If reading
such posts as mine is wasting your time, that seems to lack as an
argument when you go on to respond.

Re-iterate the subject, now there is a waste indeed when you can use
google to accomplish the same goal.

If you want to invigorate the proceedings, it won't come from blaming
the darkness.

73's
Richard Clark, KB7QHC

ps

It would pay to respond to the right post. Yours is a singular
example of extreme drift in having blamed for off-topic to
>On Sun, 23 Mar 2003 19:36:47 +0000, "Ian White, G3SEK"
><G3SEK@ifwtech.co.uk> wrote:
>
>>Those are indications that it could be balanced; but the question was
>>about "is balanced".
>>
>>
>>>Third, it should make a good null in the expected direction.

>>>
>>Now that's a good point - it's indirect, but probably about the only
>>measurable indication of balance in the absence of any groundplane.
>>
>
>Hi Ian,
>
>I don't know how you come up with Richard's observation being an
>"indirect" proof of balance - it seems to illustrate the point quite
>clearly. However, if it being indirect is a good point, many more
>good points can be made through rather more tedious tests of
>indirection if you need them, but I would suspect you could as easily
>offer a list of such tests yourself.
>
>73's
>Richard Clark KB7QHC

6090. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 00:39:08 UTC
From: hmmm <sp@m.not>
Message-ID: <3E7E53A6.D79C961C@m.not>
Source record: 121978
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Isn't a chopper amplifier what a woodsman uses to cut wood faster with his axe?

Don Lancaster wrote:

> Tarmo Tammaru wrote:
> >
> > You realize that nobody under the age of 60 knows what a chopper amplifier
> > is?
> >
> > Tam/WB2TT
>
> A Chevvy V8 on a Harley, obviously.
>
> --
> Many thanks,
>
> Don Lancaster
> Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
> voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462
>
> Please visit my GURU's LAIR web site at http://www.tinaja.com

6091. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 00:49:34 UTC
From: John Larkin <John.Larkin>
Message-ID: <mfls7vc6s48t5m3pqn85gq7idchuvsnlsv@4ax.com>
Source record: 121979
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
wrote:

>Tarmo Tammaru wrote:
>>
>> You realize that nobody under the age of 60 knows what a chopper amplifier
>> is?
>>
>> Tam/WB2TT
>

This is just a special case of nobody under 50 knowing anything at
all.

John

6092. FS: new 200 pf doorknob caps

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 00:54:16 UTC
From: k9sqg@aol.com
Message-ID: <20030323195416.21120.00000175@mb-bj.aol.com>
Source record: 121980

Have some brand new, Centralab transmitting capacitors for sale. Model is 857, and are rated at 200 mmf at 7.5kvdc, N750. Can mix and match these values for coupling capacitors, padders for loading capacitors, or what have you. $5 each plus Priority Mail shipping. I cannot ship outside continental US.

73s,

Evan

6093. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 01:15:13 UTC
From: "Marc H.Popek" <LVMarc@worldnet.att.net>
Message-ID: <B_sfa.25959$S%3.1505925@bgtnsc04-news.ops.worldnet.att.net>
Source record: 121981
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

Hello Roy,

Good probing question!

The insensitivity to ALL E field "pollution, is qautaranteed by use of the differential signal process.

of course if you move the loop you also get a cos theta weighting to represent the peak response at 90 normal b field....

"Roy Lewallen" <w7el@eznec.com> wrote in message news:v7pksfm9r2ii72@corp.supernews.com...
> Does this Va - Vb signal remain a function of only the B field in all
> directions and polarizations? That is, is it totally insensitive to an E
> field from all directions and of all polarizations?
>
> Roy Lewallen, W7EL
>
> Marc H.Popek wrote:
> > Funny how tricky the loop and all this field business can be!
> >
> > The "shielded loop" idea eventually does not work exactly cancel out the
> > E-field component. Symmetry is to nebulous a thing to rely on for the E
> > field on one shield to be 180 phased with the field on the other shield is
> > magic and will not work over an appreciable band.
> >
> > What can work at this juncture, is to use differential signal processing to
> > produce a voltage signal proportionate to "only" the magnetic field vector
> > or the B- Field. So what's this mean???
> >
> > You form the coil and do not ground one end or the other at all. You
> > maintain two signals, Va (one end of the coil) and Vb the other. It can be
> > shown ((-:) that Va-Vb produces a signal that is only a function of
> > B-field.
> >
> > How do you make a Va-Vb function? a transformer Balanced to unbalanced, or
> > an active differential amplifier circuits. Both paths will be followed as

> > the transformer will "easier" (all passive) will have frequency
bandwidth
> > limitation due to the transformer itself! The difference amplifier with
> > transistors with an ft >25 GHz, should be able to provide a nice wide
band
> > subtraction and single ended output.. then the trick is fitting it all
into
> > a 1/4 copper pipe and swaglock into the vacuum diode!
> >
> > Marc
>

6094. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 01:19:40 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <e8ns7vsnlbqbmubtnrvhdo0imp06ne3abd@4ax.com>
Source record: 121982
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

On Sun, 23 Mar 2003 16:49:34 -0800, John Larkin <John.Larkin> wrote:

>On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
>wrote:
>
>>Tarmo Tammaru wrote:
>>>
>>> You realize that nobody under the age of 60 knows what a chopper amplifier
>>> is?
>>>
>>> Tam/WB2TT
>>
>
>This is just a special case of nobody under 50 knowing anything at
>all.
>
>John
>

Ain't that the truth!

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

6095. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 01:32:10 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <setfa.987$D24.129605@news20.bellglobal.com>
Source record: 121983

"Gary V. Deutschmann, Sr."
> Does your jack accept ANY antenna...
> ...without making your own connection hardware?

A normal TNC connector is pretty much standard for those good old fashioned
(3w) 'bag phones'.

6096. Re: RF Propagation Prediction Software???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 01:55:19 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <6stfa.101$U5.48@fe01.atl2.webusenet.com>
Source record: 121984

Ted- not much (im afraid) will help you at vhf, accept at at soplar maximums (which we are declineing from) to give an idea for F2, or Aruora- but here is a page from cary oler , who runs solar terrestrail and predicts certain info about the sun! and, some meteor info
http://www.borealis2000.com/news.html
hope this helps, Eskip the bread and butter of a vhf op is about as unpredictable as any media, tho starts about middle of april, thru maybe august, and again at around the winter solstuce (dec 12- jan 4th) hope this helps jim nn7k

"Ted Nugent" <eclip01@hotmail.com> wrote in message news:01c2ef1c$9f27bea0$82878685@clip...
> Thanks in advance for taking the time to read
> and possibly respond to this question. I was
> wondering if anyone knew of a shareware program
> that is EASY TO USE and runs under Windows
> for making predictions of coverage of VHF
> signals. I have heard of a program (I thought
> it was called mimmic, or something that sounds
> like that) that does this. What I am looking to
> do is plug in variables such as frequency, ant height,
> gain etc. and have the program predict the coverage
> area for a repeater system. It would be really
> helpful if it used or interfaced to a mapping program
> to do "actual" predictions based on longitude and
> latitude. I have found a program that does this,
> but I don't exactly want to spend $1000+ for it.
> Everyone tells me there is shareware that will fit
> my need, but can't give me any names or websites.
> So....I am tapping the vast knowledge base here, and
> hoping someone can help me out.

6097. 440 Yagi support on my Landrover

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 02:05:47 UTC
From: Bill East <beast@pcs.mb.ca>
Message-ID: <ZItfa.2911$qn.388550@localhost>
Source record: 121985

I want to use a idea I had seen before, but forgot where exactly. A wheel of your vehicle parks on a metal plate/mast design allowing you to install a 440 Yagi or other light yagi on a fiberglass mast or metal mast up about 12 feet over the roof of the truck or SUV.
Anyone remember the web page? If you have other similar ideas to use a mast on a parked vehicle I would like to hear from you .

thanks,
Bill

6098. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 02:06:12 UTC
From: "Keith R. Williams" <krw@attglobal.net>
Message-ID: <MPG.18e8321dd64d58fe98a195@enews.newsguy.com>
Source record: 121988
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <mfls7vc6s48t5m3pqn85gq7idchuvsnlsv@4ax.com>, John
Larkin <John.Larkin> says...
> On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
> wrote:
>
> >Tarmo Tammaru wrote:
> >>
> >> You realize that nobody under the age of 60 knows what a chopper amplifier
> >> is?
> >>
> >> Tam/WB2TT
> >>
>
> This is just a special case of nobody under 50 knowing anything at
> all.

Whew! I just crossed the evil "Barrier of Know-Nothing". I
prefer to say I'm 32 though. I'm prematurely grey though (ok
silver, dammit!) ;-)

--
Keith

6099. Re: Name that antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 02:10:40 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <pGtfa.106$U5.49@fe01.atl2.webusenet.com>
Source record: 121986

agree with the others that it in 960 range- and btw, the driven element (the one that goes to the coax , after the matching section which you didnt show its length, , to the block of metal thea ties it to the driven element (just showed the total lenght of the matching section rod)) is your best clue for frequency (18-19 inch long would be 2 meter or, 17-15-1/2 inch long fit 150-574 range, 12-1/2 , around 430-440 mhz, ect. That element should be VERY CLOSE to 1/2 wavelength long at the operating frequency! as info, jim nn7k

"Konr Ness" <konr@hotmail.com> wrote in message news:53e61ff.0303191136.301c3c7c@posting.google.com...
> I was just given a yagi antenna that was installed on a 10' pole on a
> building in vertical polarization. I have no experience with yagi
> antennas, and would like to know if anyone could figure out the
> frequency of this antenna, and perhaps what it was used for.
>
> Pictures with measurements are at:
> http://www.webterrace.net/yagi/yagi1.jpg
> http://www.webterrace.net/yagi/yagi2.jpg
>
> Thank You,
> Konr Ness
> konr@hotmail.com

6100. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 02:33:53 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <a0ufa.112$U5.48@fe01.atl2.webusenet.com>
Source record: 121987

Agree , as when doing radio maintance, disconnected a antenna from a base station, and had a 1/2 inch ARC jump from center conductor of coax to the frame of radio! Nothing will save you from a DIRECT HIT (and even with higher trees, the resistance of your antenna vs that of a tree still makes it an attractive target, but for those at say a 1/4th mile away hit, the polyphaser, or the Alpha Delta lightning protectors should save you considerable damage. but, again: the best bet is to disconnect the antenna, and attach it to a GOOD EARTH GROUND! and, ALL BETS ARE OFF IF THE POWER LINE GETS HIT! also unplug your radio (and all other electrical devices from power , if you are a good target) as info, jim nn7k
"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:G8OdnZ_Y46flbOCjXTWcpg@comcast.com...
> Jackie,
>
> The only sure way is to disconnect the feedline, and I don't mean with a
> switch. Put a connector in the line somewhere before the coax enters the
> house. When you disconnect, get several feet of separation between the two
> halves.
>
> Tam/WB2TT
> "Jackie" <buzzygirl@REMOVETHIS.attbi.com> wrote in message
> news:Ng9fa.204158$6b3.576759@rwcrnsc51.ops.asp.att.net...
> > Hi there,
> >
> > I'm getting ready to set up a 5 band vertical antenna and I'm thinking
> ahead
> > to the upcoming storm season. Here in the Midwestern US, we can get some
> > pretty nasty thunderstorms, and though my lot has lots of trees that're
> > taller than my 5-BTV is, I want to take some precautions to keep
lightning
> > and static charge far from the house.
> >
> > I am wondering what sort of lightning arrestors you folks use and
> recommend.
> >
> > I will, of course, be grounding the antenna well (to a metal pole that's
> > sunk quite far down into the ground) but I should probably use something
> to
> > arrest electrical spikes between the feedline and antenna... unless
there
> is
> > something out there that attaches differently, and works better than the
> > ones I've found at the local radio store. Forgive me in advance for not
> > knowing a whole lot about these items- I have heard them referred to and

> > know people use 'em, but since I'm pretty new to amateur radio, I don't
> know
> > which are best to use, so I thought I'd go to the source (actual hams).
> :-)
> >
> > TIA,
> >
> > Jackie kc0ody
> >
> >
> >
>
>

6101. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 02:50:17 UTC
From: Jackie <buzzygirl@REMOVETHIS.attbi.com>
Message-ID: <Jnufa.218775$qi4.107442@rwcrnsc54>
Source record: 121989

Hi Thierry,

Thanks for this info. I think what I will do (besides good grounding of the antenna) is to make sure I disconnect the feed line from the antenna outdoors, before a storm. I can reach the feed point with no problem. The ground should be thawed out enough in about 5-6 days for me to pound in the mast and ground rod.

Jackie KC0ODY

6102. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 02:50:41 UTC
From: Jackie <buzzygirl@REMOVETHIS.attbi.com>
Message-ID: <5oufa.219614$sf5.130320@rwcrnsc52.ops.asp.att.net>
Source record: 121990

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:G8OdnZ_Y46flbOCjXTWcpg@comcast.com...
> Jackie,
>
> The only sure way is to disconnect the feedline, and I don't mean with a
> switch. Put a connector in the line somewhere before the coax enters the
> house. When you disconnect, get several feet of separation between the two
> halves.

Sounds like a good plan. Thanks Tam.

Jackie KC0ODY

6103. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 02:56:21 UTC
From: dennis@wawa.juniper.net
Message-ID: <b5ls4l$2vle$1@heap.juniper.net>
Source record: 121994

Gary V. Deutschmann, Sr. <raiar@slacc.com.nospam> wrote:
>To obtain FCC Type Acceptance on any consumer transmitting device has
>always required the device to be reasonably user tamper proof in
>regards to the transmiter section.

(I'd note that the FCC eliminated all occurances of "Type Acceptance"
in its regulations in favor of the term "Certification", and replaced
"type-accepted" with the very ugly word "certificated", in about 1998
or so.)

What you say is true, but is not really relevant to the question of
regulations concerning external antennas. For many of the consumer
transmitting devices used in Part 95 services (e.g. CB, R/C, MURS)
there is no requirement that any antenna be specified for use with
the equipment when it is certificated. The certificated equipment
may have a standard antenna connector on the back into which you are
allowed to plug anything you want. An exception in Part 95
seems to be FRS transmitters, where section 95.194 explicitly demands
that the antenna be certificated as part of the transmitter, and
similar restrictions can be found in Part 15 regulations for some
devices.

There is hence no general FCC rule that external antennas are required
to be certificated along with consumer transmitters. The requirement
instead varies from service to service, with the requirement for
antenna certification being explicitly called out in the regulations
for services where it is required. The parts of Title 47 governing
cellular and PCS services are Parts 22 and 24, respectively, and
if there were a requirement for certification of external antenna
equipment it would be mentioned somewhere in these parts. I can't
find one, however, so I doubt such restrictions on antennas exist
for mobile phone handsets.

>Just like CB, it won't be long before illegal amplifiers are used to
>boost the signal to massive antenna's if you give the unlicensed users
>too much leeway.

The regulations for mobile phone handsets give users no leeway with
respect to handset modification or the use of uncertificated amplifiers,
but seem to permit the use of any antenna the user wishes, so the FCC's
opinion of what is "too much leeway" appears not to include arbitrary
external antennas. Given that the regulations require the handsets to
implement power control to automatically reduce the transmitter output
power to that minimally necessary for communication in any case (unlike
those services which have antenna restrictions) it is hard to imagine
any realistic negative consequences resulting from the use of even high

gain antennas with the mobile phone.

Note that cell phone users aren't "unlicensed" in either the Part 15
or the Part 95 sense. They are authorized to use the transmitter
under their service provider's license.

>I don't have the manufacturers regulations books to check them, but
>most manufactured cellualar equipment is designed to prevent mixing
>and matching of components related to the transmission of a signal.

I don't see that. I've not yet seen a cell phone that lacked an
external antenna connector, or one that wouldn't work just fine
when attached to an arbitrary 50 ohm feedpoint antenna for the appropriate
band.

FCC regulations can be found at:

http://wireless.fcc.gov/rules.html

Dennis Ferguson

6104. Re: Horizontal Polarization with Ground Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 02:58:48 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <xnufa.123$U5.72@fe01.atl2.webusenet.com>
Source record: 121991

A ground plane can be turned, and turned, but WILL NOT effect the vertical radiation pattern! your best bet (with this style) is to bend the DRIVEN ELEMENT, say 30 degrees perpendicular, and opposite the plane the sattelites travel in . I did this from a trailer in ao6/7 days- not the greatest but it worked. but an even better solution would be to build a turnstyle antenna, or an egg beater antenna. both would do pretty much what you wish, and the eggbeater has the advantage that it is an omni polariaty antenna, and would utilize the satelites circular polarization to your advantage! as info,
jim nn7k

"James Cook" <j.l.cook@mindspring.com> wrote in message
news:b5lgvvooa1@slb3.atl.mindspring.net...
> I am trying to use my ground plane antenna that is normally vertical for
> satellite operations. I would like to use it horizontally to eliminate
the
> null point overhead. Can i just turn the whole antenna 90 degrees? How
> does having a ground plane being in a different plan than the earth affect
> things?
>
> The antenna is a 140/440 groundplane currently about 15ft above the ground
> on my porch.
>
>
> Thanks
> Cook
> KG4YTL
>
>

6105. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 03:15:12 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <VCufa.135$U5.128@fe01.atl2.webusenet.com>
Source record: 121992

Why bother, Get a tripod like the roof mount for a tv antenna from ripoff shack, or other source. then a 5 foot piece of masting, and finally build a quad, or a 3-4 element yagi! once constructed, can place on deck, yet pick up the whole thing, and have it inside in a minute! have friend that did this in apartment with 6 and 2 meters sideband, on six worked austrailia-new zeland, and all over south/central america, and japan, as well as east coast! this on 6 meters, but couple-300 miles out on 2 meters as well! at dawn, simply bring in from the outside! quad probably 40 inch highx 40 inch wide, x , maybe 50 inck long, tops! not that big. as info, jim nn7k

"Rickie" <rickiev@hotmail.com> wrote in message
news:b59nh0$26kdqf$1@ID-89515.news.dfncis.de...
> I am in need to purchasing a good and strong 2 meter antenna for the
> windows. I'm not allow to setup anything on the firescape or on the
window,
> so I'll need something that I could remove when not in use.
>
> Any help would be great!
>
> Thanks in advance,
> Rickie / KC2KQQ
>
>
>

6106. Re: Horizontal Polarization with Ground Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 03:16:51 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <44us7vogr88ugoeept278fpvehg735g5ds@4ax.com>
Source record: 121993

On Sun, 23 Mar 2003 18:58:48 -0800, <Jimnn7k@reno.rmci.net> wrote:

>A ground plane can be turned, and turned, but WILL NOT effect the vertical
>radiation pattern!

Hi Jim,

Can you explain why?

73's
Richard Clark, KB7QHC

6107. Re: Easy take down HF Beam

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 04:03:06 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <_rvfa.16897$jA2.1506852@newsread2.prod.itd.earthlink.net>
Source record: 121995

Take a look at the 5 band Hexbeam. It's a compact package, and knocks down
to an easily transportable light weight package. The length disassembled is
something like 5 feet. Traffie Technology has other models as well.

K8AC

"Nige" <nomailthanks@ntlworld.com> wrote in message
news:Wc5ea.2971$ug.357@newsfep4-winn.server.ntli.net...
> I want to buy an HF beam that is going to be used for portable use. It
> needs to be able to stand up to being put up and taken down several times
a
> week. It will work on 10, 20 and 40 metres and have boom length of about
20
> feet. Does anybody have experience of a commercial antenna that will
match
> up to this spec please. The important thing is that it will stand being
> taken to pieces time and again and the simpler that process is the better.
> The Cushcraft beams look good but I have no experience of how sturdy they
> are for this sort of application. Any advice greatly appreciated guys.
>
>
>

6108. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 04:18:12 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303232018.798eb304@posting.google.com>
Source record: 121996

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<jgcs7vgnrfoam57bldcbqr0dvmqsn60v88@4ax.com>...
> On Sun, 23 Mar 2003 19:36:47 +0000, "Ian White, G3SEK"
> <G3SEK@ifwtech.co.uk> wrote:
>
> >Those are indications that it could be balanced; but the question was
> >about "is balanced".
> >
> >
> >>Third, it should make a good null in the expected direction.
> >>
> >Now that's a good point - it's indirect, but probably about the only
> >measurable indication of balance in the absence of any groundplane.
> >
>
> Hi Ian,
>
> I don't know how you come up with Richard's observation being an
> "indirect" proof of balance - it seems to illustrate the point quite
> clearly. However, if it being indirect is a good point, many more
> good points can be made through rather more tedious tests of
> indirection if you need them, but I would suspect you could as easily
> offer a list of such tests yourself.
>
> 73's
> Richard Clark KB7QHC

!!!!!!!

If anyone was able to draw a network drawing most of this discussion
would fall to one side, unfortunately those familiar with mesh
networks, impedance matching, lossless systems are not willing to
apply these tools to antennas to either obtain a mathematical answer
or to use such diagrams to obtain visuals
by MOM. If one was to only couple three loop circuits together (loop
being a combination capacitance, inductance and resistance circuit)
they have the basics
for obtaining mathmatical answers to all these questions. Also, if
only one would solve the same questions by use of MOM (they are all
antenna circuits)
they would then obtain visuals of answers instead of doing the
laborious math calculations. If only one would add a generator(
transmitter) to the first
loop circuit and couple it to the second loop in transformer form
since the third loop acts purely as a resonator which removes

reactance for resonance,
one would clearly see the graphic that shows zero current flow that I would suggest shows the ideal connection for a 'shield'. Unfortunately it appears that none on this newsgroup view network drawings favorably except where filter circuits are used, or possibly do not understand how to use them, handwaving
on this subject will continue. Yet without use of a network drawing lossless systems (assuming inductance and capacitance is lossless) will never become the practice of amateurs with respect to antennas. Nor will they be able to demonstrate the triangular current flow as discussed by Tom W7TI for extra short dipoles. Nor to obtain directional characteristics for dipoles close to the ground regardless of frequency which now seems to raise eyebrows.
So Richard H, until a person comes along that is able to accept and use meshed circuit drawings, and only W7TI comes to mind, your task of convincing others
is doomed to falure. On the other hand if one comes along and overcouples circuits two and three and then searches for the ideal coupling between the generator loop and the others you will become a hero. If you can convince the same person to change the format of the second 'loop' to that of a 'short' dipole all eyes will open in wonderment together with thoughts of presidential nomnation. But all this is just dreaming, no one thru the years on this newsgroup has shown a willingness to use the network tool, preferring to handwave to beat down statements such as yours. If you have a page and are familiar with network calculations you could illustrate your points overnight
and push the naysayers into a corner where they belong. I wish you luck, in showing the mathematical responses that prove your case via network analysis or conversly to illustrate via MOM the mathematical answers in visual form.
This is not to say the newsgroup is uneducated but suggests that our educational institutions has failed to educate antenna gurus in the advantages of network analysis so they would not be so quick to push such valuable tools aside, especially since all the books by Terman, Laval, and the like that were pioneers in our hobby a century ago used it so extensively to advantage whereas today it is met with so much disdain.
Best regards
Art

6109. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 04:49:40 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303232049.73b264c9@posting.google.com>
Source record: 121997

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:<3E7E163C.7030701@ieee.org>...
> KOP wrote:
> > 1. I feed a lambda\2 dipole (Z0= 75 ohm) with a balanced feeder, for
> > instance a 300 ohm low loss open wire line. Will this work or is the SWR
> > (4:1) too high ?
>
> 4:1 is quite acceptable for "300 ohm low loss open wire line".
> I am happy with any SWR below 12:1. Hint: 300/12 = 25 ohms.
>
> > 2. I understand that feeding a dipole with a balanced feeder makes it
> > resonant at any harmic frequency while feeding it with an ubalanced feeder
> > (coax) makes it resonant at the fundamental an odd harmoics. Is this true ?
>
> Close, but no cigar. Feeding a dipole with a *tuned* balanced feeder makes
> it resonant at virtually any frequency. The length of a tuned balanced
> feeder is very important. And there's no guarantee that resonance will be
> anywhere near 50 ohms.

Cecil, I understand your affection with 'tuned' feeders but I believe
in this case you are over reaching.A 'tuned' feeder line is good for
only a SINGLE
frequency. To use the term 'any frequency' is totaly incorrect with
out changing something since antenna reactance changes with frequency!
I know that YOU are able to "change" the tuned line or others can
remove antenna reactance by virtue of adding a secondary radiator, but
it is not correct to state that a tuned feeder makes a ANTENNA (
dipole) resonant. Usually you take great care to differentiate between
antenna and antenna system, so this time I believe the cigar should be
mine.
Regards
Art

6110. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 05:04:48 UTC
From: kevin <kevin@nospam.att.net>
Message-ID: <3E7E91EE.C61EF67F@nospam.att.net>
Source record: 121998

I did the same just like you described and great results for low cost and had
fun too.

http://www.softcom.net/users/kd6dks/quad.html

my funny neighbor thought I was building a kite !

LOL.

73 kev

Jimnn7k@reno.rmci.net wrote:

> Why bother, Get a tripod like the roof mount for a tv antenna from ripoff
> shack, or other source. then a 5 foot piece of masting, and finally build a
> quad, or a 3-4 element yagi! once constructed, can place on deck, yet pick
> up the whole thing, and have it inside in a minute! have friend that did
> this in apartment with 6 and 2 meters sideband, on six worked austrailia-new
> zeland, and all over south/central america, and japan, as well as east
> coast! this on 6 meters, but couple-300 miles out on 2 meters as well! at
> dawn, simply bring in from the outside! quad probably 40 inch highx 40
> inch wide, x , maybe 50 inck long, tops! not that big. as info, jim nn7k
>
> "Rickie" <rickiev@hotmail.com> wrote in message
> news:b59nh0$26kdqf$1@ID-89515.news.dfncis.de...
> > I am in need to purchasing a good and strong 2 meter antenna for the
> > windows. I'm not allow to setup anything on the firescape or on the
> window,
> > so I'll need something that I could remove when not in use.
> >
> > Any help would be great!
> >
> > Thanks in advance,
> > Rickie / KC2KQQ
> >
> >
> >

6111. Re: 2 meter Window Antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 05:06:06 UTC
From: kevin <kevin@nospam.att.net>
Message-ID: <3E7E923C.55718DCD@nospam.att.net>
Source record: 121999

Balun ?? did you mean a choke ?

73 kev

Brian Kelly wrote:

> Cindy <cindy.malone@nospam.com> wrote in message news:<3E7B29EB.6DB9724@nospam.com>...
> > Hi,
> >
> > Try using a steel pan instead of the aluminum, magmount likes steel better.
>
> . . . I only have one frying pan . . and I'm not giving up my morning
> eggs for the sake of any stupid ham antenna.
>
> > Also how long is the feedline ?
>
> 'Bout ten feet.
>
> >Try coil up six turns 10" coil and could help rf.
>
> 'Snot a problem a "balun" can fix. There are two fixes: Move the
> antenna farther away from the radio. Load ferrite beads onto every
> cable attached to the radio; mic, power, data cable, coax. I'm too
> cheap and lazy to go thru all that nonsense. Reducing the output to 5W
> fixed everything with a punch of a button.
>
> >
> > bye
>
> Dit-dit.
>
> w3rv
>
> >
> > Brian wrote:
> >
> > > "Rickie" <rickiev@hotmail.com> wrote in message
news:<b59nh0$26kdqf$1@ID-89515.news.dfncis.de>...
> > > > I am in need to purchasing a good and strong 2 meter antenna for the
> > > > windows. I'm not allow to setup anything on the firescape or on the window,
> > > > so I'll need something that I could remove when not in use.
> > > >
> > > > Any help would be great!
> > >
> > > I had the same basic problem.

> > >
> > > I bought the biggest throwaway aluminum foil "pan" I could find at a
> > > supermarket. I flattened it and formed it around the old iron radiator
> > > under the second floor window. I plopped a magmount antenna in the
> > > center of the pan and connected it to my 2m mobile xcvr and fired it
> > > up. At 50W output the radio went nuts, apparently my FT-1500M does not
> > > like to be operated in an intense RF field without filtering the power
> > > and mic cables. I reduced the power to 5W and can access ten repeaters
> > > and two packet stations from this mediocre location in suburban
> > > Philly. I've also done the same non-trick using aluminum foil on a
> > > wooden TV table.
> > >
> > > Any magmount antenna on any aluminum foil "plane" should work.
> > >
> > >
> > > > Thanks in advance,
> > > > Rickie / KC2KQQ
> > >
> > > w3rv

6112. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 05:13:34 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303232113.149d07de@posting.google.com>
Source record: 122000

"Jackie" <buzzygirl@REMOVETHIS.attbi.com> wrote in message
news:<Ng9fa.204158$6b3.576759@rwcrnsc51.ops.asp.att.net>...
> Hi there,
>
> I'm getting ready to set up a 5 band vertical antenna and I'm thinking ahead
> to the upcoming storm season. Here in the Midwestern US, we can get some
> pretty nasty thunderstorms, and though my lot has lots of trees that're
> taller than my 5-BTV is, I want to take some precautions to keep lightning
> and static charge far from the house.
>
> I am wondering what sort of lightning arrestors you folks use and recommend.
>
> I will, of course, be grounding the antenna well (to a metal pole that's
> sunk quite far down into the ground) but I should probably use something to
> arrest electrical spikes between the feedline and antenna... unless there is
> something out there that attaches differently, and works better than the
> ones I've found at the local radio store. Forgive me in advance for not
> knowing a whole lot about these items- I have heard them referred to and
> know people use 'em, but since I'm pretty new to amateur radio, I don't know
> which are best to use, so I thought I'd go to the source (actual hams). :-)
>
> TIA,
>
> Jackie kc0ody

Jackie,
I know there are a lot of fancy things out there that are supposed to
protect
you from antenna lightning but I have never used them. Using a well
grounded antenna (tower) away from the house with the antenna feedline
placed underground I have never had the misfortune of lightning
trauma. I suspect that
having a suitable length underground provides sufficient capacitive
coupling to earth, certainly more than the small gap provided by an
'opening' switch.
By the way I also am in the Midwest.
Art

6113. Re: Name that antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 05:28:44 UTC
From: "rick@rickfrazier.com" <rick@rickfrazier.com>
Message-ID: <3E7E978C.3A970B61@rickfrazier.com>
Source record: 122001

Konr:

Oddly enough, the pictures (and dimensions) look a lot like the antennas
that are mounted on the more remote call boxes along the roadways in the
US. Typically, the ones I've seen tend to use a cellular phone that
autodials 911....

--Rick AH7H

Konr Ness wrote:

> I was just given a yagi antenna that was installed on a 10' pole on a
> building in vertical polarization. I have no experience with yagi
> antennas, and would like to know if anyone could figure out the
> frequency of this antenna, and perhaps what it was used for.
>
> Pictures with measurements are at:
> http://www.webterrace.net/yagi/yagi1.jpg
> http://www.webterrace.net/yagi/yagi2.jpg
>
> Thank You,
> Konr Ness
> konr@hotmail.com

6114. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 05:58:41 UTC
From: tdonaly@aol.com
Message-ID: <20030324005841.26339.00000250@mb-fr.aol.com>
Source record: 122003

Art wrote,
(snip)
>This is not to say the newsgroup is uneducated but suggests that our
>educational institutions has failed to educate antenna gurus in the
>advantages of network analysis so they would not be so quick to push
>such valuable tools aside, especially since all the books by Terman,
>Laval, and the like that were pioneers in our hobby a century ago used
>it so extensively to advantage whereas today it is met with so much
>disdain.
>Best regards
>Art
>
>

Hi, Art,
network analysis generally makes the assumption of zero
length. How do you expect to analyze antennas without taking into
account their dimensions?
73,
Tom Donaly, KA6RUH

6115. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 05:59:13 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E7E9EAC.8DDE4376@att.net>
Source record: 122002

Richard Harrison wrote:

> Richard Clark wrote:
> "The Washington crowd is the single greatest accumulation of cowards in
> the world (including France).
>
> A broad brush indeed. John McCain is part of the Washington crowd, and
> he`s no coward. Washington has its quota, but surely there are some more
> brave souls. Why don`t they come to mind?
>
> Bravery in France seems to have been lacking among the French during the
> past century. Maybe bravery got exported by France to Indo-China. France
> is still smarting from our refusal to suport their colonialism. Also,
> Ike ordered the French and British out of Suez when Egypt announced
> expropriation of the canal. You take your soldiers out or we will, he
> said.They left.
>
> It was an Iraqui French-made Exocet missile, fired from a French-made
> Mirage jet fighter that ripped into the U.S.S. Stark on 17 May 1987
> while it escorted tankers carrying oil to the world, including France,
> from the Persian Gulf during the Iran Iraq war. 37 American sailors were
> killed.
>
> Russia supplied other missiles, tanks, and assorted arms to Iraq.
>
> China supplied Silkworm missiles,etc.
>
> These arms suppliers are still owed for the arms. I hope we see to it
> that they are never paid.
>
> I admire the post-war German foreign relations policy. Recognize the
> powers that be and trade with them whether you approve of them or not.
> Do as much business as you can with all of them.

But....but.... aren't these the "allies" we're gonna need????

6116. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 06:02:27 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E7E9F6E.EF80F894@att.net>
Source record: 122004

Richard Clark wrote:

> On Sun, 23 Mar 2003 17:22:45 -0600 (CST), richardharrison@webtv.net
> (Richard Harrison) wrote:
>
> >Richard Clark wrote:
> >"The Washington crowd is the single greatest accumulation of cowards in
> >the world (including France).
> >
> >A broad brush indeed. John McCain is part of the Washington crowd, and
> >he`s no coward. Washington has its quota, but surely there are some more
> >brave souls. Why don`t they come to mind?
> >
>
> Hi Richard,
>
> Come to mind? Why don't they step up? This isn't a broad brush, it
> is their backs to the wall.
>
> When one of my senators voted to "support the troops" I immediately
> responded to her with:
> This is sentimentality masking the abandonment of responsibility. Am
> I to be cajoled later that you had to vote as you did to support our
> leader and the troops? Need I point out how circular and self-serving
> that is for both sides against the middle? I can fully appreciate
> the challenge put to the political animal to vote for a united front,
> with the obvious extortion implied of future negative campaigning.
> You are the greater fool when that campaign arrives anyway and you
> have little to show other than a sulking enfant terrible who sat in
> the back seat. These are petty standards when we mock the world and
> invade Iraq.
>
> You now stand in direct conflict with the Constitution of the United
> States that explicitly puts the power of War in your hands. That you
> continue to countenance the prostitution of that document's mandate is
> repugnant, weak, and lazy.
>
> I demand a higher standard of leadership than has been evidenced by
> you of late in these matters. If you find the issues too demanding,
> or tasking of your ability, I suggest you step aside to allow those
> with more stamina and ability to take over. You may want to reflect
> that you have already done that by your capitulatory vote, the
> citizens may as well appreciate it by its actuality to prevent that
> same vote's reoccurrence.

>
> This applies to McCain no less so - is he waiting for this message to
> be morse code tapped against his cell wall?
>
> 73's
> Richard Clark, KB7QHC

Hey Rich....Where the hell were you when Clinton bombed and invaded
Kosovo/Yugoslavia-
without UN sanction, and without even asking for so much as a Security
Council resolution?
Their bastard leader was nowhere near as dastardly and deadly to his own
people as Saddam???

6117. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 06:12:14 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3E7EA1B9.C3CFBB05@att.net>
Source record: 122005

"Ian White, G3SEK" wrote:

> And how do we know when it's balanced?
>

Why wouldn't the presense or absence of common mode currents on the
feedline be an indication?

Dick

6118. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 07:16:14 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rbbt7voaehai3tmngkfb5c09s5i0k3tq6a@4ax.com>
Source record: 122007

On Mon, 24 Mar 2003 06:02:27 GMT, Dick Carroll <dickc58@att.net>
wrote:

>
>Hey Rich....Where the hell were you when Clinton bombed and invaded
>Kosovo/Yugoslavia-

I was out of town that weekend.

>without UN sanction, and without even asking for so much as a Security
>Council resolution?

Who gives a damn about the UN?!!!

>Their bastard leader was nowhere near as dastardly and deadly to his own
>people as Saddam???

What better practice? Too bad the Right Whiners wailed about chasing
down these poor tortured souls before we could nail more. We would've
had Milosivic gas soaked in a bunker instead of playing howdy-doody
with the Hague.

Dick, what is the point in comparing a dope smoker to a crack head?

73's
Richard Clark, KB7QHC

6119. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 07:52:44 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <t7et7vsogh1osqpopkb4740ag7q7vlv0du@4ax.com>
Source record: 122008
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
wrote:

>Tarmo Tammaru wrote:
>>
>> You realize that nobody under the age of 60 knows what a chopper amplifier
>> is?
>>
You should be able to find lots of them in manufacturing and the
chemical industry as young as 40. Probably not a lot younger than
that. Although they do make it a lot easier to amplify a signal from
a thermocouple. Now days you do it with solid state switches.

Roger Halstead (K8RI EN73 & ARRL Life Member)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>> Tam/WB2TT
>
>A Chevvy V8 on a Harley, obviously.

6120. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 08:30:34 UTC
From: The Real Andy <ihatespam@freemail.com.au>
Message-ID: <3e7ec144$0$16254$afc38c87@news.optusnet.com.au>
Source record: 122009
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

"John Larkin" <John.Larkin> wrote in message
news:mfls7vc6s48t5m3pqn85gq7idchuvsnlsv@4ax.com...
> On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
> wrote:
>
> >Tarmo Tammaru wrote:
> >>
> >> You realize that nobody under the age of 60 knows what a chopper
amplifier
> >> is?
> >>
> >> Tam/WB2TT
> >
>
> This is just a special case of nobody under 50 knowing anything at
> all.
>
Thats crap, i'm under 50 an i no that beer is healthy for ya....There, i no
somethink....

6121. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 08:43:40 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <u80NmeE8Usf+EAPt@ifwtech.co.uk>
Source record: 122010

Dick Carroll wrote:
>
>
>"Ian White, G3SEK" wrote:
>
>> And how do we know when it's balanced?
>>
>
> Why wouldn't the presense or absence of common mode currents on the
>feedline be an indication?

Sorry, I didn't make clear that this is an indoor receiving loop, resonated by receiving-style capacitors, so it isn't so easy to measure common-mode currents... and I don't think it would help anyway.

The problem is that a shielded loop fed with coax to a grounded receiver has two modes. The mode you want is the differential mode of the loop itself, where the received signal appears between the center conductor of the coax and the inside of the shield. But there is also an unwanted "monopole" mode of currents flowing on the outer surfaces of the loop shield, the coax, the outside of the rear panel of the receiver, and away to ground.

What I'm trying to do is to receive signals only by the differential mode of the loop itself. In particular, I want to keep the local noise received in monopole mode from coupling into the differential mode at the loop feedpoint. To that end, I have already tried to kill the monopole mode with ferrite chokes, and the next task is to improve the balance of the loop so that any remaining monopole-mode currents will not cross over into differential mode at the feedpoint.

Unfortunately, direct measurements of received noise are very inconclusive.

I can "illuminate" the indoor loop with RF from the vertical transmitting antenna outside, and that would give me enough outer-surface current to measure on the feedline. However, all that's going to tell me is the relative success of the ferrite chokes in killing the monopole mode.

Looks like the only way to measure balance is to follow Richard's suggestion: position the loop accurately at right-angles to the vertical, and adjust the balance at the loop feedpoint for minimum received signal.

Thanks for the opportunity to think aloud about this. I can see a way
forward now.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

6122. Re: Name that antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 09:57:37 UTC
From: Berhard Rhondin <berhard_rhondin@hotmail.com>
Message-ID: <3E7ED691.62AAD48D@hotmail.com>
Source record: 122011

If it is European, I would guess for a GSM-R- antenna
(GSM- based communication system for trains)

B.R.

Konr Ness wrote:
>
> I was just given a yagi antenna that was installed on a 10' pole on a
> building in vertical polarization. I have no experience with yagi
> antennas, and would like to know if anyone could figure out the
> frequency of this antenna, and perhaps what it was used for.
>
> Pictures with measurements are at:
> http://www.webterrace.net/yagi/yagi1.jpg
> http://www.webterrace.net/yagi/yagi2.jpg
>
> Thank You,
> Konr Ness
> konr@hotmail.com

6123. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 10:10:04 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <e80BmaA8ltf+EA5t@ifwtech.co.uk>
Source record: 122012

Earlier, I wrote:
>The mode you want is the differential mode of the loop itself, where
>the received signal appears between the center conductor of the coax
>and the inside of the shield.

Sorry, I didn't make that totally clear.

The mode you want is the differential mode of the loop itself. There is some kind of transformer to couple the loop to the feedline coax. At the receiver end of the coax, the wanted signal appears in the normal way, between the center conductor of the coax and the inside of the shield.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

6124. Re: 440 Yagi support on my Landrover

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 12:11:54 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303240411.3d302e5f@posting.google.com>
Source record: 122013

"Bill East" <beast@pcs.mb.ca> wrote in message news:<ZItfa.2911$qn.388550@localhost>...
> I want to use a idea I had seen before, but forgot where exactly. A wheel of
> your vehicle parks on a metal plate/mast design allowing you to install a
> 440 Yagi or other light yagi on a fiberglass mast or metal mast up about
> 12 feet over the roof of the truck or SUV.
> Anyone remember the web page? If you have other similar ideas to use a mast
> on a parked vehicle I would like to hear from you .
>
> thanks,
> Bill

I've got a homebrew version of one of those. Was made by a friend of
mine at a shipyard who has thick steel and a computerized plasma
cutter, etc. Mine is made to be a good fit for either radio shack
mast, or fence rail, which seem to be about the same size. Basically,
mine is an oval do-nut base cut from thick steel, and it uses pieces
of angle iron welded point up to the base for the "tire stops".
The mast holder is a piece of strong steel tubing slightly larger than
the mast being used. It's welded to the oval base, and also has
reinforcing legs angling down to the base, also made from angle iron.
The thing is super strong. The mast will bend over before the base
breaks. I use it here in the shack as the base for my 16 inch round MW
loop that sits on the floor. When portable I usually use it for a
dipole support using 20 ft of fence rail. I can stand up 20 ft of
that tubing by myself easily. 30 ft "three of them" is hard to do. Too
top heavy. We used it one field day to support a 6 meter beam using
the fence rails. I like the fence rails because they are cheap. About
$5 apiece for a 10 ft section. MK

6125. Re: 440 Yagi support on my Landrover

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 12:33:48 UTC
From: Phil <philip.bradway@verizon.net>
Message-ID: <MWCfa.765$kU.223@nwrdny01.gnilink.net>
Source record: 122014

I use a piece of 3/4" exterior plywood and a radio shack roof tripod. Two legs of the tripod are bolted to the plywood, the third leg has a leveling device (a plywood plate with a long bolt and a large nut that is positioned to even things up). The bolts have wing nuts for easy assembly. Using carriage head bolts and some adhesive keeps the bolts in the wood and minimizes bolt turning when tightening the wing nuts. I also use a piece of AL pipe in the tripod and insert a piece of TV mast which holds the antennas, A muffler type clamp on the TV mast keeps it off the ground so things can be rotated.

It's a lot simpler to do than describe!

Phil, KB2HQ

"Bill East" <beast@pcs.mb.ca> wrote in message
news:ZItfa.2911$qn.388550@localhost...
> I want to use a idea I had seen before, but forgot where exactly. A wheel
of
> your vehicle parks on a metal plate/mast design allowing you to install
a
> 440 Yagi or other light yagi on a fiberglass mast or metal mast up
about
> 12 feet over the roof of the truck or SUV.
> Anyone remember the web page? If you have other similar ideas to use a
mast
> on a parked vehicle I would like to hear from you .
>
> thanks,
> Bill
>
>

6126. WTD: GLA/Bugcatcher #480 Coil

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 12:51:59 UTC
From: Barry <luminosity@madriver.com>
Message-ID: <BAA4699F.3102%luminosity@madriver.com>
Source record: 122015
Cross-posted to: rec.radio.amateur.antenna,rec.radio.swap

I am looking to purchase a used, but not abused Texas Bugcatcher #480 coil.
This is the 10 thru 75 Meter / 4 inch diameter version by Henry Allen.
-Barry / N1QWA

6127. Re: Measuring antenna bandwidth with a spectrum analyzer and tracking generator

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 13:42:10 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <3j2u7v0f316oudtld0autnsjgdi6s5lr4j@4ax.com>
Source record: 122016

On Thu, 20 Mar 2003 19:59:43 -0800, "Joel Kolstad"
<JKolstad71HatesSpam@Yahoo.Com> wrote:

|"Crazy George" <munschNO@attglobal.net.SPAM> wrote in message
|news:3e7949bf_3@news1.prserv.net...
|> First, you are going to have to define bandwidth. Forward gain? SWR? F/B
|> ratio? To what degradation from best performance?
|
|The goal was to obtain a plot of S21 vs. frequency down to some tens of dB
|below the peak, that's all. Clearly SWR measurement would work for this
|application.

Hmmm, it's not clear to me. SWR is obtained from S11, not from S21,
and not the other way around.

6128. mobile antenna tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 13:54:12 UTC
From: "Larry D. Clark" <buddycl@swbell.net>
Message-ID: <86Efa.152$1L1.133346395@newssvr12.news.prodigy.com>
Source record: 122017

while doing research on mobile antennas
for my automobile, the thought has occurred
to me that it was theoritcally possible to tune
an antenna using a permeability tuned coil
much like using a permeability tuned vfo.
since i have not seen such an antenna,
the question is why is it not done? to expensive?
not power handling ability? or what???

larry
kd5foy

--
Fragen Sie nicht was Ihre Kumputer tun koennen,
aber fragen Sie was Sie fur Ihre Kumputer koennen.

6129. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 14:08:46 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303240608.2150ce23@posting.google.com>
Source record: 122018

tdonaly@aol.com (Tdonaly) wrote in message
news:<20030324005841.26339.00000250@mb-fr.aol.com>...
> Art wrote,
> (snip)
> >This is not to say the newsgroup is uneducated but suggests that our
> >educational institutions has failed to educate antenna gurus in the
> >advantages of network analysis so they would not be so quick to push
> >such valuable tools aside, especially since all the books by Terman,
> >Laval, and the like that were pioneers in our hobby a century ago used
> >it so extensively to advantage whereas today it is met with so much
> >disdain.
> >Best regards
> >Art
> >
> >
>
> Hi, Art,
> network analysis generally makes the assumption of zero
> length. How do you expect to analyze antennas without taking into
> account their dimensions?
> 73,
> Tom Donaly, KA6RUH

Tom,
Any antenna book shows an antenna as a loop circuit i.e. with
resistances (melded into one)inductance and capacitance so there is
no reason that analysis cannot be made and clever people do similar
things all the time with MOM.
I know of nothing of any formula that specifically states a length
for radiation other than the small loop that requires 1/10 or less of
a wavelength, even so the network can still be used as any inductor
includes an intrinsic length.
Rather than finding ways to avoid its use consider that ANYTHING that
carries current can radiate, and when one carries that to its limits
radiation can emanate from a single point. One final point, if you use
a square small loop as
a 'magnetic' radiator the value of the reactive components accuratly
by both mathematical methods such as a network analysis or MOM because
they can be made resonant and thus without reactance. Why not cross
over the bridge and test out its uses with respect to antennas?
Art

6130. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 15:38:39 UTC
From: Ham <sp@m.not>
Message-ID: <3E7F2681.9A2B580D@m.not>
Source record: 121919
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

My recollection is that HP made an expensive and very sensitive meter that used a nice mechanical chopper in it. I think I remember having one on my bench for a few weeks in the early 1960s.

The Real Andy wrote:

> "John Larkin" <John.Larkin> wrote in message
> news:mfls7vc6s48t5m3pqn85gq7idchuvsnlsv@4ax.com...
> > On Sun, 23 Mar 2003 17:29:49 -0700, Don Lancaster <don@tinaja.com>
> > wrote:
> >
> > >Tarmo Tammaru wrote:
> > >>
> > >> You realize that nobody under the age of 60 knows what a chopper
> amplifier
> > >> is?
> > >>
> > >> Tam/WB2TT
> > >
>

6131. Re: Horizontal Polarization with Ground Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 15:42:42 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b5n912rpq1@slb6.atl.mindspring.net>
Source record: 121920

A 1/4 wave has a nice pattern above it. A 5/8wave is a horizon hugger with basically no radiation above.

A decent satellite antenna is a simple 1/2 wave dipole horizontal above a reflective screen under it about 1/4 wave or is it 1/2 wave? It in the handbook. At least it was when I looked it up a few years back.

Dan/W4NTI

"Ralph Mowery" <rmowery@ctc.net> wrote in message news:qp6dnTBMkczLzOOjXTWcqA@ctc.net...
> > I am trying to use my ground plane antenna that is normally vertical for
> > satellite operations. I would like to use it horizontally to eliminate
> the
> > null point overhead. Can i just turn the whole antenna 90 degrees? How
> > does having a ground plane being in a different plan than the earth
affect
> > things?
> >
> > The antenna is a 140/440 groundplane currently about 15ft above the
ground
> > on my porch.
>
> The patern will still be the same , just rotated 90 deg. If the sat
passes
> to the back side of the gound plane , it will be in a big null. If you
turn
> it just right for every pass then it should work. Might just be simpler
to
> make a dipole antenna and mount it horizontal. Even beter put a single
> reflector under it like a two element beam but make the spacing a lot
more.
> Never can remember if it is 3/8 or 5/8 wavelenghts that gives a good
upward
> patern without cutting off too much at the horizon.
>
>

6132. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 15:57:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <rjau7vc8odtk5f8clhqdo7jqfmen8o205m@4ax.com>
Source record: 121922

On 24 Mar 2003 06:08:46 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Any antenna book shows an antenna as a loop circuit i.e. with
>resistances (melded into one)inductance and capacitance so there is
>no reason that analysis cannot be made

Hi Art,

This is commonly done already.

73's
Richard Clark, KB7QHC

6133. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 16:00:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E7F2B9A.8070407@ieee.org>
Source record: 121923

Art Unwin KB9MZ wrote:
> Cecil, I understand your affection with 'tuned' feeders but I believe
> in this case you are over reaching. A 'tuned' feeder line is good for
> only a SINGLE frequency.

A fixed-length feedline may be only good for a single frequency,
but then it is NOT a *tuned* feedline on those other frequencies. My
statement obviously doesn't apply to untuned feedlines.

"Feeding a dipole with a *tuned* balanced feeder makes it (dipole+feeder)
resonant at virtually any frequency."

And of course, the length of the "*tuned* balanced feeder" changes with
frequency. I think what you are missing is that if the system is not resonant,
the feedline is NOT *tuned*, by definition. My statement applies only to
tuned feeders.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6134. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 16:44:34 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E7F35C9.EF586FB4@earthlink.net>
Source record: 121924
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Watson Ammonium Chloride Name wrote:
>
> In article <3E7E517D.2BB1B17A@tinaja.com>, don@tinaja.com mentioned...
> > Tarmo Tammaru wrote:
> > >
> > > You realize that nobody under the age of 60 knows what a chopper amplifier
> > > is?
> > >
> > > Tam/WB2TT
> >
> > A Chevvy V8 on a Harley, obviously.
>
> "You call that a chopper? THIS is a chopper!"
> http://autohobbypage.com/cgi-bin/_image.pl?/show/all98/all079.jpg
> Thanks, google.

My dog was named Chopper. He was a Rat Terrier we had for about 10
years. Strong willed, stubborn, and quite a clown. Kind of like a
Usenet troll or two that I've seen. :)

--

Michael A. Terrell
Central Florida

6135. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 16:57:09 UTC
From: Thomas <zak@spam.invalid>
Message-ID: <b5ndd5ksk1@news1.tilbu1.nb.home.nl>
Source record: 121925
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Ham wrote:
> My recollection is that HP made an expensive and very sensitive meter that used
> a nice mechanical chopper in it. I think I remember having one on my bench for
> a few weeks in the early 1960s.

I owned something (fluke?) with an analog meter, and a current/volts setting.

It used neon lamps to do the chopping. Someone stole all the transistors, and all that was left were sockets. I measured and tried surplus transistors until it worked, and it did. The needle wasn't entirely stable (noise?) but sensitivity seemed to be okay, it could measure a permanent magnet moving fairly slowly across a single wire quite well.

Later I gave it away.

Thomas

6136. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 17:31:35 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303240931.33478532@posting.google.com>
Source record: 121926

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<rjau7vc8odtk5f8clhqdo7jqfmen8o205m@4ax.com>...
> On 24 Mar 2003 06:08:46 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >Any antenna book shows an antenna as a loop circuit i.e. with
> >resistances (melded into one)inductance and capacitance so there is
> >no reason that analysis cannot be made
>
> Hi Art,
>
> This is commonly done already.
>
> 73's
> Richard Clark, KB7QHC

Richard,
this group over the years have heavily resisted its use
at least with respect to antennas, and that includes yourself !
All educated people are aware of its existance
but as with water and a horse one cannot force them to drink.
Until the amateur reverses its stance we are doomed with respect
to pushing the envelope or to understand those who with its use
provides revalations

6137. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 17:58:23 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7sgu7vgr3609l03mhf9rglipq75dnea6v3@4ax.com>
Source record: 121927

On 24 Mar 2003 09:31:35 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in message
news:<rjau7vc8odtk5f8clhqdo7jqfmen8o205m@4ax.com>...
>> On 24 Mar 2003 06:08:46 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>> wrote:
>>
>> >Any antenna book shows an antenna as a loop circuit i.e. with
>> >resistances (melded into one)inductance and capacitance so there is
>> >no reason that analysis cannot be made
>>
>> Hi Art,
>>
>> This is commonly done already.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Richard,
> this group over the years have heavily resisted its use
>at least with respect to antennas, and that includes yourself !
>All educated people are aware of its existance
> but as with water and a horse one cannot force them to drink.
>Until the amateur reverses its stance we are doomed with respect
>to pushing the envelope or to understand those who with its use
> provides revalations

Hi Art,

You may have noted a shortfall of discussion, but the employment of
these techniques are quite common.

You suggest that I heavily resist these techniques simply because you
do not seek to be informed of my activities nor have you shown much
interest in other's work beyond what is described in thread subject
headers. I've spent the last week doing nothing else but these
techniques to add to material I have had posted for years. If there
is any interest flagging on the subject, then arguably it is your
passivity and refusal to research what is freely available that offers
the model of inertia.

Art, Ham radio is not doomed simply because you are bored.

73's
Richard Clark, KB7QHC

6138. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 18:04:16 UTC
From: k7itm@aol.com
Message-ID: <3200347.0303241004.350f8c84@posting.google.com>
Source record: 121928
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

"Marc H.Popek" <LVMarc@worldnet.att.net> wrote in message
news:<B_sfa.25959$S%3.1505925@bgtnsc04-news.ops.worldnet.att.net>...
> Hello Roy,
>
> Good probing question!
>
> The insensitivity to ALL E field "pollution, is qautaranteed by use of the
> differential signal process.
...

A perfectly balanced antenna connected to a perfectly balanced
amplifier/receiver will completely reject a signal which is also
perfectly balanced. Unfortunately, because of the physical separation
of the two sides of the loop, the ("e-field") signal induced in the
two sides is not exactly the same. This is quantified in one or the
other of the two references I posted...I think J&J but I don't
remember for sure. I believe also you'll find that NEC gives at least
qualitatively the same result.

Cheers,
Tom

6139. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 18:14:56 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6iiu7vo0pfa14qtv0t5lvlstechfd42dhl@4ax.com>
Source record: 121929
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

On 24 Mar 2003 10:04:16 -0800, k7itm@aol.com (Tom Bruhns) wrote:

>A perfectly balanced antenna connected to a perfectly balanced
>amplifier/receiver will completely reject a signal which is also
>perfectly balanced.

???

Hi Tom,

In what sense is a signal balanced? It is composed of three
orthogonal vectors to which at least one those vectors ground must
present some disturbance to the notion of symmetry.

73's
Richard Clark, KB7QHC

6140. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 18:21:17 UTC
From: John Larkin <jjlarkin@highSNIPlandTHIStechPLEASEnology.com>
Message-ID: <9miu7v0hpu21r2pcbd7n5u0hme5rthsafg@4ax.com>
Source record: 121930
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

On Mon, 24 Mar 2003 15:38:39 GMT, Ham <sp@m.not> wrote:

>My recollection is that HP made an expensive and very sensitive meter that used
>a nice mechanical chopper in it. I think I remember having one on my bench for
>a few weeks in the early 1960s.
>

Maybe it was a 412A; they were sold in the mid-60s. It was a DC VOM
with voltage ranges from 1000 V to 1 mV, and essentially zero drift.
It used CdSe photocells as both the input chopper and the final
synchronous demodulator, with a tube AC amp between. It used a
synchronous (clock-type) motor, a light bulb, and a chopper disk to
drive the photocells. Very nice instrument.

The early Fluke and HP differential voltmeters used mechanical,
vibrator-type choppers. Choppers were widely used in servo systems.

Lots of people make CMOS IC chopper opamps today. Some have drifts
measured in nanovolts per degree C.

John

6141. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 19:30:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v7un6ejna0une8@corp.supernews.com>
Source record: 121931

It sounds like you might have a misunderstanding of how the method of moments works. At least as it's used in antenna modeling, it's not a circuit analysis method, and does not attempt to reduce the antenna to a lumped circuit of inductances and capacitances. It does compute the self impedance of wire segments and the mutual impedance between them (using fundamental equations) and uses Ohm's law to calculate the wire currents from these and the excitation voltages. There's an excellent brief description of the method in Kraus' _Antennas_, 2nd Edition. It's not in the first edition, but I presume it's also in the third.

Roy Lewallen, W7EL

Art Unwin KB9MZ wrote:
> tdonaly@aol.com (Tdonaly) wrote in message
news:<20030324005841.26339.00000250@mb-fr.aol.com>...
>
>>Art wrote,
>>(snip)
>>
>>>This is not to say the newsgroup is uneducated but suggests that our
>>>educational institutions has failed to educate antenna gurus in the
>>>advantages of network analysis so they would not be so quick to push
>>>such valuable tools aside, especially since all the books by Terman,
>>>Laval, and the like that were pioneers in our hobby a century ago used
>>>it so extensively to advantage whereas today it is met with so much
>>>disdain.
>>>Best regards
>>>Art
>>>
>>>
>>
>>Hi, Art,
>> network analysis generally makes the assumption of zero
>>length. How do you expect to analyze antennas without taking into
>>account their dimensions?
>>73,
>>Tom Donaly, KA6RUH
>
>
> Tom,
> Any antenna book shows an antenna as a loop circuit i.e. with
> resistances (melded into one)inductance and capacitance so there is
> no reason that analysis cannot be made and clever people do similar
> things all the time with MOM.
> I know of nothing of any formula that specifically states a length

> for radiation other than the small loop that requires 1/10 or less of
> a wavelength, even so the network can still be used as any inductor
> includes an intrinsic length.
> Rather than finding ways to avoid its use consider that ANYTHING that
> carries current can radiate, and when one carries that to its limits
> radiation can emanate from a single point. One final point, if you use
> a square small loop as
> a 'magnetic' radiator the value of the reactive components accuratly
> by both mathematical methods such as a network analysis or MOM because
> they can be made resonant and thus without reactance. Why not cross
> over the bridge and test out its uses with respect to antennas?
> Art

6142. Re: Cell phone link to replace existing home phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 22:35:36 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e7f861d.317583859@news.galilei.com>
Source record: 121932

Hi Dennis

Thanks for the info and link!

I have never got to deep into the study of the cellular service, so am not up on anything about it.

I did at one time work for an antenna manufacturing company and often heard comments in engineering about this or that would cause it to fail type acceptance and more often than not they were talking about antennas for personal devices. Rather than antennas for hams our individually licensed services.
So I just assumed at the slow rate at which rules and regulations are changed that consumer devices would still fall under the various guidelines that were previously apparently covered.

But as you say, each service does have it's own rules. And as you pointed out, the transmitter section apparently turns itself down if the detected gain is too high. Which may be a way to keep larger antennas from providing any worth to cellular users.

TTUL
Gary

6143. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 23:03:47 UTC
From: richardharrison@webtv.net
Message-ID: <8782-3E7F8ED3-382@storefull-2316.public.lawson.webtv.net>
Source record: 121933

Art, KB9MZ wrote:
"---I believe the cigar should be mine."

Art wants antenna systems treated as a collection of circuit elements, it seems. He also wants a good match over a wide band to ease frequency changes. Art might look at AI1H`s article in "QST", "Broadband Dipoles - Some New Insights" in the October 1986 issue, page 27.

Best regards, Richard Harrison, KB5WZI

6144. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-24 23:33:44 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303241533.5d309270@posting.google.com>
Source record: 121934

I have no idea why you have come up with such a statement other than
to suggest that I do not know what I am talking about. I certainly
never intended to suggest that because both can be used to tackle the
same problem that they were one and the same.
Still, you are welcome to that off base opinion even tho it does not
assist with the subject at hand which is loop antennas,shielding etc .
If on the other hand
you are suggesting that network analysis has no place in antenna
discussions
or is inferior to the product that you offer then I am all ears, hand
waving would not be necessary
Art

Roy Lewallen <w7el@eznec.com> wrote in message news:<v7un6ejna0une8@corp.supernews.com>...
> It sounds like you might have a misunderstanding of how the method of
> moments works. At least as it's used in antenna modeling, it's not a
> circuit analysis method, and does not attempt to reduce the antenna to a
> lumped circuit of inductances and capacitances. It does compute the self
> impedance of wire segments and the mutual impedance between them (using
> fundamental equations) and uses Ohm's law to calculate the wire currents
> from these and the excitation voltages. There's an excellent brief
> description of the method in Kraus' _Antennas_, 2nd Edition. It's not in
> the first edition, but I presume it's also in the third.
>
> Roy Lewallen, W7EL
>
> Art Unwin KB9MZ wrote:
> > tdonaly@aol.com (Tdonaly) wrote in message
news:<20030324005841.26339.00000250@mb-fr.aol.com>...
> >
> >>Art wrote,
> >>(snip)
> >>
> >>>This is not to say the newsgroup is uneducated but suggests that our
> >>>educational institutions has failed to educate antenna gurus in the
> >>>advantages of network analysis so they would not be so quick to push
> >>>such valuable tools aside, especially since all the books by Terman,
> >>>Laval, and the like that were pioneers in our hobby a century ago used
> >>>it so extensively to advantage whereas today it is met with so much
> >>>disdain.
> >>>Best regards
> >>>Art
> >>>
> >>>

> >>
> >>Hi, Art,
> >> network analysis generally makes the assumption of zero
> >>length. How do you expect to analyze antennas without taking into
> >>account their dimensions?
> >>73,
> >>Tom Donaly, KA6RUH
> >
> >
> > Tom,
> > Any antenna book shows an antenna as a loop circuit i.e. with
> > resistances (melded into one)inductance and capacitance so there is
> > no reason that analysis cannot be made and clever people do similar
> > things all the time with MOM.
> > I know of nothing of any formula that specifically states a length
> > for radiation other than the small loop that requires 1/10 or less of
> > a wavelength, even so the network can still be used as any inductor
> > includes an intrinsic length.
> > Rather than finding ways to avoid its use consider that ANYTHING that
> > carries current can radiate, and when one carries that to its limits
> > radiation can emanate from a single point. One final point, if you use
> > a square small loop as
> > a 'magnetic' radiator the value of the reactive components accuratly
> > by both mathematical methods such as a network analysis or MOM because
> > they can be made resonant and thus without reactance. Why not cross
> > over the bridge and test out its uses with respect to antennas?
> > Art

6145. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 01:26:04 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <b5ob6o$gb8$1@slb9.atl.mindspring.net>
Source record: 121935

Perhaps he is seeking the impossible, eh? He could buy one of those 'famous' B&W Folded dipoles with the resistor in it, eh? Or a Heathkit dummy load would also fill the specs.

Dan/W4NTI

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:8782-3E7F8ED3-382@storefull-2316.public.lawson.webtv.net...
> Art, KB9MZ wrote:
> "---I believe the cigar should be mine."
>
> Art wants antenna systems treated as a collection of circuit elements,
> it seems. He also wants a good match over a wide band to ease frequency
> changes. Art might look at AI1H`s article in "QST", "Broadband Dipoles -
> Some New Insights" in the October 1986 issue, page 27.
>
> Best regards, Richard Harrison, KB5WZI
>

6146. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 01:46:35 UTC
From: richardharrison@webtv.net
Message-ID: <12791-3E7FB4FB-377@storefull-2311.public.lawson.webtv.net>
Source record: 121938

Art, KB9MZ wrote:
"Using a well grounded antenna (tower) away from the house with the antenna feedline placed underground I have never had the misfortune of lightning trauma."

Nor should he. The oft repeated "You can`t protect against a direct lightning hit." is a big lie.

I`ve worked in AM broadcast stations with underground coax and in others with above ground open-wire lines. None ever had a penny`s worth of lightning damage. These stations had countless direct lightning strikes and many dollars` worth of protection.

The average ham won`t ground coax and powerlines as he should, so it`s best for him to toss coax out the window `til the storm`s gone. But when he forgets, his house may burn.

Best regards, Richard Harrison, KB5WZI

6147. Re: Helically wound dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 01:52:16 UTC
From: thompson@mindspring.com
Message-ID: <b5ocdi$u4l$1@slb9.atl.mindspring.net>
Source record: 121936

There was some good write-ups in the ARRL Antenna book including a 2 el 40 meter beam and a helical 160 vertical.

I have some material;s from W8FYR (Kirk Antennas) SK now who had a line of helical beams using copper tape wound on Fiberglas elements. His write up said use the normal 1/2 wave (468/F) length and try to wind it in equal spacing in at least 1/2 the space. (more than 1/4 wavelength is better). The Kirk Beams were about 2/3's full size.

73 Dave K4JRB

Qamun <qamun@noc.mach-nine.com> wrote in message news:tdUea.314$NS3.17200@eagle.america.net...
> What is a good source of information for helically wound antennas? More
> specifically, I am looking for information on helically wound dipoles or
> other helically wound horizontally polarized antennas.
>
> NL7IW

6148. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 02:14:52 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303241814.4eed7a86@posting.google.com>
Source record: 121937

Richard, I apologise if my posting appeared to be combative, that was not my intention. If I have missed some past analysis of antennas via the the route I proscribed then I apologise again. With that said I am purely stating a method
by which Richards statements can be proven as correct. Fortunately he has since had Ian who has now come on board, tho it is my opinion that shielding benefits acrue from the lessening of Q and broadening of bandwidth.
It is my opinion that when amateurs move away from prejudgment in their drawings
prior to analysis by other methods they will be able to escape bonds to past works that revolve around radiators of strict wavelength dimensions.
Allow me to talk in a more folksy way, The nitty gritty of all antennas is to minimise the energy required to resonate so the remaining energy is used for actual radiation. In mechanical form this resonation can be equated to a pendulum which is about as close as we can get to perpetual motion. If we place an object on its fulcrum the object will also resonate, with minimal aditional contribution to resistance. If one applied the same thinking in network analysis form it can be seen that an ancillary resonator can allow any extra electrical energy to be convertad to radiation regardles of the the length, shape or size of the object (antenna/radiator) that it is attached to. This observation and statement has illuded the amateur community purely because a half wave dipole can do the same thing even tho it is loaded with limitations.
So now we come back to the original subject of loops
and the mystery it seems to be wrapped into. This antenna (loop) can be clarified best in network analysis form where as we have one circuit that
has a generator that is included, a coupled circuit that is synonamous to a antenna which is also coupled to a resonator (ala pendulum)
When the antenna is viewed in this way it is quite easy to see where a neutral
point can be obtained for shielding purposes which is the initial point that I entered upon.
I also mentioned that this aproach provides revelations about radiator lengths, lossless systems and the like that has been ignored for nearly a century.Since you are very familiar with network analysis I challenge you
to use it as a method of declaring my claims as false. I am fully aware that you always require mathematical back up for any statements and with your declared knoweledge of network analysis you are perfectly placed to expose me as another false antenna soothsayer or

provide validity to my work, patents and statements that naysayers in
the past have blasted .
Hopefully this posting will put us back on a more even keel with the
antenna
subject which both you and I enjoy. My aim is purely to share my work
without the intent to belittle others who do not understand the
subject and I would be grateful if you would to continue with the
subject as your presence always contributes positively to my increased
knoweledge.
Best regards
Art

\RichardRichard Clark <kb7qhc@attbi.com> wrote in message
news:<7sgu7vgr3609l03mhf9rglipq75dnea6v3@4ax.com>...
> On 24 Mar 2003 09:31:35 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >Richard Clark <kb7qhc@attbi.com> wrote in message
news:<rjau7vc8odtk5f8clhqdo7jqfmen8o205m@4ax.com>...
> >> On 24 Mar 2003 06:08:46 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> >> wrote:
> >>
> >> >Any antenna book shows an antenna as a loop circuit i.e. with
> >> >resistances (melded into one)inductance and capacitance so there is
> >> >no reason that analysis cannot be made
> >>
> >> Hi Art,
> >>
> >> This is commonly done already.
> >>
> >> 73's
> >> Richard Clark, KB7QHC
> >
> >Richard,
> > this group over the years have heavily resisted its use
> >at least with respect to antennas, and that includes yourself !
> >All educated people are aware of its existance
> > but as with water and a horse one cannot force them to drink.
> >Until the amateur reverses its stance we are doomed with respect
> >to pushing the envelope or to understand those who with its use
> > provides revalations
>
> Hi Art,
>
> You may have noted a shortfall of discussion, but the employment of
> these techniques are quite common.
>
> You suggest that I heavily resist these techniques simply because you
> do not seek to be informed of my activities nor have you shown much
> interest in other's work beyond what is described in thread subject

> headers. I've spent the last week doing nothing else but these
> techniques to add to material I have had posted for years. If there
> is any interest flagging on the subject, then arguably it is your
> passivity and refusal to research what is freely available that offers
> the model of inertia.
>
> Art, Ham radio is not doomed simply because you are bored.
>
> 73's
> Richard Clark, KB7QHC

6149. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 02:38:51 UTC
From: richardharrison@webtv.net
Message-ID: <741-3E7FC13B-311@storefull-2312.public.lawson.webtv.net>
Source record: 121939

Dan, W4NTI wrote:
"He could buy one of those "famous" B&W Folded dipoles with a resistor in it, eh?"

First, he should see L.B. Cebik`s pages. The B&W has its place in the broadband world, but Art, I believe, would like to broaden antenna frequency response by overcoupling a pair of separately resonant circuits in his antenna. Art`s antenna might have a response like an overcoupled intermediate frequency transformer. Like two bumps out at the extremes of its response.

Frank Witt, AI1H in his article, among other efforts, places a parallel-resonant circuit across the feedpoint of his series-resonant dipole.

For some reason, I thought of Art.

One of AI1H`s matching arrangements covers 3.5 to 4.0 MHz with better than 90% efficiency and less than 3:1 SWR in 50 ohms.

Best regards, Richard Harrison, KB5WZI

6150. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 02:43:31 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <knPfa.3018$062.339161@news20.bellglobal.com>
Source record: 121942

"Richard Harrison"
> ...AM broadcast stations...
> ...lightning damage...

How does the lightning damage resistance of a 50kw+ broadcast transmitter compare to that of a little old shortwave receiver connected to a long wire ?

> "You can`t protect against a direct lightning hit."
> is a big lie.

What sort of system can be used to protect a SW receiver from a direct strike to its antenna (other than disconnecting the antenna and tossing it out the window) ?

6151. FA FA FA BIG EGG INSULATORS FOR TOWERS OR ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 02:46:24 UTC
From: kf4toh@aol.com
Message-ID: <20030324214624.27985.00000347@mb-mp.aol.com>
Source record: 121940

30 LARGE EGG INSULATORS

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014269832

6152. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 02:46:54 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303241846.2e351730@posting.google.com>
Source record: 121941

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<8782-3E7F8ED3-382@storefull-2316.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "---I believe the cigar should be mine."
>
> Art wants antenna systems treated as a collection of circuit elements,
> it seems. He also wants a good match over a wide band to ease frequency
> changes. Art might look at AI1H`s article in "QST", "Broadband Dipoles -
> Some New Insights" in the October 1986 issue, page 27.
>
> Best regards, Richard Harrison, KB5WZI

Richard, I will check that one out tho I suspect it is that which has
a double dip in the SWR curve. As far as my interests go it is to
pursue the design
of a multi frequency radiator of dipole form that is not bound to
radiators of required basic wavelengths, and where total physical
length radiates efficiently regardles of frequency used. Tho my
progress speed is somewhat less than a worm I have achieved making
such an antenna which is small enought to be rotated for 160M use that
still adheres to figure 8 radiation regardless of height together with
the added benefits of the collinear radiation structure.
My present labor is to develop same in a structure that allows
mathematical examination to support claims of the antenna made. It was
around eight years ago when Tom W8TI in a discussion suggested that my
discussion seemed to revolve around meshed circuits which then ended
when I stated that I knew nothing of 'meshed circuits" !.
His advice for me to 'hit the books' was taken and even tho it has
taken me years to emulate a worms progress I am at last in a position
to prove my case in mathematical form. My wife informs me that it took
20 years for the typewriter
inventor to gain recognition, this suggests that I am now on the
finishing run,
It sure would help if Tom came back full time so that we could all
benefit from his antenna insights.
Best regards
Art

6153. Re: FA FA FA BIG EGG INSULATORS FOR TOWERS OR ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 03:09:15 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e7fca1e_2@news1.prserv.net>
Source record: 121943

You can walk into any electrical supply house and buy all of those you want cheap, and not pay shipping, or come by here and carry off the pile which has accumulated out back.

--
Crazy George
Remove NO and SPAM from return address
"kf4toh" <kf4toh@aol.com> wrote in message
news:20030324214624.27985.00000347@mb-mp.aol.com...
> 30 LARGE EGG INSULATORS
>
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3014269832

6154. Re: mobile antenna tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 03:10:16 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e7fca1f_2@news1.prserv.net>
Source record: 121944

Yes

--
Crazy George
Remove NO and SPAM from return address
"Larry D. Clark" <buddycl@swbell.net> wrote in message
news:86Efa.152$1L1.133346395@newssvr12.news.prodigy.com...
>
> while doing research on mobile antennas
> for my automobile, the thought has occurred
> to me that it was theoritcally possible to tune
> an antenna using a permeability tuned coil
> much like using a permeability tuned vfo.
> since i have not seen such an antenna,
> the question is why is it not done? to expensive?
> not power handling ability? or what???
>
> larry
> kd5foy
>
> --
> Fragen Sie nicht was Ihre Kumputer tun koennen,
> aber fragen Sie was Sie fur Ihre Kumputer koennen.
>
>

6155. Re: Horizontal Polarization with Ground Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 03:22:10 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <OPPfa.2803$U5.219@fe01.atl2.webusenet.com>
Source record: 121945

Quite simply-- the 3(4, or even center mounted on a 1/2 wave metal plate), when rotated (we are assuming its like turning a quarter on a table top), the driven element is still verticle, no mattter WHERE, it is turned to! of corse, if you wish to lay it on its side to get a horizontal pattern, then SOME effect (keep in mind that the ground radials simulate a "ground", may, or may NOT have some effect on the radiation pattern . also, then the real earth ground's reflections also enter into the equasion. (execpt in "free space" , like a sattellite) . --jim nn7k

Richard wrote: <kb7qhc@attbi.com> wrote in message news:44us7vogr88ugoeept278fpvehg735g5ds@4ax.com...
> On Sun, 23 Mar 2003 18:58:48 -0800, <Jimnn7k@reno.rmci.net> wrote:
>
> >A ground plane can be turned, and turned, but WILL NOT effect the vertical
> >radiation pattern!
>
> Hi Jim,
>
> Can you explain why?
>
> 73's
> Richard Clark, KB7QHC

6156. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 03:29:32 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3E7FCD1E.6E95A956@silverstar.com>
Source record: 121946
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Now I had thought it to be a '32 Ford V8 in an Indian!

Don Lancaster wrote:

> Tarmo Tammaru wrote:
> >
> > You realize that nobody under the age of 60 knows what a chopper amplifier
> > is?
> >
> > Tam/WB2TT
>
> A Chevvy V8 on a Harley, obviously.
>
> --
> Many thanks,
>
> Don Lancaster
> Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
> voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462
>
> Please visit my GURU's LAIR web site at http://www.tinaja.com

6157. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 03:38:14 UTC
From: Watson Ammonium Chloride Name <alondra101@hotmail.com>
Message-ID: <MPG.18e96f03b4e6033498a106@news.inreach.net>
Source record: 121921
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <3E7E517D.2BB1B17A@tinaja.com>, don@tinaja.com mentioned...
> Tarmo Tammaru wrote:
> >
> > You realize that nobody under the age of 60 knows what a chopper amplifier
> > is?
> >
> > Tam/WB2TT
>
> A Chevvy V8 on a Harley, obviously.

"You call that a chopper? THIS is a chopper!"
http://autohobbypage.com/cgi-bin/_image.pl?/show/all98/all079.jpg
Thanks, google.

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
###Got a Question about ELECTRONICS? Check HERE First:###
http://users.pandora.be/educypedia/electronics/databank.htm
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you add NOSPAM in the
Subject: line with other stuff. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

6158. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 03:57:01 UTC
From: richardharrison@webtv.net
Message-ID: <741-3E7FD38D-324@storefull-2312.public.lawson.webtv.net>
Source record: 121947

Art, KB9MZ wrote:
"So now we come back to the original subject of loops and the mystery it seems to be wrapped into."

Any mystery about loops can be resolved by Arnold B. Bailey in "TV and Other Receiving Antennas". Loops are standing-wave antennas, as are dipoles, unless the standing-wave is eliminated by a termination resistor which eliminates the reflection. A notable example of a terminated antenna is the B&W folded dipole.

So, a loop "ticks" just like a pendulum. The pendulum`s period is adjusted by its length. So is the loop`s.

Wideband antennas often have loss. Think about the rhombic, Beverage, and B&W. Loss does not automatically make any of the above bad antennas.

A loop has equal travel times in either direction to its mid-point opposite its feedpoint. That makes the phase difference the same at the mid-point as it is at the feedpoint, i.e., 180-degrees or exactly out-of-phase. That makes the continuous path at the mid-point a short-circuit and a zero volts point. Thus, since the loop is balanced to ground at the feedpoint,
the zero-volt point can be grounded without affecting the loop balance.

Best regards, Richard Harrison, KB5WZI

6159. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 04:45:03 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <S-WcnU2nuZRQQ-KjXTWcpg@comcast.com>
Source record: 121948

My thought exactly. Even if you had some kind of a protection device that clamped any voltage above what is needed to pass 100 W transmit, it probably still would not protect the receiver. Anybody try connecting the output of a transmitter directly to a receiver input? If you have a linear, you need a higher clamp voltage yet.

Tam/WB2TT
"J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca> wrote in message news:knPfa.3018$062.339161@news20.bellglobal.com...
> "Richard Harrison"
> > ...AM broadcast stations...
> > ...lightning damage...
>
> How does the lightning damage resistance of a 50kw+ broadcast transmitter
> compare to that of a little old shortwave receiver connected to a long wire
> ?
>
> > "You can`t protect against a direct lightning hit."
> > is a big lie.
>
> What sort of system can be used to protect a SW receiver from a direct
> strike to its antenna (other than disconnecting the antenna and tossing it
> out the window) ?
>
>
>

6160. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 05:06:48 UTC
From: richardharrison@webtv.net
Message-ID: <12791-3E7FE3E8-400@storefull-2311.public.lawson.webtv.net>
Source record: 121949

J. Harvey wrote:
"What sort of system can be used to protect a SW receiver from a direct strike to its antenna (other than disconnecting the antenna and tossiing it out the window)?"

End your antenna at some distance from your receiver and end it, or its open-wire feedline, near to the earth. Connect your antenna from this point to your receiver through a length of coax. Ground the coax well on both of its ends. The ground on the receiver end is outside the house. Connect to this grounded receiver end of the coax a short direct lead to the electric service ground. Connect another short direct ground lead from the case of the receiver to this external common ground for coax, receiver, and electric service.

Lightning doesn`t travel well inside coax. The two inside conductors are tightly coupled and make a common-mode choke.

Lightning must travel the outer surface of the coax, and you have that shorted to earth at both ends.

With wire as above you have made the receiver case, electric service, and antenna ground lead always have the same potential. The choke inside the coax makes the receiver antenna terminal always have very nearly the same voltage as the ground terminal on the radio.

Large lightning differential voltage at the antenna end of the coax will flashover because the coax rejects it. An arc-gap on the antenna end will look nice, but if it is like a broadcast tower, the lightning will always flashover elsewhere.

Best rergards, Richard Harrison, KB5WZI

6161. Re: FA FA FA BIG EGG INSULATORS FOR TOWERS OR ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 05:16:43 UTC
From: kf4toh@aol.com
Message-ID: <20030325001643.28021.00000378@mb-mp.aol.com>
Source record: 121950

>You can walk into any electrical supply house and buy all of those you want
>cheap, and not pay shipping, or come by here and carry off the pile which
>has accumulated out back.

AND YOUR POINT IS?

6162. Impedance matching

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 05:22:37 UTC
From: Chris <chrisw3@cox.net>
Message-ID: <3E7FE78F.232931F1@cox.net>
Source record: 121951

I am pretty new to all this antenna stuff but I now have the ARRL Antenna Book and the UHF/Microwave Experimenter's Manual. So far I'm not very impressed with the organization of these books but I guess it is too soon to say for sure. Any way I can't figure out how this guy is matching the Impedance on his 4 double quad antennas. The web site for his design is here
www.frars.org.uk/cgi-bin/render.pl?action=link&url=1162&goback=1064

Can someone please explain how his arrangement of 77 mm and 58 mm lines gets an output impedance of 50 ohms.

--
Chris W

6163. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 05:24:18 UTC
From: richardharrison@webtv.net
Message-ID: <12791-3E7FE802-402@storefull-2311.public.lawson.webtv.net>
Source record: 121954

Tam, WB2TT wrote:
"Anybody try connecting the output of a transmitter directly to a receiver input?"

That transmitter is applied in the differential mode, I infer.

Lightning is applied in a common-mode through a length of transmission line (same polarity and no voltage difference between the two conductors).

Hundreds of transistor radios installed this way with zero gas tube or other protectors across the coax. Nary a front end failure from lightning with zillions of direct hits. We did use grounded antennas. That is, grounded at the tower top.

Best regards, Richard Harrison, KB5WZI

6164. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 06:16:59 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303242216.54520f55@posting.google.com>
Source record: 121955

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303241846.2e351730@posting.google.com>...
> richardharrison@webtv.net (Richard Harrison) wrote in message
news:<8782-3E7F8ED3-382@storefull-2316.public.lawson.webtv.net>...
> > Art, KB9MZ wrote:
> > "---I believe the cigar should be mine."
> >
> > Art wants antenna systems treated as a collection of circuit elements,
> > it seems. He also wants a good match over a wide band to ease frequency
> > changes. Art might look at AI1H`s article in "QST", "Broadband Dipoles -
> > Some New Insights" in the October 1986 issue, page 27.
> >
> > Best regards, Richard Harrison, KB5WZI
>
> Richard, I will check that one out tho I suspect it is that which has
> a double dip in the SWR curve. As far as my interests go it is to
> pursue the design
> of a multi frequency radiator of dipole form that is not bound to
> radiators of required basic wavelengths, and where total physical
> length radiates efficiently regardles of frequency used.

What percentage qualifies as efficient? Nearly any dipole will be an
efficient antenna IF you can transfer power to it in an efficient
manner. It's not the antenna that is the problem. It's the matching
device if needed.

Tho my
> progress speed is somewhat less than a worm I have achieved making
> such an antenna which is small enought to be rotated for 160M use that
> still adheres to figure 8 radiation regardless of height together with
> the added benefits of the collinear radiation structure.

How is the efficiency? Not too hot I bet if the antenna is small.
Feeding a dipole with a rectangular shaped delta match is not a
collinear radiation structure, if thats the antenna you refer to.

> My present labor is to develop same in a structure that allows
> mathematical examination to support claims of the antenna made.

I can save you a whole lot of trouble. It's fairly simple really. The
most efficient way to feed a dipole on all bands, and still have a
normal dipole pattern, is to use motorized elements which extend and
retract to suit the band.
No matching device is needed on any band, as you have an appx 50 ohm
feedpoint on any band. But you would need to use long enough elements
to be a 1/2 wave on the lowest band used. Also, the antenna sections

would need to be small enough to shrink down to 8 ft per side to work 10m. This antenna is over 90 % efficient on any band used. It has a perfect dipole pattern on any band used if you use a 1:1 balun. It is fed with coax so wx is not a problem. Anything less is inferior if those are the properties you desire. Alas, this antenna has already been invented. I know this is not what you want to hear...

It was
> around eight years ago when Tom W8TI in a discussion suggested that my
> discussion seemed to revolve around meshed circuits which then ended
> when I stated that I knew nothing of 'meshed circuits" !.

W8JI...

MK

6165. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 06:42:17 UTC
From: "Dave M." <gadget@frontiernet.net>
Message-ID: <dTSfa.244$c71.76@news02.roc.ny.frontiernet.net>
Source record: 121956
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

I'm 49 and I know of them. In instrumentation amplifiers, they are used to modulate the input voltage after which the modulated signal is detected as a D.C. voltage with an offset determined by the precision of the match of the two choppers. At the time, the precision D.C. instrumentation amplifier did not exist.

Dave M.

Don Lancaster <don@tinaja.com> wrote in message
news:3E7E517D.2BB1B17A@tinaja.com...
> Tarmo Tammaru wrote:
> >
> > You realize that nobody under the age of 60 knows what a chopper
amplifier
> > is?
> >
> > Tam/WB2TT
>
> A Chevvy V8 on a Harley, obviously.
>
> --
> Many thanks,
>
> Don Lancaster
> Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
> voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462
>
> Please visit my GURU's LAIR web site at http://www.tinaja.com
>

6166. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 07:26:11 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E8004CF.1BFD7D15@earthlink.net>
Source record: 121957
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

```
Watson Ammonium Chloride Name wrote:
>
> In article <3E7F35C9.EF586FB4@earthlink.net>, mike.terrell@earthlink.net
> mentioned...
> > Watson Ammonium Chloride Name wrote:
> > >
> > > In article <3E7E517D.2BB1B17A@tinaja.com>, don@tinaja.com mentioned...
> > > > Tarmo Tammaru wrote:
> > > > >
> > > > > You realize that nobody under the age of 60 knows what a chopper amplifier
> > > > > is?
> > > > >
> > > > > Tam/WB2TT
> > > >
> > > > A Chevvy V8 on a Harley, obviously.
> > >
> > > "You call that a chopper? THIS is a chopper!"
> > > http://autohobbypage.com/cgi-bin/_image.pl?/show/all98/all079.jpg
> > > Thanks, google.
> >
> >
> > My dog was named Chopper. He was a Rat Terrier we had for about 10
> > years. Strong willed, stubborn, and quite a clown. Kind of like a
> > Usenet troll or two that I've seen. :)
>
> "Of all the dog breeds, the terrier is the best. Of all the terriers,
> the scotty is the best." I dunno where I read that, but we had a runt
> scotty when I was a kid. Good dawg.
>
> --

Good, but strange. I was on a service call one day, and this little
old lady answered the door. She told me she had a dog, but he wouldn't
bother me, and would hide under the couch, till I left. It was a toy
terrier that looked exactly like my 40 pound terrier at home, but it
could sit in the palm of your hand. i got busy on the TV, and heard the
dog's toenails on the hard floor and looked up to see it had brought me
one of its toys and laid it by where I was working. The lady was
shocked. She went on and on about how it had never taken to a stranger,
and never let anyone near any of its chew toys. I smiled and told her I
had one of my own, and it probably smelled the scent and knew it was OK.
```

I miss that old dog. He started having strokes and the vet couldn't do anything, so we had no choice but to let him be put to sleep. I doubt I'll ever see another one like him again. He wasn't afraid of the biggest dogs in the neighborhood, but would lay by the couch and watch a baby sleep and come get someone if it moved. He was terrified to climb stairs, but would jump up on things a lot higher. If I carried him down into the basement he would sleep by my feet while I worked all day at my workbench. The strangest thing was when he was a pup a cat attacked him, by slapping him with a paw, and those nails extended. Instead of jumping it like a dog would normally do, he slapped it, and it rolled about 20 feet across the yard and never came back. He was a strange, but lovable old friend.

--

Michael A. Terrell
Central Florida

6167. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 07:40:46 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <v801r8rr1m82b@corp.supernews.com>
Source record: 121958

Absolutely correct remark Richard. I stopped taking damage, at least from the antenna game, when I went to all grounded shunt fed towers for vertical array work and protected the coax to ground after that.

If I would just do the proper job of surrounding the house with the ground loop and take the power line input and grounds down to that as well, I'd likely have even less in-site damage from power line hits that come backwards into the place from them!

Right wrong or indifferent, I take, from statistics I've been able to keep over about ten years now, at least one direct hit a year or so here. And nothing is disconnected ever from whatever with nothing lost for a long time after I wised up and read up on the Polyphaser stuff and so on.

Richard Harrison wrote:

>Art, KB9MZ wrote:
>"Using a well grounded antenna (tower) away from the house with the
>antenna feedline placed underground I have never had the misfortune of
>lightning trauma."
>
>Nor should he. The oft repeated "You can`t protect against a direct
>lightning hit." is a big lie.
>
>I`ve worked in AM broadcast stations with underground coax and in others
>with above ground open-wire lines. None ever had a penny`s worth of
>lightning damage. These stations had countless direct lightning strikes
>and many dollars` worth of protection.
>
>The average ham won`t ground coax and powerlines as he should, so it`s
>best for him to toss coax out the window `til the storm`s gone. But when
>he forgets, his house may burn.
>
>Best regards, Richard Harrison, KB5WZI
>
>
>

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

6168. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 07:42:33 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <v801ujaoiec26c@corp.supernews.com>
Source record: 121959

Spot on again with the remark Richard. The secret is a GROUNDED antenna.

Richard Harrison wrote:

>Tam, WB2TT wrote:
>"Anybody try connecting the output of a transmitter directly to a
>receiver input?"
>
>That transmitter is applied in the differential mode, I infer.
>
>Lightning is applied in a common-mode through a length of transmission
>line (same polarity and no voltage difference between the two
>conductors).
>
>Hundreds of transistor radios installed this way with zero gas tube or
>other protectors across the coax. Nary a front end failure from
>lightning with zillions of direct hits. We did use grounded antennas.
>That is, grounded at the tower top.
>
>Best regards, Richard Harrison, KB5WZI
>
>
>

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

6169. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 12:28:38 UTC
From: Jeroen Belleman <Jeroen.Belleman@cern.ch>
Message-ID: <3E804B76.31E106A5@cern.ch>
Source record: 121961

"William E. Sabin" wrote:
>
> Pn(available) = En^2 / 4R = k T B
>
> This available thermal noise power is also the thermal noise power that
> is available from the hypothetical attenuator. In other words the
> thermal noise power that is available from the attenuator is the same
> for any value of attenuation [...]

In a matched system, the thermal noise power produced by an
attenuator goes as Patt = k Ta B(1-G^2), with G the voltage gain
of the attenuator (0<G<1), and Ta its temperature. So the noise
power does not depend on the impedance level, but it *does*
depend on the attenuation.

The contribution of the source as seen at the attenuator output
is Po = k Ts B(G^2), where Ts is the source noise temperature.
If the source has the same temperature, (Ta = Ts), the total noise
power indeed becomes independent of attenuation, however, this is
by no means general.

Admittedly the point is moot in the case of SW receivers, but I
did have to worry about this while measuring the noise level of
an LNA, recently.

Jeroen Belleman

6170. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 12:49:01 UTC
From: richardharrison@webtv.net
Message-ID: <14290-3E80503D-155@storefull-2313.public.lawson.webtv.net>
Source record: 121962

Mark Keith wrote:
"What percentage qualifies as efficient?"

AI1H has a graph of bandwidth improvement versus band edge efficiency. With LC network match and balance (Q=200) at the feedpoint, efficiency exceeds 90%. 3/4-in hardline match gives 85%. RG-58A gives 48% efficiency.

Best regards, Richard Harrison, KB5WZI

6171. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 12:56:33 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <3mYfa.3188$062.413042@news20.bellglobal.com>
Source record: 121960

J. Harvey wrote:
> "What sort of system can be used to protect
> a SW receiver from a direct strike to its antenna
> (other than disconnecting the antenna and tossiing
> it out the window)?"

"Richard Harrison"
> <snip - see original recipe...>
> Lightning doesn`t travel well inside coax.

Even if you persuade the lightning to go to ground, what is the rough magnitude of the 'side effect' voltages that might be quite happy to travel inside the coax ? In other words, what is the ratio between the magnitude of a lightning bolt and the damage energy of a receiver ? How much isolation can your system provide ?

I'm tempted to stay signed-up with the 'big lie' for now. There are too many variable amd too many damage mechanisms. Obviously, it is possible to improve the odds, but I don't believe that a 100% cure is practical (not saying it isn't possible) for the average ham.

A typical commercial installation is actually much easier due to metal building, fewer equipment than some hams, much larger budget, zero concern about appearance, full-time staff, etc.

6172. Re: Impedance matching

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 13:24:18 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E8057F9.FE8E5476@gte.net>
Source record: 121963

Chris wrote:

> I am pretty new to all this antenna stuff but I now have the ARRL
> Antenna Book and the UHF/Microwave Experimenter's Manual. So far I'm
> not very impressed with the organization of these books but I guess it
> is too soon to say for sure. Any way I can't figure out how this guy is
> matching the Impedance on his 4 double quad antennas. The web site for
> his design is here
> www.frars.org.uk/cgi-bin/render.pl?action=link&url=1162&goback=1064
>
> Can someone please explain how his arrangement of 77 mm and 58 mm lines
> gets an output impedance of 50 ohms.
>
> --
> Chris W

This appears to be the standard scheme for combining 4 antennas. The antennas are grouped into 2 groups of 2. The 2 antennas from each group are combined together with ANY EQUAL lengths of 50 Ohm coax. This results in a 25 Ohm resistance at each of the 2 Tees. Then an ODD electrical length multiple of 1/4 wavelength 50 Ohm line is used to transform the 25 Ohm impedance to 100 Ohms. When these are connected at the 3rd Tee- 50 Ohms results from the parallel combination of each antenna. 50 Ohm coax is used as the 1/4 wave transformers because it is the mean between 25 and 100 Ohms.

Dale W4OP

6173. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 13:29:25 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303250529.75fa8238@posting.google.com>
Source record: 121964

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<12791-3E7FB4FB-377@storefull-2311.public.lawson.webtv.net>...

Richard, as a further point of interest I once modelled an antenna
with the feed at the top of the tower and the attached a line to the
antenna which went to the bottom of the tower and laid it as close to
the ground as the program would allow for some length. The program
showed that the antenna radiated of course but so did the attached
wire, not only down the tower but also for a distance close to the
ground where it finally stopped radiating.
If one agrees to the idea that radiation stops when current flow stops
then it adds credence to this method of avoiding lightning trauma. The
only cavaet
I see is that lightning is composed of different frequencies
Regards
Art

Art, KB9MZ wrote:
> "Using a well grounded antenna (tower) away from the house with the
> antenna feedline placed underground I have never had the misfortune of
> lightning trauma."
>
> Nor should he. The oft repeated "You can`t protect against a direct
> lightning hit." is a big lie.
>
> I`ve worked in AM broadcast stations with underground coax and in others
> with above ground open-wire lines. None ever had a penny`s worth of
> lightning damage. These stations had countless direct lightning strikes
> and many dollars` worth of protection.
>
> The average ham won`t ground coax and powerlines as he should, so it`s
> best for him to toss coax out the window `til the storm`s gone. But when
> he forgets, his house may burn.
>
> Best regards, Richard Harrison, KB5WZI

6174. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 14:04:52 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303250604.46fdd7c6@posting.google.com>
Source record: 121965

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0303242216.54520f55@posting.google.com>...
> aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303241846.2e351730@posting.google.com>...
> > richardharrison@webtv.net (Richard Harrison) wrote in message
news:<8782-3E7F8ED3-382@storefull-2316.public.lawson.webtv.net>...
> > > Art, KB9MZ wrote:
> > > "---I believe the cigar should be mine."
> > >
> > > Art wants antenna systems treated as a collection of circuit elements,
> > > it seems. He also wants a good match over a wide band to ease frequency
> > > changes. Art might look at AI1H`s article in "QST", "Broadband Dipoles -
> > > Some New Insights" in the October 1986 issue, page 27.
> > >
> > > Best regards, Richard Harrison, KB5WZI
> >
> > Richard, I will check that one out tho I suspect it is that which has
> > a double dip in the SWR curve. As far as my interests go it is to
> > pursue the design
> > of a multi frequency radiator of dipole form that is not bound to
> > radiators of required basic wavelengths, and where total physical
> > length radiates efficiently regardles of frequency used.

Mark we have been thru this before!
>
> What percentage qualifies as efficient?
Max efficiency is when NON radiating resistance is reduced to a
minimum

Nearly any dipole will be an
> efficient antenna IF you can transfer power to it in an efficient
> manner. It's not the antenna that is the problem. It's the matching
> device if needed.
So you need a 'lossless' matching system in accordance with the
effeciency
statement above
>
> Tho my
> > progress speed is somewhat less than a worm I have achieved making
> > such an antenna which is small enought to be rotated for 160M use that
> > still adheres to figure 8 radiation regardless of height together with
> > the added benefits of the collinear radiation structure.
>
> How is the efficiency? Not too hot I bet if the antenna is small.

You should not bet in an area that you are unsure of. Efficiencies
shown by modelling programs provide in excess of 80% for a 'short'
rotatable dipole for 180M.

> Feeding a dipole with a rectangular shaped delta match is not a
> collinear radiation structure, if thats the antenna you refer to.

No.
I stated the feed system as a 'loop' circuit that is coupled
to the dipole at a point where it balances the non reactive impedance
provided by the dipole and its coupled resonator.
Re collinear.... it is not the feed 'loop' that creates the phase
change on the dipole length, it is the coupled resonator that provides
the phase change.
>
> > My present labor is to develop same in a structure that allows
> > mathematical examination to support claims of the antenna made.

> I can save you a whole lot of trouble. It's fairly simple really. The
> most efficient way to feed a dipole on all bands, and still have a
> normal dipole pattern, is to use motorized elements which extend and
> retract to suit the band.

Yes that has been used thru the years both in unsupported radiaters
and with supported radiators such as the IR antenna but my yard does
not have enough swing area for a 180M dipole!!!!

> No matching device is needed on any band, as you have an appx 50 ohm
> feedpoint on any band. But you would need to use long enough elements
> to be a 1/2 wave on the lowest band used. Also, the antenna sections
> would need to be small enough to shrink down to 8 ft per side to work
> 10m. This antenna is over 90 % efficient on any band used. It has a
> perfect dipole pattern on any band used if you use a 1:1 balun. It is
> fed with coax so wx is not a problem. Anything less is inferior if
> those are the properties you desire. Alas, this antenna has already
> been invented. I know this is not what you want to hear...

I don't know why you should say that. My aim is to have all the
physical rotatable portions to radiate for maximum efficient useage of
real estate provided. The IR antenna does not use all its physical
extension to radiate
which does not contribute to efficiency either to real estate or to
antenna efficiency. It would be much better if the IR antenna used the
whole physical length for instance on 10 M and take advantage of the
gains presented with the collinear format.
If ever you are in this area Mark stop in and have a look at the
antenna, it seems you are still struggling with its shape and size.

Best Regards.
Art
You are English too if your father was the son of your
grandfather who emigrated from Plymouth

>
> It was
> > around eight years ago when Tom W8TI in a discussion suggested that my
> > discussion seemed to revolve around meshed circuits which then ended
> > when I stated that I knew nothing of 'meshed circuits" !.
>
> W8JI...
>
> MK

6175. Re: FA FA FA BIG EGG INSULATORS FOR TOWERS OR ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 14:07:17 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e806413_1@news1.prserv.net>
Source record: 121967

"kf4toh" <kf4toh@aol.com> wrote in message
news:20030325001643.28021.00000378@mb-mp.aol.com...
> >You can walk into any electrical supply house and buy all of those you
want
> >cheap, and not pay shipping, or come by here and carry off the pile which
> >has accumulated out back.
>
>
> AND YOUR POINT IS?

FA + NG = :>(~

6176. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 14:11:56 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303250611.495b3fd5@posting.google.com>
Source record: 121966

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<741-3E7FD38D-324@storefull-2312.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "So now we come back to the original subject of loops and the mystery it
> seems to be wrapped into."
>
> Any mystery about loops can be resolved by Arnold B. Bailey in "TV and
> Other Receiving Antennas". Loops are standing-wave antennas, as are
> dipoles, unless the standing-wave is eliminated by a termination
> resistor which eliminates the reflection. A notable example of a
> terminated antenna is the B&W folded dipole.
>
> So, a loop "ticks" just like a pendulum. The pendulum`s period is
> adjusted by its length. So is the loop`s.
>
> Wideband antennas often have loss. Think about the rhombic, Beverage,
> and B&W. Loss does not automatically make any of the above bad antennas.
>
> A loop has equal travel times in either direction to its mid-point
> opposite its feedpoint. That makes the phase difference the same at the
> mid-point as it is at the feedpoint, i.e., 180-degrees or exactly
> out-of-phase. That makes the continuous path at the mid-point a
> short-circuit and a zero volts point. Thus, since the loop is balanced
> to ground at the feedpoint,
> the zero-volt point can be grounded without affecting the loop balance.
>
> Best regards, Richard Harrison, KB5WZI

Exactly. That is what I stated on my initial post on this subject and
I am very pleased that another Englishman (Ian) agrees with it. A
small advance for this
question that you have had over the years but it is so much better
than a small retreat.
Regards
Art

6177. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 14:51:00 UTC
From: richardharrison@webtv.net
Message-ID: <26606-3E806CD4-470@storefull-2314.public.lawson.webtv.net>
Source record: 121869

J. Harvey wrote:
"What is the ratio between the magnitude of a lightning bolt and the damage energy of the receiver?"

The receiver can withstand only minute excess antenna input for a short period. Precise determination may be destructive. I don`t try to find what it takes to break a receiver.

What is the magnitude of a lightning bolt?

Which one? When? Where? And, the next one?

There are too many variables. What works reliably is more important. My system provides 100% reliability in my vast experience, when it is done with care.

You need wavelengths of coax between an antenna with a 1/4-wave stub across its drivepoint and the receiver you want to protect.

Thet`s it for the receiver`s transistor front-end. The stub mitigates the energy across the coax. Zo impedes the surge. If it`s too high, it`ll flash. Only a slice of the spectrum is applied to the coax because it is limited in bandwidth by the stub. What gets to the receiver doesn`t last long enough to hurt it.

Most of the energy applied to the coax is common-mode. This adds to zero in the receiver load. The differential mode is limited by the stub, the flash, and the surge impedance.

The problem is to divert lightning harmlessly from the coax exterior. This is solved the same as the disposition of energy from a lightning rod and iits grounding system.

This receiver protection works, believe it or not.

Best regards, Richard Harrison, KB5WZI

6178. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 15:04:37 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E807005.4010308@mwci-news>
Source record: 121968

Jeroen Belleman wrote:
> "William E. Sabin" wrote:
>
>>Pn(available) = En^2 / 4R = k T B
>>
>>This available thermal noise power is also the thermal noise power that
>>is available from the hypothetical attenuator. In other words the
>>thermal noise power that is available from the attenuator is the same
>>for any value of attenuation [...]
>
>
> In a matched system, the thermal noise power produced by an
> attenuator goes as Patt = k Ta B(1-G^2), with G the voltage gain
> of the attenuator (0<G<1), and Ta its temperature. So the noise
> power does not depend on the impedance level, but it *does*
> depend on the attenuation.
>

The noise power that is *available* from any
resistor or any resistor network at temperature T
is exactly as I have stated. Your statement above
is incorrect. The correct conclusion is very
well known.

If the generator feeding the attenuator is at some
other temperature, the various temperatures need
to be considered, as I carefully mentioned, but my
writeup assumed a temperature of 290K for
everything.

The method for varying temperatures is to use the
methods of noise temperature analysis.

Bill W0IYH

6179. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 16:26:12 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <gZde$EBkMIg+EA1N@ifwtech.co.uk>
Source record: 121870

Art Unwin KB9MZ wrote:

>> Thus, since the loop is balanced
>> to ground at the feedpoint,
>> the zero-volt point can be grounded without affecting the loop balance.
>>
>> Best regards, Richard Harrison, KB5WZI
>

>Exactly. That is what I stated on my initial post on this subject and I
>am very pleased that another Englishman (Ian) agrees with it.

Pardon me, but I expressed no opinion on what you said.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

6180. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 16:42:41 UTC
From: Jeroen Belleman <Jeroen.Belleman@cern.ch>
Message-ID: <3E808701.A83140E8@cern.ch>
Source record: 121874

"William E. Sabin" wrote:
>
> Jeroen Belleman wrote:
> > In a matched system, the thermal noise power produced by an
> > attenuator goes as Patt = k Ta B(1-G^2), [so] it *does*
> > depend on the attenuation.
> >
> The noise power that is *available* from any
> resistor or any resistor network at temperature T
> is exactly as I have stated. Your statement above
> is incorrect.[...]

Ah, well, come now, perhaps you can point out where
exactly I erred? Allow me to refer back to your article
of May 18, stating:

> It is not true that a lossy coax contributes more
> thermal noise, for a given temperature, than a
> lower loss coax, but it does attenuate the signal,
> therefore decreases the signal-to-noise ratio.

From this it would seem that you believe that inserting
even the tiniest smidgeon of attenuation immediately
causes the available noise power to jump to a level
corresponding to the temperature of the attenuator,
whatever the source's noise temperature. I contest that
view.

> [...]
> my writeup assumed a temperature of 290K for
> everything.
> The method for varying temperatures is to use the
> methods of noise temperature analysis.

My formula indeed yields a constant available noise
power (i.e., independent of attenuation,) if the
source and attenuator are at the same temperature.
At least we seem to agree that far. If it's incorrect
for differing temperatures, where then did I fail?

Jeroen Belleman

6181. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 17:00:34 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nl218vsb30qv7rhv5bsnbocmep8q0vb4na@4ax.com>
Source record: 121871

On 25 Mar 2003 06:04:52 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>The IR antenna does not use all its physical
>extension to radiate
>which does not contribute to efficiency either to real estate or to
>antenna efficiency.

Hi Art,

ALL antennas radiate from their ENTIRE structure. There is no such
thing as an antenna that radiates only from a limited section of its
structure.

73's
Richard Clark, KB7QHC

6182. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 17:26:38 UTC
From: Watson Ammonium Chloride Name <alondra101@hotmail.com>
Message-ID: <MPG.18ea312a70ee274d98a110@news.inreach.net>
Source record: 121952
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

```
In article <3E7F35C9.EF586FB4@earthlink.net>, mike.terrell@earthlink.net
mentioned...
> Watson Ammonium Chloride Name wrote:
> >
> > In article <3E7E517D.2BB1B17A@tinaja.com>, don@tinaja.com mentioned...
> > > Tarmo Tammaru wrote:
> > > >
> > > > You realize that nobody under the age of 60 knows what a chopper amplifier
> > > > is?
> > > >
> > > > Tam/WB2TT
> > >
> > > A Chevvy V8 on a Harley, obviously.
> >
> > "You call that a chopper? THIS is a chopper!"
> > http://autohobbypage.com/cgi-bin/_image.pl?/show/all98/all079.jpg
> > Thanks, google.
>
>
> My dog was named Chopper. He was a Rat Terrier we had for about 10
> years. Strong willed, stubborn, and quite a clown. Kind of like a
> Usenet troll or two that I've seen. :)

"Of all the dog breeds, the terrier is the best. Of all the terriers,
the scotty is the best." I dunno where I read that, but we had a runt
scotty when I was a kid. Good dawg.

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
###Got a Question about ELECTRONICS? Check HERE First:###
http://users.pandora.be/educypedia/electronics/databank.htm
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you add NOSPAM in the
Subject: line with other stuff. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@
```

6183. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 17:32:29 UTC
From: Watson Ammonium Chloride Name <alondra101@hotmail.com>
Message-ID: <MPG.18ea3284a94ec15098a111@news.inreach.net>
Source record: 121953
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <9miu7v0hpu21r2pcbd7n5u0hme5rthsafg@4ax.com>,
jjlarkin@highSNIPlandTHIStechPLEASEnology.com mentioned...
[snip]

> The early Fluke and HP differential voltmeters used mechanical,
> vibrator-type choppers. Choppers were widely used in servo systems.

I used one of the Fluke differential voltmeters when I was in the army.
Today, people just don't appreciate how much time and labor a DMM saves
them. Give them a differential voltmeter to use, and let them realize
how it's done, manually.

> John

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
###Got a Question about ELECTRONICS? Check HERE First:###
http://users.pandora.be/educypedia/electronics/databank.htm
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you add NOSPAM in the
Subject: line with other stuff. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

6184. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 17:32:46 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <pcGcnVZr5PQhDx2jXTWcqQ@comcast.com>
Source record: 121872

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:12791-3E7FE802-402@storefull-2311.public.lawson.webtv.net...
> Tam, WB2TT wrote:
> "Anybody try connecting the output of a transmitter directly to a
> receiver input?"
>
> That transmitter is applied in the differential mode, I infer.
>
> Lightning is applied in a common-mode through a length of transmission
> line (same polarity and no voltage difference between the two
> conductors).................
>

Richard,

Won't this cause another problem. Say the shield of the coax goes to 2000V, but the radio is grounded through the power supply. I have heard of people who had the green wire in the power cord of communications equipment get fried due to lightning hits.

Also, the argument about common mode would not apply to an end fed antenna; and let's say it is hung between two trees to get towers out of the picture. Likewise, lightning could hit the half of a dipole that is connected to the center conductor

Tam/WB2TT

6185. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 17:36:29 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E809419.DE7CFB6B@att.net>
Source record: 121873

Richard,

Art is at least partially correct on this item.

The IR antenna has non-conducting support tubes which do not change
length when the conductors are adjusted.

Therefore the real estate efficiency comment is correct, even if
irrelevant for a multiband antenna.

The antenna efficiency comment is nonsense.

73,
Gene
W4SZ

Richard Clark wrote:
>
> On 25 Mar 2003 06:04:52 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >The IR antenna does not use all its physical
> >extension to radiate
> >which does not contribute to efficiency either to real estate or to
> >antenna efficiency.
>
> Hi Art,
>
> ALL antennas radiate from their ENTIRE structure. There is no such
> thing as an antenna that radiates only from a limited section of its
> structure.
>
> 73's
> Richard Clark, KB7QHC

6186. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 18:00:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <43618v847iuq40thf8j6uth2p0sauot3sh@4ax.com>
Source record: 121875

On Tue, 25 Mar 2003 17:36:29 GMT, Gene Fuller <W4SZzzzzz@att.net>
wrote:

>Richard,
>
>Art is at least partially correct on this item.
>
>The IR antenna has non-conducting support tubes which do not change
>length when the conductors are adjusted.
>
>Therefore the real estate efficiency comment is correct, even if
>irrelevant for a multiband antenna.
>
>The antenna efficiency comment is nonsense.
>
>73,
>Gene
>W4SZ

Hi Gene,

Yes, I suppose plastic does not radiate, and arguing that the screws
that hold it (the metal) together do would be tedious. It is already
tedious.

73's
Richard Clark, KB7QHC

6187. Re: The world's first Faster Than Light data transmission line!.....

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 18:42:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <mg818vs4susvte5f20mc4po0m5lnmncqrd@4ax.com>
Source record: 121876

On Tue, 25 Mar 2003 19:24:04 +0100, Gilbert Mouget <no.spam@thank.you>
wrote:

>In article <b5ps7n$g6q$1@nemesis.news.tpi.pl>,
> dated Tue, 25 Mar 2003 16:22:44 +0100,
> Mathew Orman, <orman@nospam.com> says...
>
>
>> Faster Than Light data transmission lines manufacturing and sales.
>> Up to 40 times faster than light propagation speeds of useful data
>> transmission up to 30km distance.
>> All hardware guaranteed with 200% money back.
>>
>> Useful comment and suggestions are welcome!
>>
>> www.ultra-faster-than-light.com
>
>Fractal cable ? :
>
>http://www.ultra-faster-than-light.com/allproducts.htm

Hi Gilbert,

Must be, it loses power before data is even applied to it:
>Power consumption 25ï¿½C, 9VDC Supply 150mA
and for only 1 meter of cable costing $325.

There is only ONE thing faster than light, its these folks who see a
sucker coming before he arrives. I wonder if HP is aware they are
using a Hewlett Packard logo to promote this.

73's
Richard Clark, KB7QHC

6188. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 19:26:06 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303251126.240d1a69@posting.google.com>
Source record: 121877

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
>
>
> Mark we have been thru this before!

We have?
> >
> > What percentage qualifies as efficient?
> Max efficiency is when NON radiating resistance is reduced to a
> minimum
>
> Nearly any dipole will be an
> > efficient antenna IF you can transfer power to it in an efficient
> > manner. It's not the antenna that is the problem. It's the matching
> > device if needed.
> So you need a 'lossless' matching system in accordance with the
> effeciency
> statement above

There is no such thing as a "lossless matching system" when feeding
small antennas.
> >
> > Tho my
> > > progress speed is somewhat less than a worm I have achieved making
> > > such an antenna which is small enought to be rotated for 160M use that
> > > still adheres to figure 8 radiation regardless of height together with
> > > the added benefits of the collinear radiation structure.
> >
> > How is the efficiency? Not too hot I bet if the antenna is small.
>
> You should not bet in an area that you are unsure of. Efficiencies
> shown by modelling programs provide in excess of 80% for a 'short'
> rotatable dipole for 180M.

But how efficient is the matching device? How small is the antenna? It
sounds pretty small. I actually work 160m. I've made quite a few
loaded dipoles as an example. None were as good as the full size
antenna. But in my case the losses were in the loading coils, not the
matching device. But no matter, there is no free lunch to be had on
160m.
>
>
> > Feeding a dipole with a rectangular shaped delta match is not a
> > collinear radiation structure, if thats the antenna you refer to.
>

> No.
> I stated the feed system as a 'loop' circuit that is coupled
> to the dipole at a point where it balances the non reactive impedance
> provided by the dipole and its coupled resonator.
> Re collinear.... it is not the feed 'loop' that creates the phase
> change on the dipole length, it is the coupled resonator that provides
> the phase change.

But if you directly attach the loop wires to the dipole, you are not
"coupling" the loop to the dipole. Again, all you are doing is making
a delta match with a rectangle shape to it. It does the same exact
job. It's a matching device.
> >
> > > My present labor is to develop same in a structure that allows
> > > mathematical examination to support claims of the antenna made.
>
> > I can save you a whole lot of trouble. It's fairly simple really. The
> > most efficient way to feed a dipole on all bands, and still have a
> > normal dipole pattern, is to use motorized elements which extend and
> > retract to suit the band.
>
> Yes that has been used thru the years both in unsupported radiaters
> and with supported radiators such as the IR antenna but my yard does
> not have enough swing area for a 180M dipole!!!!

Well then, you will never have the results of a full size dipole.
Probably usable though.
>
> > No matching device is needed on any band, as you have an appx 50 ohm
> > feedpoint on any band. But you would need to use long enough elements
> > to be a 1/2 wave on the lowest band used. Also, the antenna sections
> > would need to be small enough to shrink down to 8 ft per side to work
> > 10m. This antenna is over 90 % efficient on any band used. It has a
> > perfect dipole pattern on any band used if you use a 1:1 balun. It is
> > fed with coax so wx is not a problem. Anything less is inferior if
> > those are the properties you desire. Alas, this antenna has already
> > been invented. I know this is not what you want to hear...
>
> I don't know why you should say that. My aim is to have all the
> physical rotatable portions to radiate for maximum efficient useage of
> real estate provided. The IR antenna does not use all its physical
> extension to radiate
> which does not contribute to efficiency either to real estate or to
> antenna efficiency. It would be much better if the IR antenna used the
> whole physical length for instance on 10 M and take advantage of the
> gains presented with the collinear format.

But you can't do that unless you have a way to properly feed the two
elements in phase. This means you will need a phasing stub. Also, what
is an IR antenna?

> If ever you are in this area Mark stop in and have a look at the
> antenna, it seems you are still struggling with its shape and size.

I don't think so. I made a drawing of it when I modeled it, and you said it was correct. I doubt I will be in your neck of the woods any time soon.
>
> Best Regards.
> Art
> You are English too if your father was the son of your
> grandfather who emigrated from Plymouth

My mothers grandfather was from Southhampton. The "Keith's" are from Scotland originally. http://pages.prodigy.net/lakeith/marishal.htm for a brief history of a few of the better known ones. We even have a "family" castle over there...Dunnottar castle.
I think my line came from Scotland to most likely VA. in the late 1600's or early 1700's. I haven't been able to narrow down exactly which line I am from though. MK

6189. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 19:43:36 UTC
From: richardharrison@webtv.net
Message-ID: <14289-3E80B168-523@storefull-2313.public.lawson.webtv.net>
Source record: 121879

Tam, WB2TT wrote:
Won`t this (common mode on the coax) cause another problem?"

It presents another problem. This is solved by proper grounding and bypassing. The coax is grounded at both ends. Power and other conductors into the equipment require additional protection. We know how to do that too.

Best regards, Richard Harrison, KB5WZI

6190. Re: The world's first Faster Than Light data transmission line!.....

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 20:06:04 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <iid18v8hdl93ir4h5f6831uo8ku59f66rc@4ax.com>
Source record: 121878

On Tue, 25 Mar 2003 18:42:22 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>There is only ONE thing faster than light, its these folks who see a
>sucker coming before he arrives. I wonder if HP is aware they are
>using a Hewlett Packard logo to promote this.

Well, you seem to be forgetting about warp drive and sub-space
communication ;-)

Maybe this guy needs to send his HP equipment out for calibration,
or maybe he just needs to go back to school and pay more attention.

-fb-

6191. SGC Coupler / Small Wire Loops:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 20:18:46 UTC
From: google@ac6rm.net
Message-ID: <f86fe777.0303251218.78b9029a@posting.google.com>
Source record: 121880

Howdy;

I'm a ground-floor apartment dweller. I saw SGC at Dayton last year selling a simple "broom-stick" loop antenna that utilized their antenna coupler to match the coax to the antenna -- four brooms creating an eight-foot-or-so sized cross, around which was wound approximately 60 feet of wire. The ends where then attached directly to the coupler. They were selling it as a package -- wire, some clips and the coupler. It looks pretty neat.

I've been searching everywhere trying to get some more data on this design. I've seen and studied references to mag loops that look very different -- solid copper, very high-Q.

It's clear that the SGC design will get me on the air. I'm already on the air; I have a ground-mounted High Sierra HS1500 with a compromise ground plane. What's not clear is whether or not the SGC design would be better or worse than the mag loop, or the HS1500, and what flexibility is available. More turns better, less turns better, larger diameter, more or less wire, etc. etc. I've searched for two days on the web and cannot find anything that addresses design considerations for this type of antenna at all.

The key design points are that: (a) the antenna will be close to the ground; (b) one or more turns of #14 or #16 wire on a square frame sized anywhere from four to eight feed square; (c) I have an MFJ transmatch unit (the 941E) that I can put directly on the loop.

Can someone point me in the right direction?

Appologies if this is a post asking questions that have been asked in the past; I did find a few references to horizontal loops (tacked around the inner walls of the apartment) in the group and read those with interest. But I could not find anything on this particular design.

Many thanks and 73,

Martin AC6RM

6192. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 20:32:40 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E80BCE8.5010203@ieee.org>
Source record: 121881

Richard Clark wrote:
> ALL antennas radiate from their ENTIRE structure. There is no such
> thing as an antenna that radiates only from a limited section of its
> structure.

Don't forget top hats. A properly balanced top hat results in destructive interference in the far field, i.e. balanced top hats, like balanced elevated ground planes, are purposefully designed to radiate very little.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6193. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 21:05:19 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E80C48F.5020306@mwci-news>
Source record: 121882

Jeroen Belleman wrote:
> "William E. Sabin" wrote:
>
>>Jeroen Belleman wrote:
>>
>>>In a matched system, the thermal noise power produced by an
>>>attenuator goes as Patt = k Ta B(1-G^2), [so] it *does*
>>>depend on the attenuation.
>>>

One problem here is your use of the ambiguous word
"produced", which can mean different things to
different people. So let's try again.

1) One of my statements was that the available
thermal noise power AVAILABLE from a resistor, or
a resistor network, considered all by itself,
depends *only* on its temperature, and not on its
value of resistance or its attenuation. I insist
that this is correct.

2) If the generator that feeds the attenuator has
a temperature greater than or less than normal
ambient then we must take a more complicated
approach. We can use Friis's equation for cascaded
networks, or we can use the noise temperature
method to determine the total noise DELIVERED (OR
AS YOU SAY "PRODUCED") FROM THE ATTENUATOR TO THE
CIRCUITRY THAT FOLLOWS.

>
>>It is not true that a lossy coax contributes more
>>thermal noise, for a given temperature, than a
>>lower loss coax, but it does attenuate the signal,
>>therefore decreases the signal-to-noise ratio.

This is correct. The thermal noise power that is
available from a high loss coax (just the coax
all by itself) is exactly the same as the thermal
noise that is *available* from a low loss coax (at
the same temperature and all by itself). This
statement refers *only* to the coax itself, and
not necessarily to the entire network consisting
of generator, coax and the rest of the equipment
whose components may be at different temperatures.
If we consider the entire system, the correct

approach is to characterize each element of the
system, all by itself, and then perform a
stage-by-stage analysis of the entire system to
find the system output noise and the system
temperature.

If it is done in this manner (and done correctly)
the correct answer is guaranteed.

>
>
> From this it would seem that you believe that inserting
> even the tiniest smidgeon of attenuation immediately
> causes the available noise power to jump to a level
> corresponding to the temperature of the attenuator,
> whatever the source's noise temperature. I contest that
> view.
>

I believe I have given my viewpoint correctly, and
it does not imply your conclusion at all. You are
misunderstanding my meaning. The ambiguity of the
word "produce" is causing confusion. A more
precise and unambiguous terminology is required.

I repeat one more time: if we consider the coax
all by itself (not connected to a larger system),
its *available* thermal noise power is the same
regardless of its attenuation.

I don't want to discuss this any more. If it is
not OK, in your opinion, then so be it.

Bill W0IYH

6194. Re: SGC Coupler / Small Wire Loops:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 21:33:29 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <8665q7m8ra.fsf@duchess.twilley.org>
Source record: 121883

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Martin" == Martin Crundall <google@ac6rm.net> writes:

[... Martin talks about the SGC loop antenna ...]

Martin> I've been searching everywhere trying to get some more data on
Martin> this design. I've seen and studied references to mag loops
Martin> that look very different -- solid copper, very high-Q.

[...]

Martin> I've searched for two days on the web and cannot find anything
Martin> that addresses design considerations for this type of antenna
Martin> at all.

Martin> The key design points are that: (a) the antenna will be close
Martin> to the ground; (b) one or more turns of #14 or #16 wire on a
Martin> square frame sized anywhere from four to eight feed square;
Martin> (c) I have an MFJ transmatch unit (the 941E) that I can put
Martin> directly on the loop.

Martin> Can someone point me in the right direction?

There's a good page on the ARRL web site covering this general topic
at http://www.arrl.org/tis/info/limited.html and it includes a
members-only link to an antenna that sounds very similar to what
you've described. The page tells you what issues of QST (February and
May 1996) to track down to learn more.

Good luck.

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.1 (FreeBSD)

iD8DBQE+gMswGPFSfAB/ezgRAjArAKDLj/vn2AS73nUBs1NfgedHNegZLgCg5SRV
iBw8HzWgvhqjFfcbHc30z00=
=9uj2
-----END PGP SIGNATURE-----

6195. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 21:45:28 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <VfKzO9J43Mg+EATB@ifwtech.co.uk>
Source record: 121884

William E. Sabin wrote:
>
>One problem here is your use of the ambiguous word "produced", which
>can mean different things to different people. So let's try again.
>
>1) One of my statements was that the available thermal noise power
>AVAILABLE from a resistor, or a resistor network, considered all by
>itself, depends *only* on its temperature, and not on its value of
>resistance or its attenuation.

"Available" is equally ambiguous, to someone who doesn't already know the standard definition.

The thermal noise power generated in any (non-zero, non-infinite) resistor is simply kT W/Hz, regardless of the resistor value. But that power is generated at a source impedance equal to the resistor value, and is only 100% "available" to a matched load impedance. All other load impedances suffer a mismatch, which is why we don't detect the thermal noise generated at grossly mismatched impedances, for example in low-resistance connecting wires.

That particular definition of "available power" (it's there, but only if you can collect it) has always struck me as, well, counter-intuitive... but that's the standard definition, so we just have to know what it means and live with it.

Given that definition of "available", and a suitable definition of Jeroen's term "produced", their two sets of statements line up.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

6196. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 21:55:32 UTC
From: WB2JKX <mycall-N0SPAM@arrl.net>
Message-ID: <of4ga.24672$ja4.1668616@bgtnsc05-news.ops.worldnet.att.net>
Source record: 121885
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Thomas <zak@spam.invalid> wrote in message
news:b5ndd5ksk1@news1.tilbu1.nb.home.nl...
> Ham wrote:
> > My recollection is that HP made an expensive and very sensitive meter
that used
> > a nice mechanical chopper in it. I think I remember having one on my
bench for
> > a few weeks in the early 1960s.
>
> I owned something (fluke?) with an analog meter, and a current/volts
setting.
>
> It used neon lamps to do the chopping. Someone stole all the transistors,
and
> all that was left were sockets. I measured and tried surplus transistors
until
> it worked, and it did. The needle wasn't entirely stable (noise?) but
> sensitivity seemed to be okay, it could measure a permanent magnet moving
fairly
> slowly across a single wire quite well.
>
> Later I gave it away.
>
>
> Thomas

Let's not forget Ballantine Labs. There was a very good true RMS analog
meter that used a mech chopper amplifier to handle the output from the
tunnel diode detector. 50 to 500 microvolts DC, not easily done in the 60's.
Also a mechanical DVM, that used a chopper amp as the servo. Noisy but quite
accurate.

--
Just replace the obvious with my call for E-mail--I hate Spam, unless it
comes in a can, and even then......

6197. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 22:08:38 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <3E80D366.9287F5@uci.edu>
Source record: 121886

"William E. Sabin" wrote:
> 1) One of my statements was that the available
> thermal noise power AVAILABLE from a resistor, or
> a resistor network, considered all by itself,
> depends *only* on its temperature, and not on its
> value of resistance or its attenuation. I insist
> that this is correct.

Assuming noise 'power' is a function only of temperature, then at a fixed temperature the ratio V^2/R stays constant for any R. So as R goes up, V must also go up in order to hold V^2/R constant. In other words, noise voltage increases with resistance (and temperature).

73, AC6XG

6198. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 22:37:47 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303251437.5b23fcdc@posting.google.com>
Source record: 121887

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<gZde$EBkMIg+EA1N@ifwtech.co.uk>...
> Art Unwin KB9MZ wrote:
>
> >> Thus, since the loop is balanced
> >> to ground at the feedpoint,
> >> the zero-volt point can be grounded without affecting the loop balance.
> >>
> >> Best regards, Richard Harrison, KB5WZI
> >
>
> >Exactly. That is what I stated on my initial post on this subject and I
> >am very pleased that another Englishman (Ian) agrees with it.
>
> Pardon me, but I expressed no opinion on what you said.

I am sorry Ian, obviously I misunderstood your post to Richard where
you were thinking out loud and agreed with him. Seems like I am
grabbing at straws!
However, when reading my quote above where I referred to "zero-volts"
that
was a mistake on my part, it should have read " zero current" but it
would
still hold good for a neutral point.
Again apologies
Art

6199. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 22:58:22 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E80DF0E.4020207@mwci-news>
Source record: 121888

Ian White, G3SEK wrote:
> William E. Sabin wrote:
>
>>
>> One problem here is your use of the ambiguous word "produced", which
>> can mean different things to different people. So let's try again.
>>
>> 1) One of my statements was that the available thermal noise power
>> AVAILABLE from a resistor, or a resistor network, considered all by
>> itself, depends *only* on its temperature, and not on its value of
>> resistance or its attenuation.
>
>
> "Available" is equally ambiguous, to someone who doesn't already know
> the standard definition.

It is not ambiguous, and the lack of understanding
of the standard definition of available power is
not a rationale for inventing "new" theories.

The definition of available power does not require
a knowledge of the load impedance. It is also not
a measure of the power that is delivered. This is
common knowledge that is available in many
references. Also, I repeat that cascaded noise
figure and Friis's formula are predicated on
available power and available power gain. This is
basic in a wide range of literature, and has been
for many years.

Bill W0IYH

6200. Re: Mounting an FT100D in a Toyota Tacoma Extra Cab P/U Truck

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 23:02:48 UTC
From: "Dan Hayman, KD0DAN" <DanHayman@Accomplishments.com>
Message-ID: <3f5ga.105$Zz3.57836@news.uswest.net>
Source record: 121889

The "bar" idea seems to be the one I like best. I know that they make a bar held in place by tension, used to secure items in the bed. Its not an expensive item either. Maybe that's the way to go for mounting an ATAS antenna.

Thanks for the comments! Of course, finding a spot in the cab for the radio is also a problem--just no space! I am mounting an FT100D--even with the separation kit, its a tough call.

Thanks,

Dan

--
Dan Hayman
www.RakNRoll.com
From Surf Boards To Canoes, From SUV's To RV's, "The No Holes Drilled Transport Solution"
"starsekr" <starsekr@aol.com> wrote in message news:f2828edc.0303171614.3d48dce1@posting.google.com...
> 'Doc <w5lz@cwis.net> wrote in message news:<3E71DF8B.BC34FE88@cwis.net>...
>
> > Antennas, especially on a truck, are always going to
> > be in the way of something. Using a 'stake hole'
> > mount seems to be a fairly 'convenient' place to mount
> > an antenna, at least to me.
>
> Can't with a Tacoma, they don't have stakeholes. Walls are double box
> construction on the bed, so a ball sidemount needs spacers between the
> walls to prevent collapse, but a ball mount inside the bed might not
> look too bad. One good option, a screwdriver on the rear bumper,
> through the ball hitch hole, take off the tailgate and put a net up
> instead, then pull the antenna down and forward with a line to either
> front corner of the box.
> Another option, if you are just doing VHF/UHF, is to mount a bar
> behind the cab, sort of like a roll bar or driving light bar. This
> could be your antenna mount. Or get a big 3 magnet antenna mount and
> use ham sticks.
>

6201. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-25 23:09:10 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E80E196.3070705@mwci-news>
Source record: 121890

Jim Kelley wrote:
> "William E. Sabin" wrote:
>
>>1) One of my statements was that the available
>>thermal noise power AVAILABLE from a resistor, or
>>a resistor network, considered all by itself,
>>depends *only* on its temperature, and not on its
>>value of resistance or its attenuation. I insist
>>that this is correct.
>
>
> Assuming noise 'power' is a function only of temperature, then at a
> fixed temperature the ratio V^2/R stays constant for any R. So as R
> goes up, V must also go up in order to hold V^2/R constant. In other
> words, noise voltage increases with resistance (and temperature).
>
> 73, AC6XG

The open-circuit noise voltage (measured with a
very high impedance voltmeter) does increase with
R, as you say, but the noise power that is
AVAILABLE from the resistor does not increase with
the value of R.

I have already discussed this previously. It is
important to understand what is meant by
"available power", a term that is very widely
understood in electronics, but perhaps a new idea
to some folks.

Bill W0IYH

6202. Re: RF Propagation Prediction Software???

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 00:01:42 UTC
From: hasan schiers <schiers@netins.net>
Message-ID: <b5qql8$2d1ubp$1@ID-52642.news.dfncis.de>
Source record: 121891

Radio Mobile is a TERRIFIC piece of software. Very impressive, but the learning curve is a bit steep. If you are willing to invest some time, you will be rewarded for your efforts. It's free, updated on a reasonable basis, and tells you what you want to know. I highly recommend it, but NOT for someone who does not want to put some effort in to learning the concepts involved and the user-interface.

Once set up, it's easy to use. (IF and only IF you understand the "concepts" staring back at you from your monitor.) Example: what is a net, who is member, etc. etc.

It's well done, but it isn't "simple". I think it's by far the best product I've ever seen for free. It has a very professional feel. It puts most software I've paid for to shame, sans EZnec, which certainly lives up to its price.

...hasan, N0AN

"JLB" <IHateSpam@nospam.net> wrote in message
news:Mosea.56145$Dp.40060@fe01.atl2.webusenet.com...
> Check out RadioMobile at the link below.
>
> Jim
> N8EE
>
> http://www.cplus.org/rmw/english1.html
>
>
> "Ted Nugent" <eclip01@hotmail.com> wrote in message
> news:01c2ef1c$9f27bea0$82878685@clip...
> > Thanks in advance for taking the time to read
> > and possibly respond to this question. I was
> > wondering if anyone knew of a shareware program
> > that is EASY TO USE and runs under Windows
> > for making predictions of coverage of VHF
> > signals. I have heard of a program (I thought
> > it was called mimmic, or something that sounds
> > like that) that does this. What I am looking to
> > do is plug in variables such as frequency, ant height,
> > gain etc. and have the program predict the coverage
> > area for a repeater system. It would be really
> > helpful if it used or interfaced to a mapping program
> > to do "actual" predictions based on longitude and
> > latitude. I have found a program that does this,
> > but I don't exactly want to spend $1000+ for it.

> > Everyone tells me there is shareware that will fit
> > my need, but can't give me any names or websites.
> > So....I am tapping the vast knowledge base here, and
> > hoping someone can help me out.
>
>
>

6203. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 00:09:14 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <Gc6ga.1905$lf3.243545@news20.bellglobal.com>
Source record: 121893

"Richard Harrison" explained the bit about the stub...
> ...Only a slice of the spectrum is applied to the coax because
> it is limited in bandwidth by the stub. What gets to the receiver
> doesn`t last long enough to hurt it.

Ah....I see - receiver front end is shorted to ground with a tuned stub (etc.). I understand perfectly and I believe you when you say that it provides excellent protection (perhaps even essentially perfect protection).

Unfortunately, my SW receivers like to be tuned from ~100 kHz to 30 MHz depending on my mood and the propagation. Makes a tuned stub much less practical. The amateur installation is again typically more difficult to protect than the professional installation.

Transceivers are even more difficult to protect (than receivers) since you must allow ~100 watts to go one direction (when transmitting) and prevent some much smaller amounts of power from going the other direction (when receiving). This requirement forces the world-famous neon bulb *into* the transceiver on the R side of the T/R relay (thereby voiding your warranty, if applicable, if one cares).

I'm of the opinion that much can be done to improve the odds and reduce the damage, but total (100%) protection for a typical *amateur* (or SWL) installation simply requires tossing the feedline out the window and hiding the radio under the bed (slight exaggeration).

YMMV.

BTW - I read somewhere that lightning bolts are as 'little' as 10kA, often 100kA, and Florida (for example) sometimes sees some 2MA monsters.

Regards.

6204. Re: The world's first Faster Than Light data transmission line!.....

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 00:13:09 UTC
From: Paulo Marcondes <pepm@osite.com.br>
Message-ID: <3E80F095.B96BAF3C@osite.com.br>
Source record: 121892

funkbastler wrote:
>
> Well, you seem to be forgetting about warp drive and sub-space
> communication ;-)

OOps... but that WAS in 23rd century... :)
--
Paulo E.P. Marcondes
Half-trekkie
pepm@osite.com.br

6205. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 00:32:26 UTC
From: ddwyer <dd@ddwyer.demon.co.uk>
Message-ID: <AiEQQKAaUPg+Ewy8@ddwyer.demon.co.uk>
Source record: 121894
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <dTSfa.244$c71.76@news02.roc.ny.frontiernet.net>, Dave M.
<gadget@frontiernet.net> writes
> I'm 49 and I know of them. In instrumentation amplifiers, they are used to
>modulate the input voltage after which the modulated signal is detected as a
>D.C. voltage with an offset determined by the precision of the match of the
>two choppers. At the time, the precision D.C. instrumentation amplifier did
>not exist.
>
>Dave M.
>
>
>Don Lancaster <don@tinaja.com> wrote in message
>news:3E7E517D.2BB1B17A@tinaja.com...
>> Tarmo Tammaru wrote:
>> >
>> > You realize that nobody under the age of 60 knows what a chopper
>amplifier
>> > is?
>> >
>> > Tam/WB2TT
>>
>> A Chevvy V8 on a Harley, obviously.
>>
>> --
>> Many thanks,
>>
>> Don Lancaster
>> Synergetics 3860 West First Street Box 809 Thatcher, AZ 85552
>> voice: (928)428-4073 email: don@tinaja.com fax 847-574-1462
>>
>> Please visit my GURU's LAIR web site at http://www.tinaja.com
>>
>
>
No-ones mentioned mercury wetted ....sexy or what?
--
ddwyer

6206. Re: Lightning arrestors- your choice?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 00:45:11 UTC
From: richardharrison@webtv.net
Message-ID: <5236-3E80F817-233@storefull-2317.public.lawson.webtv.net>
Source record: 121895

J. Harvey wrote:
"Unfortunately, my SW receiver likes to be tuned~100kHz to 30 MHz
depending on my mood and the propagation."

Understood. In my first posting I advised amateurs to unplug the coax
and toss it out of the window. I also noted that the price of forgetting
might be a house burnt down.

Best regards, Richard Harrison, KB5WZI

6207. Re: SGC Coupler / Small Wire Loops:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 01:38:47 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <Hw7ga.49882$S%3.1733874@bgtnsc04-news.ops.worldnet.att.net>
Source record: 121896

"Jack Twilley" <jmt+usenet@twilley.org> wrote in message
news:8665q7m8ra.fsf@duchess.twilley.org...
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Martin" == Martin Crundall <google@ac6rm.net> writes:

[... Martin talks about the SGC loop antenna ...]

Martin> I've been searching everywhere trying to get some more data on
Martin> this design. I've seen and studied references to mag loops
Martin> that look very different -- solid copper, very high-Q.

[...]

Martin> I've searched for two days on the web and cannot find anything
Martin> that addresses design considerations for this type of antenna
Martin> at all.

Martin> The key design points are that: (a) the antenna will be close
Martin> to the ground; (b) one or more turns of #14 or #16 wire on a
Martin> square frame sized anywhere from four to eight feed square;
Martin> (c) I have an MFJ transmatch unit (the 941E) that I can put
Martin> directly on the loop.

Martin> Can someone point me in the right direction?

There's a good page on the ARRL web site covering this general topic
at http://www.arrl.org/tis/info/limited.html and it includes a
members-only link to an antenna that sounds very similar to what
you've described. The page tells you what issues of QST (February and
May 1996) to track down to learn more.

Good luck.

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.1 (FreeBSD)

iD8DBQE+gMswGPFSfAB/ezgRAjArAKDLj/vn2AS73nUBs1NfgedHNegZLgCg5SRV
iBw8HzWgvhqjFfcbHc30z00=
=9uj2
-----END PGP SIGNATURE-----

6208. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 03:03:06 UTC
From: Al <afjjay@earthlink.net>
Message-ID: <afjjay-563FBA.22030625032003@news.bellatlantic.net>
Source record: 121897
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article
<of4ga.24672$ja4.1668616@bgtnsc05-news.ops.worldnet.att.net>,
"WB2JKX" <mycall-N0SPAM@arrl.net> wrote:

> Thomas <zak@spam.invalid> wrote in message
> news:b5ndd5ksk1@news1.tilbu1.nb.home.nl...
> > Ham wrote:
> > > My recollection is that HP made an expensive and very sensitive meter
> that used
> > > a nice mechanical chopper in it. I think I remember having one on my
> bench for
> > > a few weeks in the early 1960s.
> >
> > I owned something (fluke?) with an analog meter, and a current/volts
> setting.
> >
> > It used neon lamps to do the chopping. Someone stole all the transistors,
> and
> > all that was left were sockets. I measured and tried surplus transistors
> until
> > it worked, and it did. The needle wasn't entirely stable (noise?) but
> > sensitivity seemed to be okay, it could measure a permanent magnet moving
> fairly
> > slowly across a single wire quite well.
> >
> > Later I gave it away.
> >
> >
> > Thomas
>
> Let's not forget Ballantine Labs. There was a very good true RMS analog
> meter that used a mech chopper amplifier to handle the output from the
> tunnel diode detector. 50 to 500 microvolts DC, not easily done in the 60's.
> Also a mechanical DVM, that used a chopper amp as the servo. Noisy but quite
> accurate.
>

In the sixties, I used an analog computer which used chopper stabilized
amplifiers as op amps. We used it to solve simultaneous diffential
equations. It took hours to program with patch cords and to adust
coefficients, but it took only a couple of seconds to print out the
solution in the form of a graph on graph paper. The computers were made
by some company in New Jersey whose name escapes me now.

Al

--

Remove extra j from the address to reply.

6209. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 04:13:31 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303252013.7ca11f43@posting.google.com>
Source record: 121898

Gene Fuller <W4SZzzzzz@att.net> wrote in message news:<3E809419.DE7CFB6B@att.net>...
> Richard,
>
snip
>
> Therefore the real estate efficiency comment is correct,

..(1).....even if irrelevant for a multiband antenna.......Hmmmmmm
>
> (2)........The antenna efficiency comment is nonsense..........Hmmm

>Gene,
Gene

You made two odd statements above. Can you restate what you are saying
together with an intelligent reason or facts to support your position?
If you are not really knowledgable about antenna construction to put
it into
academic terms its fine by me ,If you explain your position in non
academic terms thats fine also. If you just have a off the cuff
personal opinion with no back up that is fine also.
I would be excited if you were really truthfully
familiar with coupled circuits and the like since as yet no one has
come
forward with factual knowledge of same.Apparently antenna programs
have supplanted mathematical analysis and real life experimenting.
Especially since there are now so many GOOD antenna programs that are
available for FREE and more versatile than those one used to have to
pay $$$$$ for!!!
I haven't communicated with you before so I am hoping that you have a
academic background so that I have the opportunity of learning as
opposed to a session of hand waving and the like.
Regards
Art

> 73,
> Gene
> W4SZ
>
> Richard Clark wrote:
> >
> > On 25 Mar 2003 06:04:52 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> > wrote:
> >
> > >The IR antenna does not use all its physical

> > >extension to radiate
> > >which does not contribute to efficiency either to real estate or to
> > >antenna efficiency.
> >
> > Hi Art,
> >
> > ALL antennas radiate from their ENTIRE structure. There is no such
> > thing as an antenna that radiates only from a limited section of its
> > structure.
> >
> > 73's
> > Richard Clark, KB7QHC

6210. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 04:18:59 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303252018.15c0b8e6@posting.google.com>
Source record: 121899

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<nl218vsb30qv7rhv5bsnbocmep8q0vb4na@4ax.com>...
> On 25 Mar 2003 06:04:52 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >The IR antenna does not use all its physical
> >extension to radiate
> >which does not contribute to efficiency either to real estate or to
> >antenna efficiency.
>
> Hi Art,
>
> ALL antennas radiate from their ENTIRE structure. There is no such
> thing as an antenna that radiates only from a limited section of its
> structure.
>
> 73's
> Richard Clark, KB7QHC

Richard
You are now getting a bit silly with your comments. More comments like
that and you will lose credability !!!
Art
Art

6211. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 04:45:41 UTC
From: ham <sp@m.not>
Message-ID: <3E81307B.5AB22E3D@m.not>
Source record: 121900
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Electronic Associates Incorporated
Precision Analog Computing Equipment (PACE)
Long Branch, New Jersey

I'm holding in my hand one of their plastic templates to draw the analog computer blocks. I've had it in my desk drawer for all these years 40+ and another at work and I still use it for simple drawing in preference to a ruler and used to have a second one that has escaped over the years. I think somebody lifted it from my desk at work.

I loved those computers and would much prefer to work with them rather than those klunky (at the time) digital things that never worked for longer than a half hour or so before having to be repaired. I used it at grad school at Northwestern in the 1959 and 1960 school years. And wasn't that a wonderful Non Linear Systems (San Diego) digital voltmeter with the stack of engraved Plexiglas digits edge lit for a readout great and impressive?

There was something very satisfying about tweaking a coefficient pot and watching the trace on the strip chart change in response as the red ink splatter from the pen left a track across the front of your shirt if you were impatient and opened the cover while it was still running.

Besides sitting in front of the computer with all those ten turn pots (a couple of hundred in a top end system) and all those plug in amps was sort of like being in command of a spaceship or something or so it seemed in those naive times.

Of course Northwestern's other Analog computer, circa 1945, took up a whole half of the room and a full wall with full size inductors, capacitors and the like. I never saw anybody using it.

Al wrote:

> In article
> <of4ga.24672$ja4.1668616@bgtnsc05-news.ops.worldnet.att.net>,
> "WB2JKX" <mycall-N0SPAM@arrl.net> wrote:
>
> > Thomas <zak@spam.invalid> wrote in message
> > news:b5ndd5ksk1@news1.tilbu1.nb.home.nl...
> > > Ham wrote:
> > > > My recollection is that HP made an expensive and very sensitive meter
> > that used
> > > > > a nice mechanical chopper in it. I think I remember having one on my
> > bench for
> > > > > a few weeks in the early 1960s.

> > >
> > > I owned something (fluke?) with an analog meter, and a current/volts
> > setting.
> > >
> > > It used neon lamps to do the chopping. Someone stole all the transistors,
> > and
> > > all that was left were sockets. I measured and tried surplus transistors
> > until
> > > it worked, and it did. The needle wasn't entirely stable (noise?) but
> > > sensitivity seemed to be okay, it could measure a permanent magnet moving
> > fairly
> > > slowly across a single wire quite well.
> > >
> > > Later I gave it away.
> > >
> > >
> > > Thomas
> >
> > Let's not forget Ballantine Labs. There was a very good true RMS analog
> > meter that used a mech chopper amplifier to handle the output from the
> > tunnel diode detector. 50 to 500 microvolts DC, not easily done in the 60's.
> > Also a mechanical DVM, that used a chopper amp as the servo. Noisy but quite
> > accurate.
> >
>
> In the sixties, I used an analog computer which used chopper stabilized
> amplifiers as op amps. We used it to solve simultaneous diffential
> equations. It took hours to program with patch cords and to adust
> coefficients, but it took only a couple of seconds to print out the
> solution in the form of a graph on graph paper. The computers were made
> by some company in New Jersey whose name escapes me now.
>
> Al
>
> --
>
> Remove extra j from the address to reply.

6212. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 04:46:26 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <b5rbb2$e79$1@mail.specsol.com>
Source record: 121901
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In rec.radio.amateur.antenna Al <afjjay@earthlink.net> wrote:

> In the sixties, I used an analog computer which used chopper stabilized
> amplifiers as op amps. We used it to solve simultaneous diffential
> equations. It took hours to program with patch cords and to adust
> coefficients, but it took only a couple of seconds to print out the
> solution in the form of a graph on graph paper. The computers were made
> by some company in New Jersey whose name escapes me now.

> Al

> --

> Remove extra j from the address to reply.

Memories...

In the sixties I maintained a big analog computer (tube based) that had
motor driven chopper stabilized op amps.

It too solved simultaneous diffential equations, though the solutions
were in real time.

The problem was hard wired and there were these huge (feet in diameter)
oil filled servo driven pots to derive a solution.

It was the fire control computer for the Nike Hercules anti-aircraft
missile system.

My fondest memory is hot swapping a bad op amp one day (you weren't
supposed to do that, but this was not in the US and aircraft with
red stars were heading our way) and getting knocked to my knees by the
charge in one of the B+ caps. Turned out the bleeder resistor was in the
mainframe, not in the op amp itself.

--
Jim Pennino

6213. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 04:52:57 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E8132A4.63F412EA@att.net>
Source record: 121902

Hi Art,

My first comment is easy to address.

If one has a multiband antenna, such as the SteppIR, the physical size will be whatever is required for the lowest frequency of operation. The fact that the physical size is then not as small as possible for the higher bands seems to me to be irrelevant.

If you have room to install and rotate a 20 meter antenna do you really care if the same antenna does not physically shrink when used at 10 meters? It is unlikely that the trees or property boundaries move in closer when the antenna is adjusted for a different band.

My second comment means just what it says.

The excess non-conducting support structure of the SteppIR has no measurable impact on efficiency. Do you have a different definition of efficiency than the standard definition?

Most people accept the definition that efficiency is the ratio of radiation resistance to the total resistance, including loss resistance. Why is this a special issue for the SteppIR antenna?

73,
Gene
W4SZ

Art Unwin KB9MZ wrote:
>
> Gene Fuller <W4SZzzzzz@att.net> wrote in message news:<3E809419.DE7CFB6B@att.net>...
> > Richard,
> >
> snip
> >
> > Therefore the real estate efficiency comment is correct,
>
> ..(1).....even if irrelevant for a multiband antenna.......Hmmmmmm
> >
> > (2)........The antenna efficiency comment is nonsense..........Hmmm
>
> >Gene,
> Gene
>
> You made two odd statements above. Can you restate what you are saying
> together with an intelligent reason or facts to support your position?
> If you are not really knowledgable about antenna construction to put

> it into
> academic terms its fine by me ,If you explain your position in non
> academic terms thats fine also. If you just have a off the cuff
> personal opinion with no back up that is fine also.
> I would be excited if you were really truthfully
> familiar with coupled circuits and the like since as yet no one has
> come
> forward with factual knowledge of same.Apparently antenna programs
> have supplanted mathematical analysis and real life experimenting.
> Especially since there are now so many GOOD antenna programs that are
> available for FREE and more versatile than those one used to have to
> pay $$$$$ for!!!
> I haven't communicated with you before so I am hoping that you have a
> academic background so that I have the opportunity of learning as
> opposed to a session of hand waving and the like.
> Regards
> Art
>
> > 73,
> > Gene
> > W4SZ
> >
> > Richard Clark wrote:
> > >
> > > On 25 Mar 2003 06:04:52 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> > > wrote:
> > >
> > > >The IR antenna does not use all its physical
> > > >extension to radiate
> > > >which does not contribute to efficiency either to real estate or to
> > > >antenna efficiency.
> > >
> > > Hi Art,
> > >
> > > ALL antennas radiate from their ENTIRE structure. There is no such
> > > thing as an antenna that radiates only from a limited section of its
> > > structure.
> > >
> > > 73's
> > > Richard Clark, KB7QHC

6214. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 06:02:09 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <5hg28vgkm52dheaad5imdfu1pmso5f4uud@4ax.com>
Source record: 121903

On 25 Mar 2003 20:18:59 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in message
news:<nl218vsb30qv7rhv5bsnbocmep8q0vb4na@4ax.com>...
>> On 25 Mar 2003 06:04:52 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>> wrote:
>>
>> >The IR antenna does not use all its physical
>> >extension to radiate
>> >which does not contribute to efficiency either to real estate or to
>> >antenna efficiency.
>>
>> Hi Art,
>>
>> ALL antennas radiate from their ENTIRE structure. There is no such
>> thing as an antenna that radiates only from a limited section of its
>> structure.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Richard
>You are now getting a bit silly with your comments. More comments like
>that and you will lose credability !!!
>Art
>Art

Hi Art,

Am I catching up then?

73's
Richard Clark, KB7QHC

6215. Decent counterpoise

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 06:16:58 UTC
From: Rob <rob@sysadminus.com>
Message-ID: <uBbga.4425$Pp.150191@twister.southeast.rr.com>
Source record: 121904

Hello everyone, I just joined the group. I am just getting back into HF operation after a long hiatus. I recently bought a house and would like to run an antenna. I live in a POA which has restrictions on antennas so I am trying to keep it hidden. My antenna theory is very poor, so I was hoping to get some insight from you all. My shack is on the ground floor and my plan is to run a longwire up the side of the house and then out to a nearby tree. Thus creating an endfed inverted L. I plan to sink a groundrod a few feet outside my window. My question is how to counterpoise this.

From the groundrod, I could run a few wires along the ground. The only way to get any length would be to run it in the same direction as the horizontal piece of the L. However, I could run a few shorter pieces, maybe 20-30' in each direction perpendicular to that. Another option would be to run coax at groundlevel out to a tree. I could then get a longer vertical driven element. Then I could run counterpoises from the tree. I realize that neither will make a perfect antenna, I am just trying to get the best I can. Any advice?

Also, the soil in my area is very red which I think means it has a very height iron content. I think this will make the groundrod very efficient an might minimize (I know not eliminate) the need for a counterpoise at all.

I am sure this gets discussed allot and I am sorry to bring it up again.

Thanks
Bob

6216. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 08:37:26 UTC
From: Jeroen Belleman <Jeroen.Belleman@cern.ch>
Message-ID: <3E8166C6.4FAADF68@cern.ch>
Source record: 121905

"William E. Sabin" wrote:
>
> One problem here is your use of the ambiguous word
> "produced"[...]

OK, maybe I should have said 'delivered to the load',
which, in the matched case, is equal to 'available'.
I'll be more careful.

>
> 1) One of my statements was that the available
> thermal noise power AVAILABLE from a resistor, or
> a resistor network, considered all by itself,
> depends *only* on its temperature[...]

Agreed.

Deleted a large chunk, and then...

> [...] if we consider the [lossy] coax
> all by itself (not connected to a larger system),
> its *available* thermal noise power is the same
> regardless of its attenuation.

Oh, I see. I thought we were discussing the effect of
a piece of lossy coax inserted between a source and a
load. Anyway, put as cited above, yes, I agree.

At the risk of sounding pedantic, I'll attempt to restate
my point precisely then:

Given a source of temperature Ts, followed by a matched
attenuator with voltage gain G (0<G<1) and temperature Ta,
the available noise power over 1Hz BW to a matched load
connected to the output is:

P = k Ts G^2 + k Ta (1-G^2)

This means that, for a lossy element inserted between a
source and a load, the noise power available to the load
depends on the loss if the temperatures of the source and
the lossy element are different.
For high losses (G->0), the available noise power depends
essentially only on the temperature of the lossy element.
For low losses (G->1), it depends essentially only on the
temperature of the source.

That's about as close as I can get without getting excessively wordy.

Jeroen Belleman

6217. Re: SGC Coupler / Small Wire Loops:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 09:59:54 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0303260159.5d5528cc@posting.google.com>
Source record: 121906

Hi Martin,
single-turn, low-resistance loops are usually considered the only solution for transmitting, while multiturn loops are used for receiving only. AFAIK, SM0VPO http://w1.859.telia.com/~u85920178/antennas/frameant.htm and OK1FOU http://www.qsl.net/ok1fou/anteny/loop1.html have tested multiturn loops for transmitting successfully.
The OK1FOU antenna consists of 2 - 3 turns of wire on a wooden cross. The ends of the wire are connected to both stators of a two-gang tuning capacitor. The braid of the coax is connected to its rotor. A second, coupling capacitor is connected between one end of the wire and the central conductor of the coax. Set the tuning capacitor for the resonance and then the coupling capacitor to minimum SWR.

BR from Ivan OK1SIP

6218. Anyone built this Yagi antenna for ~1900MHz Sprint PCS cell phones?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 12:45:40 UTC
From: Gene S <genes@thegateway.net>
Message-ID: <5jhga.6890$Zo.82438@dfw-read.news.verio.net>
Source record: 121907
Cross-posted to: alt.cellular.sprintpcs,alt.cellular.tech,rec.radio.amateur.antenna

Here is an interesting design for a Yagi antenna that
may work for the PCS band of Sprint (1850-1990MHz)
cell phones.
http://www.qsl.net/eb4eqa/
(Click on the tiny drawing to get a printable Adobe 8.5/11" image
to use as a pattern.)

If anyone has built this little antenna, I would like to
see a photo. I'm not sure what cable to use & the
best way to "attach" the wire/ground to the antenna.

My current thinking is to build one using a small piece
of 1/2" PVC pipe drilled for copper wires.

Feel free to email me directly if you like.

THANKS,
Gene

--
E-mail: genes@thegateway.net

6219. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 12:54:50 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E81A31A.7050604@mwci-news>
Source record: 121908

Jeroen Belleman wrote:
>
>
> Given a source of temperature Ts, followed by a matched
> attenuator with voltage gain G (0<G<1) and temperature Ta,
> the available noise power over 1Hz BW to a matched load
> connected to the output is:
>
> P = k Ts G^2 + k Ta (1-G^2)
>
> This means that, for a lossy element inserted between a
> source and a load, the noise power available to the load
> depends on the loss if the temperatures of the source and
> the lossy element are different.
> For high losses (G->0), the available noise power depends
> essentially only on the temperature of the lossy element.
> For low losses (G->1), it depends essentially only on the
> temperature of the source.
>

This looks good. Thanks.

Bill W0IYH

6220. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 13:05:58 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E81A5B6.4050304@mwci-news>
Source record: 121909

William E. Sabin wrote:
> Jeroen Belleman wrote:
>
>>
>>
>> Given a source of temperature Ts, followed by a matched
>> attenuator with voltage gain G (0<G<1) and temperature Ta, the
>> available noise power over 1Hz BW to a matched load
>> connected to the output is:
>>
>> P = k Ts G^2 + k Ta (1-G^2)
>>
>> This means that, for a lossy element inserted between a
>> source and a load, the noise power available to the load depends on
>> the loss if the temperatures of the source and the lossy element are
>> different.
>> For high losses (G->0), the available noise power depends essentially
>> only on the temperature of the lossy element. For low losses (G->1),
>> it depends essentially only on the temperature of the source.
>>
>
> This looks good. Thanks.
>
> Bill W0IYH
>

Note also that if Ts=Ta=T then P=kT for any value
of G from 0 to 1.

Bill W0IYH

6221. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 13:44:56 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303260544.7b34d28d@posting.google.com>
Source record: 121910

Gene Fuller <W4SZzzzzz@att.net> wrote in message news:<3E8132A4.63F412EA@att.net>...
> Hi Art,
>
> My first comment is easy to address.
>
> If one has a multiband antenna, such as the SteppIR, the physical size
> will be whatever is required for the lowest frequency of operation. The
> fact that the physical size is then not as small as possible for the
> higher bands seems to me to be irrelevant.
>
> If you have room to install and rotate a 20 meter antenna do you really
> care if the same antenna does not physically shrink when used at 10
> meters? It is unlikely that the trees or property boundaries move in
> closer when the antenna is adjusted for a different band.
>
> My second comment means just what it says.
>
> The excess non-conducting support structure of the SteppIR has no
> measurable impact on efficiency. Do you have a different definition of
> efficiency than the standard definition?
>
> Most people accept the definition that efficiency is the ratio of
> radiation resistance to the total resistance, including loss resistance.
> Why is this a special issue for the SteppIR antenna?
Gene,
Thanks for responding.
My point is that if the structure has to be rotated, have an area of
land so this can be done and a rotor sized to be capable of turning
all that is on the tower, then any extension not used is a loss of
efficiency for the total installation. Since the IR antenna has been
brought forward we will use that as an example. If one is on 10 M then
one should use the WHOLE extension to radiate
and thus gain a higher gain antenna. In the past I showed that adding
a resonator to an arbitary length radiator can increase the efficiency
as well as make it a multi frequency radiator (my first antenna
patent) I then followed up with my second patent which provided means
for obtaining suitable impedance matching regardless of frequency
used. The patent I am in process with is a reflection of what I have
now stated here and descibed as three coupled loops or conversly two
coupled loops with a straight radiator that not only uses the whole
radiator length at all times but also provides the ability to transmit
on any frequency with maximum efficiency because of the " loss less"
feed system
which the IR antenna cannot do beyond 20 M. Now I don't have a real

issue on the I.R. antenna but if they changed the aproach where the
radiator was of a fixed length then from an electrical and mechanical
benefits would acrue. There is no magic to what I have stated and the
use of coupled circuit analysis which I have shared confirmes both
modelling trials and actual trials !!!!. It was my hope that someone
familiar with such circuits would come onto the scene and debate in
such a way that naysayers handwaving will not be necessary, but it was
not to be.
Not to worry, in time I will demonstrate it at a hamfest where
naysayers of little background will dig holes to find some magic
apparatus that must be hidden some where because somehow it is
impossible!!! That could be a lot of fun to watch.
Regards
ART
Best regards
Art

> 73,
> Gene
> W4SZ
>
> Art Unwin KB9MZ wrote:
> >
> > Gene Fuller <W4SZzzzzz@att.net> wrote in message news:<3E809419.DE7CFB6B@att.net>...
> > > Richard,
> > >
> snip
> > >
> > > Therefore the real estate efficiency comment is correct,
> >
> > ..(1).....even if irrelevant for a multiband antenna.......Hmmmmmm
> > >
> > > (2).....The antenna efficiency comment is nonsense.....Hmmm
>
> > >Gene,
> > Gene
> >
> > You made two odd statements above. Can you restate what you are saying
> > together with an intelligent reason or facts to support your position?
> > If you are not really knowledgable about antenna construction to put
> > it into
> > academic terms its fine by me ,If you explain your position in non
> > academic terms thats fine also. If you just have a off the cuff
> > personal opinion with no back up that is fine also.
> > I would be excited if you were really truthfully
> > familiar with coupled circuits and the like since as yet no one has
> > come
> > forward with factual knowledge of same.Apparently antenna programs
> > have supplanted mathematical analysis and real life experimenting.
> > Especially since there are now so many GOOD antenna programs that are

> > available for FREE and more versatile than those one used to have to
> > pay $$$$$ for!!!
> > I haven't communicated with you before so I am hoping that you have a
> > academic background so that I have the opportunity of learning as
> > opposed to a session of hand waving and the like.
> > Regards
> > Art
> >
> > > 73,
> > > Gene
> > > W4SZ
> > >
> > > Richard Clark wrote:
> > > >
> > > > On 25 Mar 2003 06:04:52 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> > > > wrote:
> > > >
> > > > >The IR antenna does not use all its physical
> > > > >extension to radiate
> > > > >which does not contribute to efficiency either to real estate or to
> > > > >antenna efficiency.
> > > >
> > > > Hi Art,
> > > >
> > > > ALL antennas radiate from their ENTIRE structure. There is no such
> > > > thing as an antenna that radiates only from a limited section of its
> > > > structure.
> > > >
> > > > 73's
> > > > Richard Clark, KB7QHC

6222. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 13:52:40 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303260552.4896fee@posting.google.com>
Source record: 121911

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:<3E80BCE8.5010203@ieee.org>...
> Richard Clark wrote:
> > ALL antennas radiate from their ENTIRE structure. There is no such
> > thing as an antenna that radiates only from a limited section of its
> > structure.
>
> Don't forget top hats. A properly balanced top hat results in destructive
> interference in the far field, i.e. balanced top hats, like balanced elevated
> ground planes, are purposefully designed to radiate very little.

Yes Cecil I use top hats with my antenna. With the modified collinear
current flow it is always zero at the radiator ends with a sudden drop
off atphase change so I added top hats to equalise each current
pattern so the low efficiency to length portions at the ends match
that removed at the center.
I suppose one day a 'variable' top hat will come along so that the
current curves will remain symetrical regardles of frequency used.
Regards
Art

6223. VE3ERP's Hamcalc on the web.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 14:10:29 UTC
From: Eskay <sieb_kNOS@PAMyahoo.ca>
Message-ID: <3E81B4D5.5050605@PAMyahoo.ca>
Source record: 121912

George Murphy VE3ERP has put his Hamcalc program on the web.
It is available at the CQ magazine website.
www.cq-amateur-radio.com
73 de VE3JUA.

6224. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 14:10:56 UTC
From: Al <afjjay@earthlink.net>
Message-ID: <afjjay-02EF55.09105726032003@news.bellatlantic.net>
Source record: 121913
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

In article <3E81307B.5AB22E3D@m.not>, ham <sp@m.not> wrote:

> Electronic Associates Incorporated
> Precision Analog Computing Equipment (PACE)
> Long Branch, New Jersey
>
<big, big snip>
>
> > Al wrote:
> >
> > In the sixties, I used an analog computer which used chopper stabilized
> > amplifiers as op amps. We used it to solve simultaneous diffential
> > equations. It took hours to program with patch cords and to adust
> > coefficients, but it took only a couple of seconds to print out the
> > solution in the form of a graph on graph paper. The computers were made
> > by some company in New Jersey whose name escapes me now.
> >

Yes!!!! I think it was close to Fort Monmouth where the army did
electronics research. I also remember Long Branch as being a resort town
and sorta unusual for the location of a then high tech company.

I remember how happy my EE professors were when they got their first
rack mounted digital computer. The students weren't allowed anywhere
near it. We had to use the analog computers.

Al

--

Remove extra j from the address to reply.

6225. Dipole + coax + radiation from feeder

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 14:16:33 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5sco0$5v4$1@hercules.btinternet.com>
Source record: 121914

There's an improved program FEEDPOWR available from website below.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

6226. FRG-7000 schematic

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 14:21:54 UTC
From: "maurizio.bonfanti" <maurizio.bonfanti@libero.it>
Message-ID: <6liga.50960$Lr4.1554114@twister2.libero.it>
Source record: 121915

Can someone send to me yaesu FRG-7000 schematic diagram?

Thank you

Maurizio

6227. FA: Large 32 uh Air Wound Inductor

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 14:30:35 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <fQiga.7909$ns6.495807@news2.east.cox.net>
Source record: 121916
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015264353

Thanks for looking..

KQ4BY

6228. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 15:47:44 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b5si1i$28t1c$2@hades.csu.net>
Source record: 121917
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

ddwyer wrote:
[snip]
>>Don Lancaster <don@tinaja.com> wrote in message
>>news:3E7E517D.2BB1B17A@tinaja.com...

>>>Tarmo Tammaru wrote:

>>>>You realize that nobody under the age of 60 knows what a chopper
>>>>amplifier is?
[snip]

>>>Please visit my GURU's LAIR web site at http://www.tinaja.com

> No-ones mentioned mercury wetted ....sexy or what?

Nowadays, if you mention the word mercury, the environmental police will
come out and quarantine your area and abate the toxic waste. :-P

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

6229. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 15:50:05 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b5si5v$28t1c$3@hades.csu.net>
Source record: 121918
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Al wrote:
[snip]

> In the sixties, I used an analog computer which used chopper stabilized
> amplifiers as op amps. We used it to solve simultaneous diffential
> equations. It took hours to program with patch cords and to adust
> coefficients, but it took only a couple of seconds to print out the
> solution in the form of a graph on graph paper. The computers were made
> by some company in New Jersey whose name escapes me now.

While I'm on the subject of toxic waste, do you know why New York has
all the lawyers, and New Jersey has all the toxic waste?

A: New Jersey had first choice.

<G>

> Al

--
----------------(from OED Mini-Dictionary)----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

6230. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 16:01:16 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b5siqv$28pag$1@hades.csu.net>
Source record: 121769
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

ham wrote:
> Electronic Associates Incorporated
> Precision Analog Computing Equipment (PACE)
> Long Branch, New Jersey

In the army I trained for radar repair at Ft Monmouth, right down the
street from Long Branch, N.J.

[snip]
> And wasn't that a wonderful Non Linear Systems
> (San Diego) digital voltmeter with the stack of engraved Plexiglas digits edge lit
> for a readout great and impressive?

Yes! The guy I worked for got one surplus, something was wrong with it.
It rattled a lot as the relays hunted for the input voltage. I don't
remember if it was a NLS, but it had those plexiglas edge-lit digits,
and it was a trip to watch them thru the windows. NLS later started
KayComp which became Kaypro Computers. I believe the guy's name was Kay.

>[snip]

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

6231. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 16:06:35 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b5sj4u$28o9g$1@hades.csu.net>
Source record: 121770
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Jim Pennino wrote:
[snip]

> Memories...

> In the sixties I maintained a big analog computer (tube based) that had
> motor driven chopper stabilized op amps.

> It too solved simultaneous diffential equations, though the solutions
> were in real time.

> The problem was hard wired and there were these huge (feet in diameter)
> oil filled servo driven pots to derive a solution.

> It was the fire control computer for the Nike Hercules anti-aircraft
> missile system.

> My fondest memory is hot swapping a bad op amp one day (you weren't
> supposed to do that, but this was not in the US and aircraft with
> red stars were heading our way) and getting knocked to my knees by the
> charge in one of the B+ caps. Turned out the bleeder resistor was in the
> mainframe, not in the op amp itself.

I hope you're saying fondest memory in jest, because I wouldn't consider
getting knocked on my knees a fond memory.

I worked on the Nike Herc search radars when I was in the army. I
didn't get a chance to see any of that fire control stuff.

Seems hard to believe that what they used back in those days took up a
whole room, yet today could fit in a pocket, or even a wristwatch.

--
----------------(from OED Mini-Dictionary)-----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural
where there is no possessive sense, as in ~tea's are served here~;
(ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct
uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)---------------
From a fully deputized officer of the Apostrophe Police!

6232. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 16:11:00 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E81D114.BED68A99@cwis.net>
Source record: 121771

Art,
If you will give me a nomths notice of the hamfest
where you will be demonstrating your miraculous antenna,
I'll be there with my shovel...
'Doc

6233. Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 16:41:05 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0303260841.98fb276@posting.google.com>
Source record: 121772
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Can anyone here tell me if I need different ferrite cores? The SWR meter I am working on seems to work OK on the lower bands but does not work on the higher bands. I don't think I have any stray capacitances or inductances in my circuit. (This is HF, not VHF, UHF, or microwave.) However, I do understand that ferrite cores have their limitations, and I believe those are the source of my problem.

The design I am using is based on that portrayed in the last of the three schematics at:
http://engphys.mcmaster.ca/~elmer101/rfpower/swrtheory.html

One difference between my design and that one is that I apply an RC low-pass filter to the diode outputs consisting of a .001uF capacitor and a 100k-ohm resistor in parallel.

The ferrite cores I am using have #43 type material. The dimensions are .5-in. thickness, .625-in. outer diameter, and .3125-in. inner diameter. The turns ratios are 1:10 for both. I noticed that most of the other SWR meter designs use smaller cores. (I'm wondering if I have stray capacitance between the primary and secondary wires due to the relatively long length of wire my cores use as compared to the wire lengths of smaller cores.)

I tested my design by connecting it to my transceiver and dummy load. The dummy load is supposed to be 50 ohms, but it has stray capacitances in parallel to the load, and this causes the SWR to go up as the frequency increases. I used full power in order to minimize the effects of diode losses.

At 1.8MHz, my MFJ SWR meter showed an SWR of 1.9 and 60W of power. The forward voltage sample is 6.46V DC, or 10% of the actual forward voltage. The reflected voltage sample is 1.707V. This gives an SWR of 1.7. Considering that the MFJ SWR cross-needle meter has mediocre resolution, these results seem reasonable.

At 3.8MHz, my MFJ SWR meter showed an SWR of 3 and 20W of power. (As you can see, the high SWR protection circuit in the transceiver was at work to limit transmitted power when the SWR is high.) I had 3.578V forward, 1.795V reflected, and a measured SWR of 3. So far, so good.

At 7.2MHz, my MFJ SWR meter showed an SWR of 5 and 15W of power. The measurements were 2.838V forward, 2.166V reflected, and an SWR of 7.5. Considering the awful resolution of the MFJ meter at high SWRs, this seems reasonable.

At 10.12MHz, my MFJ SWR meter showed an SWR between 5 and infinity. The measurements were 2.941 forward, 2.673 reflected, and an SWR of 21.

Around the 20m band, my SWR meter begins to fail. At all higher frequencies, my MFJ meter showed 10-20W of power and an extremely high SWR. The forward reflected power drifted down from 2.692V at 14.3MHz to 1.5V at 29MHz. At 14.3MHz, my reflected voltage was 1.3% HIGHER than my forward voltage. At still higher frequencies, my measured SWR actually dropped.

My measured SWR was infinity at 14.3MHz, 89 at 18.1MHz, 13 at 21.3MHz, 5.7 at 24.9MHz, and only 3.9 at 29MHz.

Can anyone help me? Do I need a smaller #43 core? Should I switch to a #61 core?

Jason Hsu, AG4DG
usenet@@@@jasonhsu.com

6234. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 16:43:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <o2m38vcgt5u83lbb40i7fenqdut30knj85@4ax.com>
Source record: 121773

On 26 Mar 2003 05:52:40 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>I suppose one day a 'variable' top hat will come along so that the
>current curves will remain symetrical regardles of frequency used.
>Regards
>Art

Hi Art,

So, symmetry changes with frequency does it? I'm not going to be able
to catch up if you keep boosting the pace.

73's
Richard Clark, KB7QHC

6235. Re: Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 17:09:15 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <VeOcnSn7ndY8cByjXTWc3A@ctc.net>
Source record: 121778
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

> Can anyone here tell me if I need different ferrite cores? The SWR
> meter I am working on seems to work OK on the lower bands but does not
> work on the higher bands. I don't think I have any stray capacitances
> or inductances in my circuit. (This is HF, not VHF, UHF,

YOu need a beter dummy load to do the tests. YOu should be using a good dummy load and to get the swr parallel 2 or more good 50 ohm loads. Then use some capacitors or inductors and calculate the swr of the load.

Also you could probalby use a beter standard than the MFJ sutff.
I bought an antenna tuner made by MFJ. I did recaliberate the wattmeter against a Bird and a surplus wattmeter. The MRJ was a bit off from the other 2.

It is difficult to do lab quality measurments with low quality equipment.

6236. Antenna Engineers Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 17:19:49 UTC
From: spencer313@yahoo.com
Message-ID: <ed5d175e.0303260919.73df67f1@posting.google.com>
Source record: 121774

See: http://www.antennasys.com

6237. Re: The world's first Faster Than Light data transmission line!.....

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 17:24:51 UTC
From: James <jimbo.james@nospam.com>
Message-ID: <3E81E262.A7292DDA@nospam.com>
Source record: 121775

For those prices, I would expect crimp on rg-6 connectors instead of the twist on style !

Somebody in their marketing dept. must get their company name printed on the cables !

Now we just have to wait for the FTL processors to come on the market.

Richard wrote:

> On Tue, 25 Mar 2003 19:24:04 +0100, Gilbert Mouget <no.spam@thank.you>
> wrote:
>
> >In article <b5ps7n$g6q$1@nemesis.news.tpi.pl>,
> > dated Tue, 25 Mar 2003 16:22:44 +0100,
> > Mathew Orman, <orman@nospam.com> says...
> >
> >
> >> Faster Than Light data transmission lines manufacturing and sales.
> >> Up to 40 times faster than light propagation speeds of useful data
> >> transmission up to 30km distance.
> >> All hardware guaranteed with 200% money back.
> >>
> >> Useful comment and suggestions are welcome!
> >>
> >> www.ultra-faster-than-light.com
> >
> >Fractal cable ? :
> >
> >http://www.ultra-faster-than-light.com/allproducts.htm
>
> Hi Gilbert,
>
> Must be, it loses power before data is even applied to it:
> >Power consumption 25ï¿½C, 9VDC Supply 150mA
> and for only 1 meter of cable costing $325.
>
> There is only ONE thing faster than light, its these folks who see a
> sucker coming before he arrives. I wonder if HP is aware they are
> using a Hewlett Packard logo to promote this.
>
> 73's
> Richard Clark, KB7QHC

6238. Re: Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 17:26:37 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nom38vokg5ujgr265qskimsg5jb1iiq1ul@4ax.com>
Source record: 121776
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 26 Mar 2003 08:41:05 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>
>Can anyone help me? Do I need a smaller #43 core?

Hi Jason,

You decide your design is faulty because it cannot measure a very poor load at high frequency. Faulty logic and poor technique is closer to the problem. Am I to believe that this extremely poor load is your dummy load with stray coupling??? Or is it simply an extremely poor load? Why? Don't you think you should see if it worked with nominal first? Don't you think that calibrated mismatches rather than opportunistic SWRs would help resolve your issues? Consider the question and ANY answer: you could have answered it yourself if you had simply observed my comments long ago about buying several formulations and forms and substituting. That path to a solution would have taken perhaps twice as long as the time of your having written a plea for someone else to do it for you.

Beyond that, how is it that the core becomes suspect because the circuit failed? Jason, you are not showing much savvy in the lab by skipping the fundamentals. This is poor second year lab stuff, not graduate quality. Do you have an adviser or thesis reviewer? Fire same, they clearly have no interest.

73's
Richard Clark, KB7QHC

6239. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 17:42:26 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <6Elga.244637$qi4.126757@rwcrnsc54>
Source record: 121777
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
> Jim Pennino wrote:
> [snip]
>
>> Memories...
>
>
>> In the sixties I maintained a big analog computer (tube based) that had
>> motor driven chopper stabilized op amps.
>
>
>> It too solved simultaneous diffential equations, though the solutions
>> were in real time.
>
>
>> The problem was hard wired and there were these huge (feet in diameter)
>> oil filled servo driven pots to derive a solution.
>
>
>> It was the fire control computer for the Nike Hercules anti-aircraft
>> missile system.
>
>
>> My fondest memory is hot swapping a bad op amp one day (you weren't
>> supposed to do that, but this was not in the US and aircraft with
>> red stars were heading our way) and getting knocked to my knees by the
>> charge in one of the B+ caps. Turned out the bleeder resistor was in the
>> mainframe, not in the op amp itself.
>
>
> I hope you're saying fondest memory in jest, because I wouldn't consider
> getting knocked on my knees a fond memory.
>
> I worked on the Nike Herc search radars when I was in the army. I
> didn't get a chance to see any of that fire control stuff.
>
> Seems hard to believe that what they used back in those days took up a
> whole room, yet today could fit in a pocket, or even a wristwatch.
>
I can rememner the first battery level digital computer for Arty, The
FADAC. It was a monster with a single platter disc drive as it's memory.
It got replaced by th HP45.

Bill Higdon

6240. Re: The world's first Faster Than Light data transmission line!.....

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 18:44:39 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e81f4f8$0$138$edfadb0f@dtext02.news.tele.dk>
Source record: 121779

Hello James

> Now we just have to wait for the FTL processors to come on the market.

Should be here about the 1. of April :)

Regards Max

6241. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 19:07:12 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5stp0$5sc$1@titan.btinternet.com>
Source record: 121780

Ric, you're learning fast.

None of that old-wives' rubbish about the middle 1/3rd of dipoles.

But still some way to go. ;o)
--
==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

"Richard Clark" says

> ALL antennas radiate from their ENTIRE structure. There is no such
> thing as an antenna that radiates only from a limited section of its
> structure.

6242. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 19:19:18 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5sufm$6t3$1@titan.btinternet.com>
Source record: 121781

"Richard Clark" sez -

> Yes, I suppose plastic does not radiate.

==========

Dielectric antennas are becoming fashionable again.

6243. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 19:32:24 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E820048.38B3C88@cwis.net>
Source record: 121782

Especially in designer colors...

6244. Re: Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 20:07:38 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <p8048vc3mhqqlmvff1kim6767qe5jpchmt@4ax.com>
Source record: 121783
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On 26 Mar 2003 08:41:05 -0800, jason_hsu@my-deja.com (Jason Hsu)
wrote:

|Can anyone here tell me if I need different ferrite cores?

Maybe, but how can you tell with the measurements you are making.

First you need a precision termination and some known mismatches for
standards. Some precision attenuators followed by a short will give
you known return losses.

These need so be in the same connector series as your test port, which
I hope isn't an SO-239. No adapters allowed.

Trash the MFJ. Do not try to measure one unknown by comparing to
another unknown.

Isn't this a school project? Don't you have access to a real lab?

Treat this as two projects. Eliminate the detection process until you
get the power sampling down. Your two transformers are just a 20 dB
bi-directional coupler. Measure its parameters separately using good
terminations all around and find out how it functions.

When you've got the coupler working, move on to the detection process.

6245. Screwdriver antenna now won't tune 40/80M.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 21:00:19 UTC
From: Michael Pupeza <mpupeza@nccw.net>
Message-ID: <v8456vpa3jm113@corp.supernews.com>
Source record: 121784

I've got a BB3 Nott (TJAntennas) Screwdriver antenna that has worked fine for 3 years or so. Suddenly it won't tune on 80 and 40, but seems to work fine on 30, 20 17, 15. I didn't try 10 cause my whip is too long.
Now the BB3 uses a black plastic encased 'matching network' at the base of the antenna. I've verified the coax right to this unit, and it's fine.
Could this unit have a failure mode that would allow the antenna to work fine on higher frequencies, but not on 80/40? We have had a LOT of rain lately. I don't run higher power than 60W PEP.
I've tried e-mailing the mfgr but my e-mails are bouncing.
I've got some toroids and wire, but haven't a clue on how to make a replacement. Any help would be appreciated.
Thanks and 73
Mike VE3EQP....>

6246. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 21:41:45 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303261341.10dc226f@posting.google.com>
Source record: 121785

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303260544.7b34d28d@posting.google.com>...
In the past I showed that adding
> a resonator to an arbitary length radiator can increase the efficiency
> as well as make it a multi frequency radiator (my first antenna
> patent)

It does not increase the efficiency of the dipole element. You are
only transfering more power to it due to the addition of the matching
device.

I then followed up with my second patent which provided means
> for obtaining suitable impedance matching regardless of frequency
> used. The patent I am in process with is a reflection of what I have
> now stated here and descibed as three coupled loops or conversly two
> coupled loops with a straight radiator that not only uses the whole
> radiator length at all times but also provides the ability to transmit
> on any frequency with maximum efficiency because of the " loss less"
> feed system
> which the IR antenna cannot do beyond 20 M.

Your's is not going to be lossless either if the antenna is small.

Now I don't have a real
> issue on the I.R. antenna but if they changed the aproach where the
> radiator was of a fixed length then from an electrical and mechanical
> benefits would acrue. There is no magic to what I have stated and the
> use of coupled circuit analysis which I have shared confirmes both
> modelling trials and actual trials !!!!.

It does? Where is this info? The version I modeled did not work as you
claim. Are you refering to a different antenna now?

It was my hope that someone
> familiar with such circuits would come onto the scene and debate in
> such a way that naysayers handwaving will not be necessary, but it was
> not to be.

What? If I disagree with what you say, I'm a handwaving naysayer with
little background? What if you end up being wrong? What will I be
then? I may not have studied this stuff in school, but I have since
then for about 25 years. Quite intensely since about 1983. I've been
making antennas since I was in the 6th grade for SWL use. Built my
first novice station and antenna when I was in the 8th grade. I have
many books, etc here. My school is here and does not close at night.
I've seen some people that did study this stuff in school that

couldn't make a dipole without direct supervision. So that doesn't mean much to me. My complex math skills may be fairly weak compared to many, but I have a powerful built-in bullshit filter. It's not wrong too often. And my bullshit filter quivers every time you describe the workings of your antenna. I'm not trying to get your goat. I just don't think it works as you say it does. IE: "opinion" What you do means little to me. I have no interest in it, except in the way you describe it's workings. I use full size antennas.

> Not to worry, in time I will demonstrate it at a hamfest where
> naysayers of little background will dig holes to find some magic
> apparatus that must be hidden some where because somehow it is
> impossible!!! That could be a lot of fun to watch.

Yes, it would. If it were me, I'd do that first, and then try to explain how it worked later. At least you will know if it really works or not. If it does, more power to you, but I'm still quite skeptical.
MK

6247. Re: Screwdriver antenna now won't tune 40/80M.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 22:14:29 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <0c948v4tqk9i5ru9siacbpqpstuiht9r58@4ax.com>
Source record: 121786

Mike - That coil box is not sealed, and it could be full of water.
Easy to open up and see. Also, take the PVC cover off by holding the
top cap and twisting. Examine the fingers to make sure they haven't
become unsoldered. The Nott website is still the same as it has been
http://www.antennex.com/antenna/bb3.htm Try to reach Ron Walton at
rondo@nottltd.com . They are very helpful. I have been to the
factory in Farmington, N.M. twice.

Dick - W6CCD

On Wed, 26 Mar 2003 16:00:19 -0500, "Michael Pupeza"
<mpupeza@nccw.net> wrote:

>I've got a BB3 Nott (TJAntennas) Screwdriver antenna that has worked fine
>for 3 years or so. Suddenly it won't tune on 80 and 40, but seems to work
>fine on 30, 20 17, 15. I didn't try 10 cause my whip is too long.
>Now the BB3 uses a black plastic encased 'matching network' at the base of
>the antenna. I've verified the coax right to this unit, and it's fine.
>Could this unit have a failure mode that would allow the antenna to work
>fine on higher frequencies, but not on 80/40? We have had a LOT of rain
>lately. I don't run higher power than 60W PEP.
>I've tried e-mailing the mfgr but my e-mails are bouncing.
>I've got some toroids and wire, but haven't a clue on how to make a
>replacement. Any help would be appreciated.
>Thanks and 73
>Mike VE3EQP....>
>

6248. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 22:35:20 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303261435.4d70b735@posting.google.com>
Source record: 121787

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b5sufm$6t3$1@titan.btinternet.com>...
> "Richard Clark" sez -
>
> > Yes, I suppose plastic does not radiate.
>
> ==========
>
> Dielectric antennas are becoming fashionable again.

Sounds like an antitenna. :/ MK

6249. Re: Decent counterpoise

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-26 22:54:56 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303261454.42619943@posting.google.com>
Source record: 121788

"Rob" <rob@sysadminus.com> wrote in message
news:<uBbga.4425$Pp.150191@twister.southeast.rr.com>...
> Hello everyone, I just joined the group. I am just getting back into HF
> operation after a long hiatus. I recently bought a house and would like to
> run an antenna. I live in a POA which has restrictions on antennas so I am
> trying to keep it hidden. My antenna theory is very poor, so I was hoping to
> get some insight from you all. My shack is on the ground floor and my plan
> is to run a longwire up the side of the house and then out to a nearby tree.
> Thus creating an endfed inverted L. I plan to sink a groundrod a few feet
> outside my window. My question is how to counterpoise this.
>
> From the groundrod, I could run a few wires along the ground. The only way
> to get any length would be to run it in the same direction as the horizontal
> piece of the L. However, I could run a few shorter pieces, maybe 20-30' in
> each direction perpendicular to that. Another option would be to run coax at
> groundlevel out to a tree. I could then get a longer vertical driven
> element. Then I could run counterpoises from the tree. I realize that
> neither will make a perfect antenna, I am just trying to get the best I can.
> Any advice?
>
> Also, the soil in my area is very red which I think means it has a very
> height iron content. I think this will make the groundrod very efficient an
> might minimize (I know not eliminate) the need for a counterpoise at all.
>
> I am sure this gets discussed allot and I am sorry to bring it up again.
>
>
> Thanks
> Bob

You don't say which bands you want to work. Has a great
bearing...Overall, for an "only" antenna that may have to work all
bands, I would stay away from anything that requires a ground system
to function. You don't need the extra losses.
And you would be better off operating than laying out scads of wire
for a radial system.
I'd run a line out to the tree and feed a center fed dipole that is
thrown up in the top of the tree. Even if it's low, it will probably
beat most verticals or "L's" if the L is the same height. You will
have much less shack "rf" problems due to the reduced currents on the
feedline. You can use magnet wire if you need the wire to be
"invisible". A bit thicker would be nice though to last longer.
If the "L" is the only option, everything you mentioned is fine, and
about all you can really do. But, I wouldn't bother with the

perpendicular wires. I'd use short radials layed out normally, and concentrate the wire at the base. More short radials are better than just a few long ones for a given amount of wire. I'd try to swing a thin wire dipole if at all possible. If you want it to work all bands, you would need to feed with ladder line or twin lead. 300 ohm TV line will work fine with low losses as long as it's not wet. Coax for single band, 3rd harmonic, and anywhere you can accept the loss. I've worked just fine with some terrible SWR readings using coax. Even if you lose half your power, thats only 3 db, which is not too bad on HF. MK

6250. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 00:45:25 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E8249E5.4493B9C5@earthlink.net>
Source record: 121789
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
>
> In the army I trained for radar repair at Ft Monmouth, right down the
> street from Long Branch, N.J.

They trained you to work on RADAR? They pulled me from the Weather
Vision section at Fort Rucker and sent me out to fix RADAR equipment
with no training. Of course they didn't train me to work on the CATV,
video, or microwave CARS equipment either. A draft notice, a MOS test,
and I was a broadcast engineer.
--

Michael A. Terrell
Central Florida

6251. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 00:47:38 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E824A77.BECDC089@earthlink.net>
Source record: 121790
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
>
> Nowadays, if you mention the word mercury, the environmental police will
> come out and quarantine your area and abate the toxic waste. :-P
> --

Even if you are just naming the planets in our solar system. :(

--

Michael A. Terrell
Central Florida

6252. FA: Large 27 uH Air Wound Inductor

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 00:58:23 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <P0sga.12255$ns6.602367@news2.east.cox.net>
Source record: 121791
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Please see:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015522501

Thanks!

Larry
KQ4BY

6253. Re: FA: Large 27 uH Air Wound Inductor

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 01:16:26 UTC
From: Tracy Fort <beerbarrel@cox.net>
Message-ID: <rdk48v0g0b55uhs1n10qtjfom23pu7itr6@4ax.com>
Source record: 121792
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

You must be right down the street from me...

On Thu, 27 Mar 2003 00:58:23 GMT, "ga_boneyard"
<ga_boneyard@hotmail.com> wrote:

>Please see:
>
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015522501
>
>Thanks!
>
>Larry
>KQ4BY
>

Tracy Fort

KE4ODD

beerbarrel@cox<NOSPAM>.net

remove <NOSPAM> for repliess

6254. Magloop coupling Q

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 01:19:20 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3E8251AA.6010104@adelphia.net>
Source record: 121793

I'm in the final stages of my Magloop, after a couple month hiatus
because it was too darn cold in the garage.

I was originally going to use a gamma couple loop, but I've looked
around a bit and seen simple loop coupling, and a capacitive coupling loop.

Any thoughts on whether one is better than the other?

Then again, maybe I can just experiemnt.....

- Mike KB3EIA -

6255. Re: Decent counterpoise

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 02:00:30 UTC
From: Bob Miller <bxmiller@texas.netNOSPAM>
Message-ID: <3hm48v0g227lbo4g10cm5pk4gs7rpcchu5@4ax.com>
Source record: 121794

On Wed, 26 Mar 2003 06:16:58 GMT, "Rob" <rob@sysadminus.com> wrote:

>Hello everyone, I just joined the group. I am just getting back into HF
>operation after a long hiatus. I recently bought a house and would like to
>run an antenna. I live in a POA which has restrictions on antennas so I am
>trying to keep it hidden. My antenna theory is very poor, so I was hoping to
>get some insight from you all. My shack is on the ground floor and my plan
>is to run a longwire up the side of the house and then out to a nearby tree.
>Thus creating an endfed inverted L. I plan to sink a groundrod a few feet
>outside my window. My question is how to counterpoise this.
>
>From the groundrod, I could run a few wires along the ground. The only way
>to get any length would be to run it in the same direction as the horizontal
>piece of the L. However, I could run a few shorter pieces, maybe 20-30' in
>each direction perpendicular to that. Another option would be to run coax at
>groundlevel out to a tree. I could then get a longer vertical driven
>element. Then I could run counterpoises from the tree. I realize that
>neither will make a perfect antenna, I am just trying to get the best I can.
>Any advice?

You don't give your bands of interest, but just to get you an
alternative for laying a bunch of radial or counterpoise wires, go to
http://www.cebik.com/radio.html
and see the article, "A vertical doublet for 30-10 meters."

Bob
k5qwg

>
>Also, the soil in my area is very red which I think means it has a very
>height iron content. I think this will make the groundrod very efficient an
>might minimize (I know not eliminate) the need for a counterpoise at all.
>
>I am sure this gets discussed allot and I am sorry to bring it up again.
>
>
>Thanks
>Bob
>

6256. Duplexer response curves

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 03:16:30 UTC
From: MikeN <mnewman@clear.net.nz>
Message-ID: <k9q48v8vj3ekr1ul9o6be1lkvlvt357r9r@4ax.com>
Source record: 121795

I'm looking at the response curves from the manufacturers datasheet for a bandpass / bandreject uhf duplexer.

There are three curves plotted.

1. Low pass to Antenna - peaking on one frequency and notching at the other 5MHz higher

2. High pass to Antenna - similar to 1, but with the pass / reject frequencies reversed

3. High pass to Low pass - which is essentially flat at around -68dB except for deep notches to around -100dB at the rcvr and xmtr frequencies

Could someone please explain the significance of the 3rd curve? If it helps to explain the question, I'll put the response curves into the binaries newsgroup

Thanks

MikeN

6257. Re: Duplexer response curves

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 03:33:01 UTC
From: "J. Harvey" <JM002.Harvey_SPAMBAD_@Sympatico.ca>
Message-ID: <Ihuga.6686$D24.620283@news20.bellglobal.com>
Source record: 121797

"MikeN"
> 3. High pass to Low pass - which is essentially flat
> at around -68dB except for deep notches to around
> -100dB at the rcvr and xmtr frequencies
>
> Could someone please explain the significance of the
> 3rd curve?

The key word for Curve # 3 is "isolation".

-68dB is good, and -100dB is even better.

High Pass to Low Pass means from the transmitter to the receiver (and/or the reverse direction - same thing). Obviously this is important since the transmitter is "shouting in the receiver's ear".

6258. Heath Active Antenna Schematic needed

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 03:34:04 UTC
From: Tony Messina <t-rex@ix.netcom.com>
Message-ID: <b5trh2$672$1@slb1.atl.mindspring.net>
Source record: 121796

I have a Heath Active Antenna ... model HD1424 ...

Have the manual, diagrams, pcb layout, parts lists, etc ... but no schematic :-/ Would appreciate a scan of same, or a link to the schematic on the web. Email me directly.

Tony - KD7TOG

6259. Re: Duplexer response curves

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 03:46:43 UTC
From: Gary Schafer <gaschafer@attbi.com>
Message-ID: <60t48v8n5gm7id6h2haqtri68nuepr9qk5@4ax.com>
Source record: 121798

On Thu, 27 Mar 2003 15:16:30 +1200, MikeN <mnewman@clear.net.nz>
wrote:

>I'm looking at the response curves from the manufacturers datasheet
>for a bandpass / bandreject uhf duplexer.
>
>There are three curves plotted.
>
>1. Low pass to Antenna - peaking on one frequency and notching
>at the other 5MHz higher
>
>2. High pass to Antenna - similar to 1, but with the pass /
>reject frequencies reversed
>
>3. High pass to Low pass - which is essentially flat at around
>-68dB except for deep notches to around -100dB at the rcvr and xmtr
>frequencies
>
>Could someone please explain the significance of the 3rd curve? If it
>helps to explain the question, I'll put the response curves into the
>binaries newsgroup
>
>Thanks
>
>MikeN

Hi MikeN,

The middle curve is called the "mid band isolation". It is the result of the sum of the two curves of each pass band curve where they overlap each other.

If they are showing you each pass band curve separately (between the tx and rx frequencies) you will see that they do not go down as far as the mid band curve. They usually overlay the mid band curve to show the sum of the two pass curves. That is the total pass band protection that you get between the tx and rx frequency band.

You will note that with that type of duplexer that on the outside of the tx and rx frequencies that there is very little pass band roll off. The curve goes down only 20 db or so. But in-between the protection is very good.

The middle band protection does nothing for the operation of the duplexer as far as keeping the transmitter noise and carrier out of

the receiver. The notches do that. But the added pass band protection will help keep transmitter trash out of other systems and it will also help keep other trash out of your receiver if it happens to be within the mid band range.

The pass / notch duplexer is the best type in regards to overall performance / price. It doesn't provide a very good band pass (mostly notch action) but it is better than none.

A straight pass band duplexer will give the most protection but usually requires more or larger cavities. More money. Also it can not be used with very narrow spacing.

The straight notch duplexer is the cheapest as a deep notch is easier to get than a deep skirt on a pass band unit.

73
Gary K4FMX

6260. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 04:48:09 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303262048.589d1f35@posting.google.com>
Source record: 121799

nm5k@wt.net (Mark Keith) wrote in message
Mark I know you are not trying to get my goat so there are no
problems there.
On the subject of my antenna work. It took me a long while to study up
on my ideas and it was Tom W8TI who pushed me into it years ago when I
was trying to describe an idea. You could probably do it much quicker
but reading up on ladder
work analysis, filters, impedance transform and the like can be very
exhausting.
You obviously have seen that even quite knoweledgable people have not
followed thru on a lot of the stuff that I have described and thus put
it down to my poor communication.I have given you and the others
everything that is required to duplicate my antenna and nobody seems
to have the total knoweledge required
or sceptisism runs to deep especially because previous claims by some
have been disapointing. So my advice to you is to put this antenna to
one side and be patient until somebody writes it up....and they will,
probably after I have passed away.
Let me share with you a paragraph that I stumbled on today by Terman,
it reads like this and he was discussing an antenna for the frequency
range .5 to 18 Mhz

Quote
The design of the circuits for antenna-coupling and line-to-receiver
networks is based upon the theory of wave filters and is beyond the
scope of this book..... end quote

so just that statement alone shows how difficult this problem is. He
goes on to say...

Quote... It is sufficient to say that by proper attention to details
surprisingly satisfactory results are obtained over the entire
frequency band..... End Quote

75 years have now passed and it is more easier with the aid of
computors, step motors and the like that together with the study of
resonators, to bring these ideas further forward so that old wives
tales and the like can now be seen from a different perspective. Now
some people on this group are critical of Terman
and all do not believe most of what I say so quoting Terman also can
be seen
as 'impossible'. But speaking frankly, if you do not have an
understanding of
Lossless feed systems, equivalent circuits and what I stated in
another thread on the subject of "Q"..... Soooooo.... let us drop

this interchange as working on just a written word without sketches and the impossibility of keeping track of things when subjects are changed so frequently is making this very tiring.
I have no problem in discussing individual items but not the antenna in its entirety as it becomes very laborious. Frankly when I came across that statement today by Terman I was overjoyed as it has greatly rejuvenated faith in myself.
I can now deflect uncomplementary comments towards Terman and his works without having to stand alone.
Hooray, hooray for Terman, I am not stupid after all.
Best regards
Art XG

6261. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 05:05:15 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E82868B.A5452542@cwis.net>
Source record: 121800

I love it when people cite quotes out of context...
'Doc

6262. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 05:18:29 UTC
From: "Dave M." <gadget@frontiernet.net>
Message-ID: <FQvga.184$NG2.52@news02.roc.ny.frontiernet.net>
Source record: 121801
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

```
Lizard Blizzard <NOSPAM@rsccd.org> wrote in message
news:b5si1i$28t1c$2@hades.csu.net...
> ddwyer wrote:
> [snip]
> >>Don Lancaster <don@tinaja.com> wrote in message
> >>news:3E7E517D.2BB1B17A@tinaja.com...
>
> >>>Tarmo Tammaru wrote:
>
> >>>>You realize that nobody under the age of 60 knows what a chopper
> >>>>amplifier is?
> [snip]
>
> >>>Please visit my GURU's LAIR web site at http://www.tinaja.com
>
> > No-ones mentioned mercury wetted ....sexy or what?
>
> Nowadays, if you mention the word mercury, the environmental police will
> come out and quarantine your area and abate the toxic waste. :-P

Now, what did I do with that vial of mercury? I just can't remember... OOPS!

>
>
>
> --
> ----------------(from OED Mini-Dictionary)-----------------
> PUNCTUATION - Apostrophe
> Incorrect uses: (i) the apostrophe must not be used with a plural
> where there is no possessive sense, as in ~tea's are served here~;
> (ii) there is no such word as ~her's, our's, their's, your's~.
>
> Confusions: it's = it is or it has (not 'belonging to it'); correct
> uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone);
> but ~the dog wagged its tail~ (no apostrophe).
> ----------------(For the Apostrophe challenged)----------------
> From a fully deputized officer of the Apostrophe Police!
>
```

6263. Ft-857,897,100D and ATAS-120

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 13:29:17 UTC
From: Bill East <beast@pcs.mb.ca>
Message-ID: <E%Cga.3572$qn.426741@localhost>
Source record: 121802

What are this groups thoughts on using the screwdriver ATAS-120 on VHF/UHF bands . The system says it does cover these bands but some folks actually use a seperate VHF/UHF dual bander .The performance isn`t great on vhf/uhf with the atas-120. For city use, getting into repeaters I think the antenna can`t be any worse than a 1/4 wave on vhf/uhf.
I don`t want to place another antenna on the truck anyway so was hoping the atas-120 is the answer.
Can I use the ATAS -120 for these 2 bands and expect so-so performance. Is a duplexer like a diamond MX-62M or similiar to use on the radio connected to a atas-120 basically the way to go? Does the duplexer pass the control voltage for the screwdriver motor?
thanks,
bill

6264. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 13:37:24 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303270537.73dcb90c@posting.google.com>
Source record: 121803

'Doc <w5lz@cwis.net> wrote in message news:<3E82868B.A5452542@cwis.net>...
> I love it when people cite quotes out of context...
> 'Doc

Doctor, I invite you and others to read your statement March 20, Loop
Antenna questions. Your response then exposes you for what you are...
a fraud.
If you were in any respectable engineering group such utterences would
have got you quickly fired. On the other hand you certainly would have
benefited from
the company of true engineers. For the short time you were employed
each and every one would have prefixed a outburst to you with the name
'Jesus Christ....." that short period would then allow you to drop
the self imposed
designation of 'Doctor' and adopt the name of 'Jesus Christ' which
would certainly create some of the respect that you desire without
having worked for it. As for when I decide on a hamfest per your
statement earlier on this thread
my response is the same as yours....'That would be telling'...Jesus
Christ!!!!!!!
Art XG

6265. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 14:57:55 UTC
From: richardharrison@webtv.net
Message-ID: <18838-3E831173-15@storefull-2311.public.lawson.webtv.net>
Source record: 121805

Mark Keith wrote:
"Feeding a dipole with a rectangular shaped delta match is not a collinear radiation structure, if that`s the antenna you refer to."

True. Were a delta match to have a triangular or circular shape, it would be no more likely to give significant gain.

What is a delta match? Art Unwin described a delta match when he described his dipole combined with a loop to match the dipole.

Instead of centerfeeding a dipole across a center insulator, the insulator is shorted. Feedwires are attached equidistant from the short. Drivepoint impedance varies with the distance between attachment points.

Art added a variable capacitor to his delta match. Art said that gain resulted from his configuration.

Other delta match users don`t seem to claim gain from the "delta" arrangement.

A somewhat similar arrangement to adjust dipole feedpoint impedance is the folded dipole. With same-sized parallel conductors, 2 wires give 4X the impedance. 3 wires give 9X the impedance, etc. However, gain is the same for all these dipoles.

I think Mark Keith found Art`s antenna had the same gain as a simple dipole when he tried to model it. Who is surprised by that result?

Best regards, Richard Harrison, KB5WZI

6266. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 14:57:57 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v864b9eluh3701@corp.supernews.com>
Source record: 121804

In radio-astronomy, Ts is often very small and Ta can approach 300. One wants to measure changes in Ts. Thus it is important to keep G close to 1. It is also nice when it is possible to cool the transmission line so as to make Ta smaller. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"William E. Sabin" <sabinw@mwci-news> wrote in message news:3E81A5B6.4050304@mwci-news...
> William E. Sabin wrote:
> > Jeroen Belleman wrote:
> >
> >>
> >>
> >> Given a source of temperature Ts, followed by a matched
> >> attenuator with voltage gain G (0<G<1) and temperature Ta, the
> >> available noise power over 1Hz BW to a matched load
> >> connected to the output is:
> >>
> >> P = k Ts G^2 + k Ta (1-G^2)
> >>
> >> This means that, for a lossy element inserted between a
> >> source and a load, the noise power available to the load depends on
> >> the loss if the temperatures of the source and the lossy element are
> >> different.
> >> For high losses (G->0), the available noise power depends essentially
> >> only on the temperature of the lossy element. For low losses (G->1),
> >> it depends essentially only on the temperature of the source.
> >>
> >
> > This looks good. Thanks.
> >
> > Bill W0IYH
> >

6267. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 15:20:27 UTC
From: k3bu@aol.comnoSaddam
Message-ID: <20030327102027.05668.00000008@mb-fo.aol.com>
Source record: 121806

Art, KB9MZ writes:

>On the subject of my antenna work. It took me a long while to study up
>on my ideas and it was Tom W8TI who pushed me into it years ago when I
>was trying to describe an idea. You could probably do it much quicker
>but reading up on ladder
>work analysis, filters, impedance transform and the like can be very
>exhausting.

and in his Patent 5625367 among other "claims" he states:

>>2. Discussion of the Related Technology

Conventional beam antennas, such as a Yagi antenna, include at least one driver element tuned to resonate at a desired receive/transmit frequency band and positioned at right angles to a support boom. To increase the directivity of such an antenna, a parasitic reflector element, usually tuned to a frequency slightly higher than the driver resonant frequency, can be placed parallel to the driver element along the boom. For further increased directivity, one or more director elements, usually tuned to frequencies slightly lower than the driver resonant frequency, can be placed at various distances along the boom on the other side of the driver element and parallel to the driver element. The driver and other elements are electromagnetically coupled for maximum gain and directivity and are usually of approximately the same length. In these antennas, the driver and the other elements are basically dipoles which in combination are resonant for a particular frequency band. <<

Looks to me like there was some "backwards" studying going on :-)
... or another proof that you can get patent just for about anything nowadays.
If you put capacitatevly EM coupled fractal flashlight in the boom, will it speed up the waves beyond speed of light so you can catch signals from tomorrow?

Yuri, BUm

6268. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 15:33:38 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E831A51.B56CB62D@att.net>
Source record: 121807

Art,

A couple of comments on your Terman "discovery".

* Scope refers to range of topics, not difficulty. Every author must decide what to include and what to omit in any given publication. It is possible that Terman thought this subject to be too difficult, but that seems unlikely.

* These writings are not ancient coded documents that require a Rosetta Stone to aid with interpretation. Why do you think you are the first person to really understand what Terman is saying? Generations of professionals have certainly read Terman very carefully. Probably quite a few amateurs as well.

* Terman certainly understood "wave filters", and so do many other people. Do you believe that everyone looking for a broadband antenna has somehow missed this revelation hidden in the writings of Terman?

I have no further comments on your implementation of broadband antennas, patents, length-independent antennas, or any other inventions. However, there is no justification for the belief that Terman somehow validates your work.

In his typical concise fashion, 'Doc' was saying about the same thing.

73,
Gene
W4SZ

Art Unwin KB9MZ wrote:

[snip]

> Let me share with you a paragraph that I stumbled on today by Terman,
> it reads like this and he was discussing an antenna for the frequency
> range .5 to 18 Mhz
>
> Quote
> The design of the circuits for antenna-coupling and line-to-receiver
> networks is based upon the theory of wave filters and is beyond the
> scope of this book..... end quote
>
> so just that statement alone shows how difficult this problem is. He
> goes on to say...
>
> Quote... It is sufficient to say that by proper attention to details

> surprisingly satisfactory results are obtained over the entire
> frequency band..... End Quote

[snip]

6269. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 15:45:16 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E831C8C.20103@mwci-news>
Source record: 121808

J. McLaughlin wrote:
> In radio-astronomy, Ts is often very small and Ta can approach 300. One
> wants to measure changes in Ts. Thus it is important to keep G close to
> 1. It is also nice when it is possible to cool the transmission line so
> as to make Ta smaller. 73 Mac N8TT
>

A cryogenic FET amplifier at the antenna dish
helps tremendously.

Bill W0IYH

6270. DX Option For Baby Boomer Quad

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 16:13:51 UTC
From: G&R <spam@limbo.hell>
Message-ID: <1rFga.5842$062.823981@news20.bellglobal.com>
Source record: 121809

Thank you all those at visited us at HAMEX this past weekend.

In response to those that indicated that our antenna is an excellent DXpedition antenna but would like it in a smaller shipping package than we already offer. We are please to announce that we have provided this option on the BBQ101520.

Because this is a special option, at this point we ask that you contact us directly at info@degendesigns.com (with your phone number and the best times to call you) and let us call you to discuss the details.

Otherwise, please visit our site at www.degendesigns.com and please consider our antennas.

73 Guenther VE3CVS
info@degendesigns.com

6271. "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 16:18:38 UTC
From: Siddhartha <jrm7287@rochester.rr.com>
Message-ID: <yvFga.3681$4v1.2780@twister.nyroc.rr.com>
Source record: 121810

I have not posted on this antenna group before, nor have I spent an appreciable time reading the posts. Having said that I will submit an often asked question, "What is the correct feedling length for a multi-band dipole antenna". Do spare me the details of the electrical 1/2 wavelength intervals, etc. Regards, Jim.

6272. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 16:45:47 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <nea68v4qg0mt5d8dlvdsq27e4kjhnob1vu@4ax.com>
Source record: 121811

On Thu, 27 Mar 2003 16:18:38 GMT, "Siddhartha"
<jrm7287@rochester.rr.com> wrote:

|I have not posted on this antenna group before, nor have I spent an
|appreciable time reading the posts. Having said that I will submit an often
|asked question, "What is the correct feedling length for a multi-band dipole
|antenna". Do spare me the details of the electrical 1/2 wavelength
|intervals, etc. Regards, Jim.

Sparing the details, I find that having the line long enough to reach
from the transmitter to the antenna is a requirement.

6273. Re: Horizontal Polarization with Ground Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 16:56:47 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <u0b68vk6nun4bcjul53nlg2vi9r6naj5fa@4ax.com>
Source record: 121812

On Mon, 24 Mar 2003 19:22:10 -0800, <Jimnn7k@reno.rmci.net> wrote:

>Quite simply-- the 3(4, or even center mounted on a 1/2 wave metal plate),
>when rotated (we are assuming its like turning a quarter on a table top),
>the driven element is still verticle, no mattter WHERE, it is turned to! of
>corse, if you wish to lay it on its side to get a horizontal pattern, then
>SOME effect (keep in mind that the ground radials simulate a "ground", may,
>or may NOT have some effect on the radiation pattern . also, then the real
>earth ground's reflections also enter into the equasion. (execpt in "free
>space" , like a sattellite) . --jim nn7k
>

Hi Jim,

Some. May, or may not. ...except...

This is speculation, not explanation. The "simply" part that
introduces this is simply wrong; perhaps that is why what follows is
so vague.

73's
Richard Clark, KB7QHC

6274. Re: Am I using the wrong ferrite cores?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:02:42 UTC
From: richardharrison@webtv.net
Message-ID: <18036-3E832EB2-187@storefull-2318.public.lawson.webtv.net>
Source record: 121814

Jason Hsu wrote:
"Can anyone tell me if I need different ferrite cores?"

Jason can refer to prior projects for what works. Bert Kelley, AA4FB describes a "PIC SWR Meter" on page 40 of the Dec.1999 "QST". Kelley refers to the "1987 ARRL Handbook", page 34.12. Here the aim is to operate from 160 to 6 meters at powers up to 2000 watts PEP. An Amidon FT-82-61 is used in the ARRL unit.

Best regards, Richard Harrison, KB5WZI

6275. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:10:32 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <6pb68vcqvg8962j8mn202rgauljn8bk25c@4ax.com>
Source record: 121813

On Thu, 27 Mar 2003 09:45:47 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>On Thu, 27 Mar 2003 16:18:38 GMT, "Siddhartha"
><jrm7287@rochester.rr.com> wrote:
>
>|I have not posted on this antenna group before, nor have I spent an
>|appreciable time reading the posts. Having said that I will submit an often
>|asked question, "What is the correct feedling length for a multi-band dipole
>|antenna". Do spare me the details of the electrical 1/2 wavelength
>|intervals, etc. Regards, Jim.
>
>Sparing the details, I find that having the line long enough to reach
>from the transmitter to the antenna is a requirement.

At first glance, that appears to be a rather flippant answer. It is,
however, the right answer. If my feedline was the "correct" length,
I'd have to set up my rig out in the front yard.

So Wes is right - the correct length is whatever it takes to get from
the antenna to the rig - no more, no less. If you have an SWR
problem, either trim the antenna or use a tuner. That's all it takes.

-fb-

6276. Re: Magloop coupling Q

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:19:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5vbr9ilo1@sparta.btinternet.com>
Source record: 121815

Mike,

For a variety of reasons the best way of coupling/matching small magloops to a coaxial line is to place an even smaller single-turn loop inside it in the same plane.

Forget about Q. Like SWR, that's just another relative useless number to be calculated and waffled about after the design is complete.

Perhaps you've already used program MAGLOOP4 (available from website below) which, amongst other things, calculates the diameter of the coupling loop.

Consider the two loops, one inside the other, to be an impedance matching transformer. Each winding has one turn. The turns ratio is fixed at one-to-one. From a cursory inspection it has leakage inductance/reactance which is in fact made use of by tuning it out.

Think in terms of magnetic flux, ampere-turns, due to the circular main loop. According to the laws of nature the flux inside the loop is uniformly distributed over the plane area it encloses. Therefore the small loop encloses, taps-off, a calculable fraction of that flux.

Thus the transformer's ampere-turns ratio and hence the impedance ratio is set by a function of the ratio of the two diameters. For convenience, here it is considered to be a current transformer although we can arrive via a more tortuous route at the same conclusions by considering it to be a voltage transformer with a corresponding volts-per-turn ratio.

OK, we have a matching transformer. So far so good !

Not unduly surprising, the two impedances to be matched are the series resonant resistance R of the main loop (the load) and the feedline (the source) impedance Ro. Ro can be anything convenient. Balanced twisted pair if you like.

The transformer primary and secondary each have inductance L1 and L2. Common to the two there's a mutual inductance M. It is necessary, of course, to determine L1, L2 and M from loop and conductor diameters.

Incidentally, as there must be at least two variable components in any impedance-matching device, it is the small loop's diameter which forms the second variable. The beauty of a magloop with this type of coupling is that coupling loop diameter tends to remain constant over a wide range of frequencies. Diameter does tend to creep slowly upwards with frequency.

All we have now is an elementary 2-mesh, network-analysis problem which any competent 2nd year electrical engineering student, blessed with a good professor, should have no trouble with.

HINT: Mutual inductive reactance, Xm, between primary and secondary
'windings' is -

Xm = Sqrt(R * Ro) ohms, and

R = Radiation resistance + Conductor Resistance + Ground Loss resistance.

But why bother? - MAGLOOP4 does it all for you.

Incidentally, instead of tedious repetitive reconstruction work to adjust
diameter of the coupling loop, just rotate it relative to the main loop
plane. It varies the coupling coefficient.

It need not consist of anything more than the self-supporting bared inner
conductor of the coax feedline. Only the area it encloses matters. Hit it
with a clenched fist. Ignore Old Wives who have a habit of dropping the name
of Faraday.

My first magloop was also constructed in a cold garage. It was also subject
to flooding. You must press on regardless.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

"Mike Coslo" wrote -

> I'm in the final stages of my Magloop, after a couple month hiatus
> because it was too darn cold in the garage.
>
> I was originally going to use a gamma couple loop, but I've looked
> around a bit and seen simple loop coupling, and a capacitive coupling
loop.
>
> Any thoughts on whether one is better than the other?
>
> Then again, maybe I can just experiemnt.....
>
>
> - Mike KB3EIA -
>

6277. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:25:46 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <aob68v8l7td6of5otiok8q8e1ljugri8gq@4ax.com>
Source record: 121816

On 26 Mar 2003 20:48:09 -0800, aunwin@insightbb.com (Art Unwin KB9MZ) wrote:

>You obviously have seen that even quite knoweledgable people have not
>followed thru on a lot of the stuff that I have described and thus put
>it down to my poor communication.

All very true.

>I have given you and the others
>everything that is required to duplicate my antenna and nobody seems
>to have the total knoweledge required

This should be a clue confirming the comment above.

>or sceptisism runs to deep especially because previous claims by some
>have been disapointing.

You provide the claims, Art, not the reviewers. And yes, the claims have been disappointing as has the technical content of their specification. Again, these are more clues that confirm the lead-in statement.

> So my advice to you is to put this antenna to
>one side and be patient until somebody writes it up....and they will,
>probably after I have passed away.

Given your christ references in other correspondence, should we wait until after the rising? This comment of yours is the standard appeal to pathetic sentimentality instead of science.

snip

>75 years have now passed and it is more easier with the aid of
>computors, step motors and the like that together with the study of
>resonators, to bring these ideas further forward so that old wives
>tales and the like can now be seen from a different perspective.

Do we really learn anything from seeing erroneous notions shown in new cartoon strips?

>Now some people on this group are critical of Terman

You have lead that group in the past, are you apologizing?

>and all do not believe most of what I say so quoting Terman also can
>be seen
>as 'impossible'. But speaking frankly, if you do not have an
>understanding of

>Lossless feed systems, equivalent circuits and what I stated in
>another thread on the subject of "Q"....... Soooooooo....

Your efficiency is near zero because of the bloated turn radius.

Art, if you expect respect for technical discussion, perhaps you
should attempt to improve on your self-acknowledged dismal
communications. Posting this malarkey is NOT serving that end.

73's
Richard Clark, KB7QHC

6278. Horn antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:33:19 UTC
From: Chris W <chrisw3@cox.net>
Message-ID: <3E833619.DCEDB5C4@cox.net>
Source record: 121817

I have a question about the Horn Antenna design in the ARRL Antenna Book (19th edition). On page 18-43, Fig 67 it shows the path-length difference between the center and the edge of a horn antenna. I talks about how this will cause side lobs to form. I was wondering if cutting a radius at the end of the horn in the H Plane wouldn't eliminate those side lobes? I know you can't radius it in both the H and the E plane, or could you? If you could I am pretty sure that would be much more difficult than just doing it in the H Plane. I was also wondering if this same problem exists with a horn for a circular wave guide.

--
Chris W

6279. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:34:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5vcndqsl1@titan.btinternet.com>
Source record: 121818

If anybody has an SWR problem the first thing to try is another feedline length - more correct than the last one.

6280. 2.4 ghz double dipole with ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:35:27 UTC
From: Chris W <chrisw3@cox.net>
Message-ID: <3E833699.C842BE3A@cox.net>
Source record: 121819

I am thinking about building a modification of the double dipole EIA standard gain reference antenna shown on page 9-34 of the ARRL UHF/Microwave Experimenters manual. I want to build it for 2.4 - 2.5 ghz. And I want to make it a full wavelength dipole instead of half wave. So here is what I need to know.

1) The impedance for the full wavelength dipole is going to be much higher than the ï¿½ wavelength. How do I calculate what that impedance will be? I know it depends on the diameter of the elements used.

2) Why do the parallel feed lines from the balun that run to the two dipoles continue back down to the ground plane?

3) I can't seem to find any formula for sizing the split sleeve balun, do I just make the diameters such that the impedance is what I want or is there some other method for sizing it?

4) Once I figure out the impedance of the full wave dipole what would be a good way to match that impedance with my feeds? Could the split sleeve balun be designed to have something other than a 4:1 ratio?

5) Finaly I was thinking that with a full wave dipole the ground plane should probably be bigger than 1 wavelength. I was thinking 1.5 or 2. Is there any rull of thumb or formula for something like this?

--
Chris Woodhouse
3147 SW 127th St.
Oklahoma City, OK 73170
405-691-5206
chrisw@programmer.net
N35ï¿½ 20.492'
W97ï¿½ 34.342'

6281. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:41:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5vd3v$k3a$1@hercules.btinternet.com>
Source record: 121820

> 1. It is also nice when it is possible to cool the transmission line so
> as to make Ta smaller. 73 Mac N8TT
>
==========

Why then are there no deep-space radio receiving stations at the N.Pole.
It's got to be worth at least another vital 0.01 of an S-point.

6282. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:43:00 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns934B62D7622FBpookster@216.168.3.50>
Source record: 121821

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in news:b5vcndqsl1
@titan.btinternet.com:

> If anybody has an SWR problem the first thing to try is another feedline
> length - more correct than the last one.
>

Heresy.

--
Bill, W7TI

6283. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:44:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5vd93kam1@hercules.btinternet.com>
Source record: 121822

Art sez -
> Mark I know you are not trying to get my goat

==========

Art, there's no need for him to try.

6284. Re: Horizontal Polarization with Ground Plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:46:08 UTC
From: richardharrison@webtv.net
Message-ID: <11680-3E8338E0-239@storefull-2316.public.lawson.webtv.net>
Source record: 121827

Richard Clark wrote:
"This is speculation, not explanation."

In free-space, the meanings of horizontal and vertical are assigned. There is no earth reflection to affect an antenna pattern.

A VHF antenna may be placed so many wavelengths above the earth as to make the antenna pattern almost the same as the free-space pattern. Yet, a receiver may get a signal from an earth reflection as well as a direct signal from the sender.

The receiver responds to the total received signal.

Ground-planes work in the same manner in any position, unless their environment is impressive enough to affect their impedance or pattern. Polarization refers to the direction of the voltage vector with respect to the earth. The earth`s reflecting characteristic is different for different polarizations. When the surface is highly reflective, this can make a difference.

Best regards, Richard Harrison, KB5WZI

6285. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 17:56:09 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5vdvp$la0$1@hercules.btinternet.com>
Source record: 121823

> Given your christ references in other correspondence, should we wait
> until after the rising?

==========

Is Terman due to be resurrected then? When and where should his disciples congregate, bibles in hand?

6286. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 18:06:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E833DB9.70506@ieee.org>
Source record: 121826

Siddhartha wrote:
> I have not posted on this antenna group before, nor have I spent an
> appreciable time reading the posts. Having said that I will submit an often
> asked question, "What is the correct feedling length for a multi-band dipole
> antenna". Do spare me the details of the electrical 1/2 wavelength
> intervals, etc. Regards, Jim.

Check out my no-tuner multi-band dipole on my web page for information.
--
73, Cecil, http://www.qsl.net/w5dxp

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6287. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 18:08:00 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <7ff68vsl5ipevnqrgk5asfsjn1c9os2mct@4ax.com>
Source record: 121824

On Thu, 27 Mar 2003 17:56:09 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>> Given your christ references in other correspondence, should we wait
>> until after the rising?
>
>========================
>
>Is Terman due to be resurrected then? When and where should his disciples
>congregate, bibles in hand?
>

If you just put down those dice and listened....

6288. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 18:08:17 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E833E11.BEC987FA@cwis.net>
Source record: 121825

Art,
Why does the nickname 'Doc' bother you so much?
As I've said a number of times, it's a nickname. It has nothing to do with with me being a doctor of any thing, and to the best of my knowledge, I've never claimed to be a doctor of any kind.
As to the promise to attend the hamfest where you will be demonstrating your antenna. It's okay, you certainly don't have to tell me. I don't have to worry about missing it either...
-=<>=-={'Doc }=-=<>=-

6289. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 18:15:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E833FDB.83E93ED9@cwis.net>
Source record: 121828

Bill,
I didn't think Heresy had anything to do with feed
lines. I do know they make pretty good chocolate bars.
'Doc

6290. Re: Screwdriver antenna now won't tune 40/80M.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 18:30:01 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E834329.35B78826@cwis.net>
Source record: 121829

Michael,
It seems like if the antenna no longer works where
it did work at one time, then there must have been
some physical change in the antenna. It also seems
reasonable that inspecting the various parts of the
antenna for something that would be causing a short,
or an open circuit at the extreme end of the coil
would be a good idea.
Almost every time I've had a problem with a mobile
antenna the grounding seems to have been associated
with the 'cure'. The ground that I had wasn't as good
a ground as it could have been. That seems a bit unlikely
in your case, but...
'Doc

6291. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 18:35:17 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <_o6cnUOo_rn-2R6jXTWc3A@comcast.com>
Source record: 121830

You have higher and lower mixed up.

Tam/WB2TT

"Yuri Blanarovich" <k3bu@aol.comnoSaddam> wrote in message
news:20030327102027.05668.00000008@mb-fo.aol.com...
> Conventional beam antennas, such as a Yagi antenna, include at least one
driver
> element tuned to resonate at a desired receive/transmit frequency band and
> positioned at right angles to a support boom. To increase the directivity
of
> such an antenna, a parasitic reflector element, usually tuned to a
frequency
> slightly higher than the driver resonant frequency, can be placed parallel
to
> the driver element along the boom. For further increased directivity, one
or
> more director elements, usually tuned to frequencies slightly lower than
the
> driver resonant frequency, can be placed at various distances along the
boom on
> the other side of the driver element and parallel to the driver element.
The
> driver and other elements are electromagnetically coupled for maximum gain
and
> directivity and are usually of approximately the same length. In these
> antennas, the driver and the other elements are basically dipoles which in
> combination are resonant for a particular frequency band.
.....................<<
> Yuri, BUm

6292. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 18:51:33 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <uvh68vg8dnpv2q9qcmt3nm2biome6m0gvc@4ax.com>
Source record: 121831

On Thu, 27 Mar 2003 13:35:17 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:

>You have higher and lower mixed up.
>
>Tam/WB2TT

Hi Tam,

Whom do you mean by "you?" (re-read the post before answering)

73's
Richard Clark, KB7QHC

6293. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 19:00:51 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303271100.640503ff@posting.google.com>
Source record: 121832

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<18838-3E831173-15@storefull-2311.public.lawson.webtv.net>...
> Mark Keith wrote:
> "Feeding a dipole with a rectangular shaped delta match is not a
> collinear radiation structure, if that`s the antenna you refer to."
>
> True. Were a delta match to have a triangular or circular shape, it
> would be no more likely to give significant gain.
>
> What is a delta match? Art Unwin described a delta match when he
> described his dipole combined with a loop to match the dipole.
>
> Instead of centerfeeding a dipole across a center insulator, the
> insulator is shorted. Feedwires are attached equidistant from the short.
> Drivepoint impedance varies with the distance between attachment points.
>
> Art added a variable capacitor to his delta match. Art said that gain
> resulted from his configuration.

Very good Richard, you are paying attention to what I stated and not
adding personal interpretations which many apear to be doing. I
presume that when you said I am adding a variable capacitor you meant
it was to the loop since the matching system was as you described.

>
> Other delta match users don`t seem to claim gain from the "delta"
> arrangement.

Well that is a moot point since it does radiate I dont think anyone
would argue with that but itsb radiation can be considered small

>
> A somewhat similar arrangement to adjust dipole feedpoint impedance is
> the folded dipole. With same-sized parallel conductors, 2 wires give 4X
> the impedance. 3 wires give 9X the impedance, etc. However, gain is the
> same for all these dipoles.
>
> I think Mark Keith found Art`s antenna had the same gain as a simple
> dipole when he tried to model it. Who is surprised by that result?

Richard I have no idea how Mark did his modeling but it is of no
matter. The discussion emanated from multi band antennas that did not
use its physical length on all frequencies so in the case of useage on
10M only half of the physical length was used. My point was that
radiation would increase, if one
placed a phase change in the center one would obtain a collinear gain.

The coupled loop provided the means for a phase change in a similar
way that one gets with a zepp except it is not the transmission line
that provided the phase change but the loop which I might add does add
to the radiation. Now somebody mentioned that this does not represent
gain as we know it and I understand such a comment from some one
buried in antennas only but efficiency is a term that is used widely
in every field and I believe I used it correctly. To those who claim
a zepp gain, are they incorrect? If they are incorrect then so am I.
I believe a lot of the misunderstanding is purely because of continual
subject changes plus over the years it has been a learning process for
me also.
Ofcourse it is so much easier to catcall instead of paying full
attention
but then this is a free world.
Regards
Art
>
> Best regards, Richard Harrison, KB5WZI

6294. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 19:38:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E835350.EFD404A3@cwis.net>
Source record: 121833

Yuri,
Carefull! Ol'Frac might sue you for idea
infringement(?)...
'Doc

6295. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 20:05:17 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <nbm68voq6ufgflb8ilurrmmj53km76f9dg@4ax.com>
Source record: 121834

On Wed, 26 Mar 2003 06:02:09 GMT, Richard Clark <kb7qhc@attbi.com>
wrote:

>>You are now getting a bit silly with your comments.

6296. Re: Screwdriver antenna now won't tune 40/80M.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 20:10:40 UTC
From: Michael Pupeza <mpupeza@nccw.net>
Message-ID: <v86mltsp6r7gd0@corp.supernews.com>
Source record: 121835

Thanks for the advice, guys.
I've pretty well got it figured out now. Doc was right - grounding!
My unit is mounted on the top of an L shaped welded 1 1/2" square tubing, 32" x 32", which is U-bolted in 2 places along the 2" square tube that holds the trailer hitch on my van, under the rear bumper. The antenna sits on the top end of the tubing, visible in the driver's mirror, about 5" away from the body of the vehicle. It's a good spot because even the base of the antenna isn't very close to metal there, with the windows starting around that point. The ground was dependent upon the metal to metal contacts. I looked around under there and see that there has been a lot of rusting. The higher frequencies are less dependent upon that physical ground, as the capacitive component of all that surface area contributes to a ground action.
I connected my MFJ antenna analyser and played a bit, after opening up the 'matching network' and finding nothing apparently wrong.
SWR at 10 MHz and above is acceptable. Lower than that it gets high and the 'dip' is well over 3:1. I'll be cleaning it all up when I get back North, but I may try a ground strap as a temporary measure. I'll see if that helps.
The rusting, I guess, had increased fairly rapidly after the rains of a few weeks ago, and I haven't been using the antenna much lately!

Live and learn.
73
Mike VE3EQP/W4.....>

'Doc <w5lz@cwis.net> wrote in message news:3E834329.35B78826@cwis.net...
>
>
> Michael,
> It seems like if the antenna no longer works where
> it did work at one time, then there must have been
> some physical change in the antenna. It also seems
> reasonable that inspecting the various parts of the
> antenna for something that would be causing a short,
> or an open circuit at the extreme end of the coil
> would be a good idea.
> Almost every time I've had a problem with a mobile
> antenna the grounding seems to have been associated
> with the 'cure'. The ground that I had wasn't as good
> a ground as it could have been. That seems a bit unlikely
> in your case, but...
> 'Doc

6297. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 20:18:31 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cem68vg3b91ghd05l42h426vlobaon9du3@4ax.com>
Source record: 121836

On 25 Mar 2003 20:18:59 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>You are now getting a bit silly with your comments.

On 27 Mar 2003 11:00:51 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Ofcourse it is so much easier to catcall instead of paying full
>attention

Hi Art,

You didn't fall very far from the tree yourself.

73's
Richard Clark, KB7QHC

6298. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 20:25:04 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <GROdnf1jttqAwx6jXTWcqg@comcast.com>
Source record: 121837

The message I was responding to (Yuri's) . The pertinent part of which was included in my posting. This may have to do with what kind of browser you are using, but I don't see any confusion. The Reflector is longer than the DE, hence lower in frequency. The directors are shorter, hence higher in frequency

Tam/WB2TT
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:uvh68vg8dnpv2q9qcmt3nm2biome6m0gvc@4ax.com...
> On Thu, 27 Mar 2003 13:35:17 -0500, "Tarmo Tammaru"
> <t-tammaru@home.com> wrote:
>
> >You have higher and lower mixed up.
> >
> >Tam/WB2TT
>
> Hi Tam,
>
> Whom do you mean by "you?" (re-read the post before answering)
>
> 73's
> Richard Clark, KB7QHC

6299. Alpha Delta DX-DD

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 20:33:16 UTC
From: Vince <vcl@sympatico.ca>
Message-ID: <aeJga.6209$FO3.677370@news20.bellglobal.com>
Source record: 121838

Hi guys, i am looking for the schematic for the alpha delta DX-DD or DX-CC
if anyone have it can you let me know i would like to build it myself. thank
you ....

Vince ve3elb
======================
Email: ve3elb@rac.ca
Visit My Webpages @ :
www.qsl.net/ve3elb
http://www3.sympatico.ca/vcl

6300. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 20:54:43 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <45p68vstitj7irfjc1h2e1dqto4k4ifk2v@4ax.com>
Source record: 121839

On Thu, 27 Mar 2003 12:15:55 -0600, 'Doc <w5lz@cwis.net> wrote:

|Bill,
| I didn't think Heresy had anything to do with feed
|lines. I do know they make pretty good chocolate bars.
| 'Doc

Hmmm. Is that a local brand? Here in Arizona, I've only seen Hershey chocolate. How do they compare?

6301. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 21:12:15 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <t7q68vgptpc98is7uhpqh1sq0tie19akps@4ax.com>
Source record: 121840

On Thu, 27 Mar 2003 13:54:43 -0700, Wes Stewart <n7ws@#arrl.net>
wrote:

>On Thu, 27 Mar 2003 12:15:55 -0600, 'Doc <w5lz@cwis.net> wrote:
>
>|Bill,
>| I didn't think Heresy had anything to do with feed
>|lines. I do know they make pretty good chocolate bars.
>| 'Doc
>
>Hmmm. Is that a local brand? Here in Arizona, I've only seen Hershey
>chocolate. How do they compare?

They're the same - Doc has a spelling problem ;-)

-fb-

6302. Re: Magloop coupling Q

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 21:15:45 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5vpm1jkm1@titan.btinternet.com>
Source record: 121841

Muttering to myself -

As a matter of fact, if I was a nit-picking perfectionist which I am not, to feed a magloop I would prefer a twisted or otherwise balanced pair to coax. Zo = 200 ohms ?

This would help maintain the main loop in better balance with its environment. It might be an advantage when receiving with a transmitting loop - nulling out interference.

Also a 200-ohm line would have considerably lower loss than 50-ohm coax. As the line to a magloop always has a low SWR (the tuner being located at the antenna end) only a simple fixed ratio 4-to-1 balun is needed at the transmitter end.

But my mind is wandering again.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

6303. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 21:18:03 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <56q68v0n8qi9atigjlr261oe18ngj156i0@4ax.com>
Source record: 121842

On Thu, 27 Mar 2003 15:25:04 -0500, "Tarmo Tammaru"
<t-tammaru@home.com> wrote:

>The message I was responding to (Yuri's) .

That is eminently obvious by the nature of posting order.

>The pertinent part of which was
>included in my posting. This may have to do with what kind of browser you
>are using, but I don't see any confusion.

You didn't read my full posting then. A perfectly suitable answer
would consist of one name, not an explanation. (hint: you are
probably wrong)

> The Reflector is longer than the
>DE, hence lower in frequency. The directors are shorter, hence higher in
>frequency

There is only one person that can be shown to have missed that through
the demonstration of what was written. I ask again, whom do you refer
to by "You" in the following post of yours, repeated with my
unanswered question:
>
>Tam/WB2TT
>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>news:uvh68vg8dnpv2q9qcmt3nm2biome6m0gvc@4ax.com...
>> On Thu, 27 Mar 2003 13:35:17 -0500, "Tarmo Tammaru"
>> <t-tammaru@home.com> wrote:
>>
>> >You have higher and lower mixed up.
>> >
>> >Tam/WB2TT
>>
>> Hi Tam,
>>
>> Whom do you mean by "you?" (re-read the post before answering)
>>
>> 73's
>> Richard Clark, KB7QHC
>

73's
Richard Clark, KB7QHC

6304. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 21:23:58 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b5vq5e$ee0$1@sparta.btinternet.com>
Source record: 121843

> Heresy.
> --
> Bill, W7TI

==========

Bill, I do wish you wouldn't use such emotion-stirring words.

I'm likely to be added to the CIA hit-list in the "Burned-at-the-Stake"
category.

6305. Re: 440 Yagi support on my Landrover

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 21:24:36 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <o_Jga.8043$RS6.368707@twister.southeast.rr.com>
Source record: 121844

Youve got the right idea. I did it with a flat piece of steel 2ft long about 1ft wide. 1inch hole near the end for same size bolt 6" long. Also suported the mast from a support fastened to my luggage rack. This supported a 30' mast. You can also use you trailer hitch. Remove the ball and treplace it with a bolt you can slip your mast over.

"Bill East" <beast@pcs.mb.ca> wrote in message
news:ZItfa.2911$qn.388550@localhost...
> I want to use a idea I had seen before, but forgot where exactly. A wheel
of
> your vehicle parks on a metal plate/mast design allowing you to install
a
> 440 Yagi or other light yagi on a fiberglass mast or metal mast up
about
> 12 feet over the roof of the truck or SUV.
> Anyone remember the web page? If you have other similar ideas to use a
mast
> on a parked vehicle I would like to hear from you .
>
> thanks,
> Bill
>
>

6306. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 21:38:09 UTC
From: richardharrison@webtv.net
Message-ID: <27158-3E836F41-295@storefull-2314.public.lawson.webtv.net>
Source record: 121845

Art, KB9MZ wrote:
"My point was that radiation would increase, if one placed a phase change in the center, one would get a collinear gain."

That`s true in an antenna elemewnt exceeding 1/2-wavelength in the direction perpendicular to the element under certain conditions.

A generator has out-of-phase terminals. In a center-fed 1/2-wave dipole, current flows out of one side of the dipole and into the generator. Current flows out of the generator and into the other side of the dipole. This in and out current places both halves of the dipole in phase at its feedpoint.

This current in a center-fed dipole is in-phase in both halves of the dipole until the total length of the dipole exceeds a full wavelength. When an antenna element exceeds 1/2-wavelength, current reverses direction at the 1/2-wave point of current travel. Reversed current begins to subtract from radiation perpendicular to the wire.

Collinear arrays often use phase reversal circuits (inverters) at 1/2-wave distances from the drivepoint to reverse the natural phase reversal. This places antenna segments back in-phase on both sides of the inverter. The inverter often takes the form of a short-circuit 1/4-wave stub.

Back to the subject of gain. The full-wave center-fed dipole has gain versus a 1/2-wave dipole. Neither dipole requires a phase inverter to keep current flowing in the same direction throughout its length.

A 1/2-wave, center-fed dipole becomes a full-wave at 2X its 1/2-wave frequency. But, suppose I wanted to use the antenna at 4X its 1/2-wave frequency. At the highest frequency, part of the antenna`s length would work against me at the highest frequency in the direction perpendicular to the wire.

I could install parallel-resonant circuits, at the highest frequency, in series with the wire at the 1/2-wave distances from the drivepoint, to automatically switch-off current to the ends of the antenna to avoid the reversed current flow. These are called traps.

I don`t like mixing traps and inverters in the same posting, but Art mentioned "multiband antennas that did not use its (sic) physical length on all frequencies". Art also said that "if one placed a phase change in the center one would obtain a collinear gain".

That depends on the "center" of what?

Art has mixed apples and oranges and the fruit salad is tasteless.

Best regards, Richard Harrison, KB5WZI

6307. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 22:13:58 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <5GCdndgPtbkSGx6jXTWcqA@ctc.net>
Source record: 121847

> |asked question, "What is the correct feedling length for a multi-band
dipole
> |antenna". Do spare me the details of the electrical 1/2 wavelength
> |intervals, etc. Regards, Jim.
>
> Sparing the details, I find that having the line long enough to reach
> from the transmitter to the antenna is a requirement.
>
I always find having a few feet extra always helps incase I have to move the
rig.

6308. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 22:29:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v86upvp6hjvt8a@corp.supernews.com>
Source record: 121846

That's a nice simplified explanation of pattern generation. But like all simplified explanations, you have to be careful not to carry it too far. The idea that the field from reversed current beyond a half wavelength "works against" the current closer in is an example of the hazard. (Incidentally, the current reversal takes place 1/2 wavelength from the end of the antenna, not 1/2 wavelength from the feed point.) A 5/4 wavelength dipole actually has about 1 dB gain over a full wavelength dipole, broadside to the dipole. If our knowledge were limited to the simplified explanation, we'd reach the opposite -- and wrong -- conclusion. We'd expect less gain from the 5/4 wavelength antenna, since the current in the odd 1/8 wavelength on each side would "work against" the current in the remaining 1/2 wavelength.

Likewise, an explanation for the gain produced by a W8JK antenna would fail. In these antennas, the currents in two closely spaced elements are out of phase, resulting in partial to full cancellation of their fields in all directions. There's no direction in which they reinforce. Yet the W8JK exhibits substantial gain over a single (dipole) element.

The reason the 5/4 wave antenna has more broadside gain than a full wavelength dipole, and the reason a W8JK has gain in spite of the field cancellation, is due to mutual coupling between the portions of the antenna. In the W8JK, the reversed-phase current in one element causes the current in the other element to increase, and vice-versa. The increased currents produce larger fields than an isolated dipole would. This increase more than compensates for the partial field cancellation. Likewise, the current in the outside half wave portion of each end of a 5/4 wave dipole is considerably greater than the current in each half of a full wave dipole. Again, the increased current more than makes up for the field cancellation. (If you'd like to see this for yourself with EZNEC or a similar program, be sure to set a constant power level, and don't just use a fixed feed point voltage or current. In EZNEC, this is done in the Options menu.)

Field cancellation from the reversed currents does take place as Richard says. However, the out of phase currents not only "work against" each other by interfering with each other's fields, but also "work for" each other by causing an overall increase in current. In many cases, such as the two examples above, the "for" overcomes the "against". Any explanation that hopes to give answers consistent with real observable and measurable results have to consider both factors and not simply ignore one or the other.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Art, KB9MZ wrote:
> "My point was that radiation would increase, if one placed a phase
> change in the center, one would get a collinear gain."
>
> That`s true in an antenna elemewnt exceeding 1/2-wavelength in the
> direction perpendicular to the element under certain conditions.
>
> A generator has out-of-phase terminals. In a center-fed 1/2-wave dipole,
> current flows out of one side of the dipole and into the generator.
> Current flows out of the generator and into the other side of the
> dipole. This in and out current places both halves of the dipole in
> phase at its feedpoint.
>
> This current in a center-fed dipole is in-phase in both halves of the
> dipole until the total length of the dipole exceeds a full wavelength.
> When an antenna element exceeds 1/2-wavelength, current reverses
> direction at the 1/2-wave point of current travel. Reversed current
> begins to subtract from radiation perpendicular to the wire.
>
> Collinear arrays often use phase reversal circuits (inverters) at
> 1/2-wave distances from the drivepoint to reverse the natural phase
> reversal. This places antenna segments back in-phase on both sides of
> the inverter. The inverter often takes the form of a short-circuit
> 1/4-wave stub.
>
> Back to the subject of gain. The full-wave center-fed dipole has gain
> versus a 1/2-wave dipole. Neither dipole requires a phase inverter to
> keep current flowing in the same direction throughout its length.
>
> A 1/2-wave, center-fed dipole becomes a full-wave at 2X its 1/2-wave
> frequency. But, suppose I wanted to use the antenna at 4X its 1/2-wave
> frequency. At the highest frequency, part of the antenna`s length would
> work against me at the highest frequency in the direction perpendicular
> to the wire.
>
> I could install parallel-resonant circuits, at the highest frequency, in
> series with the wire at the 1/2-wave distances from the drivepoint, to
> automatically switch-off current to the ends of the antenna to avoid the
> reversed current flow. These are called traps.
>
> I don`t like mixing traps and inverters in the same posting, but Art
> mentioned "multiband antennas that did not use its (sic) physical length
> on all frequencies". Art also said that "if one placed a phase change in
> the center one would obtain a collinear gain".
>
> That depends on the "center" of what?
>
> Art has mixed apples and oranges and the fruit salad is tasteless.
>
> Best regards, Richard Harrison, KB5WZI

>

6309. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 23:23:59 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303271523.539f947d@posting.google.com>
Source record: 121848

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<aob68v8l7td6of5otiok8q8e1ljugri8gq@4ax.com>...
> On 26 Mar 2003 20:48:09 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
>
> >You obviously have seen that even quite knoweledgable people have not
> >followed thru on a lot of the stuff that I have described and thus put
> >it down to my poor communication.
>
> All very true.
>
> >I have given you and the others
> >everything that is required to duplicate my antenna and nobody seems
> >to have the total knoweledge required
>
> This should be a clue confirming the comment above.
>
> >or sceptisism runs to deep especially because previous claims by some
> >have been disapointing.
>
> You provide the claims, Art, not the reviewers. And yes, the claims
> have been disappointing as has the technical content of their
> specification. Again, these are more clues that confirm the lead-in
> statement.
>
> > So my advice to you is to put this antenna to
> >one side and be patient until somebody writes it up....and they will,
> >probably after I have passed away.
>
> Given your christ references in other correspondence, should we wait
> until after the rising? This comment of yours is the standard appeal
> to pathetic sentimentality instead of science.
>
> snip
>
> >75 years have now passed and it is more easier with the aid of
> >computors, step motors and the like that together with the study of
> >resonators, to bring these ideas further forward so that old wives
> >tales and the like can now be seen from a different perspective.
>
> Do we really learn anything from seeing erroneous notions shown in new
> cartoon strips?
>

> >Now some people on this group are critical of Terman
>
> You have lead that group in the past, are you apologizing?
>
> >and all do not believe most of what I say so quoting Terman also can
> >be seen
> >as 'impossible'. But speaking frankly, if you do not have an
> >understanding of
> >Lossless feed systems, equivalent circuits and what I stated in
> >another thread on the subject of "Q"..... Soooooooo....
>
> Your efficiency is near zero because of the bloated turn radius.
>
> Art, if you expect respect for technical discussion, perhaps you
> should attempt to improve on your self-acknowledged dismal
> communications. Posting this malarkey is NOT serving that end.
>
> 73's
> Richard Clark, KB7QHC

Richard, I thought you had put your nastiness aside but when I saw your retort at the post initiator regarding subject change I thought it was just a momentary lapse, unfortunatly this is not so, you have now returned fully to your normally nasty self.
Thats a real shame because you have some engineering knoweledge where-as some others on this group are just wanna bees engineers. Perhaps Tom W8TI will come back some time and put you back in your place with respect to antennas. A pin prick will allow some of the air to escape I am sure.
Yet you can be a capable person and it is just a shame that periodically you
relapse into nastiness. Because you fail to understand certain aspects of engineering you justify it by calling it malarkey to cover up. If you want to discuss a particular point I will be happy to and share what I have found or just debate it but you surely can't expect me to educate you from scratch so that you can understand. If the antenna and its engineering aspects don't interest you then thats fine, if Termans work is suspect to you then thats also fine, pick a point and post it for general discussion, but surely you don't ask me to give a basic education to everybody so they can then understand my work. Tom just picked you apart on one of your antenna assertions so you should have some modesty about your antenna knoweledge.

Let's just take a single point to debate, for instance, I say that when you place a parallel circuit containing a variable capacitor, at the center of a dipole the current pattern will change from a single sinosoidal pattern to one that can equates to a collinear type pattern. For some reason you cannot understand or grasp this basic fact or for that matter understand why the parallel circuit (loop) acts as an oscillator. Until you can grasp this basic engineering or antenna fact and that goes for the non engineering types who just

troll, it is impossible for you to advance to the next step since coupling is basic to the understanding of antennas.
Regards
Art

6310. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 23:44:26 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <cv278v4rj7bjsmn47c196ie5ceeftqoq8t@4ax.com>
Source record: 121849

On 27 Mar 2003 15:23:59 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>
>Let's just take a single point to debate, for instance, I say that
>when you place a parallel circuit containing a variable capacitor, at
>the center of a dipole the current pattern will change from a single
>sinosoidal pattern to one that can equates to a collinear type
>pattern.

Hi Art,

You obviously didn't read Roy's critique of Richard's dipole current
distribution posting.

Required reading before you revisit this above.

73's
Richard Clark, KB7QHC

6311. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-27 23:58:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8740f5il59d3a@corp.supernews.com>
Source record: 121850

I'm not sure what it has to do with my earlier posting, but it's a fact that nothing you do at the center of a dipole will change its current distribution. The only effect is on the feedpoint impedance. This is easily confirmed by either modeling or measurement.

Roy Lewallen, W7EL

Richard Clark wrote:
> On 27 Mar 2003 15:23:59 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
>
>>Let's just take a single point to debate, for instance, I say that
>>when you place a parallel circuit containing a variable capacitor, at
>>the center of a dipole the current pattern will change from a single
>>sinosoidal pattern to one that can equates to a collinear type
>>pattern.
>
>
> Hi Art,
>
> You obviously didn't read Roy's critique of Richard's dipole current
> distribution posting.
>
> Required reading before you revisit this above.
>
> 73's
> Richard Clark, KB7QHC

6312. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 00:01:12 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E8390C8.AF7728DE@cwis.net>
Source record: 121851

Wes,
They look a lot alike, but they taste the opposite
of each other.
'Doc

6313. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 00:21:03 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E839524.528C8434@attbi.com>
Source record: 121852

Hershey's are available pure or with nuts: Heresy's are never pure and
are full of errors <g>!

Rev. Mr. Dave, AKA Deacon Dave, W1MCE
<><

Wes Stewart wrote:
>
> On Thu, 27 Mar 2003 12:15:55 -0600, 'Doc <w5lz@cwis.net> wrote:
>
> |Bill,
> | I didn't think Heresy had anything to do with feed
> |lines. I do know they make pretty good chocolate bars.
> | 'Doc
>
> Hmmm. Is that a local brand? Here in Arizona, I've only seen Hershey
> chocolate. How do they compare?

Wes Stewart wrote:
>
> On Thu, 27 Mar 2003 12:15:55 -0600, 'Doc <w5lz@cwis.net> wrote:
>
> |Bill,
> | I didn't think Heresy had anything to do with feed
> |lines. I do know they make pretty good chocolate bars.
> | 'Doc
>
> Hmmm. Is that a local brand? Here in Arizona, I've only seen Hershey
> chocolate. How do they compare?

6314. FA: 29 uH Air Wound Coil -- 12 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 00:32:12 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <gKMga.17812$ns6.846770@news2.east.cox.net>
Source record: 121853
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Please see:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015698719

Thanks for looking!

Larry
KQ4BY

6315. Re: Magloop coupling Q

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 00:34:14 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3E8398A4.3090306@adelphia.net>
Source record: 121854

Reg Edwards wrote:
> Mike,
>
> For a variety of reasons the best way of coupling/matching small magloops to
> a coaxial line is to place an even smaller single-turn loop inside it in the
> same plane.
>
> Forget about Q. Like SWR, that's just another relative useless number to be
> calculated and waffled about after the design is complete.
>
> Perhaps you've already used program MAGLOOP4 (available from website below)
> which, amongst other things, calculates the diameter of the coupling loop.

Yes I have. I got a very good start with it. Being able to vary the
params with it made a lot of things very clear.

<A bunch of good info snipped>
>
> My first magloop was also constructed in a cold garage. It was also subject
> to flooding. You must press on regardless.

Will do! I expect to go on the air with it this weekend. Thanks for the
very good answer, Reg. It cleared up some other confusions I had.

- Mike KB3EIA -

6316. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 00:49:25 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <KZmcnfA28qqLAR6jXTWcqA@comcast.com>
Source record: 121855

I give up. I completely don't understand your question. I already said who,
which you said was eminently obvious?

Tam/WB2TT
"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:56q68v0n8qi9atigjlr261oe18ngj156i0@4ax.com...
> On Thu, 27 Mar 2003 15:25:04 -0500, "Tarmo Tammaru"
> <t-tammaru@home.com> wrote:
>
> >The message I was responding to (Yuri's) .
>
> That is eminently obvious by the nature of posting order.
>
> >The pertinent part of which was
> >included in my posting. This may have to do with what kind of browser you
> >are using, but I don't see any confusion.
>
> You didn't read my full posting then. A perfectly suitable answer
> would consist of one name, not an explanation. (hint: you are
> probably wrong)
>
> > The Reflector is longer than the
> >DE, hence lower in frequency. The directors are shorter, hence higher in
> >frequency
>
> There is only one person that can be shown to have missed that through
> the demonstration of what was written. I ask again, whom do you refer
> to by "You" in the following post of yours, repeated with my
> unanswered question:
> >
> >Tam/WB2TT
> >"Richard Clark" <kb7qhc@attbi.com> wrote in message
> >news:uvh68vg8dnpv2q9qcmt3nm2biome6m0gvc@4ax.com...
> >> On Thu, 27 Mar 2003 13:35:17 -0500, "Tarmo Tammaru"
> >> <t-tammaru@home.com> wrote:
> >>
> >> >You have higher and lower mixed up.
> >> >
> >> >Tam/WB2TT
> >>
> >> Hi Tam,
> >>
> >> Whom do you mean by "you?" (re-read the post before answering)
> >>

> >> 73's
> >> Richard Clark, KB7QHC
> >
>
> 73's
> Richard Clark, KB7QHC

6317. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 01:01:12 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87r88swbhj.fld@barrow.com>
Source record: 121856

"Tarmo Tammaru" <t-tammaru@home.com> wrote:
>The message I was responding to (Yuri's) . The pertinent part of which was
>included in my posting. This may have to do with what kind of browser you
>are using, but I don't see any confusion. The Reflector is longer than the
>DE, hence lower in frequency. The directors are shorter, hence higher in
>frequency
>
>Tam/WB2TT

Richard is not being forthright with you. Yuri's article used
one of those stylistic abominations for quoting text, which you
missed (no small wonder, because it is an easy abomination to
miss). The "quoted text" was enclosed in >> ... << like this:

>> this kind of bracket
at the beginning and
this at the end. <<

Which is an absolutely ridiculous way to quote text on Usenet...

The appropriate way to quote text from a non-Usenet article
source, is with an indented paragraph, surrounded by double
quotes:

"This is the way to quote text from a source
other than the Usenet article to which one
is responding."

I happen to like reducing both margins by equal amounts, but
only the left margin indent is actually necessary. The whole
point is to *make* *it* *obvious*, so whatever margin spacing
makes that so, is right. And that is exactly *not* what the
article referenced managed to do with that particular style
abomination.

>"Richard Clark" <kb7qhc@attbi.com> wrote in message
>news:uvh68vg8dnpv2q9qcmt3nm2biome6m0gvc@4ax.com...
>> On Thu, 27 Mar 2003 13:35:17 -0500, "Tarmo Tammaru"
>> <t-tammaru@home.com> wrote:
>>
>> >You have higher and lower mixed up.
>> >
>> >Tam/WB2TT
>>
>> Hi Tam,
>>

>> Whom do you mean by "you?" (re-read the post before answering)
>>
>> 73's
>> Richard Clark, KB7QHC
>
>

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

6318. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 01:03:10 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b606v0$298hu$1@hades.csu.net>
Source record: 121857
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Michael A. Terrell wrote:
> Lizard Blizzard wrote:
>
>>In the army I trained for radar repair at Ft Monmouth, right down the
>>street from Long Branch, N.J.

> They trained you to work on RADAR? They pulled me from the Weather
> Vision section at Fort Rucker and sent me out to fix RADAR equipment
> with no training. Of course they didn't train me to work on the CATV,
> video, or microwave CARS equipment either. A draft notice, a MOS test,
> and I was a broadcast engineer.

Well, it was like this. They trained hundreds of search radar repair techs, and then let them loose to do their time, knowing full well that there were only 20 or so Nike Herc search radars in the whole world. So I worked on radars for almost a year at Snelling air defense site in Minneapolis, then I got shipped to Germany where I never did see another radar. That's the typical military intelligence oxymoron: I get trained for radar then get shipped to some place where my talents were unused, and you get shipped to a place with radar but with no training. Furrfu!

--
----------------(from OED Mini-Dictionary)----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural where there is no possessive sense, as in ~tea's are served here~; (ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone); but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

6319. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 01:07:46 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87n0jgwb6l.fld@barrow.com>
Source record: 121858

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
>> 1. It is also nice when it is possible to cool the transmission line so
>> as to make Ta smaller. 73 Mac N8TT
>>
>============================
>
>Why then are there no deep-space radio receiving stations at the N.Pole.
>It's got to be worth at least another vital 0.01 of an S-point.

It could be because the last airplane to land at the North Pole,
sank into the ice and was lost... just as would be an antenna
structure large enough for deep space radio reception.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

6320. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 01:16:40 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <5pNga.212678$VD2.74718@fe03.atl2.webusenet.com>
Source record: 121860

Bill, W7TI <jamspam@upyours.now> wrote in message
news:Xns934B62D7622FBpookster@216.168.3.50...
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in news:b5vcndqsl1
> @titan.btinternet.com:
>
> > If anybody has an SWR problem the first thing to try is another feedline
> > length - more correct than the last one.
> >
>
> --
>
> Heresy.
>
> --
> Bill, W7TI

AMEN!

If your grounding is sufficient, your dipole is clear of obstacles, your
feedline length doesn't matter.
If it does, there is something else wrong beside a "certain" feed length.

This myth was apparently born on the CB band and will never
die---unfortunately. All things
correctly installed, it takes whatever length it takes to get from antenna
to rig. Period.

Jerry
K4KWH

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.435 / Virus Database: 244 - Release Date: 1/4/03

6321. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 01:18:02 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b607sa$d67$1@titan.btinternet.com>
Source record: 121859

Ralph sez -
> I always find having a few feet extra always helps
> incase I have to move the rig.
==========

Yes Ralph, excellent advice, it's a very worth-while few-pennies form of insurance.

As few of my antennas have ever stayed in situ longer than a few weeks I had a selection of hanks of feedline piled up and rotting away in a roof-leaking rickerty-timber garden shed, each hank labelled with its length. Recently I engaged a contractor to clear up the whole garden, including bushes and weeds, ground radials, the shed and its contents. All disappeared overnight.

I now feel rejuvinated like I've had the first refreshing clean hot bath in years and I've even started to shave more often.

We musn't allow amateur radio to rule our lives. Time for thought should be allocated to Messrs B and B's intentions to solve the problem of the misery (western brought about) of the world's oil-field populations using B-52 and guided-missile genocide.

I've now started smoking again - already up to 20 a day. But as it takes 15 years to take effect what have I to worry about?

;o) ;o) ;o)

Reg, G4FGQ

6322. atas-120 on Ft-897,100D

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 01:45:37 UTC
From: Bill East <beast@pcs.mb.ca>
Message-ID: <XNNga.3611$qn.429825@localhost>
Source record: 121861

What are this groups thoughts on using the screwdriver ATAS-120 on VHF/UHF
> bands . The system says it does cover these bands but some folks actually
> use a separate VHF/UHF dual bander .The performance isn`t great on
vhf/uhf
> with the atas-120. For city use, getting into repeaters I think the
antenna
> can`t be any worse than a 1/4 wave on vhf/uhf.
> I don`t want to place another antenna on the truck anyway so was hoping
the
> atas-120 is the answer.
> Can I use the ATAS -120 for these 2 bands and expect so-so performance.
Is
> a duplexer like a diamond MX-62M or similar to use on the radio
> connected to a atas-120 basically the way to go? Does the duplexer pass
> the control voltage for the screwdriver motor?
> thanks,
> bill

6323. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 02:19:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b60bfb$ho2$1@titan.btinternet.com>
Source record: 121862

> Why then are there no deep-space radio receiving stations at the N.Pole.
> It's got to be worth at least another vital 0.01 of an S-point.
>
> It could be because the last airplane to land at the North Pole,
> sank into the ice and was lost... just as would be an antenna
> structure large enough for deep space radio reception.

==========

Dear Floyd,

Indeed, for what better reason. Down here in a temperate climate we are inclined to forget there's no solid land around the North Pole. Must enquire again in Antarctica.

I took a trip round your website. Your informative pictures appeared on my screen with excellent clarity. Considerably better than most.

Thanks very much for educating us at a latitude of about 52 degrees (Birmingham, England) about what goes on in the relatively cold northern regions. You must enjoy the peace, perhaps healthy tranquility, relative to the ideotic nonsense which goes on down here.

Glad to have met up with you Floyd. This small Earth gets even smaller every day.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
Sorry no pictures. Just a story.
==========

6324. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 02:45:57 UTC
From: richardharrison@webtv.net
Message-ID: <11680-3E83B765-320@storefull-2316.public.lawson.webtv.net>
Source record: 121863

Roy Lewallen wrote:
"The idea that the field from a reversed current beyond a half wavelength "works against" the current closer in is an example of the hazard."

Roy is correct. An antenna catalog will show the casual observer that a 5/8-wave vertical, not a 1/2-wave vertical, produces nearly maximum omni gain along the horizontal plane.

There is more going on than the simple battle between out of phase signals from a wire or tower.

I am sorry to have added to the confusion.

Best regards, Richard Harrison, KB5WZI

6325. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 03:32:00 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87r88supxr.fld@barrow.com>
Source record: 121864

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
>>
>> It could be because the last airplane to land at the North Pole,
>> sank into the ice and was lost... just as would be an antenna
>> structure large enough for deep space radio reception.
>
>==========
>
>Dear Floyd,
>
>Indeed, for what better reason. Down here in a temperate climate we are
>inclined to forget there's no solid land around the North Pole. Must
>enquire again in Antarctica.

Hey, that damned place is too cold!

>I took a trip round your website. Your informative pictures appeared on my
>screen with excellent clarity. Considerably better than most.
>
>Thanks very much for educating us at a latitude of about 52 degrees
>(Birmingham, England) about what goes on in the relatively cold northern
>regions. You must enjoy the peace, perhaps healthy tranquility, relative to
>the ideotic nonsense which goes on down here.

Ahhh, this is an *exciting* place to live. Incidentally, the
spring whaling season is fast approaching, and today I noticed
several of those umiaq skin boats outside with new skins
attached drying in the "warmth" of the mid day sun. (The high
today was -24C and the low last night was -33C, but trust me,
that sun *is* warm!)

>Glad to have met up with you Floyd. This small Earth gets even smaller every
>day.

Thanks for the pleasant response.

BTW, I wasn't kidding about that airplane sinking either. A
couple of yo-yo's (well, at least one of them is a yo-yo, which
I know because I worked with him for 25 years or so) flew from
here in Barrow over to Spitsbergen Island (Norway), and on the
way back they managed to sink an absolutely gorgeous Antonov
AN-2, and old Russian made bi-wing fighter plane. Here's a
recounting of what happened:

<http://www.dickrutan.com/page7a.html>

Disgusting.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

6326. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 03:36:44 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E83C388.E15D094@earthlink.net>
Source record: 121865
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
>
> Michael A. Terrell wrote:
> > Lizard Blizzard wrote:
> >
> >>In the army I trained for radar repair at Ft Monmouth, right down the
> >>street from Long Branch, N.J.
>
> > They trained you to work on RADAR? They pulled me from the Weather
> > Vision section at Fort Rucker and sent me out to fix RADAR equipment
> > with no training. Of course they didn't train me to work on the CATV,
> > video, or microwave CARS equipment either. A draft notice, a MOS test,
> > and I was a broadcast engineer.
>
> Well, it was like this. They trained hundreds of search radar repair
> techs, and then let them loose to do their time, knowing full well that
> there were only 20 or so Nike Herc search radars in the whole world. So
> I worked on radars for almost a year at Snelling air defense site in
> Minneapolis, then I got shipped to Germany where I never did see another
> radar. That's the typical military intelligence oxymoron: I get trained
> for radar then get shipped to some place where my talents were unused,
> and you get shipped to a place with radar but with no training. Furrfu!

Maybe they didn't think very many guys would finish the course? One
of my buddies worked on the early radars and kept bragging about how
good he was at troubleshooting. He came dragging in after 9:00 one night
and said he'd spent the whole day working on dogs. I asked him to get
the schematics and give me the symptoms for the first unit, and then
asked a couple questions and told him which part was bad. In 25 minutes
I diagnosed every problem he had spent 12 hours working on and he was
pissed. He demanded to know where I learned RADAR. I laughed and told
him that RADAR was just a stripped down TV system, and a lot easier to
fix. I know I should have rubbed it in, but you get tired of some of
the guys BS after six months or so. Then I taught him some logical
troubleshooting, and he was able to find problems a lot faster.

> --
My first ay of duty at FT. Greely, AK. the station manager asked when
I graduated from Ft. Monmoth. When I told him I had been awarded my MOS
as a civilian acquired skill he grunted and told me "No civilian knows a
damn thing about electronics!" It was all I could do to keep from
laughing in his face. The TV sataion could barely get on the air and I
was told not to do anything to the equipment, but being me, I

justcouldn't ignore the challange of a piece of defective equipment. A month later I had repaired everything, and the only problem we had was film breaking, or a studio light vblowing during the live newscast.

I spent my whole time in the service working on electronics, but the only training I got was how to field strip and clean the M-16 rifle while laying in wet sawdust. Can you believe that they drafted me, gave me no training, gave me a job where you worked 40 hours in two days, then they complained that I wasn't "GI". Geeze! "GI" was enlisted, but I was drafted so I was classed "US". As Bugs Bunny would say, "What a bunch of marons!"

I worked at a radio and TV station as a broadcast engineer, did CATV work, including the installation of the first emergency alert system that took control of 17 CATV systems around the base at the flip of a switch so the base could alert people to a callup, disaster, or a war. It was so primative that we had to use dedicated telephone pairs to switch custom relays built by Winchester Electronics for the project. Of course, the civilian CATV company that served the day rooms objected, but they were reminded of the contract with the Army that they could over ride local programing in a declared emergency. Of course, I got one of those bright red flip up switch covers and used a lead seal so no one could play with it.

The TV stations was a real trip. B&W, mostly tube, and a few RTL ICs in the Grass Valley dual Sync generator system. No video tape, just 16mm film and 35mm slides. Everything was depot level maintaince, but I fixed it anyway.

--

Michael A. Terrell
Central Florida

6327. Re: 29 uH Air Wound Coil -- 12 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 03:40:22 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v87h0nshhp04c0@corp.supernews.com>
Source record: 121866
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

There must be a better place for this. ....must be the third time for
this item Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"ga_boneyard" <ga_boneyard@hotmail.com> wrote in message
news:gKMga.17812$ns6.846770@news2.east.cox.net...
> Please see:
>
>
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015698
719
>
> Thanks for looking!
>
>
> Larry
> KQ4BY
>
>

6328. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 03:53:56 UTC
From: Ian <cls119@remove.spam.lycos.co.uk>
Message-ID: <IHPga.4037$ls4.1158447@newsfep2-win.server.ntli.net>
Source record: 121732

hello,

If it is "often asked" then it must have had replies, so you must have an idea of the answer. It seems pointless asking something you know the answer to.

"Siddhartha" <jrm7287@rochester.rr.com> wrote in message news:yvFga.3681$4v1.2780@twister.nyroc.rr.com...
> I have not posted on this antenna group before, nor have I spent an
> appreciable time reading the posts. Having said that I will submit an
often
> asked question, "What is the correct feedling length for a multi-band
dipole
> antenna". Do spare me the details of the electrical 1/2 wavelength
> intervals, etc. Regards, Jim.
>
>

6329. Military Ribbon Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 03:54:10 UTC
From: efuchs03@hotmail.com
Message-ID: <bf1abc14.0303271954.2e03083c@posting.google.com>
Source record: 121867

I have a ribbon antenna for the prc-126/128. I am looking for a connector or adapter to mate this antenna to a standard bnc. I am also wondering about grounding for the transceiver (it's originally designed for a ht) and impedance matching. I've tried finding a matching nut/washer combination, but cannot seem to match the military threading. It is a nice looking antenna and I have to admit that I like the style, so I don't want to build it into a pvc contraption. If anyone has any experience with using these antennas I would appreciate the help.

6330. Re: VE3ERP's Hamcalc on the web.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 04:01:09 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v87i7mm70br99f@corp.supernews.com>
Source record: 121868

What does "Hancalc" do? The CQ site seems not to provide an answer.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"Eskay" <sieb_kNOS@PAMyahoo.ca> wrote in message
news:3E81B4D5.5050605@PAMyahoo.ca...
> George Murphy VE3ERP has put his Hamcalc program on the web.
> It is available at the CQ magazine website.
> www.cq-amateur-radio.com
> 73 de VE3JUA.
>

6331. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 04:15:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E83CC75.6080001@ieee.org>
Source record: 121719

Jerry Oxendine wrote:
> If your grounding is sufficient, your dipole is clear of obstacles, your
> feedline length doesn't matter.

If I didn't vary my feedline length, my IC-756pro wouldn't load.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6332. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 04:20:28 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <v87jc6nrdflb80@corp.supernews.com>
Source record: 121720

Dear Bill: Well said.
A sub-theme is how much better the NFs are of today's active devices
than the very expensive, almost hand made, low noise vacuum tubes of
yore. In the span over which it has become easy to attain small NFs,
man-made noise has increased dramatically.
As you and others have shown, the rules for calculating noise have
no reason to change because of changes in the technology or changes in
the environment. None of the techniques for enhancing SNR have changed.
Just the numbers (sizes) have changed. Volume 18 of the MIT Radiation
series plus little else is all one needs. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
Office: JCM@McLMcL.Com
"William E. Sabin" <sabinw@mwci-news> wrote in message
news:3E831C8C.20103@mwci-news...
> J. McLaughlin wrote:
> > In radio-astronomy, Ts is often very small and Ta can approach 300.
One
> > wants to measure changes in Ts. Thus it is important to keep G
close to
> > 1. It is also nice when it is possible to cool the transmission
line so
> > as to make Ta smaller. 73 Mac N8TT
> >
>
> A cryogenic FET amplifier at the antenna dish
> helps tremendously.
>
> Bill W0IYH
>

6333. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 04:23:44 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303272023.6394408@posting.google.com>
Source record: 121721

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<27158-3E836F41-295@storefull-2314.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "My point was that radiation would increase, if one placed a phase
> change in the center, one would get a collinear gain."
>
> That`s true in an antenna elemewnt exceeding 1/2-wavelength in the
> direction perpendicular to the element under certain conditions.

It will also be collinear in form ie two in phase wave forms where the
peak current points are separated. Do you disagree with that or not?
Lets not go around in circles.
>
> A generator has out-of-phase terminals. In a center-fed 1/2-wave dipole,
> current flows out of one side of the dipole and into the generator.
> Current flows out of the generator and into the other side of the
> dipole. This in and out current places both halves of the dipole in
> phase at its feedpoint.

And your point is what.....
>
> This current in a center-fed dipole is in-phase in both halves of the
> dipole until the total length of the dipole exceeds a full wavelength.

And your point is what

> When an antenna element exceeds 1/2-wavelength, current reverses
> direction at the 1/2-wave point of current travel. Reversed current
> begins to subtract from radiation perpendicular to the wire.
And again your point is what ?

>
> Collinear arrays often use phase reversal circuits (inverters) at
> 1/2-wave distances from the drivepoint to reverse the natural phase
> reversal.

'Often'!!!!! O. K.

This places antenna segments back in-phase on both sides of
> the inverter. The inverter often takes the form of a short-circuit
> 1/4-wave stub.

And your point is what? what is it you are trying to point to as
correct or incorrect. This is like saying it is Columbus Day tomorrow
we all know that.

>
> Back to the subject of gain. The full-wave center-fed dipole has gain
> versus a 1/2-wave dipole.

So you are agreeing with me. If the IR anjtenna had a static element
it would be
a wavelength long on 10 M now we are getting some where.

Neither dipole requires a phase inverter to
> keep current flowing in the same direction throughout its length.

But I have a phase reversal at the center with the addition of
radiation
from the oscillator, is this harmfull, regressive or what? What is
your
opinion? Have you compared useing a program or by direct experiment
to come up with a db value difference ?

> A 1/2-wave, center-fed dipole becomes a full-wave at 2X its 1/2-wave

Agreed.. yes

> frequency. But, suppose I wanted to use the antenna at 4X its 1/2-wave
> frequency. At the highest frequency, part of the antenna`s length would
> work against me at the highest frequency in the direction perpendicular
> to the wire.

Well you would get a multilobe pattern if you used it for say 50
meters but why would you want to do that? It is out of the realms of
discussion
for what we are talking about.I am more interested in using
frequencies that go the other way so that the figure 8 radiation
patern can be maintained
>
> I could install parallel-resonant circuits, at the highest frequency, in
> series with the wire at the 1/2-wave distances from the drivepoint, to
> automatically switch-off current to the ends of the antenna to avoid the
> reversed current flow. These are called traps.

Yes you could but would this still provide for radiation over the
total physical length regardless of frequency used ? The word "trap"
in the dictionary is very specific

>
> I don`t like mixing traps and inverters in the same posting, but Art
> mentioned "multiband antennas that did not use its (sic) physical length
> on all frequencies".

Yes that is true, examples are tribanders and the IR antenna......

Art also said that "if one placed a phase change in
> the center one would obtain a collinear gain".

Yes I said that and stand by it because of a couple of things

1. it retains radiation per unit length of the normal dipole

2. At the phase change point it removes the low radiation portions per unit length of each pattern at the center in a similar way a hat would do at the other end and replaces these two subtracted parts with the higher efficiency per unit length with the loop antenna which also operates as an oscillator.
>
> That depends on the "center" of what?

At the center of the arbitary length dipole, where do you think it should be?

>
> Art has mixed apples and oranges and the fruit salad is tasteless.

Come on Richard you should not drink to much wine before you eat your desert,

do you have modelling capabilities ? I suspect you do not.
>
> Best regards, Richard Harrison, KB5WZI

Richard your posting provides a lot of well known facts but what is the thrust of your posting. What specifically above proves that what I have stated is incorrect? Most of it is not even remotely connected to a point that you may or may not agree with. Maybe you should pick a specific point where you feel I am incorrect and with the data that makes you think that way which will remove some mixups.

Best Regards as always
Art

6334. Re: Loop Antenna questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 04:26:57 UTC
From: "Marc H.Popek" <LVMarc@worldnet.att.net>
Message-ID: <laQga.28467$ja4.1944372@bgtnsc05-news.ops.worldnet.att.net>
Source record: 121722
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

the three vector are:

the coupled e field, the b field due to I- and the b field due to I+. right?

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:6iiu7vo0pfa14qtv0t5lvlstechfd42dhl@4ax.com...
> On 24 Mar 2003 10:04:16 -0800, k7itm@aol.com (Tom Bruhns) wrote:
>
> >A perfectly balanced antenna connected to a perfectly balanced
> >amplifier/receiver will completely reject a signal which is also
> >perfectly balanced.
>
> ???
>
> Hi Tom,
>
> In what sense is a signal balanced? It is composed of three
> orthogonal vectors to which at least one those vectors ground must
> present some disturbance to the notion of symmetry.
>
> 73's
> Richard Clark, KB7QHC

6335. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 04:31:07 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303272031.3a85eb6d@posting.google.com>
Source record: 121723

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<cv278v4rj7bjsmn47c196ie5ceeftqoq8t@4ax.com>...
> On 27 Mar 2003 15:23:59 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >
> >Let's just take a single point to debate, for instance, I say that
> >when you place a parallel circuit containing a variable capacitor, at
> >the center of a dipole the current pattern will change from a single
> >sinosoidal pattern to one that can equates to a collinear type
> >pattern.
>
> Hi Art,
>
> You obviously didn't read Roy's critique of Richard's dipole current
> distribution posting.
>
> Required reading before you revisit this above.
>
> 73's
This posting is before I get to Roys posting, not sure how you did
that
or why I should read things in the order that you want me to. On top
of that you have said nothing for me to revisit or your computor
transmittion went bad.
> Richard Clark, KB7QHC
Art

6336. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 04:44:48 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303272044.7815d3a4@posting.google.com>
Source record: 121724

Roy Lewallen <w7el@eznec.com> wrote in message news:<v8740f5il59d3a@corp.supernews.com>...
> I'm not sure what it has to do with my earlier posting, but it's a fact
> that nothing you do at the center of a dipole will change its current
> distribution. The only effect is on the feedpoint impedance. This is
> easily confirmed by either modeling or measurement.
Roy
I havent read your earlier posting yet but Richard seem s to think
this one is directed to me

"nothing that you do at the center........." hmm must be a catch or
something here. Current distribution means shape or value of current
flow? No you can't mean that. A capacitor either side of a dipole of a
zepp length gives a double hump in the current curve... no it can't
mean that. Roy what are you trying to say and what type of computor
program are you using. We really have to sort this out so that newbies
are not mislead.
Art

>
> Roy Lewallen, W7EL
>
> Richard Clark wrote:
> > On 27 Mar 2003 15:23:59 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> > wrote:
> >
> >
> >>Let's just take a single point to debate, for instance, I say that
> >>when you place a parallel circuit containing a variable capacitor, at
> >>the center of a dipole the current pattern will change from a single
> >>sinosoidal pattern to one that can equates to a collinear type
> >>pattern.
> >
> >
> > Hi Art,
> >
> > You obviously didn't read Roy's critique of Richard's dipole current
> > distribution posting.
> >
> > Required reading before you revisit this above.
> >
> > 73's
> > Richard Clark, KB7QHC

6337. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 04:58:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v87lj5kmp1mhda@corp.supernews.com>
Source record: 121725

Given a distance x from the center of the dipole, the current in the wire can be described as a function of x. That is, I = f(x). The shape of this curve is known as the current distribution. I see that the index of my 1997 ARRL Antenna Book lists six references to "Currents, Distribution on antennas". I suggest you (or the newbies you refer to) take a look at some of these if the concept isn't clear.

The current distribution (including phase) uniquely determines a given antenna's radiation pattern. So when I say that nothing you do at the center of a dipole can affect the current distribution, it follows that nothing you do there can affect the radiation pattern.

My statement about modeling was general. Any modeling method, including but not limited to computer programs or mathematical models, which accurately predict current distribution, will verify what I said. As you know, I personally use EZNEC whenever possible. Since I develop and sell that program for a living, I'm most familiar with it.

Roy Lewallen, W7EL

Art Unwin KB9MZ wrote:
> Roy Lewallen <w7el@eznec.com> wrote in message
news:<v8740f5il59d3a@corp.supernews.com>...
>
>>I'm not sure what it has to do with my earlier posting, but it's a fact
>>that nothing you do at the center of a dipole will change its current
>>distribution. The only effect is on the feedpoint impedance. This is
>>easily confirmed by either modeling or measurement.
>
> Roy
> I havent read your earlier posting yet but Richard seem s to think
> this one is directed to me
>
> "nothing that you do at the center........." hmm must be a catch or
> something here. Current distribution means shape or value of current
> flow? No you can't mean that. A capacitor either side of a dipole of a
> zepp length gives a double hump in the current curve... no it can't
> mean that. Roy what are you trying to say and what type of computor
> program are you using. We really have to sort this out so that newbies
> are not mislead.
> Art

6338. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 05:01:16 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303272101.53a9590f@posting.google.com>
Source record: 121726

Richard Clark <kb7qhc@attbi.com> wrote in message
news:<cem68vg3b91ghd05l42h426vlobaon9du3@4ax.com>...
> On 25 Mar 2003 20:18:59 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >You are now getting a bit silly with your comments.
>
> On 27 Mar 2003 11:00:51 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >Ofcourse it is so much easier to catcall instead of paying full
> >attention
>
> Hi Art,
>
> You didn't fall very far from the tree yourself.
>
> 73's
> Richard Clark, KB7QHC
What is it this time Richard ? I see nothing above other than what I
would expect for a troll.Have you gone thru a divorce or something of
late ?
No it can't be that, I suspect you have never been married at least
for any length of time. By the way what State are you registered in as
a engineer?
Art

6339. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 06:19:49 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E83E985.9FA9F5AE@cwis.net>
Source record: 121727

Art Unwin KB9MZ wrote:
>
> Richard Clark <kb7qhc@attbi.com> wrote in message
news:<cem68vg3b91ghd05l42h426vlobaon9du3@4ax.com>...
> > On 25 Mar 2003 20:18:59 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> > wrote:
> >
> > >You are now getting a bit silly with your comments.
> >
> > On 27 Mar 2003 11:00:51 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
> > wrote:
> >
> > >Ofcourse it is so much easier to catcall instead of paying full
> > >attention
> >
> > Hi Art,
> >
> > You didn't fall very far from the tree yourself.
> >
> > 73's
> > Richard Clark, KB7QHC
> What is it this time Richard ? I see nothing above other than what I
> would expect for a troll.Have you gone thru a divorce or something of
> late ?
> No it can't be that, I suspect you have never been married at least
> for any length of time. By the way what State are you registered in as
> a engineer?
> Art

Art,
The above post is a good example of what he is
talking about.
'Doc

6340. Re: VE3ERP's Hamcalc on the web.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 07:02:40 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0303272302.3a13e198@posting.google.com>
Source record: 121728

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:<v87i7mm70br99f@corp.supernews.com>...
> What does "Hancalc" do? The CQ site seems not to provide an answer.
> 73 Mac N8TT
Hi,
it is a valuable set of apps for various (not only ham) calculations.
I haven't installed the latest version yet, but I use the previous one
quite often.

73 Ivan OK1SIP

6341. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 07:16:24 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E83F6C8.7090300@mwci-news>
Source record: 121729

J. McLaughlin wrote:

> Volume 18 of the MIT Radiation
> series plus little else is all one needs.

Chapters 12 (E. Schremp) and 13 (R. Twiss and Y.
Beers) are still good references a half-century later.

Bill W0IYH

6342. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 08:13:41 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303280013.3286d533@posting.google.com>
Source record: 121730

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<11680-3E83B765-320@storefull-2316.public.lawson.webtv.net>...
> Roy Lewallen wrote:
> "The idea that the field from a reversed current beyond a half
> wavelength "works against" the current closer in is an example of the
> hazard."
>
> Roy is correct. An antenna catalog will show the casual observer that a
> 5/8-wave vertical, not a 1/2-wave vertical, produces nearly maximum omni
> gain along the horizontal plane.
>
> There is more going on than the simple battle between out of phase
> signals from a wire or tower.
>
> I am sorry to have added to the confusion.
>
> Best regards, Richard Harrison, KB5WZI

But even still, in Art's case, no phasing change should be required.
IE: a 40 m dipole fed on 17m as an EDZ. So why a loop, cap, or other
devices are needed, I don't know. The elements are already in phase.
Maybe not at the optimum spacing, but they are in phase none the less.
When I modeled the dipole/loop combo, I did many versions. And I still
have all the files. I included the cap in loop section. In fact, I
saved a file for each band 20-17-15-12-10 where I adjusted the cap to
tune to resonance.
As an example, for the 20m dipole with the small loop at the feed, a
4.9 pf cap was required to tune for 10m. I also made versions where
the dipole and loop were fed as seperate antenna elements. In this
case, yes, you can alter the pattern of the antenna. No big surprise.
But feeding the antenna by the loop only, ala delta match style, no,
you can not alter the pattern of the antenna by changing the cap value
or any other parameter of this "matching device".
As far as feeding a single dipole for all bands, his antenna will
work. No problem there. But unless he feeds the loop as a separate
element, and keeps it totally separate from the dipole, he will not be
able to steer the pattern. Does anyone here disagree with this
modeling and how it would pertain to real life? It seems accurate to
me. Any "naysayers" speak now or forever hold your IR antenna... MK

6343. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 09:07:03 UTC
From: richardharrison@webtv.net
Message-ID: <15593-3E8410B7-1@storefull-2312.public.lawson.webtv.net>
Source record: 121731

Roy, W7EL wrote:
"Incidentally, the current reversal takes place 1/2 wavelength from the end of the antenna, not 1/2 wavelength from the feed point."

Well, you have to be careful not to carry your simplification too far, Wave velocity isn`t quite as fast on that antenna wire. It would be a shame not to take that into consideration. What`s more, the voltage pile-up at the open end of the wire enhances the capacitive effect. Taken together these have a serious effect on antenna length. It might even be shortened by 5%. If fat wire is used, it might be shorter yet. These omissions result from a paucity of specificity in Roy`s criticism.

Now, taking into consideration velocity of a wave traveling along some antenna wire well in excess of 1/2-wavelength, and said wire is directly connected to a generator, by the time the wave travels from the generator to the 1/2-wavelength point from the generator, its phase will have stayed the same, but back at the generator the phase of the wave will have changed by 180-degrees. (V=Fx lambda)

In other words, if the wave had started its cycle at zero volts and started rising, by the time that start of the cycle at zero volts hit the half-wave point on the antenna wire, the wave has already crested and fallen back to zero at the generator.

At the 1/2-wave point on the antenna wire the voltage is just starting to rise while at the generator it is just starting to fall below zero volts. Current is in phase vith volts in the radiation resistance of an antenna. So, current is mimicking the volts.

Rising current at the 1/2-wave point on the antenna wire while the current is falling at the feed point (generator) as characterized above, means the voltage at the generator starts to go negative at the instant that the voltage at the point 1/2-wavelength away starts to go positive.

Obviously, the point 1/2-wavelength down the antenna wire from the generator is 180-degrees out of phase with the generator. The end of the wire, wherever it is in this example, has nothing to do with the phase delay due to transit time of the wave down the wire. As I said, the current reversal occurs 1/2-wavelength from the feedpoint in my example.

I`ll suppose Roy was thinking of standing waves. It makes no difference in my posted examples because I used 1/2-wave and full-wave antenna examples.

It is 12 inches from one end of a ruler to the other end, no matter which way you measure it.

Best regards, Richard Harrison, KB5WZI

6344. Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 09:30:09 UTC
From: Rob <rob@sysadminus.com>
Message-ID: <BCUga.9690$RS6.578035@twister.southeast.rr.com>
Source record: 121733

A few years ago I saw a antenna that was basically a dipole, a length of ladder line, and a balun. It was supposed to be an all band antenna. Anyone know how good these antenna's are and where I can get building instructions or kits?

I am looking for a decent HF antenna I can hide on my property and I was hoping I could install this along my roof.

Bob

6345. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 10:00:05 UTC
From: richardharrison@webtv.net
Message-ID: <5385-3E841D25-1@storefull-2311.public.lawson.webtv.net>
Source record: 121734

Art, KB9MZ wrote:
"It will be collinear in form ie two in phase wave forms where the peak current points are separated."

Collinear may be the wrong term. Collinear means on the same line. It`s hard for me to accept that paths described as a loop and a straight line are in alinement.

Art repeatedly asked what my point was. I was trying to define and explain the function of a collinear antenna, to see how Art`s antenna fit. If it does not fit the description I gave, why should it be called a collinear antenna?

Art may initiate a thread, just as anyone may. The initiator does not own the thread or control its meandering. We enjoy freedom of speech here.

Best regards, Richard Harrison, KB5WZI

6346. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 10:36:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v889djimgbvoca@corp.supernews.com>
Source record: 121735

It seems that my point was missed, something that happens all too frequently. It's a constant reminder of my poor communication skills. I apologize for my inadequacy, but I keep trying, and hope that at least some of what I try to say gets through.

Some level of simplification is always necessary, and nearly always desirable. It would be idiotic to invoke quantum physics and relativity, and maybe not even necessary to consider air friction, if all we want to know is how long it takes for a rock to hit the ground after being dropped off a cliff. The point I was trying to make is not that simplification is a bad thing. It's that we always have to be aware of the limitations of our simplifications. While Newtonian physics is fine and appropriate for the rock problem, it isn't when timing interplanetary spacecraft events to the nanosecond. When the simplification leads to an answer that's wrong (outside the accuracy we assume) or misleading, then the simplification isn't a good one.

When I speak of phase of current along a wire, here's what I mean. First of all, I'm referring to steady state, not some transient condition. At the exact instant that the current at the reference point (say, the middle of the antenna) is at the zero point in its cycle, freeze time. Then look at each point along the wire and see where the current is in its cycle. That's what I mean by the phase of the current. It doesn't require any knowledge of power, voltage, or radiation resistance. I suppose that considering the steady state constitutes "thinking of standing waves". Nearly any antenna analysis we deal with for communications falls into this category, so I thought it was usually understood without stating explicitly. But one always has to be aware of the knowledge level of the audience when trying to communicate, and I'm sometimes lacking at this.

The 180 degree phase shift and the lengths I mentioned were both simplifications, and both do indeed depend on such things as wire diameter. But the phase does change the most, and the most rapidly, at a point roughly 1/2 wavelength from the end, not 1/2 wavelength from the center, of a 5/4 wavelength dipole. An example I put together quickly is a modification of EZNEC's Dipole1 model, with more segments and greater length, for a total length of exactly 1.25 wavelength (1.25 meters at 300 MHz), and a diameter of 1 mm. On this antenna, the current magnitude drops to its minimum value about 0.14 wavelength from the center (about 0.48 wavelength from the end). The current phase changes the most rapidly in this region. Over a 0.1 wavelength region centered about the point of minimum current magnitude (about 0.48 wavelength from the end), the phase of the current changes 127 degrees. Over a 0.1 wavelength region centered about a point about 0.48 wavelength from the center, the

phase changes only about 2 degrees.

The 127 degree change (over 0.1 wavelength) about 0.48 wavelength from the end is considerably less than the 180 degrees which I stated earlier, a difference large enough to draw erroneous conclusions under some circumstances. I apologize if anyone was misled by this. The exact amount of change will depend on the wire diameter and probably the total length, and the abruptness will vary also. If good quantitative results are required, they're easily obtained with any of the readily available modeling programs.

Roy Lewallen, W7EL

Richard Harrison wrote:
> Roy, W7EL wrote:
> "Incidentally, the current reversal takes place 1/2 wavelength from the
> end of the antenna, not 1/2 wavelength from the feed point."
>
> Well, you have to be careful not to carry your simplification too far,
> Wave velocity isn`t quite as fast on that antenna wire. It would be a
> shame not to take that into consideration. What`s more, the voltage
> pile-up at the open end of the wire enhances the capacitive effect.
> Taken together these have a serious effect on antenna length. It might
> even be shortened by 5%. If fat wire is used, it might be shorter yet.
> These omissions result from a paucity of specificity in Roy`s criticism.
>
> Now, taking into consideration velocity of a wave traveling along some
> antenna wire well in excess of 1/2-wavelength, and said wire is directly
> connected to a generator, by the time the wave travels from the
> generator to the 1/2-wavelength point from the generator, its phase will
> have stayed the same, but back at the generator the phase of the wave
> will have changed by 180-degrees. (V=Fx lambda)
>
> In other words, if the wave had started its cycle at zero volts and
> started rising, by the time that start of the cycle at zero volts hit
> the half-wave point on the antenna wire, the wave has already crested
> and fallen back to zero at the generator.
>
> At the 1/2-wave point on the antenna wire the voltage is just starting
> to rise while at the generator it is just starting to fall below zero
> volts. Current is in phase vith volts in the radiation resistance of an
> antenna. So, current is mimicking the volts.
>
> Rising current at the 1/2-wave point on the antenna wire while the
> current is falling at the feed point (generator) as characterized above,
> means the voltage at the generator starts to go negative at the instant
> that the voltage at the point 1/2-wavelength away starts to go positive.
>
> Obviously, the point 1/2-wavelength down the antenna wire from the
> generator is 180-degrees out of phase with the generator. The end of the
> wire, wherever it is in this example, has nothing to do with the phase

> delay due to transit time of the wave down the wire. As I said, the
> current reversal occurs 1/2-wavelength from the feedpoint in my example.
>
> I`ll suppose Roy was thinking of standing waves. It makes no difference
> in my posted examples because I used 1/2-wave and full-wave antenna
> examples.
>
> It is 12 inches from one end of a ruler to the other end, no matter
> which way you measure it.
>
> Best regards, Richard Harrison, KB5WZI
>

6347. Re: 29 uH Air Wound Coil -- 12 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 11:45:27 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <BPOcncTwE6ROqBmjXTWc2Q@crocker.com>
Source record: 121736
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

a local flea market would be better... of course at most of those you find junk like this for $1 or less in a box of other stuff. must be 12ga gold wire to sell for $14.95!

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message news:v87h0nshhp04c0@corp.supernews.com...
> There must be a better place for this. ....must be the third time for
> this item Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
> Office: JCM@McLMcL.Com
> "ga_boneyard" <ga_boneyard@hotmail.com> wrote in message
> news:gKMga.17812$ns6.846770@news2.east.cox.net...
> > Please see:
> >
> >
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1502&item=3015698
> 719
> >
> > Thanks for looking!
> >
> >
> > Larry
> > KQ4BY
> >
> >
>

6348. Re: Horn antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 12:52:43 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E84450E.8C521A4@gte.net>
Source record: 121737

Chris W wrote:

> I have a question about the Horn Antenna design in the ARRL Antenna Book
> (19th edition). On page 18-43, Fig 67 it shows the path-length
> difference between the center and the edge of a horn antenna. I talks
> about how this will cause side lobs to form. I was wondering if cutting
> a radius at the end of the horn in the H Plane wouldn't eliminate those
> side lobes? I know you can't radius it in both the H and the E plane,
> or could you? If you could I am pretty sure that would be much more
> difficult than just doing it in the H Plane. I was also wondering if
> this same problem exists with a horn for a circular wave guide.
>
> --
> Chris W

Hi Chris,

Do a Google search under W1GHZ. Paul has a wonderful on-line antenna book
that deals in depth with many feed designs- with E/H plane plots.
I think you will find the newer circular aperture feeds to be superior to
rectangular feeds- at least for dish illumination.

Dale W4OP

6349. Re: 2.4 ghz double dipole with ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 12:56:58 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3E84460D.6466EAEB@gte.net>
Source record: 121738

Chris W wrote:

> I am thinking about building a modification of the double dipole EIA
> standard gain reference antenna shown on page 9-34 of the ARRL
> UHF/Microwave Experimenters manual. I want to build it for 2.4 - 2.5
> ghz. And I want to make it a full wavelength dipole instead of half
> wave. So here is what I need to know.
>
> 1) The impedance for the full wavelength dipole is going to be much
> higher than the ï¿½ wavelength. How do I calculate what that impedance
> will be? I know it depends on the diameter of the elements used.
>
> 2) Why do the parallel feed lines from the balun that run to the two
> dipoles continue back down to the ground plane?
>
> 3) I can't seem to find any formula for sizing the split sleeve balun,
> do I just make the diameters such that the impedance is what I want or
> is there some other method for sizing it?
>
> 4) Once I figure out the impedance of the full wave dipole what would be
> a good way to match that impedance with my feeds? Could the split
> sleeve balun be designed to have something other than a 4:1 ratio?
>
> 5) Finaly I was thinking that with a full wave dipole the ground plane
> should probably be bigger than 1 wavelength. I was thinking 1.5 or 2.
> Is there any rull of thumb or formula for something like this?
>
> --
> Chris Woodhouse
> 3147 SW 127th St.
> Oklahoma City, OK 73170
> 405-691-5206
> chrisw@programmer.net
> N35ï¿½ 20.492'
> W97ï¿½ 34.342'

The 1/4 wave feeds on this design act as mechanical supports for the
dipoles- but because they are shorted and grounded at one end, they appear
essentially invisible at the top end, compared with the relatively low feed
Z of the half wave dipoles.. They would, however probably not be invisible
at the impedance levels you will encounter with a full wave dipole. This
would likely call for an entirely new design.

Dale W4OP

6350. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 13:03:13 UTC
From: vhfradiobuff@aol.comspamme
Message-ID: <20030328080313.28094.00000013@mb-ci.aol.com>
Source record: 121739

>If it is "often asked" then it must have had replies, so you must have an
>idea of the answer. It seems pointless asking something you know the answer
>to.

Ah-men!

When will people learn this simple fact?: The correct feedline length is the
shortest possible length. It's that simple. No magical math formula's.
=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
73! de Andy KC2SSB (ex: KF4KHC/HL9HCT)
Beachwood, NJ USA! Grid FM29vw
http://vhfradiobuff.tripod.com
Fight Spam! http://spamcop.net

6351. Re: Military Ribbon Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 13:08:04 UTC
From: fumper@aol.com
Message-ID: <20030328080804.28512.00000055@mb-fv.aol.com>
Source record: 121740

If you find this adapter please let me know also.

Thanx Steve --N0NHA

6352. NEEDED Military portable or any portable antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 13:12:07 UTC
From: fumper@aol.com
Message-ID: <20030328081207.28512.00000056@mb-fv.aol.com>
Source record: 121741

If you have any military portable antennas, Please email me. I am passing them out and setting them up with HF equipment to freinds who have family over seas. They can monitor HF radio broadcasts. I use them myself in the feild also.
Please include price and shipping zip
Thanx Steve -- N0NHA

6353. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 13:17:21 UTC
From: PETER CARVER <ITATNGA@COMCAST.NET>
Message-ID: <HL2cnTjZNcvy1hmjXTWcpw@comcast.com>
Source record: 121742

bob you can find this antenna on e-bay already made with all hardware included.search e bay for antennas or ham radio equip. good luck.

"Rob" <rob@sysadminus.com> wrote in message news:BCUga.9690$RS6.578035@twister.southeast.rr.com...
> A few years ago I saw a antenna that was basically a dipole, a length of
> ladder line, and a balun. It was supposed to be an all band antenna. Anyone
> know how good these antenna's are and where I can get building instructions
> or kits?
>
> I am looking for a decent HF antenna I can hide on my property and I was
> hoping I could install this along my roof.
>
> Bob
>
>

6354. ft-897and atas 120

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 13:22:03 UTC
From: Bill East <beast@pcs.mb.ca>
Message-ID: <Q_Xga.3626$qn.432084@localhost>
Source record: 121743

I`m wondering how well the atas 120 works on VHF and UHF bands. . What method are you using to the atas-120 across all HF/v/uhf bands.
thanks
bill

6355. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 13:41:13 UTC
From: Bob Miller <bxmiller@texas.netNOSPAM>
Message-ID: <k1k88vofoa13pismh6b1o13oa78nauc9b4@4ax.com>
Source record: 121744

On Fri, 28 Mar 2003 09:30:09 GMT, "Rob" <rob@sysadminus.com> wrote:

>A few years ago I saw a antenna that was basically a dipole, a length of
>ladder line, and a balun. It was supposed to be an all band antenna. Anyone
>know how good these antenna's are and where I can get building instructions
>or kits?
>
>I am looking for a decent HF antenna I can hide on my property and I was
>hoping I could install this along my roof.
>
>Bob
>

You'll also need an antenna tuner to make the dipole plus ladder line
idea work. It wouldn't hurt to buy something like the ARRL Antenna
Book to build such a critter. Or contact the Wireman at his web site
and buy one of his dipole kits. But you'll need a tuner for all band
use...

Bob
k5qwg

6356. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 14:53:06 UTC
From: "Bill, W7TI" <jamspam@upyours.now>
Message-ID: <Xns934C460979AE5pookster@216.168.3.50>
Source record: 121745

vhfradiobuff@aol.comspamme (VHFRadioBuff) wrote in
news:20030328080313.28094.00000013@mb-ci.aol.com:

> When will people learn this simple fact?: The correct feedline length
> is the shortest possible length. It's that simple. No magical math
> formula's.
>

Sorry Buff, but that's not true in every case. A mismatched
antenna/feedline has a feed point impedance that varies *greatly* along
its length, and trimming it may make it easier to couple to the
transmitter.

What does NOT happen is changing the SWR by trimming. That ancient
legend needs to disappear.

--
Bill, W7TI

6357. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 14:53:08 UTC
From: richardharrison@webtv.net
Message-ID: <29688-3E8461D4-22@storefull-2313.public.lawson.webtv.net>
Source record: 121749

Roy, W7EL wrote:
"When I speak of phase of current along a wire here`s what I mean. First of all, I`m referring to steady state, not some transient condition."

I`m in phase with that. The 19th edition of the "ARRL Antenna Book" has a "Phase" statement on page 8-3:
"The term phase has the same meaning when used in connection with currents flowing in antenna elements as it does in ordinary circuit work. For example, two currents are in phase when they reach their maximum values, flowing in the same direction, at the same instant. The direction of current flow depends on the way in which power is applied to the element."

My examples, which Roy challenged, were given to describe a collinear antenna. The "Antenna Book" also comments on these on page 8-36:
"In a long wire the direction of current flow reverses in each 1/2 wave section. Consequently, collinear elements cannot simply be connected end to end; there must be some means for making the current flow in the same direction in all elements. When more than two collinear elements are used it is necessary to connect "phasing" stubs between adjacent elements in order to bring the currents in all elements in phase."

These simple ideas, well erxpressed by the "Antenna Book" and quoted above, were exactly what I tried to express and which Roy faulted. Roy quoted my entire posting then said:
"A 5/4 wavelength dipole actually has about 1 dB gain over a full wavelength dipole, broadside to the dipole."

That`s interesting and true, but I never mentioned a 5/4-wave dipole or a 5/8-wave vertical.

Phase of the incident wave and direction of the current flow depend "on the way in which power is applied to the element". They`re not determined by the end conditions of the antenna. For instance, an open-circuit 1/2-wave dipole and a folded 1/2-wave dipole with a short at its ends have exactly the same radiation patterns.

Best regards, Richard Harrison, KB5WZI

6358. Ham ressources links site

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 14:54:05 UTC
From: Radio <f5lcy@online.fr>
Message-ID: <b61nmgluq1@news-reader10.wanadoo.fr>
Source record: 121746

```
Site updated with new links, new ressources
http://f6keh.free.fr/index_r
```

6359. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 15:02:03 UTC
From: Lizard Blizzard <NOSPAM@rsccd.org>
Message-ID: <b61o3t$29kfl$1@hades.csu.net>
Source record: 121747
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Michael A. Terrell wrote:
[snip]

> Maybe they didn't think very many guys would finish the course?

Well, they had a graduation every so many months, so I don't think there was a lack of information in that respect.

>>--
> I was drafted so I was classed "US". As Bugs Bunny would say, "What a
> bunch of marons!"

Maroons?

Hey, it could happen again. The draft, that is. Today young guys don't realize what it was like back then. I stood in line at the processing center, and some sergeant came down the line counting, and stopped and said, "Okay, all you guys, go over there; you're Marines. The rest of you go over there, you're Army." So a guy could get drafted into the Marines, which surprises some.

--
----------------(from OED Mini-Dictionary)----------------
PUNCTUATION - Apostrophe
Incorrect uses: (i) the apostrophe must not be used with a plural where there is no possessive sense, as in ~tea's are served here~; (ii) there is no such word as ~her's, our's, their's, your's~.

Confusions: it's = it is or it has (not 'belonging to it'); correct uses are ~it's here~ (= it is here); ~it's gone~ (= it has gone); but ~the dog wagged its tail~ (no apostrophe).
----------------(For the Apostrophe challenged)----------------
From a fully deputized officer of the Apostrophe Police!

6360. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 15:06:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E8464FB.8090507@ieee.org>
Source record: 121748

Roy Lewallen wrote:
> The current distribution (including phase) uniquely determines a given
> antenna's radiation pattern. So when I say that nothing you do at the
> center of a dipole can affect the current distribution, it follows that
> nothing you do there can affect the radiation pattern.

How about shorting the dipole at the center? :-)
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6361. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 15:15:36 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E846718.8060805@ieee.org>
Source record: 121750

Rob wrote:
> A few years ago I saw a antenna that was basically a dipole, a length of
> ladder line, and a balun. It was supposed to be an all band antenna. Anyone
> know how good these antenna's are and where I can get building instructions
> or kits?

Take a look at my no-tuner all-HF-band dipole on my web page. A good fixed
length feedline for it is 100 feet.
--
73, Cecil, http://www.qsl.net/w5dxp

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6362. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 15:22:29 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E8468B5.4050608@ieee.org>
Source record: 121751

VHFRadioBuff wrote:
>>If it is "often asked" then it must have had replies, so you must have an
>>idea of the answer. It seems pointless asking something you know the answer
>>to.
>
> Ah-men!
>
> When will people learn this simple fact?: The correct feedline length is the
> shortest possible length. It's that simple. No magical math formula's.

But my IC-756pro autotuner won't match my ladder-line-fed dipole
unless I vary the length of the feedline. And I don't have a high
power antenna tuner so no match is possible with my SG-500 amp
unless I choose the proper length of feedline.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6363. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 15:24:26 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E84692A.6040407@ieee.org>
Source record: 121752

Bob Miller wrote:
> You'll also need an antenna tuner to make the dipole plus ladder line
> idea work. It wouldn't hurt to buy something like the ARRL Antenna
> Book to build such a critter. Or contact the Wireman at his web site
> and buy one of his dipole kits. But you'll need a tuner for all band
> use...

I don't need a tuner for all band use. :-) See how on my web page.
--
73, Cecil, http://www.qsl.net/w5dxp

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6364. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 15:32:34 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E846B12.6080605@ieee.org>
Source record: 121753

Bill, W7TI wrote:
> Sorry Buff, but that's not true in every case. A mismatched
> antenna/feedline has a feed point impedance that varies *greatly* along
> its length, and trimming it may make it easier to couple to the
> transmitter.

For instance, a 40m dipole fed with ladder-line used on 75m can
present a very wide range of impedances depending upon the length
of the ladder-line - from about 4 ohms to tens of thousands of ohms.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6365. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 15:59:10 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303280759.477484d2@posting.google.com>
Source record: 121754

"William E. Sabin" <sabinw@mwci-news> wrote in message
news:<3E83F6C8.7090300@mwci-news>...
> J. McLaughlin wrote:
>
> > Volume 18 of the MIT Radiation
> > series plus little else is all one needs.
>
> Chapters 12 (E. Schremp) and 13 (R. Twiss and Y.
> Beers) are still good references a half-century later.
>
> Bill W0IYH

Bill, This series of books to which you refer, I have not come across
them.
Could you provide some aditional details about it i.e. are they all
about antennas as we hams know it, if not what Volumes and author
would I need to
get the library to loan the volumes that do relate to "ham" antennas.
TIA
Art

6366. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 16:37:55 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E8479D6.F4EFF59@attbi.com>
Source record: 121755

Then you are the proud owner of some standing waves!!

Deacon Dave, W1MCE

OC_CAM's Razor wrote:
>
> Jerry Oxendine wrote:
> > If your grounding is sufficient, your dipole is clear of obstacles, your
> > feedline length doesn't matter.
>
> If I didn't vary my feedline length, my IC-756pro wouldn't load.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6367. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 16:51:42 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E847DE1.CB63D652@earthlink.net>
Source record: 121756
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

Lizard Blizzard wrote:
>
> Michael A. Terrell wrote:
> [snip]
>
> > Maybe they didn't think very many guys would finish the course?
>
> Well, they had a graduation every so many months, so I don't think there
> was a lack of information in that respect.
>
> >>--
> > I was drafted so I was classed "US". As Bugs Bunny would say, "What a
> > bunch of marons!"
>
> Maroons?
>
> Hey, it could happen again. The draft, that is. Today young guys don't
> realize what it was like back then. I stood in line at the processing
> center, and some sergeant came down the line counting, and stopped and
> said, "Okay, all you guys, go over there; you're Marines. The rest of
> you go over there, you're Army." So a guy could get drafted into the
> Marines, which surprises some.
>
> --

When I went to register for the draft they wanted to know where I worked and what I did, then they gave me the usual physical. Then they said that I had a hearing problem at some frequencies, bad feet, and that I was almost legally blind but I would be drafted because of my electronics background. Basic was hell because of my feet and legs just wouldn't take the long marches but the drill instructors were shocked by how much I could pick up by myself. I told them I was able to load almost any of the old tube type color TV sets by myself as long as I didn't have to bend over. Have you ever carried a 25" color console up a flight of stairs by yourself? I used to be able to. I could lift and hold a 4'*12' sheet of drywall with one hand and drive the nails in with the other. Today, I can only lift a few pounds, and half of my left hand is numb all the time. Life can be a true challenge at times. :)

--

Michael A. Terrell
Central Florida

6368. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 16:52:14 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E847DBE.2000306@ieee.org>
Source record: 121757

Dave Shrader wrote:
> Then you are the proud owner of some standing waves!!

I am indeed proud of my standing waves. I can't do transmission
line transformation without them. With an SWR of 9:1 on my 450
ohm ladder-line, the transmission line does all the work of
transforming the impedance seen by the transmitter to 50 ohms -
no tuner needed.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6369. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 17:34:04 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303280934.67796114@posting.google.com>
Source record: 121758

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<5385-3E841D25-1@storefull-2311.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "It will be collinear in form ie two in phase wave forms where the peak
> current points are separated."
>
> Collinear may be the wrong term. Collinear means on the same line. It`s
> hard for me to accept that paths described as a loop and a straight line
> are in alinement.
>
> Art repeatedly asked what my point was. I was trying to define and
> explain the function of a collinear antenna, to see how Art`s antenna
> fit. If it does not fit the description I gave, why should it be called
> a collinear antenna?
>
> Art may initiate a thread, just as anyone may. The initiator does not
> own the thread or control its meandering. We enjoy freedom of speech
> here.
>
> Best regards, Richard Harrison, KB5WZI

Ahhhh.

Now I see your problem Richard, allow me to put it another way
so at least the model we are talking about is one and tha same.
I am sure you have seen current curves for the ZEPP antenna
You will see that the sinosoidal curves are in phase and at the ends
of the antenna they start at the zero point. In the case of a ZEPP the
sinosoidal curves are complete but in the center portion the current
curve
goes below the horizontal for a short distance ,down the transmission
line stub
and moves towards the other side sinosoidal curve. As there are two
separate current peaks one can say it is of collinear form.
Now we come to the crunch point as can be seen on Cecil's page where
he was forced to vary the "stub" length so the antenna could be used
for multifrequencies, and his method of changing the 'stub' length was
quite novel.

Now my aproach to the same problem is quite different, I like the
BIDIRECTIONAL FIGURE EIGHT pattern for ALL frequencies of use and
remove all those wastefull side lobes that are created by what goes on
between the two full curves in phase.
My aproach is to use the radiator distance between the two zero
current point at the center in a better way. If you throw away the

stub idea as well as the 'negative' current and replace it with a small magnetic loop you make better use of that antenna length by the loop reinforcing the main lobes.
Now as one changes frequency the sinosoidal curves will not be complete at the center because of increasing wave length but it not really a problem since its effect on the radiation pattern is quite small similar to a capacity hat.
(end portions of a sinosoidal curves have extremely low efficiency per unit length)Actualy it wouldn't hurt to have capacity hats at the absolute ends also.
So we have now achieved a method to obtain Zepp patterns without the wastefull transmission line problem.
Now let us try and analyse what we have modelled.
We feed the RANDOM length dipole and because the loop is coupled " beyond the
so called "critical resonance point" it also will be part of the antenna installation and will also resonate not only itself but the whole structure even tho the dipole is an ARBITARY length. Since there is nothing that states that a radiator must be of a certain length before it can resonate this should not be
a surprise to engineering students tho it does seem to be passed over in most antenna books but it does introduce to all that efficient smaller antennas can be made especially if combined with "loss-less feed systems which I have have written up for patent purposes.
Using the variable capacitor we can then REMOVE all REACTANCE from the antenna assembly leaving just a resistive impedance to match at the generator
(being only resistive helps the transmitter tuner to be more versatile when dealing with higher SWR's).
Now if the resistive matching problem erks you you can take an extra step of choosing an impedance that closely matches the design of the assembly regardles of frequency used, which then allows one to insert a simple balun
and thus dispense with a tuner!
O.K. Richard I have not moved into how one feeds the system since it seems to cause some constination so I will leave it to you how you feed this thing i.e.
standard dipole center feeding, delta match, I don't care at this point.
I will be happy to explain any points that you have difficulty with.
Best Regards
Art

6370. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 17:55:07 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <3e848c5f.94026890@news.galilei.com>
Source record: 121759

Wes Stewart <n7ws@#arrl.net> verbositized:

>On Thu, 27 Mar 2003 12:15:55 -0600, 'Doc <w5lz@cwis.net> wrote:
>
>|Bill,
>| I didn't think Heresy had anything to do with feed
>|lines. I do know they make pretty good chocolate bars.
>| 'Doc
>
>Hmmm. Is that a local brand? Here in Arizona, I've only seen Hershey
>chocolate. How do they compare?

Heresy Bars have more Chutzpah!

TTUL
Gary

6371. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 18:43:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8t598vc6ggrrgimpf11s0irqjhm8jpmt5h@4ax.com>
Source record: 121760

On Fri, 28 Mar 2003 07:06:35 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Roy Lewallen wrote:
>> The current distribution (including phase) uniquely determines a given
>> antenna's radiation pattern. So when I say that nothing you do at the
>> center of a dipole can affect the current distribution, it follows that
>> nothing you do there can affect the radiation pattern.
>
>How about shorting the dipole at the center? :-)

Hi Cecil,

We've been down that road and it lead us here.

73's
Richard Clark, KB7QHC

6372. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 18:55:22 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8v598voqmd8krue4n81kkke3fkg336vjf4@4ax.com>
Source record: 121761

On 27 Mar 2003 20:31:07 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Richard Clark <kb7qhc@attbi.com> wrote in message
news:<cv278v4rj7bjsmn47c196ie5ceeftqoq8t@4ax.com>...
>> On 27 Mar 2003 15:23:59 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
>> wrote:
>>
>> >
>> >Let's just take a single point to debate, for instance, I say that
>> >when you place a parallel circuit containing a variable capacitor, at
>> >the center of a dipole the current pattern will change from a single
>> >sinosoidal pattern to one that can equates to a collinear type
>> >pattern.
>>
>> Hi Art,
>>
>> You obviously didn't read Roy's critique of Richard's dipole current
>> distribution posting.
>>
>> Required reading before you revisit this above.
>>
>> 73's
>This posting is before I get to Roys posting, not sure how you did
>that
>or why I should read things in the order that you want me to. On top
>of that you have said nothing for me to revisit or your computor
>transmittion went bad.
>> Richard Clark, KB7QHC
>Art

Hi Art,

After having read the other responses, I see you have both come to the
nut of the matter quickly as I expected.

The antennas currently under discussion fall under the classification
of Standing Wave antenna. There is a very good reason for it being a
standing wave: mismatch with a load. The distribution of current is
load determined, not source determined. The load is the ï¿½ther to set
terms straight. As Richard pointed out, one can contrive to change
the shape of that distribution through the agencies of tuned circuits,
as compensating loads REMOTE from the source.

This is one of those easier issues to resolve: measure the currents on
each arm of your dipole before and after the application of your

invention. I take it you have not done this fundamental step.

73's
Richard Clark, KB7QHC

6373. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 18:58:29 UTC
From: Bob Miller <bxmiller@texas.netNOSPAM>
Message-ID: <ri698vs8e56bb3q2kfdd9hjhkcp2g7goog@4ax.com>
Source record: 121762

On Fri, 28 Mar 2003 07:24:26 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Bob Miller wrote:
>> You'll also need an antenna tuner to make the dipole plus ladder line
>> idea work. It wouldn't hurt to buy something like the ARRL Antenna
>> Book to build such a critter. Or contact the Wireman at his web site
>> and buy one of his dipole kits. But you'll need a tuner for all band
>> use...
>
>I don't need a tuner for all band use. :-) See how on my web page.

Cecil, I think of your switches/feedline sections as a "tuner." A
little different from what MFJ sells, but a tuner, still, since by
adjusting the feedline length, you're "tuning" the system for the
relevant frequency.

Bob
k5qwg

6374. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 19:02:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E849C5D.20607@ieee.org>
Source record: 121764

Richard Clark wrote:
> <Cecil.A.Moore@ieee.org> wrote:
>
>>Roy Lewallen wrote:
>>>The current distribution (including phase) uniquely determines a given
>>>antenna's radiation pattern. So when I say that nothing you do at the
>>>center of a dipole can affect the current distribution, it follows that
>>>nothing you do there can affect the radiation pattern.
>>
>>How about shorting the dipole at the center? :-)
>
> We've been down that road and it lead us here.

Sorry, I haven't been following the thread. Where's here?
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6375. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 19:06:14 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <n0798vklm2h71ov8etgo1il7jo1ufn820m@4ax.com>
Source record: 121763

On 28 Mar 2003 00:13:41 -0800, nm5k@wt.net (Mark Keith) wrote:

>As far as feeding a single dipole for all bands, his antenna will
>work. No problem there. But unless he feeds the loop as a separate
>element, and keeps it totally separate from the dipole, he will not be
>able to steer the pattern. Does anyone here disagree with this
>modeling and how it would pertain to real life? It seems accurate to
>me. Any "naysayers" speak now or forever hold your IR antenna... MK

Hi Mark,

Sounds dead on to me.

Steering is going to need two apparent sources. I have yet to see Art
successfully offer a working example.

73's
Richard Clark, KB7QHC

6376. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 19:07:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E849D80.4060800@ieee.org>
Source record: 121765

Bob Miller wrote:
> On Fri, 28 Mar 2003 07:24:26 -0800, OC_CAM's Razor
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Bob Miller wrote:
>>
>>>You'll also need an antenna tuner to make the dipole plus ladder line
>>>idea work. It wouldn't hurt to buy something like the ARRL Antenna
>>>Book to build such a critter. Or contact the Wireman at his web site
>>>and buy one of his dipole kits. But you'll need a tuner for all band
>>>use...
>>
>>I don't need a tuner for all band use. :-) See how on my web page.
>
> Cecil, I think of your switches/feedline sections as a "tuner." A
> little different from what MFJ sells, but a tuner, still, since by
> adjusting the feedline length, you're "tuning" the system for the
> relevant frequency.

Well, a *tuned feeder* certainly performs the *tuning function*.
But it doesn't meet the ARRL definition of a "tuner" which requires
discrete lumped reactance components, if I remember that definition
correctly.
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6377. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 19:22:28 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <56898vgh2rusof6pgv6r09th20j32hb5uv@4ax.com>
Source record: 121766

On Fri, 28 Mar 2003 11:02:53 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>>Roy Lewallen wrote:
>>>>The current distribution (including phase) uniquely determines a given
>>>>antenna's radiation pattern. So when I say that nothing you do at the
>>>>center of a dipole can affect the current distribution, it follows that
>>>>nothing you do there can affect the radiation pattern.
>>>
>>>How about shorting the dipole at the center? :-)
>>
>> We've been down that road and it lead us here.
>
>Sorry, I haven't been following the thread. Where's here?

I'm here, you are near here.

6378. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 19:34:48 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <st1ha.243727$3D1.131926@sccrnsc01>
Source record: 121767
Body handling: Inline uuencoded payload not displayed: audio.gif

Main Entry: tun&#65533;er
Pronunciation: 't&#65533;-n&r,
Function: noun
Date: circa 1801
1 : one that tunes <a piano tuner>
2 : something used for tuning;

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E849D80.4060800@ieee.org...
> >
> Well, a *tuned feeder* certainly performs the *tuning function*.
> But it doesn't meet the ARRL definition of a "tuner" which requires
> discrete lumped reactance components, if I remember that definition
> correctly.
> --
> 73, Cecil, W5DXP
>
>
>
> ------------== Posted via Newsfeed.Com - Uncensored Usenet News
==----------
> http://www.newsfeed.com The #1 Newsgroup Service in the World!
> -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers
=-----

[Inline uuencoded payload not displayed: audio.gif]

6379. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 19:41:06 UTC
From: Dan Richardson <ChangeThisToCallSign@mendolink.com>
Message-ID: <75998vc89pt55kldfnsqv4v9kbvo21v566@4ax.com>
Source record: 121768

On Fri, 28 Mar 2003 11:07:44 -0800, OC_CAM's Razor
<Cecil.A.Moore@ieee.org> wrote:

>Bob Miller wrote:
>> On Fri, 28 Mar 2003 07:24:26 -0800, OC_CAM's Razor
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>
>>>Bob Miller wrote:
>>>
>>>>You'll also need an antenna tuner to make the dipole plus ladder line
>>>>idea work. It wouldn't hurt to buy something like the ARRL Antenna
>>>>Book to build such a critter. Or contact the Wireman at his web site
>>>>and buy one of his dipole kits. But you'll need a tuner for all band
>>>>use...
>>>
>>>I don't need a tuner for all band use. :-) See how on my web page.
>>
>> Cecil, I think of your switches/feedline sections as a "tuner." A
>> little different from what MFJ sells, but a tuner, still, since by
>> adjusting the feedline length, you're "tuning" the system for the
>> relevant frequency.
>
>Well, a *tuned feeder* certainly performs the *tuning function*.
>But it doesn't meet the ARRL definition of a "tuner" which requires
>discrete lumped reactance components, if I remember that definition
>correctly.

Check QST for "My Feedline Tunes My Antenna" by Bryon Goodman". In
fact they (the ARRL) have published three times! March 1956, November
1991 and April 1997.

Danny, K6MHE

6380. Re: Coax for reception

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 20:38:25 UTC
From: "William E. Sabin" <sabinw@mwci-news>
Message-ID: <3E84B2C1.8050407@mwci-news>
Source record: 121669

Art Unwin KB9MZ wrote:
> "William E. Sabin" <sabinw@mwci-news> wrote in message
news:<3E83F6C8.7090300@mwci-news>...
>
>>J. McLaughlin wrote:
>>
>>
>>>Volume 18 of the MIT Radiation
>>>series plus little else is all one needs.
>>
>>Chapters 12 (E. Schremp) and 13 (R. Twiss and Y.
>>Beers) are still good references a half-century later.
>>
>>Bill W0IYH
>
>
> Bill, This series of books to which you refer, I have not come across
> them.
> Could you provide some aditional details about it i.e. are they all
> about antennas as we hams know it, if not what Volumes and author
> would I need to
> get the library to loan the volumes that do relate to "ham" antennas.
> TIA
> Art

It refers to the MIT Radiation Lab series,
published in the early 1950s, that described the
radar technology development efforts at MIT during
WWII. The particular book is Volume 18 "Vacuum
Tube Amplifiers" edited by Valley and Wallman.
Wallman developed, among many other ideas, the
"cascode amplifier" circuit. I have seen this book
available from used book stores.

Bill W0IYH

6381. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 20:41:07 UTC
From: richardharrison@webtv.net
Message-ID: <13046-3E84B363-86@storefull-2314.public.lawson.webtv.net>
Source record: 121675

Art, KB9MZ wrote:
"I like the bidirectional figure eight pattern for all frequencies of use and remove all those wasteful side lobes that are created by what goes on between those two full curves in phase."

I infer an aim from Art`s statement. He wants an antenna with a free-space pattern similar to a center-fed dipole of some length but not too much longer than a full wave. Lomger antennas start to have multiple lobes. They no longer have Art`s desire, a "figure eight" E-plane radiation pattern.

The 19th edition of the "ARRL Antenna Book" conveniently demonstrates what happens to the dipole`s pattern as its length progresses in 1/2-wavelengths by approximate intergers from 1 through 4. At the dipoles 2nd harmonic, full-wavelength, or integer No.2, its pattern is still a "figure eight". At integers 3 and 4, it no longer gives a "figure eight". Patterns are on page 2-12 in the book.

I also infer that Art dreams of a pattern that doesn`t break to pieces at higher frequencies as ordinary antennas` do. The Zepp is a high-impedance matching system akin to the J-pole. Cecil`s selected feedlines are a matching system. Neither the Zepp nor Cecil`s system prevents pattern breakup in a too long wire.

Finding a way to match a beast does not make it a single-focus killer-antenna.

Best regards, Richard Harrison, KB5WZI

6382. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 20:41:50 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E84B38E.4000608@ieee.org>
Source record: 121671

CW wrote:
> Main Entry: tunï¿½er
> Pronunciation: 'tï¿½-n&r,
> Function: noun
> Date: circa 1801
> 1 : one that tunes <a piano tuner>
> 2 : something used for tuning;

Try the ARRL Antenna Book definition of "tuner".
--
73, Cecil, W5DXP

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6383. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 20:42:45 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E84B3C5.8901088A@cwis.net>
Source record: 121670

Cecil,
Art has been thingking again. Take it from there.
'Doc

6384. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 20:44:31 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E84B42F.8060907@ieee.org>
Source record: 121672

'Doc wrote:
> Cecil, Art has been thingking again. Take it from there.

"thingking"?????

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

6385. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 20:53:40 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E84B5AF.86DF8C48@attbi.com>
Source record: 121673

How do I modulate the signal created by my wife's tuner?? It's a tuning fork!! What does one eat with a tuning fork, How can I tune my antenna with a tuning fork?

How does this definition contribute to the discussion??

Hmmm ... ???

Deacon Dave, W1MCE

CW wrote:
>
> Main Entry: tunï¿½er
> Pronunciation: 'tï¿½-n&r,
> Function: noun
> Date: circa 1801
> 1 : one that tunes <a piano tuner>
> 2 : something used for tuning;
>
> "OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
> news:3E849D80.4060800@ieee.org...
> > >
> > Well, a *tuned feeder* certainly performs the *tuning function*.
> > But it doesn't meet the ARRL definition of a "tuner" which requires
> > discrete lumped reactance components, if I remember that definition
> > correctly.
> > --
> > 73, Cecil, W5DXP
> >
> >
> >
> > ----------== Posted via Newsfeed.Com - Uncensored Usenet News
> ==----------
> > http://www.newsfeed.com The #1 Newsgroup Service in the World!
> > -----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers
> =-----
>
> [Image]

6386. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 21:08:27 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <6_ucndr_b5RUJBmjXTWcpQ@comcast.com>
Source record: 121674

Floyd,

I am glad I checked back here. Thanks loads. Never seen >> << before, or if I did, did not know what it meant. I should have figured it out from the context though.

Tam/WB2TT
"Floyd Davidson" <floyd@ptialaska.net> wrote in message news:87r88swbhj.fld@barrow.com...
> "Tarmo Tammaru" <t-tammaru@home.com> wrote:
> >The message I was responding to (Yuri's) . The pertinent part of which was
> >included in my posting. This may have to do with what kind of browser you
> >are using, but I don't see any confusion. The Reflector is longer than the
> >DE, hence lower in frequency. The directors are shorter, hence higher in
> >frequency
> >
> >Tam/WB2TT
>
> Richard is not being forthright with you. Yuri's article used
> one of those stylistic abominations for quoting text, which you
> missed (no small wonder, because it is an easy abomination to
> miss). The "quoted text" was enclosed in >> ... << like this:
>
> >> this kind of bracket
> at the beginning and
> this at the end. <<
>
> Which is an absolutely ridiculous way to quote text on Usenet...
>
> The appropriate way to quote text from a non-Usenet article
> source, is with an indented paragraph, surrounded by double
> quotes:
>
> "This is the way to quote text from a source
> other than the Usenet article to which one
> is responding."
>
> I happen to like reducing both margins by equal amounts, but
> only the left margin indent is actually necessary. The whole
> point is to *make* *it* *obvious*, so whatever margin spacing
> makes that so, is right. And that is exactly *not* what the
> article referenced managed to do with that particular style
> abomination.

>
>
>
>
> >"Richard Clark" <kb7qhc@attbi.com> wrote in message
> >news:uvh68vg8dnpv2q9qcmt3nm2biome6m0gvc@4ax.com...
> >> On Thu, 27 Mar 2003 13:35:17 -0500, "Tarmo Tammaru"
> >> <t-tammaru@home.com> wrote:
> >>
> >> >You have higher and lower mixed up.
> >> >
> >> >Tam/WB2TT
> >>
> >> Hi Tam,
> >>
> >> Whom do you mean by "you?" (re-read the post before answering)
> >>
> >> 73's
> >> Richard Clark, KB7QHC
> >
> >
>
> --
> Floyd L. Davidson <http://www.ptialaska.net/~floyd>
> Ukpeagvik (Barrow, Alaska) floyd@barrow.com

6387. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 21:37:19 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <3E84C08F.5020601@psu.edu>
Source record: 121676

Dave Shrader wrote:
> How do I modulate the signal created by my wife's tuner?? It's a tuning
> fork!! What does one eat with a tuning fork

Tuner Fish!

- Mike KB3EIA -

6388. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 21:41:15 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <3E84C17B.7070602@psu.edu>
Source record: 121677

Rob wrote:
> A few years ago I saw a antenna that was basically a dipole, a length of
> ladder line, and a balun. It was supposed to be an all band antenna. Anyone
> know how good these antenna's are and where I can get building instructions
> or kits?

You can make one of these very inexpensively. just use as much wire for the dipole as you can, feed it with ladder line, and put a Balanced line tuner in your shack. (MFJ949x or equivlent) No external Balun needed.

- Mike KB3EIA -

6389. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 22:02:29 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b62gp6$17as1$1@ID-175933.news.dfncis.de>
Source record: 121678

How true. Better to have a good match between the line and antenna, and avoid standing waves on the line in the first place. No broadcast station would tolerate that.

Sure, you can fool the tx if you find the right combination of line length and Z for the freq, but why stress the line and probably radiate from it at the same time? Why not address the problem at its source?

If there is a good match between the line and antenna, then the length of the line doesn't matter, the line will radiate little, and the tx will always be happy (assuming it was designed for that load Z).

> What does NOT happen is changing the SWR by trimming. That ancient
> legend needs to disappear.
>
> --
> Bill, W7TI

6390. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 22:45:15 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E84D07B.F306085F@cwis.net>
Source record: 121679

Cecil,
But you still use a tuner, even with your variable
feed line .
'Doc

6391. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 22:49:04 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E84D160.DF6AAF05@cwis.net>
Source record: 121680

!!! 'G', I misspellded it.
'Doc

6392. Measurements Model 59LF ?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 22:52:18 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v89khs5q3fdpdb@corp.supernews.com>
Source record: 121681
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

My Model 59LF tuning head goes down to 100kc. Does anyone know if Measurements made a tuning head that went below 100kc or has anyone made a coil that would go to 50kc? Did any other company make a grid dip that went lower than 100kc?
tnx
hank wd5jfr

6393. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 22:52:20 UTC
From: jgboyles@aol.com
Message-ID: <20030328175220.05668.00000097@mb-fo.aol.com>
Source record: 121682

>How true. Better to have a good match between the line and antenna, and
>avoid standing waves on the line in the first place. No broadcast station
>would tolerate that.

Hi Richard, We are Amateurs, not professional broadcasting stations. As an Amateur I like to operate on lots of different frequencies, and Cecil's method, or open wire feed with a tuner allows us to do that.

>Sure, you can fool the tx if you find the right combination of line length
>and Z for the freq, but why stress the line and probably radiate from it at
>the same time? Why not address the problem at its source?

Why are you stressing the open wire line, and why would it radiate if the antenna system is balanced, and a good balun is used in the system? I have used open wire for years, and it doesn't look stressed, nor does it radiate any more than some coax fed antennas I have tired. (that I can tell)

>If there is a good match between the line and antenna, then the length of
>the line doesn't matter, the line will radiate little, and the tx will
>always be happy (assuming it was designed for that load Z).

This is true, but changing bands, or even working the band edges gets to be a problem that can be avoided with open wire line and a tuner.
73 Gary N4AST

6394. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 23:05:14 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3E84D52A.6020702@oda.com.au>
Source record: 121683

> When will people learn this simple fact?: The correct feedline length
> is the shortest possible length. It's that simple. No magical math
> formula's.

It all started with a question with words to the effect "spare me the details", but the devil is in the detail.

However, a real world example is my "Inverted Vee" for 40m which is fed with 75ohm coax with a self resonant choke balun at the feedpoint. The antenna is shortened slightly to excite a VSWR(75) of 1.5 on the coax, and the cable is cut at a point (actually for convenience, at the second point) where the impedance is 50 ohms resistive, and connected to the transciever. (This solution was designed and fine tuned, not happened upon with a pair of sidecutters!)

If I made the feedline another 8m longer or shorter, the impedance would be around 110 ohms, and would not allow the particular transciever to develop near rated power without some form of impedance transformer.

(Whilst you might regard a VSWR of 1.5 to be high, it is typical of dipoles on the lower HF bands which are commonly mounted relatively close to ground.)

Nevertheless, multi-band parallel dipoles mounted close to ground introduce so many variables, that one is unlikely to systematically find an optimised solution without wasting a lot of time and possibly cutting up a lot of cable. Perhaps you should expect to use an ATU, and consider changing the cable length or element length for the relevant bands if the setup doesn't match up with reasonable ATU settings on one or more bands.

Owen

6395. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 23:41:02 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E84DCDA.A58727FF@attbi.com>
Source record: 121684

I know: you forgot the space between 'thing' and 'king'.

Everybody knows that Doc is the THING KING!!

Deacon Dave, W1MCE ;-)

PS: Doc turn on your 'spiel checquer'

+ + +

'Doc wrote:
>
> !!! 'G', I misspellded it.
> 'Doc

6396. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-28 23:59:11 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b62njv$17tl2$1@ID-175933.news.dfncis.de>
Source record: 121685

RE: Quotes below the line...

(1) Agree that amateur radio operators are not broadcast stations. High SWR values on the transmission line may be acceptable for amateur radio operators, but they are NOT acceptable for broadcast stations. That is (part of) the difference between the two classes of service.

Broadcast stations must maximize their coverage in order to achieve maximum commercial and competitive success. Amateur stations don't have those constraints.

(2) Actually I didn't stress any particular line type. But in a free-space environment, ANY line type with significant SWR will radiate. Note that any antenna itself MUST have "high SWR" if it is to be an effective radiator. Whatever applies to antennae applies equally to transmission lines.

RF (with amateur AND commercial FCC licenses dating to 1955).

"JGBOYLES" <jgboyles@aol.com> wrote\

>(1) We are Amateurs, not professional broadcasting stations.
and
>(2) Why are you stressing the open wire line, and why would it radiate if the
> antenna system is balanced, and a good balun is used in the system? I have
> used open wire for years, and it doesn't look stressed, nor does it radiate any
> more than some coax fed antennas I have tired. (that I can tell).

6397. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 00:13:32 UTC
From: k9sqg@aol.com
Message-ID: <20030328191332.01526.00000059@mb-fa.aol.com>
Source record: 121686

Bob,

That is a McCoy dipole. Put up as much wire as you can, feed it with open wire line, and run it through a tuner in the shack and you'll have a decent multiband antenna, all other things being equal.

73s,

Evan

6398. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 00:16:48 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <b8p98vc25b7ovulgtan789oi9jlkgug2uh@4ax.com>
Source record: 121687

On Fri, 28 Mar 2003 17:59:11 -0600, "Richard Fry" <rfry@adams.net>
wrote:
[snip]
|
|(2) Actually I didn't stress any particular line type. But in a free-space
|environment, ANY line type with significant SWR will radiate.

I am far from a proponent of operating a line at elevated SWR. That
said, I beg to differ that these lines necessarily radiate more than a
flat line does.

Why do you believe that this is the case?

6399. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 00:27:32 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <b62p94$17onb$1@ID-175933.news.dfncis.de>
Source record: 121688

RE: Below the line...

You first. Why do you (apparently) believe it not true?

RF

From: "Wes Stewart" <n7ws@#arrl.net>

R. Fry wrote:

|Actually I didn't stress any particular line type. But in a free-space
|environment, ANY line type with significant SWR will radiate.

> I am far from a proponent of operating a line at elevated SWR. That
> said, I beg to differ that these lines necessarily radiate more than a
> flat line does.
>
> Why do you believe that this is the case?

6400. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 01:04:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v89s9n89pmsd05@corp.supernews.com>
Source record: 121689

(2) isn't true. Saying that antennas have high SWR and radiate, therefore transmission lines with high SWR must radiate is like saying that all antennas are made from wire and radiate, therefore all transmission lines made from wire must radiate.

Radiation is not due to standing waves. It's due to fields created by currents (or, more basically if you prefer, from charge acceleration). As long as the currents on the two conductors of a transmission line are equal and opposite, the line will radiate very little. (The small amount of radiation is due to the fact that the two wires are spatially separated.) Transmission line radiation has nothing to do with SWR. It's due solely to unbalanced current on the two conductors, which is a phenomenon independent of SWR.

Antennas don't radiate because they have a high SWR. They radiate because the field from the antenna current isn't cancelled by an equal and opposite current on a nearby wire, as is the case for a properly balanced transmission line.

Roy Lewallen, W7EL

Richard Fry wrote:
> . . .
> (2) Actually I didn't stress any particular line type. But in a free-space
> environment, ANY line type with significant SWR will radiate. Note that any
> antenna itself MUST have "high SWR" if it is to be an effective radiator.
> Whatever applies to antennae applies equally to transmission lines.
>
> RF (with amateur AND commercial FCC licenses dating to 1955).

6401. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 01:05:27 UTC
From: jgboyles@aol.com
Message-ID: <20030328200527.05633.00000082@mb-fo.aol.com>
Source record: 121690

>(1) Agree that amateur radio operators are not broadcast stations. High SWR
>values on the transmission line may be acceptable for amateur radio
>operators, but they are NOT acceptable for broadcast stations. That is
>(part of) the difference between the two classes of service.

Of course Richard that is the whole idea. Amateurs are not Pros. Hams QSY, the Pros do not. A high SWR on a low loss line will be almost as efficient as your matched line to antenna. Broadcast stations maximum efficiency and directivity. I say reasonable efficiency can be obtained with low loss open wire line, with no stress (whatever that is) on the line.

>) Actually I didn't stress any particular line type. But in a free-space

You said stress, so I took it that way. I still don't know your definition of stress.

>But in a free-space
>environment, ANY line type with significant SWR will radiate.

I have never operated in free space, a few Astronauts have. Can you provide me with references that support your position that a transmission line with a high SWR radiates significantly more than one with a low SWR. The entire antenna system must be balanced of course.

>ANY line type with significant SWR will radiate. Note that any
>antenna itself MUST have "high SWR" if it is to be an effective radiator

Any line or antenna must have an acceleration of current to radiate. A true transmission line, fields cancel, no radiation.

>Whatever applies to antennae applies equally to transmission lines.

It does? transmission lines don't radiate, antennas radiate.
73 Gary N4AST

6402. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 01:06:15 UTC
From: Dan Richardson <ChangeThisToCallSign@mendolink.com>
Message-ID: <oas98v83kaqpjt2fjukfulrqpfgvqh1dug@4ax.com>
Source record: 121691

On Fri, 28 Mar 2003 17:59:11 -0600, "Richard Fry" <rfry@adams.net>
wrote:
[snip]
>
>(2) Actually I didn't stress any particular line type. But in a free-space
>environment, ANY line type with significant SWR will radiate.
[snip]

Nonsense!

Danny, K6MHE

6403. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 01:25:22 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <CSgha.13459$ES6.5986@fe08.atl2.webusenet.com>
Source record: 121713

"Mike Coslo" <mjc5@psu.edu> wrote in message
news:3E84C08F.5020601@psu.edu...
>
>
> Dave Shrader wrote:
> > How do I modulate the signal created by my wife's tuner?? It's a tuning
> > fork!! What does one eat with a tuning fork
>
> Tuner Fish!
>
> - Mike KB3EIA -
>

Sea flat??

Chuck

6404. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 01:41:59 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <d1u98vksr9bc14m4jvpmvcgbag16orehp4@4ax.com>
Source record: 121692

On Fri, 28 Mar 2003 18:27:32 -0600, "Richard Fry" <rfry@adams.net>
wrote:

|RE: Below the line...
|
|You first. Why do you (apparently) believe it not true?
|
|RF

Nice try, but no thanks. You made the claim, you go first.

I will state however, that I don't "apparently" believe it untrue, I
"definitely" believe it to be untrue.

I will leave you with another question:

Does a coaxial line terminated in a shielded short circuit make a good
antenna?

|_____________
|
|From: "Wes Stewart" <n7ws@#arrl.net>
|
| R. Fry wrote:
|
||Actually I didn't stress any particular line type. But in a free-space
||environment, ANY line type with significant SWR will radiate.
|
|> I am far from a proponent of operating a line at elevated SWR. That
|> said, I beg to differ that these lines necessarily radiate more than a
|> flat line does.
|>
|> Why do you believe that this is the case?
|

6405. SWR this!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 02:01:14 UTC
From: k3bu@aol.comnoSaddam
Message-ID: <20030328210114.28788.00000041@mb-cg.aol.com>
Source record: 121693

Found this at
http://www.freerepublic.com/focus/f-news/878827/posts
- something for theoreticians to consider.
Yuri, K3BU

Astronomers Deal Blow To Quantum Theories Of Time, Space, Gravity
Space Daily ^ | Huntsville - Mar 28, 2003 | Editorial Staff

Posted on 03/28/2003 8:49 PM EST by vannrox

Astronomers Deal Blow To Quantum Theories Of Time, Space, Gravity

Huntsville - Mar 28, 2003

For the second time in as many months, images gathered by the Hubble Space Telescope (HST) are raising questions about the structures of time and gravity, and the fabric of space.Using two HST images, astronomers from Italy and Germany looked for but did not find evidence supporting a prevailing scientific theory that says time, space and gravity are composed of tiny quantum bits.

Using existing theories, the team led by Dr. Roberto Ragazzoni from the Astrophysical Observatory of Arcetri, Italy, and the Max Planck Institute for Astronomy in Heidelberg, Germany, calculated that infinitesimally small quantum-scale variations in space time would blur images of galaxies seen from vast distances across the universe.

Instead, when they looked at both diffraction patterns from a supernova and the raw image of a second galaxy more than five billion light years from Earth, they saw images much sharper than should be possible if quantum-scale phenomenon operated as previously supposed. Their research is scheduled to be published in the April 10, 2003, edition of Astrophysical Research - Letters.

"The basic idea is that space time should fluctuate," said Ragazzoni. "If you are looking at light from a huge distance, this light passing through space time would be subject to this fluctuation in space time. They should give a distorted image of the far universe, like a blurring.

"But you don't see a universe that is blurred. If you take any Hubble Space Telescope deep field image you see sharp images, which is enough to tell us that the light has not been distorted or perturbed by fluctuations in space time from the source to the observer. This observation is enough to rule out this effect on the quantum scale.

"You can say," said Ragazzoni, "that this measurement constrains the quantum gravity theory to certain parameters."

This report comes a month after physicists at The University of Alabama in Huntsville (UAH) announced their unsuccessful attempt to use an image from an

HST interferometer to find evidence of Planck-scale effects. Taken together, the independent research findings might force physicists to reexamine the scientific underpinnings of the quantum theories of gravity, time and space.

To look for the quantum blurring effect the European team used a parameter from optics, the Strehl ratio, to calculate how sharply the telescope should be able to resolve an image of the distant light source and its first Airy ring - a signature of the interference of the rays of light entering a telescope.

If the popular quantum theories were correct, space-time effects should blur light from distant sources beyond the telescope's ability to resolve them.

They didn't.

"Without a theory to describe this, I think it's hard not to agree that it is time to start to consider theories that do not require this Planck scale, at least not like it is now," said Ragazzoni. "From an experimental point of view, there is no establishment. We are proud to have established in as rigorous a manner as possible the parameters of this quantum effect."

The Planck-scale quantum theories of time, space and gravity were derived from attempts to calculate the theoretical limits to electromagnetic energy, according to a UAH physicist, Dr. Richard Lieu.

By inverting Albert Einstein's theory of relativity (E=mc2 becomes m=E/c2), physicists could calculate how much mass should be added to a photon as it gains energy. Using that, they calculated a theoretical limit to how much energy a photon might contain before gaining so much mass it would collapse into a photon-sized black hole.

That theoretical upper limit was then used to set theoretical limits on time. One cycle of a photon carrying that much energy would last 5 x 10-44 seconds, an interval called Planck time. As the shortest potentially-measurable interval of time, theorists speculated that time moves is Planck time-sized quantum bits.

In his theory of general relativity, Einstein theorized that time, space and gravity are different manifestations of the same phenomenon, much as light and thunder are signatures of the electrical discharge in lightning. If time is made up of quantum bits, that would also mean space and gravity should also be composed of quantum units.

Since the expected blurring "signature" of quantum space time isn't seen, however, it might mean that time isn't made of quantum bits, and neither are space or gravity.

6406. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 02:58:41 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3E850BE1.4FD2BD0A@sympatico.ca>
Source record: 121694

JGBOYLES wrote:
>
> >(1) Agree that amateur radio operators are not broadcast stations. High SWR
> >values on the transmission line may be acceptable for amateur radio
> >operators, but they are NOT acceptable for broadcast stations. That is
> >(part of) the difference between the two classes of service.
>
> Of course Richard that is the whole idea. Amateurs are not Pros. Hams > QSY, the Pros do not.

I get the distinct impression that some here believe only bradcasting stations on fixed frequencies are 'pros'. I think a lot of other pros who QSY frequently and widely might disagree with you.

Dave
VE3HLU

6407. More wave magic.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 03:57:22 UTC
From: k3bu@aol.comnoSaddam
Message-ID: <20030328225722.08750.00000085@mb-fc.aol.com>
Source record: 121695

Found this at
http://www.freerepublic.com/focus/f-news/878898/posts
Hold onto your antennas ans SWR bridges!
Yuri
****

Flat Lens Could Significantly Enhance Object Resolution
Spacedaily ^ | Mar 28, 2003 | Nicolle Wahl

Posted on 03/28/2003 10:30 PM EST by Brett66

Flat Lens Could Significantly Enhance Object Resolution

by Nicolle Wahl
Toronto - Mar 28, 2003
By constructing artificial materials that break long-standing rules of nature, a U of T researcher has developed a flat lens that could significantly enhance the resolution of imaged objects. This, in turn, could lead to smaller and more effective antennas and devices for cell phones, increased space for data storage on CD-ROMs and more complex electronic circuits.

"This is new physics," says George Eleftheriades, a U of T professor specializing in electromagnetic technology at the Edward S. Rogers Sr. Department of Electrical and Computer Engineering and senior author of an article in the March 24 issue of Applied Physics Letters. "These findings provide an opportunity to resolve details in an object smaller than a wavelength."

The team works in the rapidly emerging field of metamaterials -- artificially created substances with properties not found in nature. Under normal electromagnetic conditions, light passing through a flat lens will diverge; light passing through a lens made of metamaterials, however, will bend the "wrong" way and become focused.

Their study reveals that when evanescent waves -- weak but important waves that lose strength quickly after leaving their source -- are directed through their flat metamaterial lens, these waves are amplified. At the same time, the lens corrects the phase of the waves by focusing the diverging waves into a beam.

Metamaterial lenses, when constructed at optical frequencies, could be used to engineer the next generation of electronic devices at the nanometre scale, says Eleftheriades.

Nicolle Wahl is a news services officer with the department of public affairs at the University of Toronto

6408. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 04:24:17 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303282024.13d19152@posting.google.com>
Source record: 121696

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<13046-3E84B363-86@storefull-2314.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "I like the bidirectional figure eight pattern for all frequencies of
> use and remove all those wasteful side lobes that are created by what
> goes on between those two full curves in phase."
>
> I infer an aim from Art`s statement. He wants an antenna with a
> free-space pattern similar to a center-fed dipole of some length but not
> too much longer than a full wave. Lomger antennas start to have multiple
> lobes.
That is correct

They no longer have Art`s desire, a "figure eight" E-plane
> radiation pattern.

Well you are jumping too quick here. We were comparing with the I.R.
antenna when all this started so you would start at 10 meteres for
your figure eight
radiation pattern. Never mind that particular part for the moment
since even if you didstart at another frequency there is really no big
problem with having a multi lobe pattern all the way to two metres as
long as you can rotate it
to pick up the repeater ! Never mind let's move on.

>
> The 19th edition of the "ARRL Antenna Book" conveniently demonstrates
> what happens to the dipole`s pattern as its length progresses in
> 1/2-wavelengths by approximate intergers from 1 through 4. At the
> dipoles 2nd harmonic, full-wavelength, or integer No.2, its pattern is
> still a "figure eight". At integers 3 and 4, it no longer gives a
> "figure eight". Patterns are on page 2-12 in the book.

I know what you looking at, seems like you are heading in a direction
of denial with respect to my claim of figure eight pattern all the way
down to 160M
yet what you are referring to is when you go the other way.Wish I knew
what you are driving at here or do you have frequency directions
backwards. Am I correct in my claim or am I incorrect otherwise I have
know idea what to debate.

>
> I also infer that Art dreams
Don't like that suggestion that it is all a dream this early in the
description

of a pattern that doesn`t break to pieces

> at higher frequencies as ordinary antennas` do. The Zepp is a
> high-impedance matching system akin to the J-pole. Cecil`s selected
> feedlines are a matching system. Neither the Zepp nor Cecil`s system
> prevents pattern breakup in a too long wire.

So are you agreeing with me or not? Seems like you are being wishy
washy about what direction to jump.
>
> Finding a way to match a beast does not make it a single-focus
> killer-antenna.

It is not all that bad, but either way you are jumping to fast again.
What I have described is only a small portion of the antenna. Don't
knock down the antenna before you have got the whole model in front of
you, otherwise people will assume that you are rejecting out of hand
regardless of following descriptions and the derision will start all
over again. Let us go thru the whole description in an orderly manner
so you have an understanding in it's entirety before you make a
damning or destructive analysis.

So based on my description so far on this thread...

1. Do you agree that for this description we can maintain a figure
eight pattern
for frequencies 10 thru 20 M .
2. Do you agree that thru out this frequency span we have a collinear
form of antenna
3 Do you agree that that for all frequencies the dipole/loop assembly
can be made resonant by use of the variable capacitor alone I.E we can
remove reactance from the total impedance without changing dipole
lengths.

If you say 'yes' to each of the above we can then move on with more
details about the antenna

State what you agree with and what you do not agree with then we can
resolve our differences and move on to the next part of the
description.
>
> Best regards, Richard Harrison, KB5WZI

Best regards
Art

6409. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 04:35:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E8522A5.2030907@ieee.org>
Source record: 121697

Richard Fry wrote:
> How true. Better to have a good match between the line and antenna, and
> avoid standing waves on the line in the first place. No broadcast station
> would tolerate that.

I probably wouldn't use ladder-line either if I was limited to one frequency.

> Sure, you can fool the tx if you find the right combination of line length
> and Z for the freq, but why stress the line and probably radiate from it at
> the same time? Why not address the problem at its source?

An SWR of 9:1 is absolutely no stress on 450 ohm ladder-line. As a matter of fact, those conditions are a lot less lossy than RG-58 with an SWR of 1:1. And why should a balanced feedline with balanced forward currents and balanced reflected currents radiate at all?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6410. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 04:37:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E85231D.5030104@ieee.org>
Source record: 121698

'Doc wrote:
>
> Cecil,
> But you still use a tuner, even with your variable
> feed line .

Only because I have one built into my IC-756pro. I didn't
use one when I had an IC-706. And I don't use one when I
fire up the SG-500 amp.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6411. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 04:40:17 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E8523B1.8000604@ieee.org>
Source record: 121699

Richard Fry wrote:
> (2) Actually I didn't stress any particular line type. But in a free-space
> environment, ANY line type with significant SWR will radiate.

What laws of physics predict radiation from a transmission line when
the forward currents are balanced and the reflected currents are
balanced?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6412. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 04:42:27 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E852433.4030603@ieee.org>
Source record: 121700

Richard Fry wrote:
> RE: Below the line...
>
> You first. Why do you (apparently) believe it not true?

If the forward currents are balanced, there will be negligible
radiation from the forward current fields. If the reflected
currents are balanced, there will be negligible radiation
from the reflected current fields. Where is the radiation
coming from?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6413. Re: SWR this!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 04:52:49 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E8526A1.30400@ieee.org>
Source record: 121702

Yuri Blanarovich wrote:
> Astronomers Deal Blow To Quantum Theories Of Time, Space, Gravity

Time probably didn't even exist until it was invented by
Homo sapiens as a math model to track change.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6414. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 04:55:15 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87wuiiu5zg.fld@barrow.com>
Source record: 121701

"Richard Fry" <rfry@adams.net> wrote:
>How true. Better to have a good match between the line and antenna, and
>avoid standing waves on the line in the first place. No broadcast station
>would tolerate that.

That is not necessarily true. If you have a transmission line
that has high losses with high SWRs, that is bad. But if the
loss is not high it does no harm to have a high SWR.

Hence you certainly do not want to use 200 feet of RG-58/U coax
on your 2 meter rig with an SWR of 5:1. The loss is grossly
significant!

On the other hand, with ladder line on 80 meters an SWR of 20:1
for several hundred yards is just not going to be even slightly
significant.

>Sure, you can fool the tx if you find the right combination of line length
>and Z for the freq, but why stress the line and probably radiate from it at
>the same time? Why not address the problem at its source?

First one has to determine *if* there is a problem... :-)

>If there is a good match between the line and antenna, then the length of
>the line doesn't matter, the line will radiate little, and the tx will
>always be happy (assuming it was designed for that load Z).

That is not necessarily true either. Lets go back to that 200
feet of RG-58/U on 2 meters. I don't have any references handy,
so I can't tell you what the losses are for an SWR of 1:1, but
I'd bet that 200 feet is enough to be significant, compared for
example a short 4 foot run. At 4 feet, do it! But at 200
feet??? It's best to find a different type of transmission
line.

Of course, with 200 feet of RG-58, an SWR meter located at the
transmitter likely won't be showing much of an SWR anyway, no
matter how bad the mismatch at the antenna is.

>> What does NOT happen is changing the SWR by trimming. That ancient
>> legend needs to disappear.
>>
>> --
>> Bill, W7TI

While that is true, it is a fact that by trimming the
transmission line the particular impedance presented to the

transmitter can be changed to something the transmitter can
match.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

6415. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 05:27:16 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303282127.9db2db@posting.google.com>
Source record: 121703

OC_CAM's Razor <Cecil.A.Moore@ieee.org> wrote in message
news:<3E849D80.4060800@ieee.org>...
> Bob Miller wrote:
> > On Fri, 28 Mar 2003 07:24:26 -0800, OC_CAM's Razor
> > <Cecil.A.Moore@ieee.org> wrote:
> >
> >
> >>Bob Miller wrote:
> >>
> >>>You'll also need an antenna tuner to make the dipole plus ladder line
> >>>idea work. It wouldn't hurt to buy something like the ARRL Antenna
> >>>Book to build such a critter. Or contact the Wireman at his web site
> >>>and buy one of his dipole kits. But you'll need a tuner for all band
> >>>use...
> >>
> >>I don't need a tuner for all band use. :-) See how on my web page.
> >
> > Cecil, I think of your switches/feedline sections as a "tuner." A
> > little different from what MFJ sells, but a tuner, still, since by
> > adjusting the feedline length, you're "tuning" the system for the
> > relevant frequency.
>
> Well, a *tuned feeder* certainly performs the *tuning function*.
> But it doesn't meet the ARRL definition of a "tuner" which requires
> discrete lumped reactance components, if I remember that definition
> correctly.
Cecil I suspect it must be more than just that. Isnt there a vertical
antenna
which has a variable inductor for multi frequency use? The inductance
is a lumped component but it part of a radiating antenna which is
distinctly different from a system in your case or from a system that
requires a tuner.
I would put a tuner in the catagory of any variable lumped reactance
components
that are not part of the radiator or radiation function. When it comes
down to a definition made by the ARRL it will consist of something
created by a committee!!!
Rregards
Art

6416. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 05:53:57 UTC
From: richardharrison@webtv.net
Message-ID: <13046-3E8534F5-153@storefull-2314.public.lawson.webtv.net>
Source record: 121704

Art, KB9MZ wrote:
"Do you agree that for this description we can maintain a figure eight pattern for frequencies 10 thru 20M?"

Haven`t read an adequate description yet, but anyone can make a 20-meter 1/2-wave dipole.
At 10 meters, this dipole will have a figure-8 pattern which is similar but more tightly focused than its pattern at 20 meters. Trouble is that the impedance of the dipole will be very high at 10-meters. This same 20-meter dipole will also have a figure-8 at all lower frequencies, down to as low as you want to go. Problem with this low-frequency operation is the falling radiation resistance and the rising reactance. This would make the required matching network lossy for very low frequencies.

Art also wrote:
"Do you agree that thru out this frequency span, we have a collinear form of antenna?"

Does the antenna have multiple inline 1/2-wave elements separated by 1/4-wave short-circuit stubs? I doubt it.

Art also wrote:
"Do you agree that for all frequencies the dipole/loop assembly can be made resonant by use of the variable alone---?"

I really don`t know enough about Art`s antenna to answer. But, I can make a loop with whiskers that is tunable on 20 meters and also on 10 meters, using only a variable capacitor and no bandswitching.

I really don`t want to play "20 Questions" to identify Art`s antenna. Art should adequately describe his antenna if he wants useful comments.

Best regards, Richard Harrison, KB5WZI

6417. 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 06:44:00 UTC
From: GregEMT1@netzero.com
Message-ID: <3e853f30.17337905@news.earthlink.net>
Source record: 121705

I am just getting into 10 meters, and am looking for a good way to go mobile. I have a fairly high 4wd truck that is also my daily driver, so my first thought is to use a steel whip from CB on a ball mount off the side of the bed, and trim it down a bit. I do use my truck off road, and have already lost more than one mag mount antenna both from bounces and trees, but I was wondering if there are any tips or suggestions about this whip idea, or any ohter options. BTW, my rig is only starter quality, a Radio Shack HTX-10, on sale for only $69. I also have a fiberglass shell, so about 2 feet of the antenna would be very close to that. Would the fiberglass eat alot of RF? Any help on this issue is greatly appreciated!!!!
Greg
KF6ALC

6418. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 07:04:42 UTC
From: richardharrison@webtv.net
Message-ID: <25292-3E85458A-66@storefull-2316.public.lawson.webtv.net>
Source record: 121706

Richard Fry wrote:
"Any line type with significant SWR will radiate."

Line imbalance and common-mode current produce line radiation.

A coax line can be connected to its load through a balun or common-mode choke and routed to avoid transmission of energy on its exterior.

Coax is impenetrable to r-f due to skin effect. So, coax can be mismatched, produce SWR, and still not radiate so long as r-f is excluded from its exterior by balance or other means.

Likewise, a balanced open-wire line can be mismatched to a balanced load, producing SWR, but very little radiation.

I spent years in the world`s largest shortwave broadcast plant with miles of open-wire lines. We had SWR at times at band edges but our lines didn`t have significant radiation because we had good line balance.

It`s a myth that antennas must have SWR to radiate. We had many terminated rhombics which had no significant SWR. Their radiation was excellent, almost the equal of our curtains, and much more convenient to use.

Best regards, Richard Harrison, KB5WZI

6419. Re: 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 07:25:46 UTC
From: richardharrison@webtv.net
Message-ID: <25291-3E854A7A-207@storefull-2316.public.lawson.webtv.net>
Source record: 121707

Greg, KF6ALC wrote:
"I am just getting into 10 meters, and am looking for a good way to go mobile."

My experience includes countless mobiles on 33 MHz. Lots of trucks, but the favored antenna location was high on the cab, not the bed or tool box. Height helps with local communications and DX too. A nearly full-length stainless steel CB whip and spring should be fine.

Best regards, Richard Harrison, KB5WZI

6420. Clock radio impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 09:11:39 UTC
From: GD <alfa@melb.something.au>
Message-ID: <Xns934DCD996136Dalfamelbsomethingau@203.166.23.254>
Source record: 121708

To gain better reception of the station that I like to wake up to, I'm thinking of making an external antenna for my clock radio.

So... whats the impedance likely to be? 50 ohms? 300ohms? Somewhere in between? How do I go about finding out?

cheers...
P.S. Yeah, I know it probably wont be a life threatening issue, but I'm curious to know.

6421. Re: 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 11:24:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E858288.40FFBFB5@cwis.net>
Source record: 121709

Greg,
What you suggest should work just fine. A
fibreglass shell should have no affect on RF
at all. If there is any metal in the camper
shell, that may have an affect, though probably
not much of one. Good luck...
'Doc

6422. FA: Radio Shack SWR meter, like new with box $10.00

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 12:28:01 UTC
From: 6MtrSSB <nospam@tome.com>
Message-ID: <ljgha.31348$ja4.2086166@bgtnsc05-news.ops.worldnet.att.net>
Source record: 121711
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.cb,rec.radio.swap

Don't miss out. Radio Shack SWR meter like new.
Complete with box, manual and field strength antenna.
Covers 3-30mhz up to 1000 watts.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4672&item=3014767381&
rd=1

6423. Re: SWR this!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 12:28:45 UTC
From: Harold Burton <hwburton@cableone.net>
Message-ID: <v8b49c61ksls7b@corp.supernews.com>
Source record: 121710

"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message
news:3E8526A1.30400@ieee.org...
> Yuri Blanarovich wrote:
> > Astronomers Deal Blow To Quantum Theories Of Time, Space, Gravity
>
> Time probably didn't even exist until it was invented by
> Homo sapiens as a math model to track change.
> --
> 73, Cecil, W5DXP

Don't know who first said it, but there may be more to it than one perceives at first. "Time is natures way of keeping everything from happening at once." Do any of you know the author of the statement?

6424. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 13:03:59 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303290503.628af2ae@posting.google.com>
Source record: 121712

richardharrison@webtv.net (Richard Harrison) wrote in message
news:<13046-3E8534F5-153@storefull-2314.public.lawson.webtv.net>...
> Art, KB9MZ wrote:
> "Do you agree that for this description we can maintain a figure eight
> pattern for frequencies 10 thru 20M?"
>
> Haven`t read an adequate description yet, but anyone can make a 20-meter
> 1/2-wave dipole.
> At 10 meters, this dipole will have a figure-8 pattern which is similar
> but more tightly focused than its pattern at 20 meters. Trouble is that
> the impedance of the dipole will be very high at 10-meters. This same
> 20-meter dipole will also have a figure-8 at all lower frequencies, down
> to as low as you want to go. Problem with this low-frequency operation
> is the falling radiation resistance and the rising reactance. This would
> make the required matching network lossy for very low frequencies.

Well after all these years we have a small advance in thinking re
figure eight pattern which is farther than this group have ever got
before, no small feat..
Regarding impedance I left it to you to decide on how to feed it
didn't I?
I did this because in the past people had a penchant to look for
complaining areas or confused a delta match as a loop circuit. I also
stated that we would finish up with a loss-less feed system with high
efficiency. I wish you wouldn't be so negative so early in the game
otherwise you will have a group of naysayers
jumping in based purely on your posture.
>
> Art also wrote:
> "Do you agree that thru out this frequency span, we have a collinear
> form of antenna?"
>
> Does the antenna have multiple inline 1/2-wave elements separated by
> 1/4-wave short-circuit stubs? I doubt it.
>
> Art also wrote:
> "Do you agree that for all frequencies the dipole/loop assembly can be
> made resonant by use of the variable alone---?"
>
> I really don`t know enough about Art`s antenna to answer. But, I can
> make a loop with whiskers that is tunable on 20 meters and also on 10
> meters, using only a variable capacitor and no bandswitching.

Excellent. Are you comfortable in moving on to the next part of the
description?

> I really don`t want to play "20 Questions" to identify Art`s antenna.
> Art should adequately describe his antenna if he wants useful comments.

Nor do I Richard, but it has taken years with this group to get just
to this point alone because of pre conceived thinking of charlatan
behavior that it is impossible to continue with a total description
aproach. This way, by breaking up the description I can at least
address it in a professional manner any technical point that one is
uncomfortable with and not deal with a barrage from psuedo experts and
their constant sniping. Note as yet you have agreed on the preliminary
points and nobody as joined you so you also now can be subject to
harrasement and sniping since these points have been rejected or
laughed at
by all fro years.
Very best regards
Art
where difficulties may occur

>
> Best regards, Richard Harrison, KB5WZI

6425. Re: 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 14:11:46 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <sq9b8vot3ij8jvolog8e8gg44qlmd42qv0@4ax.com>
Source record: 121714

The steel whip mounted as high as possible will be your best option.
Your "starter quality" radio is a technological marvel compared to my
first 10-meter mobile. I went to the junk yard and bought one of
those under-dash radio boxes from a pre-WW II car. I stripped the
parts out except for the vibrator power supply, and built a
crystal-controlled radio with a 6V6 driving a 6L6. Don't remember
what I used for a modulator. Receiver was a Gonset converter into the
car radio. Worked the world with that radio.

73, Dick - W6CCD

On Sat, 29 Mar 2003 06:44:00 GMT, GregEMT1(nospam)@netzero.com
(KF6ALC) wrote:

>I am just getting into 10 meters, and am looking for a good way to go
>mobile. I have a fairly high 4wd truck that is also my daily driver,
>so my first thought is to use a steel whip from CB on a ball mount off
>the side of the bed, and trim it down a bit. I do use my truck off
>road, and have already lost more than one mag mount antenna both from
>bounces and trees, but I was wondering if there are any tips or
>suggestions about this whip idea, or any ohter options. BTW, my rig
>is only starter quality, a Radio Shack HTX-10, on sale for only $69.
>I also have a fiberglass shell, so about 2 feet of the antenna would
>be very close to that. Would the fiberglass eat alot of RF? Any help
>on this issue is greatly appreciated!!!!
>Greg
>KF6ALC

6426. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 14:12:49 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E85A9E1.7E7519DF@cwis.net>
Source record: 121715

Richard,
It ought to be apparent by now that Art really
doesn't want useful comments about his antenna.
'Doc

6427. Re: Clock radio impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 14:24:14 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <QuWdnTw6MsdmJhijXTWc3Q@ctc.net>
Source record: 121619

> To gain better reception of the station that I like to wake
> up to, I'm thinking of making an external antenna for my
> clock radio.
>
> So... whats the impedance likely to be? 50 ohms? 300ohms?
> Somewhere in between? How do I go about finding out?
>
It is very difficlut to say . If it is FM it may be somewhere around 300
ohms. For receiving do not worry about the impedance.

6428. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 14:53:43 UTC
From: k3bu@aol.comnoSaddam
Message-ID: <20030329095343.16315.00000061@mb-ca.aol.com>
Source record: 121716

Art KB9MZ writes:

>it is impossible to continue with a total description
>aproach. This way, by breaking up the description I can at least
>address it in a professional manner any technical point that one is
>uncomfortable with and not deal with a barrage from psuedo experts and
>their constant sniping. Note as yet you have agreed on the preliminary
>points and nobody as joined you so you also now can be subject to
>harrasement and sniping since these points have been rejected or
>laughed at
>by all fro years.

and his Patent 5625367 among other "claims" he states:

>>"2. Discussion of the Related Technology

Conventional beam antennas, such as a Yagi antenna, include at least one driver element tuned to resonate at a desired receive/transmit frequency band and positioned at right angles to a support boom. To increase the directivity of such an antenna, a parasitic reflector element, usually tuned to a frequency slightly higher than the driver resonant frequency, can be placed parallel to the driver element along the boom. For further increased directivity, one or more director elements, usually tuned to frequencies slightly lower than the driver resonant frequency, can be placed at various distances along the boom on the other side of the driver element and parallel to the driver element. The driver and other elements are electromagnetically coupled for maximum gain and directivity and are usually of approximately the same length. In these antennas, the driver and the other elements are basically dipoles which in combination are resonant for a particular frequency band. "<< (End of quote from Arts patent)

He has not explained this to the rest of "unpofessional" dumpkoptfs.

If the rest of his thinking "in professional manner" is like the above captured in his issued US patent, then it appears that there are some serious flaws in his approach to antenna design, more like a quest of Don Quixote?

Yuri, K3BU

6429. Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 14:54:02 UTC
From: kb1flr@hotmail.com
Message-ID: <7c04d49.0303290654.590f763f@posting.google.com>
Source record: 121717

Hi All,

The grounding rod for my station has been through a few New England winters and looks like it needs a bit of clean-up. I would like to make certain the conductivity of my outdoor ground rod is not compromised by oxidation. How does one remove the oxidation from copper? Contact cleaner?

Best Regards,
Rick, KB1FLR

6430. Re: Clock radio impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 15:15:01 UTC
From: Helmut Wabnig <hXwabnig@aXon.at>
Message-ID: <c1eb8vcdb10krakc3i5ijr4rct434robpf@4ax.com>
Source record: 121718

On Sat, 29 Mar 2003 09:11:39 GMT, GD <alfa@melb.something.au> wrote:

>To gain better reception of the station that I like to wake
>up to, I'm thinking of making an external antenna for my
>clock radio.
>
>So... whats the impedance likely to be? 50 ohms? 300ohms?
>Somewhere in between? How do I go about finding out?
>
>cheers...
>P.S. Yeah, I know it probably wont be a life threatening
>issue, but I'm curious to know.

Radio clocks are outdated by GPS clocks.

It will wake you with a precision of 1,23456 E-7 or so.

w.

6431. Re: 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 15:46:07 UTC
From: Bob Miller <bxmiller@texas.netNOSPAM>
Message-ID: <vrfb8vg5e6b6i2j84lbj6bb7nvqjspr7id@4ax.com>
Source record: 121620

On Sat, 29 Mar 2003 06:44:00 GMT, GregEMT1(nospam)@netzero.com
(KF6ALC) wrote:

>I am just getting into 10 meters, and am looking for a good way to go
>mobile. I have a fairly high 4wd truck that is also my daily driver,
>so my first thought is to use a steel whip from CB on a ball mount off
>the side of the bed, and trim it down a bit. I do use my truck off
>road, and have already lost more than one mag mount antenna both from
>bounces and trees, but I was wondering if there are any tips or
>suggestions about this whip idea, or any ohter options. BTW, my rig
>is only starter quality, a Radio Shack HTX-10, on sale for only $69.
>I also have a fiberglass shell, so about 2 feet of the antenna would
>be very close to that. Would the fiberglass eat alot of RF? Any help
>on this issue is greatly appreciated!!!!
>Greg
>KF6ALC

Mr. Cebik has a nice collection of articles on 10 meter antennas,
including one or two on mobiling. See...

http://www.cebik.com/a10/anta.html

Bob
k5qwg

6432. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 15:57:49 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E85C150.765B6EF6@attbi.com>
Source record: 121621

>
> Richard Fry wrote:
>
> Coax is impenetrable to r-f due to skin effect.
SNIP

That statement is ALMOST TRUE!.

There are small gaps in the shielding in coax using braided wire for the outer sheath. These gaps introduce a leakage impedance [Vance, et al, Proceedings IEEE] that degrades coax shielding effectiveness as frequency increases throughout the HF and higher spectra. Double braided cable with 95% optical coverage in each braid exhibits a leakage inductance in the range of 0.5 nanohenries per meter and a Leakage Capacitance in the range of 10^-7 meters/farad. The inductive term dominates at HF and higher frequencies.

Single overbraid is still a poorer performer.

Conduit type coax does NOT exhibit these leakage terms [which is why many repeaters use conduit cable to minimize desense].

Deacon Dave, W1MCE + + +

SNIP
So, coax can be
> mismatched, produce SWR, and still not radiate so long as r-f is
> excluded from its exterior by balance or other means.
>
>
> Best regards, Richard Harrison, KB5WZI

6433. Re: 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 16:06:53 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E85C36E.27D4E520@attbi.com>
Source record: 121622

Dick, you forgot to mention the TNS!!

Reference: Elmac AH54, Gonset Triband Converter, TNS, PE103 Dynamotor [I think ... the 500 VDC unit not the 300 VDC unit].

I had lots of fun with the referenced 'system' [If it qualified as a system <grin>].

Deacon Dave, W1MCE
+ + +

Dick wrote:
>
> The steel whip mounted as high as possible will be your best option.
> Your "starter quality" radio is a technological marvel compared to my
> first 10-meter mobile. I went to the junk yard and bought one of
> those under-dash radio boxes from a pre-WW II car. I stripped the
> parts out except for the vibrator power supply, and built a
> crystal-controlled radio with a 6V6 driving a 6L6. Don't remember
> what I used for a modulator. Receiver was a Gonset converter into the
> car radio. Worked the world with that radio.
>
> 73, Dick - W6CCD
>
> On Sat, 29 Mar 2003 06:44:00 GMT, GregEMT1(nospam)@netzero.com
> (KF6ALC) wrote:
>
> >I am just getting into 10 meters, and am looking for a good way to go
> >mobile. I have a fairly high 4wd truck that is also my daily driver,
> >so my first thought is to use a steel whip from CB on a ball mount off
> >the side of the bed, and trim it down a bit. I do use my truck off
> >road, and have already lost more than one mag mount antenna both from
> >bounces and trees, but I was wondering if there are any tips or
> >suggestions about this whip idea, or any ohter options. BTW, my rig
> >is only starter quality, a Radio Shack HTX-10, on sale for only $69.
> >I also have a fiberglass shell, so about 2 feet of the antenna would
> >be very close to that. Would the fiberglass eat alot of RF? Any help
> >on this issue is greatly appreciated!!!!
> >Greg
> >KF6ALC

6434. G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 16:07:13 UTC
From: TonyWard <tonester1@cbuk.freeserve.co.uk>
Message-ID: <b64gb5$64s$1@newsg3.svr.pol.co.uk>
Source record: 121623

Hi,
Is there a certain length (minimum) for a 1/2 size G5RV ??
I,ve see in a few places that a certain lenth of 50 ohm is used on this antenna .....when conecting to the 300ohm.but there is nothing that suggests this on the packet!!!!!!

thanks for any info

Tony.

6435. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 16:27:49 UTC
From: richardharrison@webtv.net
Message-ID: <29688-3E85C985-181@storefull-2313.public.lawson.webtv.net>
Source record: 121625

Yuri, K3BU wrote:
He has not explained this to the rest of us "unprofessional"
dumpkoptfs."

Ja! From bits and pieces, I infer a capacitor-tuned matching section is attached to Art`s dipole.

Unfortunately for Unwin, this has already been invented. I have a copy of the 15th edition of Bill Orr, W6SAI`s "Radio Handbook". On page 444 is Figure 29(D). The subscript says:
"Where the section into which the feeders are connected is considerably shorter than the (1/2-wave dipole) driven element. This (feed) system is most convenient when the driven (1/2-wave dipole) element is too long (such as for a 28-MHz or 14-MHz array) for a convenient (folded dipole) arrangement---." (As compared with VHF)

Best regards, Richard Harrison, KB5WZI

6436. 100 feet 450 Ohm open-wire feedline for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 16:28:15 UTC
From: kf5nd@yahoo.com
Message-ID: <2a0a5403.0303290828.15ba017b@posting.google.com>
Source record: 121624

Please bid on eBay, item # 3015955045

100 Feet (30.5 meters) of 450 Ohm open-wire antenna feedline, in the following lengths:

64, 11, 9, 8, and 8 feet, total 100 feet.

This type of feedline can be used for construction of the versatile G5RV multi-band (80 m - 10 m) ham radio antenna. Unlike coaxial cable, open-wire feedline pieces can be easily spliced together by soldering without degrading the feedline performance. The exact construction of this feedline is no-maintenance hard molded plastic insultation with preformed air gaps, not the classic ladder-line with spreaders. The conductors are very hard, tough copperweld wire, and will handle full legal Amateur Radio transmitter power levels without any problem.

Open-wire feedline is extremely low loss compared to coaxial cables, and can withstand extremely bad SWR conditions without causing signal losses, that's why it's a really good way to feed a multi-band antenna, when used with an antenna tuner with an input for a balanced feedline.

This feedline is used, not new, but in good condition, and should provide years of service in your antenna system.

6437. loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 16:52:10 UTC
From: MC <mwc@umich.edu>
Message-ID: <jbkha.2537$XR3.78301@news.itd.umich.edu>
Source record: 121627

Hi, I'm interested in making a loop antenna for 100 MHz. Is there a simple conversion between a half-wave dipole and an "equivalent" loop antenna?

Thanks,
Mike

6438. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 16:57:21 UTC
From: Gene Fuller <W4SZzzzzz@att.net>
Message-ID: <3E85D0EE.9C4DF117@att.net>
Source record: 121626

Art,

If you have such low regard for the capabilities of "this group", why
are you wasting your time? Would you believe anything from the assembled
morons if it did not exactly match your views?

I seem to recall something about throwing pearls before swine . . .

73,
Gene
W4SZ

Art Unwin KB9MZ wrote:
>
> richardharrison@webtv.net (Richard Harrison) wrote in message
> > Art, KB9MZ wrote:
> > "Do you agree that for this description we can maintain a figure eight
> > pattern for frequencies 10 thru 20M?"
> >
> > Haven`t read an adequate description yet, but anyone can make a 20-meter
> > 1/2-wave dipole.
> > At 10 meters, this dipole will have a figure-8 pattern which is similar
> > but more tightly focused than its pattern at 20 meters. Trouble is that
> > the impedance of the dipole will be very high at 10-meters. This same
> > 20-meter dipole will also have a figure-8 at all lower frequencies, down
> > to as low as you want to go. Problem with this low-frequency operation
> > is the falling radiation resistance and the rising reactance. This would
> > make the required matching network lossy for very low frequencies.
>
> Well after all these years we have a small advance in thinking re
> figure eight pattern which is farther than this group have ever got
> before, no small feat..

6439. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 17:12:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b64k5e$1hd$1@titan.btinternet.com>
Source record: 121628

> Is there a certain length (minimum) for a 1/2 size G5RV ??

==========

No Tony.

(1) Just erect the longest dipole you have room for, as high above ground as you can manage.

(2) Take a balanced 450-ohm feedline all the way from the antenna back to the shack. Of no specified length. Then add a little more for luck. Use NO coax.

(3) Connect a choke balun between the transmitter end of the line and the tuner.

{4) A choke balun consists of 8 or more turns of 20 awg twin speaker cable spread around a 1.5" diameter ferrite ring.

(5) You will then have the best HF multi-band, all-round radiating system which will fit into your back yard.

Reg, G4FGQ

6440. FA: Mirage KP-2 440MHz GaAsFET Pre-amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 17:27:12 UTC
From: Nathan Ciufo <nanina@fuse.net>
Message-ID: <3e85d859$0$89179$a0465688@nnrp.fuse.net>
Source record: 121629

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4672&item=3015814013&
rd=1

6441. Re: loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 17:36:34 UTC
From: Thierry - ON1SKY <lombryt@hotmail.com>
Message-ID: <3e85d9a4_2@news.vo.lu>
Source record: 121630

"MC" <mwc@umich.edu> wrote in message
news:jbkha.2537$XR3.78301@news.itd.umich.edu...
> Hi, I'm interested in making a loop antenna for 100 MHz. Is there a
simple
> conversion between a half-wave dipole and an "equivalent" loop antenna?

Isn't it a lambda/10.

Thierry
>
> Thanks,
> Mike
>
>

6442. Re: 100 feet 450 Ohm open-wire feedline for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 18:02:20 UTC
From: Wes Stewart <n7ws@#arrl.net>
Message-ID: <trnb8v4msee0gca88vb8ip6cinf8em7ipk@4ax.com>
Source record: 121631

You must be kidding.

On 29 Mar 2003 08:28:15 -0800, kf5nd@yahoo.com (Peter W.) wrote:

|Please bid on eBay, item # 3015955045
|
|100 Feet (30.5 meters) of 450 Ohm open-wire antenna feedline, in the
|following lengths:
|
|64, 11, 9, 8, and 8 feet, total 100 feet.
|
|This type of feedline can be used for construction of the versatile
|G5RV multi-band (80 m - 10 m) ham radio antenna. Unlike coaxial cable,
|open-wire feedline pieces can be easily spliced together by soldering
|without degrading the feedline performance. The exact construction of
|this feedline is no-maintenance hard molded plastic insultation with
|preformed air gaps, not the classic ladder-line with spreaders. The
|conductors are very hard, tough copperweld wire, and will handle full
|legal Amateur Radio transmitter power levels without any problem.
|
|Open-wire feedline is extremely low loss compared to coaxial cables,
|and can withstand extremely bad SWR conditions without causing signal
|losses, that's why it's a really good way to feed a multi-band
|antenna, when used with an antenna tuner with an input for a balanced
|feedline.
|
|This feedline is used, not new, but in good condition, and should
|provide years of service in your antenna system.

6443. Re: loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 18:14:17 UTC
From: k9sqg@aol.com
Message-ID: <20030329131417.01323.00000094@mb-fa.aol.com>
Source record: 121632

A true loop is one wavelength long.

6444. Re: SGC Coupler / Small Wire Loops:

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 18:39:39 UTC
From: theplanters95@aol.comnospam
Message-ID: <20030329133939.00390.00000090@mb-ch.aol.com>
Source record: 121633

Check out the SGC website. The have some good publications for download.

Randy

6445. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 19:29:42 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <knmha.8764$G6.4367@fe01.atl2.webusenet.com>
Source record: 121635

Steel wool
Comet brand scouring powder
Elbow greese

By the way, I read a while back that a lot of commercial installations are using galvanized steel now. It may have a lower initial conductivity than copper clad, but after a few years it is better than rusting copper. Besides, a galvanized steel pipe is a lot cheaper than a copper coated ground rod.

Jim
N8EE

"KB1FLR" <kb1flr@hotmail.com> wrote in message
news:7c04d49.0303290654.590f763f@posting.google.com...
> Hi All,
>
> The grounding rod for my station has been through a few New England
> winters and looks like it needs a bit of clean-up. I would like to
> make certain the conductivity of my outdoor ground rod is not
> compromised by oxidation. How does one remove the oxidation from
> copper? Contact cleaner?
>
> Best Regards,
> Rick, KB1FLR

6446. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 19:30:52 UTC
From: Scott <scott2rp@netscape.net>
Message-ID: <3e85f480_3@news1.prserv.net>
Source record: 121634

Just use an SOS pad. If you aren't strapped for cash - you can get a brand new 8' X 5/8" copper ground rod (copper plated steel) at most of the big home improvement stores (Lowe's / Home Depot) for like 10$

I used to pull my copper ground rods out and clean them up once a year, but now I just replace them.

Scott.

KB1FLR wrote:

> Hi All,
>
> The grounding rod for my station has been through a few New England
> winters and looks like it needs a bit of clean-up. I would like to
> make certain the conductivity of my outdoor ground rod is not
> compromised by oxidation. How does one remove the oxidation from
> copper? Contact cleaner?
>
> Best Regards,
> Rick, KB1FLR

6447. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 19:37:57 UTC
From: Max <Max_Jens@post9.tele.dk>
Message-ID: <3e85f5f4$0$123$edfadb0f@dtext02.news.tele.dk>
Source record: 121636

Hello Rick

> make certain the conductivity of my outdoor ground rod is not
> compromised by oxidation. How does one remove the oxidation from
> copper? Contact cleaner?

Don't, the oxidation layer protects the copper against the oxygen,
removing it will only lead to a new layer of oxid, and every time
you do it, you loose some copper.

Regards Max

6448. Re: 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 19:38:14 UTC
From: Dick <rhughes33@cableone.net>
Message-ID: <qrsb8vkefc9kh439v6nd1sjlira074onhu@4ax.com>
Source record: 121637

I had exactly the same setup later on, but that was a few years later.
I forgot to add the Master Mobile antenna. The TNS (Twin Noise
Squelch) actually came even later. Seems like it was designed by my
friend Don Stoner, W6TNS (Silent Key.)

Dick - W6CCD

On Sat, 29 Mar 2003 16:06:53 GMT, Dave Shrader
<david.shrader@attbi.com> wrote:

>Dick, you forgot to mention the TNS!!
>
>Reference: Elmac AH54, Gonset Triband Converter, TNS, PE103 Dynamotor [I
>think ... the 500 VDC unit not the 300 VDC unit].
>
>I had lots of fun with the referenced 'system' [If it qualified as a
>system <grin>].
>
>Deacon Dave, W1MCE

6449. Re: loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 19:42:18 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <0Yydnb8i9v6FahijXTWc3A@comcast.com>
Source record: 121638

Mike,

I believe the formula for circomference in feet is 1050/F(MHZ). So, it would be 10 feet 6 inches. If you make it square, the feedpoint impedance is about 120 Ohms. If you make it about twice as high as wide, the feedpoint impedance will be about 50 ohms. For 75 Ohms, you might want to try 3-3 by 2. Note that a loop is slighty MORE than one wavelength. For horizontal polarization feed the bottom middle.

I assume you want a vertical loop, not a Halo. Maximum reception will be broadside to the loop. It might have about 2 db gain relative to a dipole.

Tam/WB2TT
"MC" <mwc@umich.edu> wrote in message
news:jbkha.2537$XR3.78301@news.itd.umich.edu...
> Hi, I'm interested in making a loop antenna for 100 MHz. Is there a
simple
> conversion between a half-wave dipole and an "equivalent" loop antenna?
>
> Thanks,
> Mike
>
>

6450. Reducing sensitivy of 49 MHz whip

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 19:46:30 UTC
From: cprstn54zz@att.net
Message-ID: <3e85f6c8.64928687@news-server.optonline.net>
Source record: 121639

I bought some RS 49 MHz low-power FM VOX walkie talkies. There is no squelch adjustment and the QRM in my area keep the squelch open most of the time. I have been unsucessful in my attemps to get information or a circuit diagram from RS, although there is a detailed parts list: http://support.radioshack.com/support_electronics/doc30/30437.htm

I have ascertained with a scanner that the QRM is narrow band. The headset antenna has a 20" flexible whip. Is there anything I can do to the whip to desentitize RX and effectively increase squelch?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

6451. Dipole, rotatable, design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 19:52:36 UTC
From: bhuson@gte.net
Message-ID: <20030329115235119071 2@evrtwa1-ar4-4-47-069-051.evrtwa1.dsl-verizon.net>
Source record: 121640

I'm trying to build my first rotatable dipole, multi-band antenna.

My initial thoughts:

Two eight foot lengths of two inch PVC with T joint

Wind quarter-wave or half-wave length around PVC
spacing turns for length ratio

At 1.9 mhz that's 246.316 feet at quarter-wave.

Use four foot remainder of 20 foot PVC for vertical
support.

Fed with coax to a 1:1 balun should provide a tuneable dipole on 160,
80, 40 and 10 meters.

Mathamatically it works out, but am I missing something very obvious
because of turns versus actual length? This theory is used in Hamsticks
I believe.

At 62, it's a heck of a time to start designing your first antenna i
agree, but it's fun to think about it.

6452. Re: Dipole, rotatable, design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 20:09:56 UTC
From: k9sqg@aol.com
Message-ID: <20030329150956.03495.00000097@mb-fm.aol.com>
Source record: 121641

Not a good idea unless what you want is an inverted V. After a few years in the sunlight, those sections of PVC will develop quite a sag. It will still work though.

6453. LMR-600 connectors [wanted]

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 20:14:22 UTC
From: ax9909@aol.com
Message-ID: <20030329151422.24317.00000039@mb-ck.aol.com>
Source record: 121642

looking for N male & N female connectors for LMR-600 cable. I dont want the crimp on type, i need the clamp and solder style! i have a part number for the...
...N male connector, # RFN-1002-2L2 but no number on the female plug. this number is an after market and not a "Times Microwave" number. someone out there must have a stash of these, let me know what you have for LMR-600 cable.

thanks to all....george [n9ird]

6454. Re: loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 20:53:44 UTC
From: richardharrison@webtv.net
Message-ID: <5383-3E8607D8-250@storefull-2311.public.lawson.webtv.net>
Source record: 121643

MC wrote:
"I`m interested in making a loop antenna for 100 MHz."

Bob Heil, K9EID gives the perimeter of a fullwave loop as:
Full wavelength = 984 / freq.
That gives the wavelength in feet when the frequency is in MHz. Divide by 3.28 for meters.
Dividing 984 by 3.28 gives 300. So we can see that no adjuatment was included in Heil`s formula for velocity or environment because free-space wavelength is:
Lambda = 300 / MHz.

For 100 MHz, the full-wavelength loop should obviously have a circumference of 9.84 feet, or 9 feet and 10 inches. The diameter is just over 3 feet.

A smaller loop can be used with a little less gain. The full-sized loop has a couple of db gain over a 1/2-wave dipole. The dipole is about 4 ft & 8 in long. A full-size square loop would be about 2 ft & 6 in on a side at 100 MHz.

Best regards, Richard Harrison, KB5WZI

6455. Force 12 Sigma Vertical Dipole vs. Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 21:20:58 UTC
From: Rick and Theresa <n6cy@earthlink.net>
Message-ID: <_6oha.1620$lZ2.165476@newsread1.prod.itd.earthlink.net>
Source record: 121644

Any thoughts, opinions or facts regarding performance of the Force 12 Sigma Vertical Dipole versus other straight vertical antennas, such as Butternut, Gap, Hustler, HyGain etc?

I'm getting ready to travel to Europe on military orders and may not have space for larger, horizontal wires or yagi/quad type antennas.

TIA,
Rick N6CY

6456. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 21:42:35 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v8c4qgl79ht6e4@corp.supernews.com>
Source record: 121645

copper oxide is a pretty good conductor, if it wasn't there would be
millions of problems becasue every house has one, NEC requirement..
remember copper oxice recitifiers?

hank wd5jfr
"KB1FLR" <kb1flr@hotmail.com> wrote in message
news:7c04d49.0303290654.590f763f@posting.google.com...
> Hi All,
>
> The grounding rod for my station has been through a few New England
> winters and looks like it needs a bit of clean-up. I would like to
> make certain the conductivity of my outdoor ground rod is not
> compromised by oxidation. How does one remove the oxidation from
> copper? Contact cleaner?
>
> Best Regards,
> Rick, KB1FLR

6457. Thankkkk's "U" All

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 21:46:56 UTC
From: Siddhartha <jrm7287@rochester.rr.com>
Message-ID: <kvoha.65$wD3.9@twister.nyroc.rr.com>
Source record: 121646

I thank the following for their generous, knowledgeable and some times hi, hi comments; I guess! to my post of March 27th, ref. "correct" feedline length.
Cecil (takes the prize with (7) responses), Dave S. (3), Richard H., Dan, Dave H., Gary (2), Roy, West S. (4), Richard F. (3), Bill (2), Andy, Ian, Reg E. (3), Ralph, Jerry, Gary D., Doc - naturally- (2) and good old -fb- (2). Some where I know the answer is to be gleamed from this array of intellectual fertilizer and postulations. Jim

6458. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 22:05:23 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303291405.354438ff@posting.google.com>
Source record: 121647

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303290503.628af2ae@posting.google.com>...
> richardharrison@webtv.net (Richard Harrison) wrote in message
news:<13046-3E8534F5-153@storefull-2314.public.lawson.webtv.net>...
> > Art, KB9MZ wrote:
> > "Do you agree that for this description we can maintain a figure eight
> > pattern for frequencies 10 thru 20M?"
> >
> > Haven`t read an adequate description yet, but anyone can make a 20-meter
> > 1/2-wave dipole.
> > At 10 meters, this dipole will have a figure-8 pattern which is similar
> > but more tightly focused than its pattern at 20 meters. Trouble is that
> > the impedance of the dipole will be very high at 10-meters. This same
> > 20-meter dipole will also have a figure-8 at all lower frequencies, down
> > to as low as you want to go. Problem with this low-frequency operation
> > is the falling radiation resistance and the rising reactance. This would
> > make the required matching network lossy for very low frequencies.
>
>
> Well after all these years we have a small advance in thinking re
> figure eight pattern which is farther than this group have ever got
> before, no small feat..

So what? It's common knowledge any small dipole has a fig 8 pattern.
This is nothing new.

> Regarding impedance I left it to you to decide on how to feed it
> didn't I?
> I did this because in the past people had a penchant to look for
> complaining areas or confused a delta match as a loop circuit.

I'm afraid it's you who has confused a delta matching device with a
loop circuit, not us or me. Every time I point this out to you , you
totally ignore me.

I also
> stated that we would finish up with a loss-less feed system with high
> efficiency.

This I gotta see for a "small" dipole...

I wish you wouldn't be so negative so early in the game
> otherwise you will have a group of naysayers
> jumping in based purely on your posture.

I doubt that. Only if the posture is wrong will the naysayers speak
out.
> >
> > Art also wrote:

>
> Excellent. Are you comfortable in moving on to the next part of the
> description?
>
> > I really don`t want to play "20 Questions" to identify Art`s antenna.
> > Art should adequately describe his antenna if he wants useful comments.
>
> Nor do I Richard, but it has taken years with this group to get just
> to this point alone because of pre conceived thinking of charlatan
> behavior that it is impossible to continue with a total description
> aproach.

What is pre conceived thinking of "charlatan" behaviour?
Art, antennas follow known rules and laws of nature. If someone
proposes an antenna that seems to break the known laws of nature, it's
going to be natural that people question it's operation. If you are
going to continue to propose an antenna that seems to break the laws
of nature, I'm going to continue to pick it apart until I prove one of
us wrong. Get used to it. It's nothing personal. Yet....

This way, by breaking up the description I can at least
> address it in a professional manner any technical point that one is
> uncomfortable with and not deal with a barrage from psuedo experts and
> their constant sniping.

Keep complaining like this, and I'll be your worst nightmare. I don't
like smartass remarks. Keep making them, and I'll make this thread my
"2nd job". Do you consider yourself an expert?
I've never considered myself an "expert". Or at least compared to many
here.
But on the other hand, I'm not a total dumbass either. I throughly
analyzed your antenna months ago. No one yet has disagreed with the
results. Not a single person. Where are all these harping "experts",
psuedo or otherwise, when I described the antenna and the modeling of
it? Why don't they climb all over my back?
Why? Because I don't propose antenna techniques which seem to break
the laws of nature. I exposed antenna techniques which seem to break
the laws of nature.
You refuse to discuss or even acknowledge this aspect of your antenna,
and just dimiss it as the utterings of a "raving mad psuedo expert"
who couldn't possibly have a clue since he doesn't work in the
engineering dept. of RCA, or Motorola, or wherever. Thats not our
fault.

Note as yet you have agreed on the preliminary
> points and nobody as joined you so you also now can be subject to
> harrasement and sniping since these points have been rejected or
> laughed at

> by all fro years.

Laugh? I never have. Reject? You bet your ass. Get used to it until you make some changes in your antenna. Either that or prove that it works. BTW, if you CAN do this, I'll be the first to say I was wrong. I'm not going to hold my breath though. MK

6459. Re: Thankkkk's "U" All

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 22:20:00 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E861BCD.9FA2D07E@attbi.com>
Source record: 121648

Intellectual Fertilizer ???????

Does that mean "Smart Sh.." ??

Deacon Dave, excuse the profane reference, I just couldn't pass it up.
W1MCE

Siddhartha wrote:
>
> I thank the following for their generous, knowledgeable and some times hi,
> hi comments; I guess! to my post of March 27th, ref. "correct" feedline
> length.
> Cecil (takes the prize with (7) responses), Dave S. (3), Richard H., Dan,
> Dave H., Gary (2), Roy, West S. (4), Richard F. (3), Bill (2), Andy, Ian,
> Reg E. (3), Ralph, Jerry, Gary D., Doc - naturally- (2) and good old -fb-
> (2). Some where I know the answer is to be gleamed from this array of
> intellectual fertilizer and postulations. Jim

6460. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 22:21:57 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b656a5$r76$1@titan.btinternet.com>
Source record: 121649

Rick said -

> The grounding rod for my station has been through a few New England
> winters and looks like it needs a bit of clean-up. I would like to
> make certain the conductivity of my outdoor ground rod is not
> compromised by oxidation.

==========
Rick,

Don't waste your time and energy. The resistance of the thin, oxidised, corroded, pitted rod surface is much lower than the thick layer of soil it is in contact with.

It is soil resistivity which controls the resistance of a metal rod to Earth.

The only way of lowering rod resistance to Earth is to replace the soil surrounding the rod with a lower resistance material. Powdered coke (carbon or graphite) is good stuff. This also prolongs rod life - by delaying corrosion of the rod by acidic soil.

Reg, G4FGQ

6461. Re: Thankkkk's "U" All

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 22:42:33 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <l58c8v42a02h3ub36dkl497h0t6nvq9puo@4ax.com>
Source record: 121650

On Sat, 29 Mar 2003 21:46:56 GMT, "Siddhartha"
<jrm7287@rochester.rr.com> wrote:

>I thank the following for their generous, knowledgeable and some times hi,
>hi comments; I guess! to my post of March 27th, ref. "correct" feedline
>length.
>Cecil (takes the prize with (7) responses), Dave S. (3), Richard H., Dan,
>Dave H., Gary (2), Roy, West S. (4), Richard F. (3), Bill (2), Andy, Ian,
>Reg E. (3), Ralph, Jerry, Gary D., Doc - naturally- (2) and good old -fb-
>(2). Some where I know the answer is to be gleamed from this array of
>intellectual fertilizer and postulations. Jim
>

If I'd known there was gonna be a prize I'd have had more to say ;-)

-fb-

6462. Re: Thankkkk's "U" All

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-29 23:36:19 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E862DF3.7417A6D3@cwis.net>
Source record: 121651

Jim,
I'll take credit for the fertilizer. If you will
lance then drain that postulation, it won't hurt near
as bad...
'Doc

6463. Re: loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 00:10:55 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <Jqacncaz6NKQqxujXTWcow@comcast.com>
Source record: 121652

Mike,

I ran EZNEC on the 3-1/4 by 2 antenna made of #14 wire, and the impedance at 100 MHz is 69 + j3.5. Close enough. Gain was .5 dbd. Actually, I was wrong about the 1050. It is supposed to be 1032, which should get rid of the j3.5 term. With my dimensions, lowest SWR, 1.1:1, is at 100.2 MHz.

Tam/WB2TT
"Tarmo Tammaru" <t-tammaru@home.com> wrote in message news:0Yydnb8i9v6FahijXTWc3A@comcast.com...
> Mike,
>
> I believe the formula for circomference in feet is 1050/F(MHZ). So, it would
> be 10 feet 6 inches. If you make it square, the feedpoint impedance is about
> 120 Ohms. If you make it about twice as high as wide, the feedpoint
> impedance will be about 50 ohms. For 75 Ohms, you might want to try 3-3 by
> 2. Note that a loop is slighty MORE than one wavelength.....

6464. Re: FA: Radio Shack SWR meter, like new with box $10.00

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 00:17:50 UTC
From: cheesecutter@webhideout.com
Message-ID: <fef386d5.0303291617.5680f58f@posting.google.com>
Source record: 121653
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.cb,rec.radio.swap

"6MtrSSB" <nospam@tome.com> wrote in message
news:<ljgha.31348$ja4.2086166@bgtnsc05-news.ops.worldnet.att.net>...
> Don't miss out. Radio Shack SWR meter like new.
> Complete with box, manual and field strength antenna.
> Covers 3-30mhz up to 1000 watts.
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4672&item=3014767381&
> rd=1

sounds like a good meter for murray neece........

6465. Re: Clock radio impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 00:23:42 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <le-cnTsNsNWWpBujXTWcpw@comcast.com>
Source record: 121654

If your radio has a single antenna terminal, it is quite likely around 75 Ohms. If it has two antenna terminals (balanced) it is more than likely 300 Ohms. If you still have the owner's manual, see what they say about external antennas.

Tam/WB2TT
"GD" <alfa@melb.something.au> wrote in message news:Xns934DCD996136Dalfamelbsomethingau@203.166.23.254...
> To gain better reception of the station that I like to wake
> up to, I'm thinking of making an external antenna for my
> clock radio.
>
> So... whats the impedance likely to be? 50 ohms? 300ohms?
> Somewhere in between? How do I go about finding out?
>
> cheers...
> P.S. Yeah, I know it probably wont be a life threatening
> issue, but I'm curious to know.

6466. Re: FA: Radio Shack SWR meter, like new with box $10.00

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 01:13:35 UTC
From: Jim <kg4enu@carolina.rr.com>
Message-ID: <c4hc8v0ek3o9me6eqrmess3dr2ovuers24@4ax.com>
Source record: 121655
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.cb,rec.radio.swap

This sure is a tough group.

On 29 Mar 2003 16:17:50 -0800, cheesecutter@webhideout.com
(chessecutter) wrote:

>"6MtrSSB" <nospam@tome.com> wrote in message
news:<ljgha.31348$ja4.2086166@bgtnsc05-news.ops.worldnet.att.net>...
>> Don't miss out. Radio Shack SWR meter like new.
>> Complete with box, manual and field strength antenna.
>> Covers 3-30mhz up to 1000 watts.
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4672&item=3014767381&
>> rd=1
>
>sounds like a good meter for murray neece........

6467. Re: 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 02:11:50 UTC
From: Crazy George <munschNO@attglobal.net.SPAM>
Message-ID: <3e8655ef_2@news1.prserv.net>
Source record: 121656

A-54H
PE-103A
The TNS article was published in May 1953 CQ. How long did it take you to
build yours?

--
Crazy George
Remove NO and SPAM from return address
"Dave Shrader" <david.shrader@attbi.com> wrote in message
news:3E85C36E.27D4E520@attbi.com...
> Dick, you forgot to mention the TNS!!
>
> Reference: Elmac AH54, Gonset Triband Converter, TNS, PE103 Dynamotor [I
> think ... the 500 VDC unit not the 300 VDC unit].
>
> I had lots of fun with the referenced 'system' [If it qualified as a
> system <grin>].
>
> Deacon Dave, W1MCE
> + + +
>
> Dick wrote:
> >
> > The steel whip mounted as high as possible will be your best option.
> > Your "starter quality" radio is a technological marvel compared to my
> > first 10-meter mobile. I went to the junk yard and bought one of
> > those under-dash radio boxes from a pre-WW II car. I stripped the
> > parts out except for the vibrator power supply, and built a
> > crystal-controlled radio with a 6V6 driving a 6L6. Don't remember
> > what I used for a modulator. Receiver was a Gonset converter into the
> > car radio. Worked the world with that radio.
> >
> > 73, Dick - W6CCD
> >
> > On Sat, 29 Mar 2003 06:44:00 GMT, GregEMT1(nospam)@netzero.com
> > (KF6ALC) wrote:
> >
> > >I am just getting into 10 meters, and am looking for a good way to go
> > >mobile. I have a fairly high 4wd truck that is also my daily driver,
> > >so my first thought is to use a steel whip from CB on a ball mount off
> > >the side of the bed, and trim it down a bit. I do use my truck off
> > >road, and have already lost more than one mag mount antenna both from
> > >bounces and trees, but I was wondering if there are any tips or
> > >suggestions about this whip idea, or any ohter options. BTW, my rig

> > >is only starter quality, a Radio Shack HTX-10, on sale for only $69.
> > >I also have a fiberglass shell, so about 2 feet of the antenna would
> > >be very close to that. Would the fiberglass eat alot of RF? Any help
> > >on this issue is greatly appreciated!!!!
> > >Greg
> > >KF6ALC

6468. Re: Force 12 Sigma Vertical Dipole vs. Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 03:02:02 UTC
From: paulfriedman@attbi.com
Message-ID: <K6tha.257810$3D1.140689@sccrnsc01>
Source record: 121657

I have a Butternut HF9V roof mounted with the tuned radial kit (plus a few extra radials for my favorite bands) and a Sigma-5 stuck in a bucket of cement on the ground.

Towards the open area (that is, away from the house -- the Sigma is rather too close to the house), there is little different at the resonant frequencies between the two.

Advantages for the Sigma:
1) no radials
2) Can be assembled or disassembled in <10 minutes without any tools
3) Packs in a very small space; also light weight
4) Quite wide <2:1 SWR on all 5-bands for which it is designed. (out of the box, the 20m coil needed retuning -- everyone seems to complain about this;
all other bands are spot-on.). The Butternut really needs a tuner to operate unless you "live" at certain frequencies on each band. The Sigma can work
quite well on its own.

Disadvantages
1) needs control cable to a hunk of junk switch box -- which needs 13.something V low power to run it
2) need to tighten the wingnuts every once in awhile -- no big deal; takes about a minute.
3) Need to run the coax horizontally (or close to it) for several feet from the antenna. A minor PITA.

I bought the Sigma to take with me to Cape Breton Island this coming summer -- just set it up at home to see how it operates. From what I've seen, it will make me reasonably happy and certainly is easy to use.It might be a good choice for you. Let me know if there is anything else I can tell you about it. Oh, BTW, there will probably be a 4-6 week lead time from order to delivery, so plan ahead.

Paul ab0si

"Rick and Theresa" <n6cy@earthlink.net> wrote in message news:_6oha.1620$lZ2.165476@newsread1.prod.itd.earthlink.net...
> Any thoughts, opinions or facts regarding performance of the Force 12 Sigma
> Vertical Dipole versus other straight vertical antennas, such as Butternut,
> Gap, Hustler, HyGain etc?
>
> I'm getting ready to travel to Europe on military orders and may not have

> space for larger, horizontal wires or yagi/quad type antennas.
>
> TIA,
> Rick N6CY
>
>

6469. Re: LMR-600 connectors [wanted]

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 03:30:18 UTC
From: Doug <doug@ycsi.net>
Message-ID: <b65ocahmm0@63.90.193.159>
Source record: 121658

Those are RF Industries numbers. The connectors can
be found at Electro-Comm in Denver, Co. They stock
the RFI group. Also, try their stock number TC-600-NMC
for the male. I dont like crimp connectors, but they
are regularly used in the comm industries. So, solder
them anyhow.

73

Doug, K7YD

Ax9909 wrote:
> looking for N male & N female connectors for LMR-600 cable. I dont want the
> crimp on type, i need the clamp and solder style! i have a part number for
> the...
> ...N male connector, # RFN-1002-2L2 but no number on the female plug. this
> number is an after market and not a "Times Microwave" number. someone out there
> must have a stash of these, let me know what you have for LMR-600 cable.
>
> thanks to all....george [n9ird]

6470. Re: Thankkkk's "U" All

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 03:41:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E866771.8050501@ieee.org>
Source record: 121659

funkbastler wrote:
> On Sat, 29 Mar 2003 21:46:56 GMT, "Siddhartha"
> <jrm7287@rochester.rr.com> wrote:
>
>>Cecil (takes the prize with (7) responses),

> If I'd known there was gonna be a prize I'd have had more to say ;-)

What's the prize?

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6471. Re: Dipole, rotatable, design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 03:52:53 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E866A15.5040902@ieee.org>
Source record: 121660

bhuson@gte.net wrote:
> I'm trying to build my first rotatable dipole, multi-band antenna.
>
> My initial thoughts:
>
> Two eight foot lengths of two inch PVC with T joint
>
> Wind quarter-wave or half-wave length around PVC
> spacing turns for length ratio
>
> At 1.9 mhz that's 246.316 feet at quarter-wave.
>
> Use four foot remainder of 20 foot PVC for vertical
> support.
>
> Fed with coax to a 1:1 balun should provide a tuneable dipole on 160,
> 80, 40 and 10 meters.

A helically wound dipole is essentially a single band antenna. Are
you going to short out part of the coils for higher frequency operation?
Unless you get the antenna higher than about 1/4WL (130 ft on 160m) the
ability to rotate it won't buy you much.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

6472. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 05:09:25 UTC
From: john <johnkrac@ja.com>
Message-ID: <9_uha.587856$Yo4.42772453@news1.calgary.shaw.ca>
Source record: 121661

Just make sure you ground wire is "cleanly" connected to the rods. If you aren't welding them then be sure you use an oxidation protector.

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message news:b656a5$r76$1@titan.btinternet.com...
> Rick said -
>
> > The grounding rod for my station has been through a few New England
> > winters and looks like it needs a bit of clean-up. I would like to
> > make certain the conductivity of my outdoor ground rod is not
> > compromised by oxidation.
>
> ==========
> Rick,
>
> Don't waste your time and energy. The resistance of the thin, oxidised,
> corroded, pitted rod surface is much lower than the thick layer of soil it
> is in contact with.
>
> It is soil resistivity which controls the resistance of a metal rod to
> Earth.
>
> The only way of lowering rod resistance to Earth is to replace the soil
> surrounding the rod with a lower resistance material. Powdered coke (carbon
> or graphite) is good stuff. This also prolongs rod life - by delaying
> corrosion of the rod by acidic soil.
> ---
> Reg, G4FGQ
>
>

6473. Re: loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 07:30:24 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <k2xha.260522$3D1.141437@sccrnsc01>
Source record: 121662

Yeah........right
"K9SQG" <k9sqg@aol.com> wrote in message
news:20030329131417.01323.00000094@mb-fa.aol.com...
> A true loop is one wavelength long.

6474. Re: Reducing sensitivy of 49 MHz whip

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 12:27:40 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <ArOdnVYbLb0gfxujXTWcqg@crocker.com>
Source record: 121663

yes, there are several ways to reduce sensitivity... cut it off, coil it up,
slip some ferrite beads over it, put some insulation over it and some braid
over the insulation to partially shield it, bend it into a fractal, and
possibly a few others that i won't mention...

"Ken" <cprstn54zz@att.net> wrote in message
news:3e85f6c8.64928687@news-server.optonline.net...
> I bought some RS 49 MHz low-power FM VOX walkie talkies. There is no
> squelch adjustment and the QRM in my area keep the squelch open most
> of the time. I have been unsucessful in my attemps to get information
> or a circuit diagram from RS, although there is a detailed parts list:
> http://support.radioshack.com/support_electronics/doc30/30437.htm
>
> I have ascertained with a scanner that the QRM is narrow band. The
> headset antenna has a 20" flexible whip. Is there anything I can do to
> the whip to desentitize RX and effectively increase squelch?
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

6475. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 12:54:17 UTC
From: bob31439 <bob31439@ix.netcom.com>
Message-ID: <3E86E8F9.A87C9D64@ix.netcom.com>
Source record: 121664

Here's a link to Polyphaser and an engineering note about copper clad
ground rods.
http://www.polyphaser.com/ppc_PEN1008.asp

Bob, WD8AWS

KB1FLR wrote:

> Hi All,
>
> The grounding rod for my station has been through a few New England
> winters and looks like it needs a bit of clean-up. I would like to
> make certain the conductivity of my outdoor ground rod is not
> compromised by oxidation. How does one remove the oxidation from
> copper? Contact cleaner?
>
> Best Regards,
> Rick, KB1FLR

--
****

Bob Gaudio
http://pw2.netcom.com/~bob31439/

"Living at risk is jumping off the cliff
and building your wings on the way down" (Ray Bradbury)

6476. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 13:35:12 UTC
From: richardharrison@webtv.net
Message-ID: <5384-3E86F290-131@storefull-2311.public.lawson.webtv.net>
Source record: 121584

John Krac@ja.com wrote:
"Just make sure your ground rod (connection) is "cleanly" connected to the rod."

Yes. High resistance is bad for r-f efficiency and can pose a shock hazard.

1/2-ohm connection resistance is trivial as compared to 20-ohms or so earth resistance (only an example, but typical in many sites).

Codes specify an "approved ground rod clamp". Make-shift connections to ground rods may burn loose in a lightning strikes, falling far from the stake. That may be undesirable. That`s one reason for the specified clamp. Lightning doesn`t stop at a 1-foot gap in a grounding wire. It arcs right across the gap if it`s the shortest and best path around.

Best regards, Richard Harrison, KB5WZI

6477. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 13:48:51 UTC
From: keep-it-clean <keep-it-clean@worldnet.att.net>
Message-ID: <7BCha.34305$ja4.2216165@bgtnsc05-news.ops.worldnet.att.net>
Source record: 121665
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

"Michael A. Terrell" <mike.terrell@earthlink.net> wrote in message
news:3E83C388.E15D094@earthlink.net...
>
> (....snip....)
>
> The TV stations was a real trip. B&W, mostly tube, and a few RTL ICs
> in the Grass Valley dual Sync generator system.

Not to be argumentative, but I'm wondering if the dual Sync Generator system you're referring to wasn't made by Telemation...not GVG ? I don't recall any RTL parts in early Grass Valley products, but I do recall an old 1RU high Telemation sync generator with beige/tan front panel and built-in changeover relays. Two of the boxes would've comprised a "dual sync generator system". Not sure if it used RTL or not (for some reason, I think it was TTL but it's been a long time ago)......

6478. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 13:56:25 UTC
From: richardharrison@webtv.net
Message-ID: <13046-3E86F789-394@storefull-2314.public.lawson.webtv.net>
Source record: 121577

John Krac@ja.com wrote:
"Just make sure your ground rod (connection) is "cleanly" connected to the rod."

Yes. High resistance is bad for r-f efficiency and can pose a shock hazard.

1/2-ohm connection resistance is trivial as compared to 20-ohms or so earth resistance (only an example, but typical in many sites).

Codes specify an "approved ground rod clamp". Make-shift connections to ground rods may burn loose in lightning strikes, falling far from the stake. That may be undesirable. That`s one reason for the specified clamp. Lightning doesn`t stop at a 1-foot gap in a grounding wire. It arcs right across the gap if it`s the shortest and best path around.

Best regards, Richard Harrison, KB5WZI

6479. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 14:07:12 UTC
From: "William H. O'Hara, III" <whoohara@yahoo.com>
Message-ID: <Xns934E5CC64947BAlphaCentauriAAAHAWK@65.100.3.61>
Source record: 121666

> Just make sure you ground wire is "cleanly" connected to the rods. If
> you aren't welding them then be sure you use an oxidation protector.

Are you not suppose to clamp them? Isn't a mechanical fastening more
likely to hold then a weld during a strike?

thanks
Bill

6480. Building a <$5 Yagi antenna for the 1850/1990MHz Sprint PCS band

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 14:18:11 UTC
From: Gene S <genes@thegateway.net>
Message-ID: <n1Dha.7134$Zo.83606@dfw-read.news.verio.net>
Source record: 121667
Cross-posted to: rec.radio.amateur.antenna,alt.cellular.sprintpcs,alt.cellular.tech

Good day, all.

I'm getting close to actually getting out the drill press & building
a tiny little Yagi antenna to see if I can get a strong enough Sprint
PCS signal at our house - which is in a valley, next to a 200' cliff.
I have found a tower that provides a "weak" signal, providing I sit
on top of the tin roof:-) The cell phone is the Samsung SCH-8500.
(I am assuming that this phone ONLY operates in the 1900MHZ
PCS range & never in the 800MHz range. We use the phone for
voice only, never to link a PC, etc...)

Here is a link to the Sprint tower locations:
http://www.sprintsites.com/tower/combinedsearch_latlongresults.cfm
I "think" I can see one of these Sprint towers,
but will just have to experiment:
AU54XC264 ~6mi
AU54XC257 ~10mi
AU54XC353 ~12mi

I plan to build the antenna from this design:
http://www.qsl.net/eb4eqa/
See: GSM1800 12 Elements Yagi Antenna.
I have the equipment to cut the elements to within .001"
(Click on the tiny image to get a printable template.)

I plan to use PVC, like this design:
http://www.alabamarailfan.com/scanner.php
See: 3 Element Yagi made with PVC

Building the antenna to the specific dimensions seems pretty
easy. However, there are a number of ways to attach
the cable wire & ground shield wires to the Driven.

Questions:
1. Assuming a "Delta" design, do I need to "cut" the Driven into
two pieces of equal length - with an overall length of 3.1024" - then
solder the cable wire to the top piece and solder the ground shield wire
to the bottom half? I have seen the Driven bent so that the wire is
soldered
to the end of the "J" & the ground shield is soldered to the center
of the Driven. My specific question is : What's the best way to build the
Driven, and specifically, where do you solder the wire & ground shield wire?
I understand that it is important to solder each wire a specific distance
from
the other. I'm not sure what that distance is for ~1900MHz - and really

do not feel like messing with a Gamma design.

2. Assuming a cable run of 20 to 30 feet - what specific type of cable
do I need?

I am generally confused as to why you would even attach the ground to
the antenna - but will accept that there is a certain amount of witchcraft
in the design of these little guys :-)

Please feel free to email me if you like.

THANKS in advance.

Gene
Briggs, TX

--
E-mail: genes@thegateway.net

6481. Transceiver cable from engine side to passenger compartment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:04:20 UTC
From: Bill East <beast@pcs.mb.ca>
Message-ID: <7kGha.3779$qn.443553@localhost>
Source record: 121573

Has anyone slipped 100 watt transceiver power cable from the engine
compartment through the rubber grommet used to pass the electrics for power
window/ door locks / sound system in a late model chev truck.
I`ve heard of using the main cable harness pass through and the brake
release rubber seal through the fire wall.
Want to keep the power cable away from the truck computer module .
thanks,
Bill

6482. Re: 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:04:36 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E872358.9022E349@attbi.com>
Source record: 121668

Though I answered this! But anyway, Licensed in 1954 or 55. Went 10
meter mobile in 1956.

Deacon Dave, W1MCE

Crazy George wrote:
>
> A-54H
> PE-103A
> The TNS article was published in May 1953 CQ. How long did it take you to
> build yours?
>
> --
> Crazy George
> Remove NO and SPAM from return address
> "Dave Shrader" <david.shrader@attbi.com> wrote in message
> news:3E85C36E.27D4E520@attbi.com...
> > Dick, you forgot to mention the TNS!!
> >
> > Reference: Elmac AH54, Gonset Triband Converter, TNS, PE103 Dynamotor [I
> > think ... the 500 VDC unit not the 300 VDC unit].
> >
> > I had lots of fun with the referenced 'system' [If it qualified as a
> > system <grin>].
> >
> > Deacon Dave, W1MCE
> > + + +
> >
> > Dick wrote:
> > >
> > > The steel whip mounted as high as possible will be your best option.
> > > Your "starter quality" radio is a technological marvel compared to my
> > > first 10-meter mobile. I went to the junk yard and bought one of
> > > those under-dash radio boxes from a pre-WW II car. I stripped the
> > > parts out except for the vibrator power supply, and built a
> > > crystal-controlled radio with a 6V6 driving a 6L6. Don't remember
> > > what I used for a modulator. Receiver was a Gonset converter into the
> > > car radio. Worked the world with that radio.
> > >
> > > 73, Dick - W6CCD
> > >
> > > On Sat, 29 Mar 2003 06:44:00 GMT, GregEMT1(nospam)@netzero.com
> > > (KF6ALC) wrote:
> > >
> > > >I am just getting into 10 meters, and am looking for a good way to go

> > > >mobile. I have a fairly high 4wd truck that is also my daily driver,
> > > >so my first thought is to use a steel whip from CB on a ball mount off
> > > >the side of the bed, and trim it down a bit. I do use my truck off
> > > >road, and have already lost more than one mag mount antenna both from
> > > >bounces and trees, but I was wondering if there are any tips or
> > > >suggestions about this whip idea, or any ohter options. BTW, my rig
> > > >is only starter quality, a Radio Shack HTX-10, on sale for only $69.
> > > >I also have a fiberglass shell, so about 2 feet of the antenna would
> > > >be very close to that. Would the fiberglass eat alot of RF? Any help
> > > >on this issue is greatly appreciated!!!!
> > > >Greg
> > > >KF6ALC

6483. Re: 10 meter mobile questions

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:14:58 UTC
From: fmmck@aol.com
Message-ID: <20030330121458.25947.00000145@mb-ff.aol.com>
Source record: 121569

<< I am just getting into 10 meters, and am looking for a good way to go mobile. I have a fairly high 4wd truck that is also my daily driver, so my first thought is to use a steel whip from CB on a ball mount off the side of the bed, and trim it down a bit. I do use my truck off road, and have already lost more than one mag mount antenna both from bounces and trees, >>

Greg-

Naturally a full quarter wave will work best, but may present a problem at Macdonalds or the bank's drive-thru! On Ten Meters, a shortened antenna will still provide a reasonably good signal. The Ball Mount will provide security, but a shortened antenna may not be as sturdy as Stainless Steel.

You can use a CB whip that has a loading coil high on the antenna, and with an adjustable top element. You may have to cut off an inch or two of the top element, but it should work well when tuned for lowest SWR. A Ten Meter Hamstick may be better, but also a little longer.

About twenty years ago I modified a Sears SSB CB set for Ten Meters. Running stock power to a modified CB antenna using a magnet-mount on the roof of my car, I was able to work several European countries as well as South America, Australia and Hawaii. The Sun-Spot cycle was quite good at the time.

73, Fred, K4DII

6484. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:15:38 UTC
From: richardharrison@webtv.net
Message-ID: <5383-3E87263A-346@storefull-2311.public.lawson.webtv.net>
Source record: 121586

John Krac@ja.com wrote:
"Just make sure your ground rod is cleanly connected at the rod."

Yes. High resistance is bad for r-f efficiency and can pose a shock hazard.

1/2-ohm is trivial compared with 20-ohms which may or may not be typical for the earth`s resistance at the rod. It`s only 2.5%. A zillion amps would cause a large voltage drop but the very high voltage would likely trigger a flashover to another ground path.

Codes specify an "approved ground rod clamp". Make-shift ground rod connections may burn loose from extreme currents. A 1-ft gap in a ground wire won`t stop lightning, but if the wire comes loose, the lightning may go elsewhere.

Best regards, Richard Harrison, KB5WZI

6485. Re: Building a <$5 Yagi antenna for the 1850/1990MHz Sprint PCS band

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:16:30 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <3h8e8v8ca2k9d1jnkapdb2h4vu45e576ks@4ax.com>
Source record: 121570
Cross-posted to: rec.radio.amateur.antenna,alt.cellular.sprintpcs,alt.cellular.tech

On Sun, 30 Mar 2003 08:18:11 -0600, "Gene S" <genes@thegateway.net>
wrote:

>Good day, all.
>
>Here is a link to the Sprint tower locations:
>http://www.sprintsites.com/tower/combinedsearch_latlongresults.cfm

That didn't work, but I don't think that matters.

>I "think" I can see one of these Sprint towers,
>but will just have to experiment:
>AU54XC264 ~6mi
>AU54XC257 ~10mi
>AU54XC353 ~12mi
>
>I plan to build the antenna from this design:
>http://www.qsl.net/eb4eqa/
>See: GSM1800 12 Elements Yagi Antenna.
>I have the equipment to cut the elements to within .001"

Looks good.

>I plan to use PVC, like this design:
>http://www.alabamarailfan.com/scanner.php
>See: 3 Element Yagi made with PVC

Do it per the original plan first. The PVC is not going to be benign
to your design as at your scale the insulator will dominate what
should have been stray capacitance and throw the tuning off seriously.

>
>
>Building the antenna to the specific dimensions seems pretty
>easy. However, there are a number of ways to attach
>the cable wire & ground shield wires to the Driven.
>

Hi Gene,

Unfortunately that's where your reference page slips off the track.

I see the author has plenty of data showing excellent SWR, but in the
space of several sentences he also claims the design is not 50 Ohms
(OK in itself, but does not answer what impedance it IS). Further,
his discussion relating to this very issue is not very satisfying (it

follows in his section called dipole).

The long and short of it is that your efforts could go for naught, or you could see some improvement (which infers you could have as easily found an improvement for far less); or you could see vast improvement (if you could only get the thing aimed).

73's
Richard Clark, KB7QHC

6486. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:24:33 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303300924.1186eff5@posting.google.com>
Source record: 121571

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0303291405.354438ff@posting.google.com>...
> aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303290503.628af2ae@posting.google.com>...
> > richardharrison@webtv.net (Richard Harrison) wrote in message
news:<13046-3E8534F5-153@storefull-2314.public.lawson.webtv.net>...
> > > Art, KB9MZ wrote:
> > > "Do you agree that for this description we can maintain a figure eight
> > > pattern for frequencies 10 thru 20M?"
> > >
snip.

> Mark
> This I gotta see for a "small" dipole...

Do you really mean that ?

> What is pre conceived thinking of "charlatan" behaviour?

Mark
you haven,t been on this newsgroup for very many years.
There have been a succession of people who have been torn apart
by some of the supposedly notable figures on this newsgroup starting
with Roy,
Clark e.t.c under the pose that they are protecting amateur radio from
untruthes. Naturaly this attracts people who will hang on and catcall.
Now that Dr Cohen has gone I am the heir of this unfortunate behavior
and like others
before me I have tried to hang on to my self respect.

> Art, antennas follow known rules and laws of nature. If someone
> proposes an antenna that seems to break the known laws of nature, it's
> going to be natural that people question it's operation.

Yes Richard H made the same statement years ago but that is the
general pattern.

If you are
> going to continue to propose an antenna that seems to break the laws
> of nature, I'm going to continue to pick it apart until I prove one of
> us wrong. Get used to it. It's nothing personal. Yet....
snip.
> I'm not going to hold my breath though. MK

O.K. Mark
I would be willing to do the following
On a separate thread I would be willing to start from the beginning

a description of the whole antenna starting afresh all over again.
Now this new thread will be inundated by comments by others in an attempt to harrass, find fault e.t.c that if you respond to them the whole debate will be splintered into so many different ways that it will be impossible to continue.

So yes, I will go through the whole antenna thing with YOU ALONE where neither of us respond to interlopers attempts to disrupt.This ofcourse does not prevent communication on other threads even tho it may well be the same subject
since the internet is free and for all.

The antenna that I will share is one that is capable of efficient transmition from 10 down to 160M and below, rotatable such that a small lot can accomodate it. Its pattern will be one of a figure 8 at all times but ofcourse subject to the earth's influence the directive pattern elevation will follow normal elevation angles. It will also be confined to horisontal polarisation as moving into vertical polarisation situations will be to laborious at this point.

Since this antenna is seen as impossible by this group I feel it is important that we proceed slowly and with mutual agreement until we get either to a point
that contradicts laws of nature or total completion.
Politeness must be observed at all times. My computor is acting up and my antenna programs have gone, but if it interferes with the debate I will rectify the situation and obtain a fresh AO program from Beasely since that is versatile enough to deal with optimisation of element diameters together with the use of impedance values. It would help if we used the same programming and I would, if necessary, purchase a copy for you also. You have "page" abilities so I could send diagrams e.t.c. which you could display.
Again it would be a public interchange between only you and I which requires disregard to other posters on the same thread.
I give you one warning !
If you agree to any technical point that I discuss you will thus render yourself as a ligitimate target by certain 'professional' policemen and may well suffer the same fate of many that have proceeded you thru the years.
Best regards
Art

6487. Re: Clock radio impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:28:01 UTC
From: fmmck@aol.com
Message-ID: <20030330122801.25947.00000146@mb-ff.aol.com>
Source record: 121572

<< To gain better reception of the station that I like to wake
up to, I'm thinking of making an external antenna for my
clock radio. >>

GD-

If your radio has two screw terminals for an external antenna, it is likely to be 300 Ohms.

An easy antenna is a Folded Dipole made of a half wavelength of 300 Ohm twin-lead. The ends are twisted together and soldered. It is fed with more 300 Ohm twin-lead, spliced into one side of the antenna. (The result is like a flattened loop.) You can make the length a half wavelength for the frequency of your favorite station, or you could choose a frequency in the center of the band. It isn't critical.

If your radio has a single screw terminal for the antenna, the best you can do is connect a quarter wavelength of wire. To go further may require modification to the radio.

If your radio has a Co-Axial connector for an external antenna, then it is probably 75 Ohms. You can use Co-Axial cable to connect a simple dipole antenna.

With any of these options, you can often improve reception by rotating and/or moving the antenna.

73, Fred, K4DII

6488. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:29:04 UTC
From: richardharrison@webtv.net
Message-ID: <4061-3E872960-379@storefull-2318.public.lawson.webtv.net>
Source record: 121585

John Krac@ja.com wrote:
"Just make sure your ground rod is cleanly connected at the rod."

Yes. High resistance is bad for r-f efficiency and can pose a shock hazard.

1/2-ohm is trivial compared with 20-ohms which may or may not be typical for the earth`s resistance at the rod. It`s only 2.5%. A zillion amps would cause a large voltage drop but the very high voltage would likely trigger a flashover to another ground path.

Codes specify an "approved ground rod clamp". Make-shift ground rod connections may burn loose from extreme currents. A 1-ft gap in a ground wire won`t stop lightning, but if the wire comes loose, the lightning may go elsewhere.

Best regards, Richard Harrison, KB5WZI

6489. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:49:39 UTC
From: richardharrison@webtv.net
Message-ID: <4062-3E872E33-138@storefull-2318.public.lawson.webtv.net>
Source record: 121587

John Krac@ja.com wrote:
"Just make sure your ground rod is cleanly connected at the rod."

Yes. High resistance is bad for r-f efficiency and can pose a shock hazard.

1/2-ohm is trivial compared with 20-ohms which may or may not be typical for the earth`s resistance at the rod. It`s only 2.5%. A zillion amps would cause a large voltage drop but the very high voltage would likely trigger a flashover to another ground path.

Codes specify an "approved ground rod clamp". Make-shift ground rod connections may burn loose from extreme currents. A 1-ft gap in a ground wire won`t stop lightning, but if the wire comes loose, the lightning may go elsewhere.

Best regards, Richard Harrison, KB5WZI

6490. Re: loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 17:54:57 UTC
From: MC <mwc@umich.edu>
Message-ID: <XbGha.2558$XR3.78715@news.itd.umich.edu>
Source record: 121574

Thanks for the help everyone. My next question is: is it possible to make a smaller loop, which is some fraction of the larger loop, and still have respectable gain (I know smaller loop = less gain)?

Thanks again,
Mike

"Tarmo Tammaru" <t-tammaru@home.com> wrote in message
news:Jqacncaz6NKQqxujXTWcow@comcast.com...
> Mike,
>
> I ran EZNEC on the 3-1/4 by 2 antenna made of #14 wire, and the impedance
> at 100 MHz is 69 + j3.5. Close enough. Gain was .5 dbd. Actually, I was
> wrong about the 1050. It is supposed to be 1032, which should get rid of
the
> j3.5 term. With my dimensions, lowest SWR, 1.1:1, is at 100.2 MHz.
>
> Tam/WB2TT
> "Tarmo Tammaru" <t-tammaru@home.com> wrote in message
> news:0Yydnb8i9v6FahijXTWc3A@comcast.com...
> > Mike,
> >
> > I believe the formula for circomference in feet is 1050/F(MHZ). So, it
> would
> > be 10 feet 6 inches. If you make it square, the feedpoint impedance is
> about
> > 120 Ohms. If you make it about twice as high as wide, the feedpoint
> > impedance will be about 50 ohms. For 75 Ohms, you might want to try 3-3
by
> > 2. Note that a loop is slighty MORE than one
> wavelength.....................
>
>

6491. Re: "Correct" feedline length

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 18:14:14 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <WtGha.12403$PM3.550418@twister.southeast.rr.com>
Source record: 121575

First you must ask" what is the incorrect length and why is it incorrect.
So I guess the correct answer would depend on the capabilities of your
tunner, the ability of the line to function under conditions of high SWR and
the actual frequencies you use. The correct answer could be what ever it
take to connect the radio to the antenna, Better yet would be what ever
length is required for the system to work on the frequencies you use.

"Siddhartha" <jrm7287@rochester.rr.com> wrote in message
news:yvFga.3681$4v1.2780@twister.nyroc.rr.com...
> I have not posted on this antenna group before, nor have I spent an
> appreciable time reading the posts. Having said that I will submit an
often
> asked question, "What is the correct feedling length for a multi-band
dipole
> antenna". Do spare me the details of the electrical 1/2 wavelength
> intervals, etc. Regards, Jim.
>
>

6492. Re: Building a <$5 Yagi antenna for the 1850/1990MHz Sprint PCS band

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 18:24:39 UTC
From: Jeff <none@none.com>
Message-ID: <HDGha.12441$PM3.551894@twister.southeast.rr.com>
Source record: 121576
Cross-posted to: rec.radio.amateur.antenna,alt.cellular.sprintpcs,alt.cellular.tech

Why not just get a new phone, like the sanyo 4900. The reception is terrible on the ancient samsung 8500. You might not even need that antenna.

"Gene S" <genes@thegateway.net> wrote in message news:n1Dha.7134$Zo.83606@dfw-read.news.verio.net...
> Good day, all.
>
> I'm getting close to actually getting out the drill press & building
> a tiny little Yagi antenna to see if I can get a strong enough Sprint
> PCS signal at our house - which is in a valley, next to a 200' cliff.
> I have found a tower that provides a "weak" signal, providing I sit
> on top of the tin roof:-) The cell phone is the Samsung SCH-8500.
> (I am assuming that this phone ONLY operates in the 1900MHZ
> PCS range & never in the 800MHz range. We use the phone for
> voice only, never to link a PC, etc...)
>
> Here is a link to the Sprint tower locations:
> http://www.sprintsites.com/tower/combinedsearch_latlongresults.cfm
> I "think" I can see one of these Sprint towers,
> but will just have to experiment:
> AU54XC264 ~6mi
> AU54XC257 ~10mi
> AU54XC353 ~12mi
>
> I plan to build the antenna from this design:
> http://www.qsl.net/eb4eqa/
> See: GSM1800 12 Elements Yagi Antenna.
> I have the equipment to cut the elements to within .001"
> (Click on the tiny image to get a printable template.)
>
> I plan to use PVC, like this design:
> http://www.alabamarailfan.com/scanner.php
> See: 3 Element Yagi made with PVC
>
>
> Building the antenna to the specific dimensions seems pretty
> easy. However, there are a number of ways to attach
> the cable wire & ground shield wires to the Driven.
>
> Questions:
> 1. Assuming a "Delta" design, do I need to "cut" the Driven into
> two pieces of equal length - with an overall length of 3.1024" - then

> solder the cable wire to the top piece and solder the ground shield wire
> to the bottom half? I have seen the Driven bent so that the wire is
> soldered
> to the end of the "J" & the ground shield is soldered to the center
> of the Driven. My specific question is : What's the best way to build the
> Driven, and specifically, where do you solder the wire & ground shield
wire?
> I understand that it is important to solder each wire a specific distance
> from
> the other. I'm not sure what that distance is for ~1900MHz - and really
> do not feel like messing with a Gamma design.
>
> 2. Assuming a cable run of 20 to 30 feet - what specific type of cable
> do I need?
>
> I am generally confused as to why you would even attach the ground to
> the antenna - but will accept that there is a certain amount of witchcraft
> in the design of these little guys :-)
>
> Please feel free to email me if you like.
>
> THANKS in advance.
>
> Gene
> Briggs, TX
>
> --
> E-mail: genes@thegateway.net
>
>

6493. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 18:50:58 UTC
From: k9sqg@aol.com
Message-ID: <20030330135058.01488.00000149@mb-fa.aol.com>
Source record: 121578

What I do tin the upper few inches of the ground rod before installation. Then, after pounding it into the ground, I affix the nickle plated (won't rust) 1" ground braid to the ground rod with two stainless steel hose clamps. Then I solder the braid to the ground rod. After it cools, I spray it with liquid plastic. Wait for it to dry. Wrap it with electrical tape. Coat it with silicon rubber. Wait a couple of days for it to cure, then backfill the hole.

73s,

Evan

6494. IC-706MKIIG > UHV-6 Tuning Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 18:54:07 UTC
From: Drink <drink@coqui.net>
Message-ID: <b67eet$da8$3@newsreader.mailgate.org>
Source record: 121579

Hi Folks,
I finally installed my new IC-706MKIIG in the Jeep and have two problems.
My setup is as follows:
-IC-706MKIIG (control head remoted) with HM-118TN DTMF microphone
All power and ground cabling connected directly to car battery
-Comet CF-706 duplexer
-AT-180 tuner
-Comet UHV-6 multi-band antenna with 20m & 40m loading coils

Problem #1
When I try to manually tune the 20 meter band, the transceiver turns off.
The AT-180 attempts to tune but none of the bands appear to be tuned.

Problem #2
The UHV-6 doesn't want to tune to 10 meters with the optional 10m loading
coil in any configuration. Oddly, WITHOUT the 10m coil, the UHV-6 will tune
10m while the 20m coil IS installed (but only the upper portion of the band
around 29.600 MHz).

Is problem #1 an issue of an untunable antenna system and the transceiver
turns off to protect the radio?
Can both problems be fixed by tuning individual coils? I believed that
the antenna coils were roughly tuned from the factory and MAY benefit from
tweaking by the end-user.
I checked the SWR with the built in function in the MKIIG. What I found
was that the spot check showed 1:1 SWR. However, the plot check showed the
SWR max'ed out (4.0:1 on the vertical bar graph) across virtually all bands.
Does this indicate that the antenna isn't resonant at most frequencies but
the AT-180's matching it down to 1:1?
I understand matching impedances with a tuner and pruning antennas to
resonance. But, this case has me quite confused. My confusion's probably
due to using the MKIIG's spot & plot SWR function. I want to be very clear
before I consider trimming a brand new antenna system.
Ideas? Experiences?
Thank you in advance for any advice you guys can give.
Cordial 73's,
Drink, WP3JQ

6495. Re: Building a <$5 Yagi antenna for the 1850/1990MHz Sprint PCS band

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 18:56:12 UTC
From: Gene S <genes@thegateway.net>
Message-ID: <%5Hha.7140$Zo.83777@dfw-read.news.verio.net>
Source record: 121580
Cross-posted to: rec.radio.amateur.antenna,alt.cellular.sprintpcs,alt.cellular.tech

Thanks, Jeff.

I have been told that the SCH-8500 actually works better
than the newer phones because of the frequency - hard to
figure it all out :-)

Gene

--
E-mail: genes@thegateway.net

"Jeff" <none@none.com> wrote in message
news:HDGha.12441$PM3.551894@twister.southeast.rr.com...
> Why not just get a new phone, like the sanyo 4900. The reception is
> terrible on the ancient samsung 8500. You might not even need that
> antenna.
>
>
> "Gene S" <genes@thegateway.net> wrote in message
> news:n1Dha.7134$Zo.83606@dfw-read.news.verio.net...
> > Good day, all.
> >
> > I'm getting close to actually getting out the drill press & building
> > a tiny little Yagi antenna to see if I can get a strong enough Sprint
> > PCS signal at our house - which is in a valley, next to a 200' cliff.
> > I have found a tower that provides a "weak" signal, providing I sit
> > on top of the tin roof:-) The cell phone is the Samsung SCH-8500.
> > (I am assuming that this phone ONLY operates in the 1900MHZ
> > PCS range & never in the 800MHz range. We use the phone for
> > voice only, never to link a PC, etc...)
> >
> > Here is a link to the Sprint tower locations:
> > http://www.sprintsites.com/tower/combinedsearch_latlongresults.cfm
> > I "think" I can see one of these Sprint towers,
> > but will just have to experiment:
> > AU54XC264 ~6mi
> > AU54XC257 ~10mi
> > AU54XC353 ~12mi
> >
> > I plan to build the antenna from this design:
> > http://www.qsl.net/eb4eqa/
> > See: GSM1800 12 Elements Yagi Antenna.
> > I have the equipment to cut the elements to within .001"
> > (Click on the tiny image to get a printable template.)

> >
> > I plan to use PVC, like this design:
> > http://www.alabamarailfan.com/scanner.php
> > See: 3 Element Yagi made with PVC
> >
> >
> > Building the antenna to the specific dimensions seems pretty
> > easy. However, there are a number of ways to attach
> > the cable wire & ground shield wires to the Driven.
> >
> > Questions:
> > 1. Assuming a "Delta" design, do I need to "cut" the Driven into
> > two pieces of equal length - with an overall length of 3.1024" - then
> > solder the cable wire to the top piece and solder the ground shield wire
> > to the bottom half? I have seen the Driven bent so that the wire is
> > soldered
> > to the end of the "J" & the ground shield is soldered to the center
> > of the Driven. My specific question is : What's the best way to build
the
> > Driven, and specifically, where do you solder the wire & ground shield
> wire?
> > I understand that it is important to solder each wire a specific
distance
> > from
> > the other. I'm not sure what that distance is for ~1900MHz - and really
> > do not feel like messing with a Gamma design.
> >
> > 2. Assuming a cable run of 20 to 30 feet - what specific type of cable
> > do I need?
> >
> > I am generally confused as to why you would even attach the ground to
> > the antenna - but will accept that there is a certain amount of
witchcraft
> > in the design of these little guys :-)
> >
> > Please feel free to email me if you like.
> >
> > THANKS in advance.
> >
> > Gene
> > Briggs, TX
> >
> > --
> > E-mail: genes@thegateway.net
> >
> >
>
>

6496. Re: Building a <$5 Yagi antenna for the 1850/1990MHz Sprint PCS band

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 18:58:48 UTC
From: Gene S <genes@thegateway.net>
Message-ID: <q8Hha.7141$Zo.83938@dfw-read.news.verio.net>
Source record: 121581
Cross-posted to: rec.radio.amateur.antenna,alt.cellular.sprintpcs,alt.cellular.tech

Thanks, Richard.

Looks like I'll just have to do a bit of tweaking & just
hope for the best. Seems like a tiny deviation can
have a big effect...

Gene

--
E-mail: genes@thegateway.net

"Richard Clark" <kb7qhc@attbi.com> wrote in message
news:3h8e8v8ca2k9d1jnkapdb2h4vu45e576ks@4ax.com...
> On Sun, 30 Mar 2003 08:18:11 -0600, "Gene S" <genes@thegateway.net>
> wrote:
>
> >Good day, all.
> >
> >Here is a link to the Sprint tower locations:
> >http://www.sprintsites.com/tower/combinedsearch_latlongresults.cfm
>
> That didn't work, but I don't think that matters.
>
> >I "think" I can see one of these Sprint towers,
> >but will just have to experiment:
> >AU54XC264 ~6mi
> >AU54XC257 ~10mi
> >AU54XC353 ~12mi
> >
> >I plan to build the antenna from this design:
> >http://www.qsl.net/eb4eqa/
> >See: GSM1800 12 Elements Yagi Antenna.
> >I have the equipment to cut the elements to within .001"
>
> Looks good.
>
> >I plan to use PVC, like this design:
> >http://www.alabamarailfan.com/scanner.php
> >See: 3 Element Yagi made with PVC
>
> Do it per the original plan first. The PVC is not going to be benign
> to your design as at your scale the insulator will dominate what
> should have been stray capacitance and throw the tuning off seriously.
>

> >
> >
> >Building the antenna to the specific dimensions seems pretty
> >easy. However, there are a number of ways to attach
> >the cable wire & ground shield wires to the Driven.
> >
>
> Hi Gene,
>
> Unfortunately that's where your reference page slips off the track.
>
> I see the author has plenty of data showing excellent SWR, but in the
> space of several sentences he also claims the design is not 50 Ohms
> (OK in itself, but does not answer what impedance it IS). Further,
> his discussion relating to this very issue is not very satisfying (it
> follows in his section called dipole).
>
> The long and short of it is that your efforts could go for naught, or
> you could see some improvement (which infers you could have as easily
> found an improvement for far less); or you could see vast improvement
> (if you could only get the thing aimed).
>
> 73's
> Richard Clark, KB7QHC

6497. Re: Transceiver cable from engine side to passenger compartment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 18:59:33 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <bafe8vc9u60d2ul6lld52o0pm6f016okic@4ax.com>
Source record: 121582

On Sun, 30 Mar 2003 18:04:20 +0100, "Bill East" <beast@pcs.mb.ca>
wrote:

>
>Has anyone slipped 100 watt transceiver power cable from the engine
>compartment through the rubber grommet used to pass the electrics for power
>window/ door locks / sound system in a late model chev truck.
>I`ve heard of using the main cable harness pass through and the brake
>release rubber seal through the fire wall.
>Want to keep the power cable away from the truck computer module .
>thanks,
>Bill
>
That's how I do it in my Jeep Cherokees. In fact, one of the
advantages of have a vehicle model used by public safety agencies is
that there is a dedicated pass through just for accessories like
radios. My advice is to use a 30 amp automotive relay to contol the
power the same way the broadcast radio is controlled. Don't attach
the power wires directly to the battery either. Use the high-current
power center under the hood. Thus will avoid corrsion problems in the
power wire. My VHF/UHF is wired this way and is noise and trouble
free.

Russ

6498. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 19:06:29 UTC
From: dplatt@radagast.org
Message-ID: <v8eg1lcb5liec1@corp.supernews.com>
Source record: 121583

In article <85ed38d.0303300924.1186eff5@posting.google.com>,
Art Unwin KB9MZ <aunwin@insightbb.com> wrote:

> I would be willing to do the following
>On a separate thread I would be willing to start from the beginning
>a description of the whole antenna starting afresh all over again.
>Now this new thread will be inundated by comments by others in an
>attempt to harrass, find fault e.t.c that if you respond to them the
>whole debate will be splintered into so many different ways that it
>will be impossible to continue.
>
> So yes, I will go through the whole antenna thing with YOU ALONE
>where neither of us respond to interlopers attempts to disrupt.This
>ofcourse does not prevent communication on other threads even tho it
>may well be the same subject
>since the internet is free and for all.

Art,

If you're really serious about having that be a closed discussion, I'd suggest that you figure out a way to do it other than via USENET. Maybe, have the discussion via email, and post the dialog on a Web site (if you really do want to have the back-and-forth discussion visible to the public).

Expecting to use a world-wide public discussion infrastructure for a private discussion, and _not_ have other people react and criticize, simply isn't terribly realistic. And, there are those who would suggest that it's quite rude to do - you'd be using the resources of many thousands of sites to hold your discussion, but refusing to allow those sites' owners and users to participate.

If you want a small-group discussion of more than two people, you could use one of the various mailing-list services available (I believe that Yahoo Groups would let you set up a closed, by-invitation-only mailing list).

I also have one very serious suggestion to make, to facilitate your discussions. When you say that you will describe the antenna, I suggest that you use the time-honored-and-extremely-reliable method of drawing a good picture of it, with all of the necessary details! As others have suggested (and you yourself seem to have agreed), your past attempts to describe this antenna verbally have not worked out at all well. Although you say that you've given all of the information about it, it appears that nobody who has read your descriptions has been able to understand them well enough to reproduce the antenna, or

create a model of it, which you feel is accurate and satisfactory.

So, in order to keep this from happening *again* in this new discussion (and I gather that it's a long-standing problem) I suggest that you simply sketch out an engineering diagram which you feel is accurate enough to allow other people to *see* what it is that you're talking about.

Doesn't have to be terribly fancy, or entirely to scale. You can probably sketch it out on a pad of paper, in less time than it will take you to respond to this message or any of the other ones in this thread.

It'd probably help if, in addition to drawing the antenna itself, you could annotate it with markings to show the current distribution that you believe will exist.

Once you've done this, you'll have given the people involved in the discussion (whoever and however many they are) something tangible to work with. They could analyze your design using conventional antenna-modelling techniques (software or paper), and determine the pattern and impedance and efficiency which would be predicted by conventional antenna theory.

If your predictions differ from conventional theory, then they (or you) could actually build the antenna, or a scale model of it, and see what the actual behavior and performance are, and see if you've discovered something novel, rediscovered something old, or simply designed something which doesn't actually work.

Now, whether you choose to make this drawing/diagram/design visible to people outside your small discussion group is entirely your own decision. I hope that you will - I think you'd get some valuable analysis and feedback - but if you want to keep it private to a small group then that's certainly a proper choice.

What I suggest that you do _not_ do, is to continue with your current approach of imprecise verbal descriptions, theoretical arguments and requests-for-agreement where you haven't fully defined the actual device or conditions in terms that anyone can comprehend, and your occasional tendency towards verbal martyrdom. It just isn't working... it isn't helping you or anyone else get to the truth.

One of the biggest difference - perhaps *the* biggest difference - between a scientist, and a crackpot, is that the scientist is willing to describe his/her research and inventions accurately enough that other people can reproduce the invention and evaluate it. A scientist produces tangible results. A crackpot waves his hands a lot, theorizes a lot, but just never manages to deliver results other than those which could be predicted by the very theories that the crackpot disparages.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

6499. Re: Reducing sensitivy of 49 MHz whip

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 19:48:13 UTC
From: cprstn54zz@att.net
Message-ID: <3e874988.151648718@news-server.optonline.net>
Source record: 121588

On Sun, 30 Mar 2003 12:27:40 -0000, "David Robbins" <k1ttt@arrl.net>
wrote:
>yes, there are several ways to reduce sensitivity...
slip some ferrite beads over it . . .

Ferrite is the easiest. Can the ferrite touch the whip? Or should I
tape the whip first?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

6500. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 19:49:39 UTC
From: john <johnkrac@ja.com>
Message-ID: <nTHha.341271$na.26185435@news2.calgary.shaw.ca>
Source record: 121589

I'm no chemist or metalurgist...but as far as dissimilar metals: how is nickle and copper/steel...I mean, will it create it's own potential and further oxidation?

Granted it may not create so large an impedance to cause problems....more curious.

"K9SQG" <k9sqg@aol.com> wrote in message news:20030330135058.01488.00000149@mb-fa.aol.com...
> What I do tin the upper few inches of the ground rod before installation.
> Then, after pounding it into the ground, I affix the nickle plated (won't rust)
> 1" ground braid to the ground rod with two stainless steel hose clamps. Then I
> solder the braid to the ground rod. After it cools, I spray it with liquid
> plastic. Wait for it to dry. Wrap it with electrical tape. Coat it with
> silicon rubber. Wait a couple of days for it to cure, then backfill the hole.
>
> 73s,
>
> Evan

6501. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 20:29:48 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E8753BC.1080701@ieee.org>
Source record: 121590

john wrote:
> I'm no chemist or metalurgist...but as far as dissimilar metals: how is
> nickle and copper/steel...I mean, will it create it's own potential and
> further oxidation?

Try doing a web search for "dissimilar metals". I got 18,300 hits.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

6502. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 20:56:37 UTC
From: richardharrison@webtv.net
Message-ID: <25291-3E875A05-375@storefull-2316.public.lawson.webtv.net>
Source record: 121591

Art, KB9MZ wrote:
"The antenna I will share is one that is capable of efficient
transmission from 10 down to 160M and below---."

Art, please say for all of us how your antenna is different from Figure 29 (D) on page 444 of the 15th edition of the "Radio Handbook" edited by W6SAI.

With that start, maybe all of us could figure what you are saying.

Best regards, Richard Harrison, KB5WZI

6503. Re: loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 21:46:42 UTC
From: richardharrison@webtv.net
Message-ID: <18335-3E8765C2-351@storefull-2317.public.lawson.webtv.net>
Source record: 121594

Mike wrote:
"Is it possible to make a smaller loop---?"

Yes, but since it isn`t self-resonant, it must be shunted with a capacitor to tune it to resonance at the desired frequency.

Arnold B. Bailey in "TV and Other Receiving Antennas" has a 200 MHz loop.

It is a 15-in.long, 1/2-in.dia. tube, bent in a circle, shunted at the feed point with a 3.6 micro-micro-farad capacitor.

Scaled to 100 MHz, it is 30-in. long, 1-in. tube, bent in a circle, shunted at the feed point with a 7.2 pico-farad capacitor.

The rub is that this parallel resonant loop has a resistance at its center frequency of 80,000 ohms. Bandwidth is only 2.5% at 3 db down, plenty for a 200 KHz FM channel. Gain is -3dBd at resonance, so the power loss from a full-size resonant loop is only 50%.

Best regards, Richard Harrison, KB5WZI

6504. Re: loop antenna for 100 MHz?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 22:01:52 UTC
From: richardharrison@webtv.net
Message-ID: <18335-3E876950-358@storefull-2317.public.lawson.webtv.net>
Source record: 121595

Mike,
I had a senior moment. The Gain of a full-size loop is 1 to 2 db over a dipole, so the gain of Arnold Bailey`s loop is 4 to 5 db less than a full-wavelength loop.

Incidentally, Bill Orr says in "All About Cubical Quad Antennas" that "optimum length of the Quad is very close to 0.257 electrical wavelength". So, 0.007 wavelength is added to the free-space 1/4-wavelength, or 2.7%.

Best regards, Richard Harrison, KB5WZI

6505. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 22:03:57 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E8769CD.9C15B460@cwis.net>
Source record: 121592

Art & Mark,
If you want to start another thread as Art described,
and if Art will truely describe his antenna in such a
way that others can understand exactly what he means, I
for one won't post to it until it is ended. As Dave said,
posting here, 'in public', isn't the 'best' way of doing
it, so, 'whatever you think'.
'Doc

6506. Re: Building a <$5 Yagi antenna for the 1850/1990MHz Sprint PCS band

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 22:12:37 UTC
From: Frank Harris <frankbhX@XcompuserveX.com>
Message-ID: <b67q26$5hg$1@ngspool-d02.news.aol.com>
Source record: 121593
Cross-posted to: rec.radio.amateur.antenna,alt.cellular.sprintpcs,alt.cellular.tech

> 2. Assuming a cable run of 20 to 30 feet - what specific type of cable
> do I need?

When I was looking into parts for directional antennas for 802.11b wireless computer networks (2400MHz), the LMR-400 cables from this place claimed to be low loss and able to run the distances you're talking about. You can get them with N-connectors or with no connectors. I don't know if these cables would work just as well at 1900 MHz.

Fleeman Anderson & Bird, Corp http://www.fab-corp.com/

Also they sell some directional, parabolic antennas that say they work at 1700-2400 MHz, so maybe you could just buy one for $69 instead of figuring out how to make one.

By the way, all the posts on the newsgroup about the Sanyo 4900 having the best reception are true. I haven't bought one, but I borrowed one and it held a solid signal in my usual marginal or barely-there spots.

--
Frank Harris in San Francisco with an A460

6507. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 22:40:14 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <inKha.12174$RS6.1425650@twister.southeast.rr.com>
Source record: 121597

At work we test our ground rods once a years. If it will blow a 5 amp fuse
ocnected to 120VAC line it PASSES.
"KB1FLR" <kb1flr@hotmail.com> wrote in message
news:7c04d49.0303290654.590f763f@posting.google.com...
> Hi All,
>
> The grounding rod for my station has been through a few New England
> winters and looks like it needs a bit of clean-up. I would like to
> make certain the conductivity of my outdoor ground rod is not
> compromised by oxidation. How does one remove the oxidation from
> copper? Contact cleaner?
>
> Best Regards,
> Rick, KB1FLR

6508. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 22:46:11 UTC
From: "J. Harvey" <JM002.Harvey_NOSPAM_@Sympatico.ca>
Message-ID: <TsKha.517$oA1.95587@news20.bellglobal.com>
Source record: 121598

"Dave Platt"
> Although you say that you've given all of the information
> about it, it appears that nobody who has read your
> descriptions has been able to understand them well
> enough to reproduce the antenna, or create a model of it,
> which you feel is accurate and satisfactory.

Is this discussion about either of Art's antenna related patents - numbers 5,790,081 or 5,625,367 ? They are, of course, available on-line at www.uspto.gov (complete with pictures in TIFF format - you'll need a free viewer).

I'm not sure if that would help or not...

There's also his other two 'push button' patents - numbers 4,013,856 and 4,159,405.

Interesting... ...sort of.

The Case Against Patents:
http://www.tinaja.com/glib/casagpat.pdf
by Don Lancaster

Also:
http://www.tinaja.com/glib/newpats.pdf
http://www.tinaja.com/glib/when2pat.pdf
http://www.tinaja.com/

6509. Thanks!

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 22:55:34 UTC
From: kb1flr@hotmail.com
Message-ID: <7c04d49.0303301455.34fa2fea@posting.google.com>
Source record: 121599

Thanks to everyone who responded. As usual, it is never easy, but always interesting and informative. I am a firm believer in safe station operation, since it can directly affect the well-being of my family. No sense becoming a statistic when it is reasonably preventable.

73 de KB1FLR

Rick

6510. Re: IC-706MKIIG > UHV-6 Tuning Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 23:08:35 UTC
From: fmmck@aol.com
Message-ID: <20030330180835.00505.00000107@mb-ch.aol.com>
Source record: 121600

<< I finally installed my new IC-706MKIIG in the Jeep and have two problems. >>

Drink-

You have a different problem than you think. Perhaps Chris, KR8LR, has it pegged as a matter of putting a duplexer in the wrong place. Or, you may not have things configured the way you say. It is definitely NOT a simple problem of tuning the individual elements.

I suggest you borrow an MFJ 249/259/269 antenna analyzer to check the antenna alone. Although there are sometimes minor differences at a higher power level, you can fairly accurately set the individual band elements. If the MFJ doesn't show things as being fairly close, you might have some kind of open ground or shorted co-ax problem.

If the antenna checks out by itself, try connecting it directly to the 706 and see how it reacts on a frequency where the MFJ showed a good SWR. Then try inserting the AT-180 between the 706 and the antenna, and see if it can tune into a known good (or close) SWR.

Lastly, put the duplexer back in the circuit and see how it works then. Since the tuner would tend to filter out signals above Six Meters, I think it would be connected with the antenna to its common connector, HF to the AT-180's output connector, et cetera. I assume the duplexer was intended for this combination and doesn't separate Six Meters from HF.

One other thing to consider, is that you might have a bad power negative connection, and the rig is using the antenna's ground for power. If that is the case, the rig might shut down when power is drawn through a high-resistance ground, making you think it is due to high SWR.

Good Luck!

73, Fred, K4DII

6511. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 23:26:21 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303301526.49cd3e8e@posting.google.com>
Source record: 121601

Thanks for your posting David and also for your suggestions.
I respect Mark and he has tried hard in the past to follow what I am saying.
Others use this subject for poking fun.For me to repeat what I have tried in past years is just not on. It is worse than being subject to a congressional hearing except all of congress would be talking and demanding at the same time that just leads to a whole lot of problems.
If Mark believes that the method chosen is rude or does not want to participate then that is the end of it. There has no inclination to discuss this thing in private and I do not have E mail facilities.
There is no reason that a discussion can be open to all on a different thread and I am sure that Mark is smart enough to participate in it and take note of any disparities. Regarding pictures, I have busted my equipment when my tower broke but that will be repaired within 14 days and a new antenna
with some added variables is also available for pictures. If somebody wants to provide page facilities that would be good and take the onus off of Mark.
Anyway until Mark has had his say nothing can be done.
It will be available to all anyway if and when I get the patent for it , it is just that it will take longer
Thanks again
Art

dplatt@radagast.org (Dave Platt) wrote in message news:<v8eg1lcb5liec1@corp.supernews.com>...
> In article <85ed38d.0303300924.1186eff5@posting.google.com>,
> Art Unwin KB9MZ <aunwin@insightbb.com> wrote:
>
> > I would be willing to do the following
> >On a separate thread I would be willing to start from the beginning
> >a description of the whole antenna starting afresh all over again.
> >Now this new thread will be inundated by comments by others in an
> >attempt to harrass, find fault e.t.c that if you respond to them the
> >whole debate will be splintered into so many different ways that it
> >will be impossible to continue.
> >
> > So yes, I will go through the whole antenna thing with YOU ALONE
> >where neither of us respond to interlopers attempts to disrupt.This
> >ofcourse does not prevent communication on other threads even tho it
> >may well be the same subject
> >since the internet is free and for all.
>
> Art,

> If you're really serious about having that be a closed discussion, I'd
> suggest that you figure out a way to do it other than via USENET.
> Maybe, have the discussion via email, and post the dialog on a Web
> site (if you really do want to have the back-and-forth discussion
> visible to the public).
>
> Expecting to use a world-wide public discussion infrastructure for a
> private discussion, and _not_ have other people react and criticize,
> simply isn't terribly realistic. And, there are those who would
> suggest that it's quite rude to do - you'd be using the resources of
> many thousands of sites to hold your discussion, but refusing to allow
> those sites' owners and users to participate.
>
> If you want a small-group discussion of more than two people, you
> could use one of the various mailing-list services available (I
> believe that Yahoo Groups would let you set up a closed,
> by-invitation-only mailing list).
>
> I also have one very serious suggestion to make, to facilitate your
> discussions. When you say that you will describe the antenna, I
> suggest that you use the time-honored-and-extremely-reliable method of
> drawing a good picture of it, with all of the necessary details! As
> others have suggested (and you yourself seem to have agreed), your
> past attempts to describe this antenna verbally have not worked out at
> all well. Although you say that you've given all of the information
> about it, it appears that nobody who has read your descriptions has
> been able to understand them well enough to reproduce the antenna, or
> create a model of it, which you feel is accurate and satisfactory.
>
> So, in order to keep this from happening *again* in this new
> discussion (and I gather that it's a long-standing problem) I suggest
> that you simply sketch out an engineering diagram which you feel is
> accurate enough to allow other people to *see* what it is that you're
> talking about.
>
> Doesn't have to be terribly fancy, or entirely to scale. You can
> probably sketch it out on a pad of paper, in less time than it will
> take you to respond to this message or any of the other ones in this
> thread.
>
> It'd probably help if, in addition to drawing the antenna itself, you
> could annotate it with markings to show the current distribution
> that you believe will exist.
>
> Once you've done this, you'll have given the people involved in the
> discussion (whoever and however many they are) something tangible to
> work with. They could analyze your design using conventional
> antenna-modelling techniques (software or paper), and determine the
> pattern and impedance and efficiency which would be predicted by

> conventional antenna theory.
>
> If your predictions differ from conventional theory, then they (or
> you) could actually build the antenna, or a scale model of it, and see
> what the actual behavior and performance are, and see if you've
> discovered something novel, rediscovered something old, or simply
> designed something which doesn't actually work.
>
> Now, whether you choose to make this drawing/diagram/design visible to
> people outside your small discussion group is entirely your own
> decision. I hope that you will - I think you'd get some valuable
> analysis and feedback - but if you want to keep it private to a small
> group then that's certainly a proper choice.
>
> What I suggest that you do _not_ do, is to continue with your current
> approach of imprecise verbal descriptions, theoretical arguments and
> requests-for-agreement where you haven't fully defined the actual
> device or conditions in terms that anyone can comprehend, and your
> occasional tendency towards verbal martyrdom. It just isn't
> working... it isn't helping you or anyone else get to the truth.
>
> One of the biggest difference - perhaps *the* biggest difference -
> between a scientist, and a crackpot, is that the scientist is willing
> to describe his/her research and inventions accurately enough that
> other people can reproduce the invention and evaluate it. A scientist
> produces tangible results. A crackpot waves his hands a lot,
> theorizes a lot, but just never manages to deliver results other than
> those which could be predicted by the very theories that the crackpot
> disparages.

6512. Re: IC-706MKIIG > UHV-6 Tuning Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-30 23:34:35 UTC
From: sideband <KRNO8SPAMLR@cac.net>
Message-ID: <3E877227.8040207@cac.net>
Source record: 121596

If I recall correctly, the AT-180 has coax input and output... try
putting it BEFORE the duplexer...

as in
Duplexer
706 HF&6 --------- AT-180 ------]
|------ Antenna
706 144/440 ------------------------]

If that's your current configuration, try switching them.

Duplexer
706 HF&6 ---------------------------]
|----- AT-180 ----- Antenna
706 144/440 ------------------------]

Of course, if you do it this way, you need to make sure the AT-180 is
in pass-thru so 2 and 440 work.

The other option would be to use a separate antenna for HF and 2/440,
as I do on the truck (http://www.qsl.net/kr8lr/TruckPics/).

Make sure the case of the 706, the case of the AT-180 and (if it's
metal) the case of the duplexer are all well grounded to the chassis.

The only reason I can think of for the 706 to shut off is RF getting
back to the control circuitry, so you might also try putting some RF
chokes on the separation cable.

Hope this helps.

73 de KR8LR, Chris

Drink wrote:
> Hi Folks,
> I finally installed my new IC-706MKIIG in the Jeep and have two problems.
> My setup is as follows:
> -IC-706MKIIG (control head remoted) with HM-118TN DTMF microphone
> All power and ground cabling connected directly to car battery
> -Comet CF-706 duplexer
> -AT-180 tuner
> -Comet UHV-6 multi-band antenna with 20m & 40m loading coils
>
> Problem #1
> When I try to manually tune the 20 meter band, the transceiver turns off.
> The AT-180 attempts to tune but none of the bands appear to be tuned.
>

> Problem #2
> The UHV-6 doesn't want to tune to 10 meters with the optional 10m loading
> coil in any configuration. Oddly, WITHOUT the 10m coil, the UHV-6 will tune
> 10m while the 20m coil IS installed (but only the upper portion of the band
> around 29.600 MHz).
>
> Is problem #1 an issue of an untunable antenna system and the transceiver
> turns off to protect the radio?
> Can both problems be fixed by tuning individual coils? I believed that
> the antenna coils were roughly tuned from the factory and MAY benefit from
> tweaking by the end-user.
> I checked the SWR with the built in function in the MKIIG. What I found
> was that the spot check showed 1:1 SWR. However, the plot check showed the
> SWR max'ed out (4.0:1 on the vertical bar graph) across virtually all bands.
> Does this indicate that the antenna isn't resonant at most frequencies but
> the AT-180's matching it down to 1:1?
> I understand matching impedances with a tuner and pruning antennas to
> resonance. But, this case has me quite confused. My confusion's probably
> due to using the MKIIG's spot & plot SWR function. I want to be very clear
> before I consider trimming a brand new antenna system.
> Ideas? Experiences?
> Thank you in advance for any advice you guys can give.
> Cordial 73's,
> Drink, WP3JQ
>
>

6513. Re: Transceiver cable from engine side to passenger compartment

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 00:14:22 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <wDLha.12537$G6.11049@fe01.atl2.webusenet.com>
Source record: 121602

In Chevys, Fords (and , think in chrystler products), you will find , at various places under the floormat, what appear to be grommits , sometimes plugged with a pin for holding down carpeting, ect. these are blocked in the engine compartment, but can be clipped off (tho some are hidden behind, say the brake , or heater core) tho sometimes hard to spot, once these are trimmed off, can easily pass up to a #10 wire into the engine compartment. used this trick for mobile installations for years, without a problem, and, btw, DID hit a computer module once, right after they first appeared in vehicles. apparantly others had the same problem, as shortly after that (about 15 years ago, detailed this- turned out that they could be mounted ANYWHERE in the vehicle , necessitating the feeling around ON BOTH SIDES of dash, firewall, ect, to insure that NOTHING was there! Also, be sure to route any wireing, INCLUDING COAX, as far away as possible from the catylitic converter, and can melt wires, and definately will short coax, even if looks ok! use chanelling at the door trim for feeding wires. as info, Jim NN7K

"Russ" <carlzomer@hotmail.com> wrote in message news:bafe8vc9u60d2ul6lld52o0pm6f016okic@4ax.com...
> On Sun, 30 Mar 2003 18:04:20 +0100, "Bill East" <beast@pcs.mb.ca>
> wrote:
>
> >
> >Has anyone slipped 100 watt transceiver power cable from the engine
> >compartment through the rubber grommet used to pass the electrics for
power
> >window/ door locks / sound system in a late model chev truck.
> >I`ve heard of using the main cable harness pass through and the brake
> >release rubber seal through the fire wall.
> >Want to keep the power cable away from the truck computer module .
> >thanks,
> >Bill
> >
> That's how I do it in my Jeep Cherokees. In fact, one of the
> advantages of have a vehicle model used by public safety agencies is
> that there is a dedicated pass through just for accessories like
> radios. My advice is to use a 30 amp automotive relay to contol the
> power the same way the broadcast radio is controlled. Don't attach
> the power wires directly to the battery either. Use the high-current
> power center under the hood. Thus will avoid corrsion problems in the
> power wire. My VHF/UHF is wired this way and is noise and trouble
> free.
>
> Russ

6514. Re: Reducing sensitivy of 49 MHz whip

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 00:30:29 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <HSLha.12615$G6.4871@fe01.atl2.webusenet.com>
Source record: 121603

Ken, have converted similar (toy 49 mhz) radios into the 50 MHz band. get crystals for 50.50, or higher. usually , the xmitter needs no adjusting, however, the reciever will need to be readjusted (this assumes that your bud is also licensed) however, if superhet rx, will need signal generator super-regen, just peak the rx coil for best quieting, at , say couple hundred feet. have used these modified (10 MW), dont laugh too hard (and these am) over distances of 5-6 MILES using an external antenna! as these are fm, be sure, when ordering xtals, to send the originals to the xtal manufacturer, so the frequency alignment will match xmit and rcve for these! and good luck, jim nn7k

"Ken" <cprstn54zz@att.net> wrote in message
news:3e85f6c8.64928687@news-server.optonline.net...
> I bought some RS 49 MHz low-power FM VOX walkie talkies. There is no
> squelch adjustment and the QRM in my area keep the squelch open most
> of the time. I have been unsucessful in my attemps to get information
> or a circuit diagram from RS, although there is a detailed parts list:
> http://support.radioshack.com/support_electronics/doc30/30437.htm
>
> I have ascertained with a scanner that the QRM is narrow band. The
> headset antenna has a 20" flexible whip. Is there anything I can do to
> the whip to desentitize RX and effectively increase squelch?
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

6515. Re: Military Ribbon Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 00:47:12 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <f6Mha.12691$G6.8828@fe01.atl2.webusenet.com>
Source record: 121604

My former employer used "Dribble" antennas with good results. these sound like the antennas you describe (about 12-14 inches long, vwry flexible, (and for counterpoise, the METAL in the frame/circuit board is the counterpoise!) They obtained an adaptor, both in "F" fitting for motorola ht-1000, and in 3/8 inch stud (for mt1000/ht600 motorolas, but you probably could make one with a 4-40 , or 3-56 screw with the head chopped off, soldered into the center pin of a bnc male. , would need a 1/4 inch piece of plastic , drilled out in the center, forced down inside the bnc connector. and cinch down the antenna with a nut. dont know who they obtanien these adaptors from, but try a search for "dribble antenna" jim nn7k
"efoxx" <efuchs03@hotmail.com> wrote in message
news:bf1abc14.0303271954.2e03083c@posting.google.com...
> I have a ribbon antenna for the prc-126/128. I am looking for a
> connector or adapter to mate this antenna to a standard bnc. I am
> also wondering about grounding for the transceiver (it's originally
> designed for a ht) and impedance matching. I've tried finding a
> matching nut/washer combination, but cannot seem to match the military
> threading. It is a nice looking antenna and I have to admit that I
> like the style, so I don't want to build it into a pvc contraption.
> If anyone has any experience with using these antennas I would
> appreciate the help.

6516. Re: Horn antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 00:56:14 UTC
From: Jimnn7k@reno.rmci.net
Message-ID: <MeMha.12733$G6.10939@fe01.atl2.webusenet.com>
Source record: 121605

And another place (this was from a Early "Proceedings of the I.E.E.E.)
detailing a FRESNAL LENS for Microwave (similar to an Optical Lens) Maybe
someone has copy of that article? (found the original artical when about 16
in a used book store, obviously many moons ago!)
might find that interesting! Jim nn7k

"Dale Parfitt" <parinc@gte.net> wrote in message
news:3E84450E.8C521A4@gte.net...
>
>
> Chris W wrote:
>
> > I have a question about the Horn Antenna design in the ARRL Antenna Book
> > (19th edition). On page 18-43, Fig 67 it shows the path-length
> > difference between the center and the edge of a horn antenna. I talks
> > about how this will cause side lobs to form. I was wondering if cutting
> > a radius at the end of the horn in the H Plane wouldn't eliminate those
> > side lobes? I know you can't radius it in both the H and the E plane,
> > or could you? If you could I am pretty sure that would be much more
> > difficult than just doing it in the H Plane. I was also wondering if
> > this same problem exists with a horn for a circular wave guide.
> >
> > --
> > Chris W
>
> Hi Chris,
>
> Do a Google search under W1GHZ. Paul has a wonderful on-line antenna book
> that deals in depth with many feed designs- with E/H plane plots.
> I think you will find the newer circular aperture feeds to be superior to
> rectangular feeds- at least for dish illumination.
>
> Dale W4OP
>

6517. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 01:07:22 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303301707.356d635d@posting.google.com>
Source record: 121606

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<b656a5$r76$1@titan.btinternet.com>...
> Rick said -
>
> > The grounding rod for my station has been through a few New England
> > winters and looks like it needs a bit of clean-up. I would like to
> > make certain the conductivity of my outdoor ground rod is not
> > compromised by oxidation.
>
> ==========
> Rick,
>
> Don't waste your time and energy. The resistance of the thin, oxidised,
> corroded, pitted rod surface is much lower than the thick layer of soil it
> is in contact with.
>
> It is soil resistivity which controls the resistance of a metal rod to
> Earth.
>
> The only way of lowering rod resistance to Earth is to replace the soil
> surrounding the rod with a lower resistance material. Powdered coke (carbon
> or graphite) is good stuff. This also prolongs rod life - by delaying
> corrosion of the rod by acidic soil.
> ---
> Reg, G4FGQ

I could not agree with you more. I certainly would review what was
connected to it tho to ensure one was not setting up a ground loop to
devices that are grounded in a different location.
Regards
Art

6518. Re: IC-706MKIIG > UHV-6 Tuning Problem

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 01:14:50 UTC
From: Drink <drink@coqui.net>
Message-ID: <b684om$7oi$2@newsreader.mailgate.org>
Source record: 121607

Thanks Chris,
I'll check the duplexer again. Nice truck, BTW. Sheeesh! Don't think I've ever seen that much antenna on a semi before! One thing I like about the Jeep's that it's an inherently ugly vehicle. So, I could put a twenty foot Texas bug-catcher mounted seven feet up on the roof and only add to its appeal. Most folks would say, "That's pretty cool". Fellow jeepers would scowl and say, "That's pretty stupid, Dude... You'll tear it off on a limb.":)
While I got ya here, are there any decent calling freqs or nets for mobile operation? I gotta get this thing ready for an eight hour road trip and want to go "mobile". The gearing/tires in the Jeep keep me down to no more than 50 even on the interstate:)
Best Regards,
Drink, WP3JQ

6519. Re: Dipole, rotatable, design

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 03:03:08 UTC
From: rckchp@comcast.net
Message-ID: <6dc33f40.0303301903.537e89e8@posting.google.com>
Source record: 121608

> I'm trying to build my first rotatable dipole, multi-band antenna.

Take a look at the homebrew version of the Buddipole (there is also a comercially version available): http://www.qsl.net/w3ff/

It doesn't go down to 80/160m but its a proven design. As designed its intended for quick assembly/take down for portable ops, but could easily be built more "permanent" by gluing the pvc connectors, etc.

Rich K2CPE

6520. Re: Dipole + ladder line

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 03:18:04 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3E87B386.5020703@adelphia.net>
Source record: 121609

Chuck/KE4ETH wrote:
> "Mike Coslo" <mjc5@psu.edu> wrote in message
> news:3E84C08F.5020601@psu.edu...
>
>>
>>Dave Shrader wrote:
>>
>>>How do I modulate the signal created by my wife's tuner?? It's a tuning
>>>fork!! What does one eat with a tuning fork
>>
>>Tuner Fish!
>>
>>- Mike KB3EIA -
>>
>
>
> Sea flat??

HAR! Good double level one Chuck!

- Mike KB3EIA -

6521. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 03:25:24 UTC
From: Lloyd Guyot <lguyot@chartermi.net>
Message-ID: <v8fd6k7latbab6@corp.supernews.com>
Source record: 121610

How does one test for the prevention of ground loops? thanks, Lloyd
>
> I could not agree with you more. I certainly would review what was
> connected to it tho to ensure one was not setting up a ground loop to
> devices that are grounded in a different location.
> Regards
> Art

6522. Phasing/delay line combiner for two antenas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 03:34:35 UTC
From: "Eric F. Richards" <efricha@dim.com>
Message-ID: <66cf8vo46be92gm00q2gvk99bbf9i5on9i@4ax.com>
Source record: 121611

Greetings, all...

I posted this over on rec.radio.shortwave, but they seem to be caught up in a poly-sci discussion, so I'm going to try here.

I have two HF receive antennas that perform very well; a T2FD and a 250 foot random wire. I'd like to build a phaser for them.

Now doing so where the second antenna is in phase or 180 degrees out is fairly easy. What I want to do is build a delay line or phase shift network.

I've considered building a Goniometer, but have only found one article online about doing so. The construction seems easy, but what should the inductance of each of the windings be? I want something that will work from LF to 30 MHz, if possible.

Likewise, has anyone tried using an old Selsyn as a Goniometer?

The other approach, the brute-force approach, is to switch in and out various lenghts of LMR-100 as delay lines. If you do powers of two up to, say, 64 meters, you get a lot of flexibility.

You also get a lot of cable.

I've seen narrow-band phase-shift network modules on Mini-circuit's web page, but nothing to give me the coverage I want.

Any ideas or suggestions?

(Oh, BTW, I want to have no preamps or tuned circuits in whatever I build, because either/both are more hinderance than help, IMHO.)

Thanks!

--
73, Eric F. Richards, KB0YDN, efricha@dim.com
"A few old diehards still blazoned 'Spark Forever!' on their QSL cards..."
- from "200 Meters & Down", copyright 1936, ARRL

6523. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 04:04:05 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0303302004.6cecd838@posting.google.com>
Source record: 121613

Mr Harvey,

Yes you point to a few of my patents but my antenna patents have been part and parcel of my recovery from illness. Since antennas became my lifeline there are irregularities that I see in retrospect plus I initially dealt with a patent attorney until I came to the realisation that it was not the smart thing to do.
So another learning process came underway. That particular episode was published in a newspaper and if somebody has a way of placing it a place where all can read I think many might find it of interest and probably will explain some of my idiosyncracies Hi,Hi. Anyway what I am trying to say that to review patents which are not totally under the control of the applicant may well prove misleading. Subject to what Mark says I will describe the sequence of thought and events in order and in such a way that high school education will cover all, this not being for Mark who is more than that level but for others in the ham community who enjoy sharing of the hobby. Mark is the boss!
Since I have now made a new antenna with variables based on past experiences thru the years I can also supply photo's of the antenna at various stages.
As you are probably aware I have not gone commercial with anything even tho I have had offers, the reason being with so many falsehoods in the industry I decided I would do nothing until I got approval from my peers. It is many years later now and this aproval has not been forth coming. I can say however that I
can personally vouch what I say together with both modeling data and readily available mathematics data together with printed articles where others have
used to a certain fashion the same principles.
I have not 'invented' anything in my life on either side of the pond, all I have done is to research things that maybe connected or useful for me to achieve my aims which is basically what inventions are....to use known information in such away to achieve something that has not been produced before. Unfortunately because so much is known by all, it arouses derision from collegues and friends together with those who provided help under direction who feel they were a major part. One patent that comes to mind, not mentioned, was one where the company wanted to patent it, I had a manager and a draftsman that I placed on that claim
to avoid discomfort. I placed it in alphabetical order which upset my boss,
the patent was printed **** (the draftsman) et al and with the name Unwin I was last and therefore buried. As far as the Radio Handbook I have the latest edition but it is irrelavent since what I discussed

earlier this month, I held the patent for it!
I also apreciate some comments made that will help a lot. The past is
past,
the future can be much better with out the hatchets of the past.
Best Regards
Art. XG

"J. Harvey" <JM002.Harvey_NOSPAM_@Sympatico.ca> wrote in message
news:<TsKha.517$oA1.95587@news20.bellglobal.com>...
> "Dave Platt"
> > Although you say that you've given all of the information
> > about it, it appears that nobody who has read your
> > descriptions has been able to understand them well
> > enough to reproduce the antenna, or create a model of it,
> > which you feel is accurate and satisfactory.
>
> Is this discussion about either of Art's antenna related patents - numbers
> 5,790,081 or 5,625,367 ? They are, of course, available on-line at
> www.uspto.gov (complete with pictures in TIFF format - you'll need a free
> viewer).
>
> I'm not sure if that would help or not...
>
> There's also his other two 'push button' patents - numbers 4,013,856 and
> 4,159,405.
>
> Interesting... ...sort of.
>
>
> The Case Against Patents:
> http://www.tinaja.com/glib/casagpat.pdf
> by Don Lancaster
>
> Also:
> http://www.tinaja.com/glib/newpats.pdf
> http://www.tinaja.com/glib/when2pat.pdf
> http://www.tinaja.com/

6524. Re: Building a <$5 Yagi antenna for the 1850/1990MHz Sprint PCS band

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 04:04:10 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E87BE3A.124D45ED@cwis.net>
Source record: 121612
Cross-posted to: rec.radio.amateur.antenna,alt.cellular.sprintpcs,alt.cellular.tech

Gene,
Got any old CD's laying around? How about a wooden dowel rod about 6 - 8 feet long? Make a radial cut in one CD, drill a couple of small holes for a bolt on either side of the radial cut. Attach feed line to the two bolts. String the CD's on the dowel rod at the proper seperation, instant 'loop' beam. It isn't quite that simple, but almost.
'Doc

PS - Now you know what to do with all those AOL disks! I wonder, if you burn a CD with your phone number, will it only pick up your calls?

6525. Re: Phasing/delay line combiner for two antenas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 04:11:56 UTC
From: "J. Harvey" <JM002.Harvey_NOSPAM_@Sympatico.ca>
Message-ID: <fePha.707$DD6.150018@news20.bellglobal.com>
Source record: 121614

"Eric F. Richards"
> I have two HF receive antennas that perform very well...
> I'd like to build a phaser for them.

ViaSat's website is down right now, but do a search on "QDC-100" to see what is involved with a completely automatic solution (at UHF with 4 antennas in this case).

6526. Re: Military Ribbon Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 04:18:53 UTC
From: Mike <km6ab@pacbell.net>
Message-ID: <3E87C1AC.30109@pacbell.net>
Source record: 121615

I made one by cannibalizing a VHF BNC rubber duck to get the BNC with threaded stud sticking out of a small white insulator. I then cut the threaded top from a PRC-77 style flexible gooseneck (which mates with the PRC-128 whip) and drilled and tapped the bottom of this to fit the threaded stud on the BNC. I then covered it with heat shrink and have a beautiful whip adaptor which will break off almost any HT BNC connector you attach it too. I hope your using the short 18" 128 antenna and not the long version used for VHF low band. At least the short one makes a good 1/4 VHF antenna and no ground is used or necessary.
Where else but the Internet would you find another nut who tried to make one of these?

Mike

efoxx wrote:
> I have a ribbon antenna for the prc-126/128. I am looking for a
> connector or adapter to mate this antenna to a standard bnc. I am
> also wondering about grounding for the transceiver (it's originally
> designed for a ht) and impedance matching. I've tried finding a
> matching nut/washer combination, but cannot seem to match the military
> threading. It is a nice looking antenna and I have to admit that I
> like the style, so I don't want to build it into a pvc contraption.
> If anyone has any experience with using these antennas I would
> appreciate the help.

6527. Re: Has anyone here used a chopper amplifier before?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 04:51:31 UTC
From: "Michael A. Terrell" <mike.terrell@earthlink.net>
Message-ID: <3E87C98C.7EDC886E@earthlink.net>
Source record: 121616
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.components,alt.engineering.electrical

keep-it-clean wrote:
>
> "Michael A. Terrell" <mike.terrell@earthlink.net> wrote in message
> news:3E83C388.E15D094@earthlink.net...
> >
> > (....snip....)
> >
> > The TV stations was a real trip. B&W, mostly tube, and a few RTL ICs
> > in the Grass Valley dual Sync generator system.
>
> Not to be argumentative, but I'm wondering if the dual Sync Generator system
> you're referring to wasn't made by Telemation...not GVG ? I don't recall
> any RTL parts in early Grass Valley products, but I do recall an old 1RU
> high Telemation sync generator with beige/tan front panel and built-in
> changeover relays. Two of the boxes would've comprised a "dual sync
> generator system". Not sure if it used RTL or not (for some reason, I think
> it was TTL but it's been a long time ago)......

It was built in 1972 or 1973 and was two rack units high with two plug
in sync generator modules, two plug in power supply modules, and a plug
in changeover module. It used RTL ICs in TO-5 cans and had +12, -12, and
+3.6 volt power supplies. It was mostly discrete parts but it used RTL
to divide the crystal down to 15750 and 60 HZ then it used analog
circuits to set pulse widths. By today's standards it was a piece of
crap, but it beat the hell out of the vacuum tube sync generator it
replaced. It was 1/6 the size and only drew about 40 watts, instead of
200 watts. The Video and Pulse Distribution Amps were Grass Valley as
well, and were completely discrete parts. The power supplies were the
same as the ones for the Sync generators, minus the 3.6 volt supplies.
--

Michael A. Terrell
Central Florida

6528. Re: Ground Rod Maintenance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 06:21:15 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <hHCCeXBb59h+EAMB@ifwtech.co.uk>
Source record: 121617

Lloyd Guyot wrote:
>How does one test for the prevention of ground loops? thanks, Lloyd
>>
>> I could not agree with you more. I certainly would review what was
>> connected to it tho to ensure one was not setting up a ground loop to
>> devices that are grounded in a different location.
>> Regards
>> Art

Use a clip-on RF current meter, as sold by MFJ, Palomar and others, or
build your own from details on my web site.

Also read the ARRL's information on grounding, at
http://www.arrl.org/tis/info/grounding.html

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

6529. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 12:56:37 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b69du5$40j$1@titan.btinternet.com>
Source record: 121618

> > Is there a certain length (minimum) for a 1/2 size G5RV ??
>
> ==========
>
> No Tony.
>
==========

Not wishing to be unduly critical, whenever I see the description '1/2 size G5RV' I am reminded of that notorious tennis player's remark "You can't be serious". ;o)

There's a crude rule of thumb - reasonable multi-band performance is obtainable from a dipole which is longer than 1/3 wavelength at the lowest frequency of interest.

There's a corresponding rule for end-fed wires like verticals, slopers and inverted-L's, fed against ground. Make them longer than 1/6 wavelength at the lowest frequency of interest.

All multi-band antennas need a tuner of some sort.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

6530. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 13:08:16 UTC
From: richardharrison@webtv.net
Message-ID: <15593-3E883DC0-587@storefull-2312.public.lawson.webtv.net>
Source record: 121469

Art, KB9MZ wrote:
"As far as the Radio Handbook, I have the latest edition, but it is irrelevant since what I duscussed earlier this month, I hold the patent for it!"

I was not accusing Art of copying another`s work. If art has patented something already published, his patent is likely unenforceable.
My question was how Art`s antenna differed from the Radio Handfbook example just to discover what art`s been talking about.

It seems from art`s response that his antenna truly does resemble the Radio Handbook antenna. For me that is good because it confirms my understanding of the sketchy information Art has provided. Maybe there isn`t enough difference to talk about.

I answered Art`s questions. It is only fair that he answers mine.

Best regards, Richard Harrison, KB5WZI

6531. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 13:43:14 UTC
From: richardharrison@webtv.net
Message-ID: <4061-3E8845F2-561@storefull-2318.public.lawson.webtv.net>
Source record: 121470

Reg, G4FGQ wrote:
"There`s a crude rule of thumb - reasonable multiband performance is obtainable from a dipole which is longer than 1/3-wavelength at the lowest frequency of interest."

A folded dipole only 1/4-wavelength long responds only -0.5 db less vigorously than the 1/2-wave version.. The 1/4-wave folded dipole contains about 1/2-wave of wire and thus its first resonance with a short overall length. Problem is the 1/4-wave`s 6000-ohm droivepoint resistance at first resonance. If you can handle the high impedance first resonance, you may be able to handle the alternating high and low impedances of subsequent resonances. Hi!

Best regards, Richard Harrison, KB5WZI

6532. Ground plane antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 14:22:00 UTC
From: captainvideo462002@yahoo.com
Message-ID: <d980bc2c.0303310622.63e8bb84@posting.google.com>
Source record: 121471

I operate a low band station for business use on 43.00 MHZ. When we installed the system 12 years ago I cut a quarter wave dipole made from #12 solid bare copper wire, fed it with RG8U and suspended it at an angle of approximately 45 degrees between two plastic insulators. Having had no SWR meter at the time I simply cut it to its theoroetical length and hoped for the best. It was only intended to be a temporary arrangement but it has worked so well through the years, affording us the coverage we needed that there was never any reason to go much further. Recently, we have expanded our operating territory and would really appreciate a little more coverage. So with this in mind, I borrowed an MFJ SWR/freq. meter from a friend and took a look at at my antenna. According to it, the length seemed to be a bit too long, so I trimmed it to obtain an SWR very close to zero. At the same time I constructed a ground plane antenna. This time my coax is Mil spec RG214U which terminates in a PL259 at the antenna end. This then screws onto a female chassis mount connector and is mounted inside a PVC pipe. There is a #12 insulated copper wire cut to quarter wavelength which runs up inside the pipe as the active element. The pipe is capped off with RTV. Coming off the female connector, and through the pipe are 4 ground radials which are cut to .95 quarter wavelength. These are again connected to plastic insulators and tied off and droop at an angle of approximately 45 degrees, in attempts to achieve a 50 ohm match. When I performed the SWR check on this newly constucted antenna, It seemed to resonate at around 46MHZ. which was certainly far from whatI had expected. I did trim it accordingly, trying to be certain to leave the ground radials at 95 percent of the center conductor length, and eventully got the SWR down once again to very near zero. So in theory this should have been it. Now both antenna go through a coaxial switch and feed my base station. And although they both work, the old crappy dipole still seems to perform better than the ground plane. I have tested this between mobiles at different locations and seem to always find that switching to the dipole always seems better. Both antennas are at the same height and on the same roof about 10 feet apart. Can anyone offer some suggestions? Thanks very much, Lenny Stein.

6533. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 14:58:46 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b69l36dsd1@titan.btinternet.com>
Source record: 121472

"Richard Harrison" wrote -
> A folded dipole only 1/4-wavelength long responds only -0.5 db less
> vigorously than the 1/2-wave version

Rich, whenever I see a statement such as the above I am again reminded of that notorious tennis player's remark "You can't be serious".

With a lot of imagination I think I can see what you're getting at. But I still don't believe it. What magazines have you been reading lately?

Could you say how you arrive at your 0.5 dB and at which point in the radiating system can the vigorous response be measured?

Reg, G4FGQ

6534. GPS Point to Street Address, WHERE?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 16:08:36 UTC
From: joealey2003@yahoo.com
Message-ID: <79d8d5b3.0303310808.51bbb56@posting.google.com>
Source record: 121473
Cross-posted to: sci.geo.satellite-nav,alt.radio.networks.npr,rec.autos.4x4,alt.satellite.gps,rec.radio.amateur.antenna

Hi all...

Someone knows where i can find a web page who receives the Global
Position and returns the street addreess?

Thanks.

6535. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 16:18:05 UTC
From: richardharrison@webtv.net
Message-ID: <5383-3E886A3D-472@storefull-2311.public.lawson.webtv.net>
Source record: 121475

Reg wrote:
"You can`t be serious."

Terman gives the gain of the tiny elemental doublet over an isotropic as a power ratio (not db) of 1.5.(page 871 of the 1955 edition) That`s about 2 db. Terman gives the gain of a resonant half-wave as 1.64. That`s between 2 and 3 db.

Arnnold B. Bailey says a dipole "much shorter than a half-wave rod "has a gain of only 0.4 db less than the half-wave rod".

Bailey uses a half-wave rod as a standard reference antenna. So it is his 0-db antenna. That gives an isotropic a gain of -2.2 db.

Arnold B. Bailey`s "TV and Other Receiving Antennas" contains a catalog of most common antennas. It includes the quarter-wave folded dipole on page 509. The -0.5 db comparison with a 1/2-wave dipole comes from that page. It is consistent with Terman and Bailey`s other information.

Best regards, Richard Harrison, KB5WZI

6536. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 16:22:40 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <btpg8v42d0ps0tvghlq5nn633mgionu9ud@4ax.com>
Source record: 121474

On Mon, 31 Mar 2003 07:08:16 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:

>I answered Art`s questions. It is only fair that he answers mine.
>
>Best regards, Richard Harrison, KB5WZI

Hi Richard,

Given the number of issues that Art simply walked away from without comment (like the distribution of current not being a function of the source - we will undoubtedly re-visit that again, and again in the future - tedious already) suggests little possibility of quid-pro-quo.

Especially amusing, and wholly like the snake oil salesmen of the eh/cfa/fractals, future details' discussion are now attached to the behavior of an assignee (Mark in this case, sorry Mark). As in times past, we are to be regaled with loyalty tests, diplomacy tests, competency tests, intelligence tests, dna tests, civility tests... to be offered and scored before data is released to only those who prove to be pure of heart and mind.

Reminds me of my Chief who inculcated me with the merits and rewards program of the Navy: "To obtain favor you need 1000 attaboys, but remember it takes only one awshit to erase all the attaboys you have accumulated."

73's
Richard Clark, KB7QHC

6537. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 16:49:29 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E887199.7040404@ieee.org>
Source record: 121476

Richard Harrison wrote:
> Reg wrote:
> "You can`t be serious."
>
> Terman gives the gain of the tiny elemental doublet over an isotropic as
> a power ratio (not db) of 1.5.(page 871 of the 1955 edition) That`s
> about 2 db. Terman gives the gain of a resonant half-wave as 1.64.
> That`s between 2 and 3 db.

EZNEC sez a 1/4WL copper folded dipole is about 3.4 dB down from a
1/2WL copper folded dipole.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6538. Re: GPS Point to Street Address, WHERE?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 17:05:20 UTC
From: "Jason T. Powell" <jtpowell@nospam-hotmail.com>
Message-ID: <kz_ha.17503$JI.5070729@twister.neo.rr.com>
Source record: 121477
Cross-posted to: sci.geo.satellite-nav,alt.radio.networks.npr,rec.autos.4x4,alt.satellite.gps,rec.radio.amateur.antenna

Try mapsonus.com
"JoeAley2003" <joealey2003@yahoo.com> wrote in message
news:79d8d5b3.0303310808.51bbb56@posting.google.com...
> Hi all...
>
> Someone knows where i can find a web page who receives the Global
> Position and returns the street addreess?
>
>
>
> Thanks.

6539. WIMO GPM-1500 Antenne Erfahrung

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 17:23:19 UTC
From: Karl <35fd001@gmx.net>
Message-ID: <fcug8vorrmtmd8jp6gnnostpi9ueskbsik@4ax.com>
Source record: 121478

Hallo !

Ich ï¿½berlege mir so eine Antenne mir anzuschaffen.
Hat wer schlecht oder gute Erfahrungen damit gemacht ?

servus Karl, 73

6540. Re: Ground plane antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 17:27:52 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87znnbpht3.fld@barrow.com>
Source record: 121479

captainvideo462002@yahoo.com (Lenny) wrote:
>I operate a low band station for business use on 43.00 MHZ. When we
...
>different locations and seem to always find that switching to the
>dipole always seems better. Both antennas are at the same height and
>on the same roof about 10 feet apart. Can anyone offer some
>suggestions? Thanks very much, Lenny Stein.

Assuming the mobile units are using vertical whip antennas, you
might get even a bit more effectiveness from a vertical 1/2 wave
dipole.

The next option is more elevation. Perhaps more transmit power.
And perhaps using an array of two vertical 1/2 wave dipoles.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

6541. Ground Rod Question?

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 17:43:46 UTC
From: buo <hkl@er.com>
Message-ID: <3E887E52.9E378613@er.com>
Source record: 121480

Can't I just ohm out across the clamp connection to test
it?

6542. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 17:57:25 UTC
From: richardharrison@webtv.net
Message-ID: <18339-3E888185-11@storefull-2317.public.lawson.webtv.net>
Source record: 121482

CAM wrote:
"EZNEC sez a 1/4WL copper folded dipole is about 3.4 db down from a
1/2WL copper dipole."

Terman says the tiny elemental dipole is down only 2 db from a 1/2-wave dipole. The only mistake I`ve ever seen in Terman is one case of a Mhz that should have been a KHz or vice versa, a simple typo.

Cecil has reported a doozie error or two in EZNEC answers. I`ll go with Terman.

Best regards, Richard Harrison, KB5WZI

6543. Earth rod question.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 18:10:37 UTC
From: TonyWard <tonester1@cbuk.freeserve.co.uk>
Message-ID: <b6a0attqr1@newsg4.svr.pol.co.uk>
Source record: 121481

Hi Guys,
I,m just wondering weather 5 feet of copper pipe sunk into the ground would be a good "earth" for the radio......
I could get a rod but had some pipe left over from a heating fix....

its not solid copper but surley has twice the surface area of a rod
????????

thanks for the help.

Tony.
M3TOE.

6544. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 18:37:37 UTC
From: richardharrison@webtv.net
Message-ID: <18339-3E888AF1-13@storefull-2317.public.lawson.webtv.net>
Source record: 121484

Richard Clark wrote:
"Given the number of details Art simply walked away from without comment---."

I should have not expected further reply when Art implied that prior publication of a similar antenna was immaterial, as Art has a patent.

It is only immaterial if Art`s antenna has substantial patentable differences from prior work. I questioned without regarding patents or priior work. I was just looking for a antenna plan close enough to mark up to reflect Art`s antenna.

Best regards, Richard Harrison, KB5WZI

6545. Re: WTD:WIN 95 for shack 'puter

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 18:41:48 UTC
From: Jasper Janssen <jasper@jjanssen.org>
Message-ID: <iu2h8vo60dfppkvodjqorgl2ktsavuiabl@4ax.com>
Source record: 121483
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

On Tue, 28 Jan 2003 21:33:55 -0500, Technician <travis57@megalink.net>
wrote:

>Slightly off on a tangent here, but has anybody else noticed that in
>Win98, if you create a new shortcut (Richt-click --> New --> Shortcut),
>that the picture to the left shows the Win95 start menu?
>
>And its still there in second edition. Don't tell me that windows is not
>programed in the copy & paste method.

It's not, or at least this isn't evidence of it. It's programmed in the
"alter only the bits that need altering" method.

Now if you found win3.11 in 9x, or 9x in NT, that'd be evidence of c/p
programming.

Jasper

6546. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 18:49:45 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87u1djpe0m.fld@barrow.com>
Source record: 121485

richardharrison@webtv.net (Richard Harrison) wrote:
>CAM wrote:
>"EZNEC sez a 1/4WL copper folded dipole is about 3.4 db down from a
>1/2WL copper dipole."
>
>Terman says the tiny elemental dipole is down only 2 db from a 1/2-wave
>dipole. The only mistake I`ve ever seen in Terman is one case of a Mhz
>that should have been a KHz or vice versa, a simple typo.
>
>Cecil has reported a doozie error or two in EZNEC answers. I`ll go with
>Terman.
>
>Best regards, Richard Harrison, KB5WZI

What is the feed point impedance of the "tiny elemental dipole",
and what is the loss of a practical matching network to feed it?

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

6547. Re: Earth rod question.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 18:53:22 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <C80ia.16845$PM3.705446@twister.southeast.rr.com>
Source record: 121486

Sometimes a rod 10 times that length would not suffice. It all depends on the conductivity of the soil.

"TonyWard" <tonester1@cbuk.freeserve.co.uk> wrote in message news:b6a0attqr1@newsg4.svr.pol.co.uk...
> Hi Guys,
> I,m just wondering weather 5 feet of copper pipe sunk into the ground would
> be a good "earth" for the radio......
> I could get a rod but had some pipe left over from a heating fix....
>
> its not solid copper but surley has twice the surface area of a rod
> ????????
>
> thanks for the help.
>
> Tony.
> M3TOE.
>
>

6548. Re: Earth rod question.

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 19:14:07 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b6a41v$b32$1@titan.btinternet.com>
Source record: 121487

"TonyWard" wrote -
> Hi Guys,
> I,m just wondering weather 5 feet of copper pipe sunk into the ground
would
> be a good "earth" for the radio......
> I could get a rod but had some pipe left over from a heating fix....
> its not solid copper but surley has twice the surface area of a rod

==========

A single 5', 1/2" diameter copper pipe makes a very poor ground for a radio transmitter unless in salt sea water. You will not be able to hammer it more than a couple of feet into the soil. It will buckle.

Use a galvanised iron rod or bar or angle of any common metal, pointed at the end.

A single 1.5m, 25mm diameter rod in average garden soil has a resistance to earth 50 to 100 ohms. Which is very poor ! It is not noticeably better than a single shallow-buried wire of the same length.

You would be much better off by using the domestic water plumbing system, especially if your incoming water main is in a metal pipe. The water system is bonded to the electricity and gas mains.

When an end-fed vertical or inverted-L antenna is fed against ground, for good efficiency an earth resistance less than 5 ohms should be looked for. And this can be obtained only by a system of 8 or more buried radial wires distributed around your back yard. Earth rods are not needed in such a system. Their contribution is not worth the labour of knocking them in. One more long radial wire is worth another 5 or 6 rods.

To find Earth resistance of 1 or more rods, 1 or more shallow buried wires, plates, etc., download in a few seconds from website below small program EARTHRES and run immediately.

==========
Regards from Reg, G4FGQ
For Free Radio Design Software
go to http://www.g4fgq.com
==========

6549. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 19:14:16 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E889388.30807@ieee.org>
Source record: 121488

Richard Harrison wrote:
> CAM wrote:
> "EZNEC sez a 1/4WL copper folded dipole is about 3.4 db down from a
> 1/2WL copper dipole."
>
> Terman says the tiny elemental dipole is down only 2 db from a 1/2-wave
> dipole. The only mistake I`ve ever seen in Terman is one case of a Mhz
> that should have been a KHz or vice versa, a simple typo.
>
> Cecil has reported a doozie error or two in EZNEC answers. I`ll go with
> Terman.

Well, I should have reported the wire size. The 3.4 dB down is using
#14 copper wire. With #8 copper wire, the difference is 2 dB. With
2" copper tubing, the difference is one dB. The fault is all mine.
It stands to reason that varying the size of the antenna conductor
will change the I^2*R antenna losses. What size wire and what material
did Terman use?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

6550. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 19:28:31 UTC
From: richardharrison@webtv.net
Message-ID: <18336-3E8896DF-218@storefull-2317.public.lawson.webtv.net>
Source record: 121489

Floyd Davidson wrote:
"What is the feed point impedance of the tiny elemental dipole---?"

It`s a very high capacitive reactance and almost zero resistance. The 1/4-wave folded dipole is a pure resistance of 6,000 ohms at resonance. The folded dipole is the bone of contention.

Best regards, Richard Harrison, KB5WZI

6551. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 19:59:02 UTC
From: Floyd Davidson <floyd@ptialaska.net>
Message-ID: <87llyvpat5.fld@barrow.com>
Source record: 121490

richardharrison@webtv.net (Richard Harrison) wrote:
>Floyd Davidson wrote:
>"What is the feed point impedance of the tiny elemental dipole---?"
>
>It`s a very high capacitive reactance and almost zero resistance. The
>1/4-wave folded dipole is a pure resistance of 6,000 ohms at resonance.
>The folded dipole is the bone of contention.
>
>Best regards, Richard Harrison, KB5WZI

But I asked what the expected losses in a practical matching
circuit might be.

--
Floyd L. Davidson <http://www.ptialaska.net/~floyd>
Ukpeagvik (Barrow, Alaska) floyd@barrow.com

6552. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 20:03:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8h7p7753bdu0f@corp.supernews.com>
Source record: 121491

The problem here is that Richard/Bailey/Terman's analysis is for a lossless dipole, but Cecil's model includes loss. An infinitesimally small lossless dipole has a gain that's only about 0.45 dB less than a lossless dipole. This is a consequence of the different current distribution on the two antennas. You can easily see this, and get an accurate answer, with EZNEC by setting wire loss to zero.

In practice, all antennas have loss. A half wavelength dipole has negligible loss when constructed with any reasonable diameter of copper wire, but this isn't at all the case for a dipole much shorter than a half wavelength. EZNEC and other modeling programs can tell you, again with good accuracy, the gain you can expect for a short dipole made from a particular diameter of wire. As you would expect, the loss, and therefore the efficiency and gain, are very strongly influenced by the conductor size. The 0.45 dB is an interesing factor, and important in understanding basic antenna operation, but not something you'll ever see in practice with a dipole substantially shorter than a half wavelength.

Modeling analysis doesn't, however, consider matching network loss, which becomes increasingly substantial as the antenna gets shorter. And this added source of loss needs to be included in an overall gain calculation.

Reg's admittedly rough rule of thumb seems reasonable when wire loss is considered.

Roy Lewallen, W7EL

OC_CAM's Razor wrote:
> Richard Harrison wrote:
>
>> CAM wrote:
>> "EZNEC sez a 1/4WL copper folded dipole is about 3.4 db down from a
>> 1/2WL copper dipole."
>>
>> Terman says the tiny elemental dipole is down only 2 db from a 1/2-wave
>> dipole. The only mistake I`ve ever seen in Terman is one case of a Mhz
>> that should have been a KHz or vice versa, a simple typo.
>>
>> Cecil has reported a doozie error or two in EZNEC answers. I`ll go with
>> Terman.
>
>
> Well, I should have reported the wire size. The 3.4 dB down is using
> #14 copper wire. With #8 copper wire, the difference is 2 dB. With
> 2" copper tubing, the difference is one dB. The fault is all mine.

> It stands to reason that varying the size of the antenna conductor
> will change the I^2*R antenna losses. What size wire and what material
> did Terman use?
> --
> 73, Cecil, W5DXP
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

6553. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 20:27:31 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <b6a8bj$g2e$1@hercules.btinternet.com>
Source record: 121492

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:5383-3E886A3D-472@storefull-2311.public.lawson.webtv.net...
> Reg wrote:
> "You can`t be serious."
>
> Terman gives the gain of the tiny elemental doublet over an isotropic as
> a power ratio (not db) of 1.5.(page 871 of the 1955 edition) That`s
> about 2 db. Terman gives the gain of a resonant half-wave as 1.64.
> That`s between 2 and 3 db.
>
> Arnnold B. Bailey says a dipole "much shorter than a half-wave rod "has
> a gain of only 0.4 db less than the half-wave rod".
>
> Bailey uses a half-wave rod as a standard reference antenna. So it is
> his 0-db antenna. That gives an isotropic a gain of -2.2 db.
>
> Arnold B. Bailey`s "TV and Other Receiving Antennas" contains a catalog
> of most common antennas. It includes the quarter-wave folded dipole on
> page 509. The -0.5 db comparison with a 1/2-wave dipole comes from that
> page. It is consistent with Terman and Bailey`s other information.
==========
Rich,

Terman (I've heard of Terman) and Bailey (who's Bailey?) must have been
suffering from radiation from the feedline in reverse.
===
Reg, G4FGQ

6554. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 20:30:47 UTC
From: Dave Shrader <david.shrader@attbi.com>
Message-ID: <3E88A4F4.25A7D4B4@attbi.com>
Source record: 121493

The tiny dipole vs 1/2 wave dipole has an unstated assumption: That is,
that both are radiating the SAME POWER.

There is a major inefficiency in coupling 100 watts into an elemental
dipole while coupling to a 1/2 wave dipole is quite efficient.

100 watts from an isotropic is down 2.14 dB from 100 watts in a 1/2 wave
dipole. But, trying to get 100 watts efficiently into the isotropic is a
major problem!

Deacon Dave, W1MCE
+ + +

Richard Harrison wrote:
>
> CAM wrote:
> "EZNEC sez a 1/4WL copper folded dipole is about 3.4 db down from a
> 1/2WL copper dipole."
>
> Terman says the tiny elemental dipole is down only 2 db from a 1/2-wave
> dipole. The only mistake I`ve ever seen in Terman is one case of a Mhz
> that should have been a KHz or vice versa, a simple typo.
>
> Cecil has reported a doozie error or two in EZNEC answers. I`ll go with
> Terman.
>
> Best regards, Richard Harrison, KB5WZI

6555. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 20:31:33 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <u49h8vk6peg3k9bmobleivfv0s9n8q0eu6@4ax.com>
Source record: 121494

On 31 Mar 2003 11:14:37 -0800, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>richardharrison@webtv.net (Richard Harrison) wrote in message
news:<15593-3E883DC0-587@storefull-2312.public.lawson.webtv.net>...

999 attaboys later:

>> I answered Art`s questions. It is only fair that he answers mine.
>>
>> Best regards, Richard Harrison, KB5WZI
>
>But you have access to
> both, and certainly in a better position than I to answer your
> own question.

AWSHIT!

Well, we knew that was coming....

73's
Richard Clark, KB7QHC

6556. Re: Phasing/delay line combiner for two antenas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 20:47:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8haa4gkdr5v68@corp.supernews.com>
Source record: 121496

There's a basic problem with using transmission lines for delay. The current or voltage delay in a transmission line is equal to the transmission line electrical length only if the transmission line is terminated in its characteristic impedance. In addition, the voltage or current will be transformed to a different value from one end of the cable to the other only if it's correctly terminated. (There are a few exceptions to this with particular lengths of line and/or load impedances.) In a transmitting array, each element typically has an impedance quite different from the impedance of the line. Even if each element is individually carefully matched, element impedances can, and often do, change dramatically when in the presence of other current carrying elements.

When receiving, the transmission lines can be properly terminated, but then the impedances of the elements feeding the lines cause unexpected magnitude and phase transformations. The net effect is the same as for the transmitting case.

A simple-minded system of phase delay using transmission lines does work if the elements are very lossy and/or very short, and individually matched. Under those circumstances, mutual coupling is negligible compared to the self impedance and can be ignored. This is ok for an HF receiving array, but undesirable for transmitting.

For more information about this topic, see Chapter 8 of the ARRL Antenna Book. A system of feeding phased arrays using only transmission lines, but taking mutual coupling into account, is described in "The Simplest Phased Array Feed System -- That Works", in the ARRL Antenna Compendium, Vol. 2.

Roy Lewallen, W7EL

Larry Phipps wrote:
> I have done extensive work recently with a number of delay mechansims
> including the MCL units, symmetrical pin-net phasers, fixed delay modules
> from Rhombus, etc. In my case, I wound up with a combination of the Rhombus
> delay lines for 1, 2, 4 and 8 nsec. For .5ns and 16ns I used RG-174U coiled
> up. The Rhombus lines don't have sufficient tolerance beyond 8 ns, making
> it impossible to achieve resolutions better than about 1ns. In my case, I
> have a range of 0-31.5 ns in .5 ns steps, which is good for my needs. It's
> relatively small, and has low insertion loss. Of course, using coax for all
> delays would be cheaper, but larger.
>
> Be aware that by using time delay as opposed to phase delay, the phase
> delays change with frequency...if you need actual calibrated phase delay...a
> simple PIC chip can be used to calculate and display the phase delay if you

> feed it the frequency.
>
> The stepped delay option is the only one I tried with really broad
> bandwidth... and it's easily computer controlled.
>
> My circuit is part of a high-performance, calibrated broadband phaser that I
> have built that is the subject of an antenna article I am working on.
>
> You might also want to do a search for WA1ION on the web, as he has designed
> a couple of such devices for low-band use which could be modified for use up
> to 30 MHz. There is also the MFJ-1025 which actually works pretty well from
> what I hear, in spite of being from MFJ...although it has limited signal
> handling capability, since the active components are small signal FETs.
>
> If you're in Europe, Wellbrook makes a better unit, but doesn't export it to
> the US.
> --
> 73,
> Larry N8LP
> www.telepostinc.com
>
>
> "Eric F. Richards" <efricha@dim.com> wrote in message
> news:66cf8vo46be92gm00q2gvk99bbf9i5on9i@4ax.com...
>
>>Greetings, all...
>>
>>I posted this over on rec.radio.shortwave, but they seem to be caught
>>up in a poly-sci discussion, so I'm going to try here.
>>
>>I have two HF receive antennas that perform very well; a T2FD and a
>>250 foot random wire. I'd like to build a phaser for them.
>>
>>Now doing so where the second antenna is in phase or 180 degrees out
>>is fairly easy. What I want to do is build a delay line or phase
>>shift network.
>>
>>I've considered building a Goniometer, but have only found one article
>>online about doing so. The construction seems easy, but what should
>>the inductance of each of the windings be? I want something that will
>>work from LF to 30 MHz, if possible.
>>
>>Likewise, has anyone tried using an old Selsyn as a Goniometer?
>>
>>The other approach, the brute-force approach, is to switch in and out
>>various lenghts of LMR-100 as delay lines. If you do powers of two up
>>to, say, 64 meters, you get a lot of flexibility.
>>
>>You also get a lot of cable.
>>

>>I've seen narrow-band phase-shift network modules on Mini-circuit's
>>web page, but nothing to give me the coverage I want.
>>
>>Any ideas or suggestions?
>>
>>(Oh, BTW, I want to have no preamps or tuned circuits in whatever I
>>build, because either/both are more hinderance than help, IMHO.)
>>
>>Thanks!
>>
>>
>>--
>>73, Eric F. Richards, KB0YDN, efricha@dim.com
>>"A few old diehards still blazoned 'Spark Forever!' on their QSL cards..."
>>- from "200 Meters & Down", copyright 1936, ARRL
>
>
>

6557. Re: Reducing sensitivy of 49 MHz whip

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 21:03:29 UTC
From: David Robbins <k1ttt@arrl.net>
Message-ID: <yB6cneKS99i8MBWjXTWcoQ@crocker.com>
Source record: 121497

put a layer of tape over the wire first, some ferrites are painted which
gives some insulation, others aren't and while they do have fairly high
resistance its probably better to insulate them from the wire.

"Ken" <cprstn54zz@att.net> wrote in message
news:3e874988.151648718@news-server.optonline.net...
> On Sun, 30 Mar 2003 12:27:40 -0000, "David Robbins" <k1ttt@arrl.net>
> wrote:
> >yes, there are several ways to reduce sensitivity...
> slip some ferrite beads over it . . .
>
> Ferrite is the easiest. Can the ferrite touch the whip? Or should I
> tape the whip first?
>
> Ken KC2JDY
>
>
> Ken
> (to reply via email
> remove "zz" from address)

6558. Re: Phasing/delay line combiner for two antenas

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 21:30:17 UTC
From: Larry Phipps <larry@telepostinc.com>
Message-ID: <Jr2ia.1963$lV1.532458@newssvr28.news.prodigy.com>
Source record: 121495

I have done extensive work recently with a number of delay mechansims including the MCL units, symmetrical pin-net phasers, fixed delay modules from Rhombus, etc. In my case, I wound up with a combination of the Rhombus delay lines for 1, 2, 4 and 8 nsec. For .5ns and 16ns I used RG-174U coiled up. The Rhombus lines don't have sufficient tolerance beyond 8 ns, making it impossible to achieve resolutions better than about 1ns. In my case, I have a range of 0-31.5 ns in .5 ns steps, which is good for my needs. It's relatively small, and has low insertion loss. Of course, using coax for all delays would be cheaper, but larger.

Be aware that by using time delay as opposed to phase delay, the phase delays change with frequency...if you need actual calibrated phase delay...a simple PIC chip can be used to calculate and display the phase delay if you feed it the frequency.

The stepped delay option is the only one I tried with really broad bandwidth... and it's easily computer controlled.

My circuit is part of a high-performance, calibrated broadband phaser that I have built that is the subject of an antenna article I am working on.

You might also want to do a search for WA1ION on the web, as he has designed a couple of such devices for low-band use which could be modified for use up to 30 MHz. There is also the MFJ-1025 which actually works pretty well from what I hear, in spite of being from MFJ...although it has limited signal handling capability, since the active components are small signal FETs.

If you're in Europe, Wellbrook makes a better unit, but doesn't export it to the US.
--
73,
Larry N8LP
www.telepostinc.com

"Eric F. Richards" <efricha@dim.com> wrote in message
news:66cf8vo46be92gm00q2gvk99bbf9i5on9i@4ax.com...
> Greetings, all...
>
> I posted this over on rec.radio.shortwave, but they seem to be caught
> up in a poly-sci discussion, so I'm going to try here.
>
> I have two HF receive antennas that perform very well; a T2FD and a
> 250 foot random wire. I'd like to build a phaser for them.
>
> Now doing so where the second antenna is in phase or 180 degrees out
> is fairly easy. What I want to do is build a delay line or phase

> shift network.
>
> I've considered building a Goniometer, but have only found one article
> online about doing so. The construction seems easy, but what should
> the inductance of each of the windings be? I want something that will
> work from LF to 30 MHz, if possible.
>
> Likewise, has anyone tried using an old Selsyn as a Goniometer?
>
> The other approach, the brute-force approach, is to switch in and out
> various lenghts of LMR-100 as delay lines. If you do powers of two up
> to, say, 64 meters, you get a lot of flexibility.
>
> You also get a lot of cable.
>
> I've seen narrow-band phase-shift network modules on Mini-circuit's
> web page, but nothing to give me the coverage I want.
>
> Any ideas or suggestions?
>
> (Oh, BTW, I want to have no preamps or tuned circuits in whatever I
> build, because either/both are more hinderance than help, IMHO.)
>
> Thanks!
>
>
> --
> 73, Eric F. Richards, KB0YDN, efricha@dim.com
> "A few old diehards still blazoned 'Spark Forever!' on their QSL cards..."
> - from "200 Meters & Down", copyright 1936, ARRL

6559. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 22:00:36 UTC
From: k3bu@aol.comnoSaddam
Message-ID: <20030331170036.29589.00000112@mb-fq.aol.com>
Source record: 121498

>
>It is only immaterial if Art`s antenna has substantial patentable
>differences from prior work.

Like rewriting how reflector and directors work? Chiseled in his (stone) patent
he claims that reflector has to be tuned higher in frequency from driver, etc.
He got the patent, so I guess it must be right. He sure nominates himself to
join the "Wunderantenna hall of fame" with likes of herr freaky Doktor, CFA,
EH, faster than light, etc.
Congrats! Well deserved :-)
Oh well, fuggetaboutit!

Yuri, BUm

6560. Re: Ground plane antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 22:06:22 UTC
From: captainvideo462002@yahoo.com
Message-ID: <d980bc2c.0303311406.5a6b7c1b@posting.google.com>
Source record: 121499

I have to add to my original message that after checking my notes, the
46 MHZ resonant frequency which I mentioned that I initially thought I
measured on my SWR meter was actually 39 MHZ. Sorry for the error.
Thanks, Lenny Stein.

captainvideo462002@yahoo.com (Lenny) wrote in message
news:<d980bc2c.0303310622.63e8bb84@posting.google.com>...
> I operate a low band station for business use on 43.00 MHZ. When we
> installed the system 12 years ago I cut a quarter wave dipole made
> from #12 solid bare copper wire, fed it with RG8U and suspended it at
> an angle of approximately 45 degrees between two plastic insulators.
> Having had no SWR meter at the time I simply cut it to its
> theoroetical length and hoped for the best. It was only intended to be
> a temporary arrangement but it has worked so well through the years,
> affording us the coverage we needed that there was never any reason to
> go much further. Recently, we have expanded our operating territory
> and would really appreciate a little more coverage. So with this in
> mind, I borrowed an MFJ SWR/freq. meter from a friend and took a look
> at at my antenna. According to it, the length seemed to be a bit too
> long, so I trimmed it to obtain an SWR very close to zero. At the same
> time I constructed a ground plane antenna. This time my coax is Mil
> spec RG214U which terminates in a PL259 at the antenna end. This then
> screws onto a female chassis mount connector and is mounted inside a
> PVC pipe. There is a #12 insulated copper wire cut to quarter
> wavelength which runs up inside the pipe as the active element. The
> pipe is capped off with RTV. Coming off the female connector, and
> through the pipe are 4 ground radials which are cut to .95 quarter
> wavelength. These are again connected to plastic insulators and tied
> off and droop at an angle of approximately 45 degrees, in attempts to
> achieve a 50 ohm match. When I performed the SWR check on this newly
> constucted antenna, It seemed to resonate at around 46MHZ. which was
> certainly far from whatI had expected. I did trim it accordingly,
> trying to be certain to leave the ground radials at 95 percent of the
> center conductor length, and eventully got the SWR down once again to
> very near zero. So in theory this should have been it. Now both
> antenna go through a coaxial switch and feed my base station. And
> although they both work, the old crappy dipole still seems to perform
> better than the ground plane. I have tested this between mobiles at
> different locations and seem to always find that switching to the
> dipole always seems better. Both antennas are at the same height and
> on the same roof about 10 feet apart. Can anyone offer some
> suggestions? Thanks very much, Lenny Stein.

6561. Re: Dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 22:18:52 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0303311418.722f9d49@posting.google.com>
Source record: 121500

aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303300924.1186eff5@posting.google.com>...
> nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0303291405.354438ff@posting.google.com>...
> > aunwin@insightbb.com (Art Unwin KB9MZ) wrote in message
news:<85ed38d.0303290503.628af2ae@posting.google.com>...
> > > richardharrison@webtv.net (Richard Harrison) wrote in message
news:<13046-3E8534F5-153@storefull-2314.public.lawson.webtv.net>...
> > > > Art, KB9MZ wrote:
> > > > "Do you agree that for this description we can maintain a figure eight
> > > > pattern for frequencies 10 thru 20M?"
> > > >
> snip.
>
> > Mark
> > This I gotta see for a "small" dipole...
>
> Do you really mean that ?

Sure. Try modeling a 20m dipole on 40m using the matching method you
propose.
#1, with the small loop as in the one I modeled, the attachments to
the dipole are too close spaced to get a good match period. You can
adjust the cap to tune out reactance, but you still have a severe
mismatch. In the example I modeled, you would use appx 214 pf to tune
for 40m, but you still have a severe mismatch of about 256:1 if
feeding with 50 ohm coax. The problem? The feedpoint impedance is
super low. Now it may well be possible to adjust the attachments to
the dipole to get a better match, but do you have the provision for
this? And even still, I'd expect some losses. I still stand by the
statement that there is no such thing as a "lossless" matching device
for a 1/2 size dipole. I probably can't explain why worth a hoot, but
I will leave that to others to disassemble.
The main problem being the very low feedpoint impedance. You can't
really get around it. IE: you can feed with low loss ladder line, and
thats "nearly" lossless as far as the line is concerned, but the loss
will rear it's ugly head at the shack in the tuner coil. You can't
escape the problem. Or I don't think anyway. You can only use the
least lossy device to match that you can.
>
> > What is pre conceived thinking of "charlatan" behaviour?
>
>
> Mark

> you haven,t been on this newsgroup for very many years.
> There have been a succession of people who have been torn apart
> by some of the supposedly notable figures on this newsgroup starting
> with Roy,
> Clark e.t.c under the pose that they are protecting amateur radio from
> untruthes. Naturaly this attracts people who will hang on and catcall.
> Now that Dr Cohen has gone I am the heir of this unfortunate behavior
> and like others
> before me I have tried to hang on to my self respect.

So, doesn't bother me, and wouldn't even if I were in your position.
All of the people you mention know more than I do, so if they comment
on this, I would welcome it. If they tell you something is wrong, I
would believe them until you prove them wrong if this is the case. I
don't think it will be, very often.
>
> > Art, antennas follow known rules and laws of nature. If someone
> > proposes an antenna that seems to break the known laws of nature, it's
> > going to be natural that people question it's operation.
>

>
> O.K. Mark
> I would be willing to do the following
> On a separate thread I would be willing to start from the beginning
> a description of the whole antenna starting afresh all over again.
> Now this new thread will be inundated by comments by others in an
> attempt to harrass, find fault e.t.c that if you respond to them the
> whole debate will be splintered into so many different ways that it
> will be impossible to continue.
>
> So yes, I will go through the whole antenna thing with YOU ALONE
> where neither of us respond to interlopers attempts to disrupt.This
> ofcourse does not prevent communication on other threads even tho it
> may well be the same subject
> since the internet is free and for all.
>
> The antenna that I will share is one that is capable of efficient
> transmition from 10 down to 160M and below, rotatable such that a
> small lot can accomodate it. Its pattern will be one of a figure 8 at
> all times but ofcourse subject to the earth's influence the directive
> pattern elevation will follow normal elevation angles. It will also
> be confined to horisontal polarisation as moving into vertical
> polarisation situations will be to laborious at this point.

Is this the same antenna which you have on the patent page? The one I
refer to is multi element. "United States Patent 5,625,367
Unwin April 29, 1997

Variable capacitance antenna for multiband reception and transmission

"

If not, as one mentioned, we need a picture. If the one above is the antenna in question, I can use the TIFF file if I can d/l it.

>
> Since this antenna is seen as impossible by this group I feel it is
> important that we proceed slowly and with mutual agreement until we
> get either to a point
> that contradicts laws of nature or total completion.

I do not feel it's impossible. In fact, I know it works to an extent. But there are niggling little details which you allude to which bother me. IE: the most glaring problem I had with the antenna I modeled, was your assertion that the pattern could be steered by changing the cap in the "loop" section. I don't know if your patented antenna uses the same method or should I say, "non-method" to steer the pattern. If so, I have a problem with it. If not, and the antenna is rotated manually, I don't. My other main gripe is the allusion of a "lossless" matching device for the antenna when used on bands where the dipole will be small sized. These are my main two gripes. A minor question would be how in the heck do you expect to adjust the elements and matching device to the exact proper dimensions for each band on the fly without using computer controled servo's or whatever? How do you know the position or length of the elements if you can't see them from the shack position?

> Politeness must be observed at all times. My computor is acting up and
> my antenna programs have gone, but if it interferes with the debate I
> will rectify the situation and obtain a fresh AO program from Beasely
> since that is versatile enough to deal with optimisation of element
> diameters together with the use of impedance values. It would help if
> we used the same programming and I would, if necessary, purchase a
> copy for you also. You have "page" abilities so I could send diagrams
> e.t.c. which you could display.

I don't need a description of how it works. I can work that out on my own. All I need is the exact picture, drawing, and other specs. I'll let YOU know what I disagree with , and you can go from there.

> Again it would be a public interchange between only you and I which
> requires disregard to other posters on the same thread.
> I give you one warning !
> If you agree to any technical point that I discuss you will thus
> render yourself as a ligitimate target by certain 'professional'
> policemen and may well suffer the same fate of many that have
> proceeded you thru the years.

Thats ok. I can take care of myself. Actually, I welcome any other input just to verify or knock down any ideas either one of us has that may be wrong. MK

6562. Re: G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 23:04:18 UTC
From: Bob Miller <bxmiller@texas.netNOSPAM>
Message-ID: <juhh8vkkdit7k7t6m8qquglmfmm7ec00o1@4ax.com>
Source record: 121501

On Sat, 29 Mar 2003 16:07:13 -0000, "TonyWard"
<tonester1@cbuk.freeserve.co.uk> wrote:

>Hi,
>Is there a certain length (minimum) for a 1/2 size G5RV ??

Yes, 51 feet, total, for the flat-top section for 7-28 Mhz. See G5RV's
1984 article on his antenna at http://www.qsl.net/aa3px/g5rv.htm

He covers sizing on all of the elements.

Bob
k5qwg

>I,ve see in a few places that a certain lenth of 50 ohm is used on this
>antenna ....when conecting to the 300ohm.but there is nothing that
>suggests this on the packet!!!!!!
>
>thanks for any info
>
>Tony.
>
>

6563. Re: Ground plane antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2003-03-31 23:14:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v8hitnf3er13d7@corp.supernews.com>
Source record: 121502

There's no obvious reason why the slanted dipole should work better than the ground plane. Some less obvious possibilities are:

1. Because the antennas are close enough to couple to each other, the inactive one will affect the active one to a considerable extent. So what you've really got is not two antennas, but a single antenna with two "elements" and two feed points. The combination of the "elements" and feedline lengths might easily make the antenna more effective when fed at one point than at the other.

2. One antenna might couple more favorably to nearby conductors than the other, resulting in somewhat different patterns due to the particular locations on the roof. This could be tested by swapping antenna positions.

3. The feedlines of both antennas will radiate, the dipole probably considerably more so than the ground plane. This radiation might be more beneficial for the dipole and less so for the ground plane.

A ground plane antenna with care taken to eliminate current on the feedline (by putting a current balun at the feedpoint and a second one about a quarter wavelength below it) has an omnidirectional pattern directed at the horizon, with the same gain as a vertical dipole. (I'm assuming you're communicating primarily by line of sight, so ground reflection probably isn't important.) In many or most cases, the feedline radiation might not be significant -- if this is the case, the baluns wouldn't make any noticeable difference. If you need to communicate in all directions, you really have only two choices to improve on the ground plane. One is to raise the antenna. The other is to use a collinear antenna. A collinear antenna has an omnidirectional azimuth pattern but a more concentrated vertical pattern, which is how it achieves gain.

Roy Lewallen, W7EL